Trade unionism and socio-economic development in the Yorkshire glass industry, circa 1840-1940

Thesis

How to cite:

For guidance on citations see FAQs.

© 1988 The Author

Version: Version of Record

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online’s data policy on reuse of materials please consult the policies page.
TRADE UNIONISM AND SOCIO-ECONOMIC DEVELOPMENT IN THE YORKSHIRE GLASS INDUSTRY, circa 1840 - 1940.

TERENCE SPENCER
BA (Hons)

SUBMITTED FOR THE DEGREE OF Ph.D

Volume Two - of Two.

Author's number: HDF 0032
Date of submission: 7 March 1988
Date of award: 27 April 1988
SECTION TWO

RETREAT, RETRENCHMENT AND

REVIVAL

1880 – 1910.
INTRODUCTION

After 1880, the manual system of container production which was the basis of artisan power, was increasingly under threat from emergent technology. Chapter nine examines the nature and consequences of the technological threat which is illustrated by a case-study concerning an early attempt to establish a machine-made bottle company and the effect on artisan attitudes.

Technological development provides the underlying theme for subsequent chapters which examine its effect on wages and on artisan working conditions. Chapter eleven utilises a case-study to provide detailed consideration of a single example of industrial disease amongst artisan glassmakers, cataract of the eyes. Subsequent chapters examine Trade Unionism in its administrative aspects and in the formulation of policies and alliances arising from the conditions of the Trade, and Section Two concludes with discussion and analysis of industrial relations during a period of declining trade and technological advance.
CHAPTER NINE:

ASPECTS OF TECHNICAL CHANGE

(a) Technological Development.

Technical innovation during the third quarter of the nineteenth century was largely confined to the refractory elements of glass production. The essential role of improved furnace technology in regularising working hours, increasing productive capacity and the pace at which work was undertaken, was stressed in Chapter 2 (a) (Supra). The introduction circa 1860, of producer gas and the regenerative pre-heating of air and gas was an important influence on furnace construction, promoting the replacement of crucibles by tanks and the displacement of annealing kilns by lehrs. The major technological breakthrough of the period was, however, the invention of the gas-fired regenerative furnace by Siemens and its application to glass production. The importance of the Siemens furnace lay in its economies of fuel and time. The easy regulation of the energy source allowed variable temperatures to be applied to different parts of the same tank furnace. As a result, the preparation and working out of the metal became two aspects of a single continuous process. Batch was fed into one end of the furnace where, following fusion of the batch materials, the metal flowed into an intermediate area where a higher temperature refined it for use before it passed into the working end of the tank where a reduced temperature enabled it to be shaped by the glassmakers. A further advantage of gas firing was the elimination of the smoke which occurred as a result of direct-fired furnaces and caused metal discolouration. The advent of Siemens invention produced two important consequences for the future of the glass industry. By making a practical possibility of continuous production the introduction of the regenerative furnace presented a direct challenge to observed working practices through reorganisation of the hours of labour, setting capital and labour on course for future industrial conflict. Secondly, the high temperatures obtained by gas firing, allowed metal to be produced, the viscosity of which was unattainable before the introduction of the continuous tank furnace, a crucial factor in the long-term development of machine bottle production. Machine bottle making was the long-cherised desire of most manufacturers. Such a development represented a means of increasing output at lower cost and emancipation from the economic thralldom of organised, skilled labour.
As early as 1859, a patent for a bottle making machine had been obtained by Alexander Mein and by 1865, the machines were installed at his works at St. Rollox, Glasgow. Mein's patent marked the onset of the first phase of experimentation and was followed in 1860 by a patented design of Kilner Bros., and by a more technically advanced machine designed by James Bowron of Stockton-on-Tees, the following year. The hand-operated machines were design influenced by the press machines developed in America between 1820 - 1860. Consequently, the early British inventions were confined to a single mould unit in which the bottle was shaped by the insertion of a metal plunger. The necessity to extract the plunger made the machine unsuitable for the production of narrow mouthed wares, confining their use to the less lucrative areas of production such as small jars and containers and therefore limiting the commercial value of the machine. In 1866, Joshua Arnall, a postmaster of Ferrybridge, Yorkshire, formulated a system with a single parison mould in which the bottles were completed from the shaped parison by the application of compressed air. The design was submitted to Edgar Breffit, who tested a prototype at his Castleford works in 1867, but failed from lack of technical refinement and was therefore declared commercially unviable and abandoned. The failure of the Arnall machine marked the beginning of a hiatus in machine development in England and during the following decades the initiative passed to the Americans of whom Atterburg, Arbogast and Gillinder were the major sources of invention. Despite the hiatus, the theoretical basis suggested by Arnall's 'press and blow' technique was important in freeing inventors from the constraints arising from the previous acceptance of press techniques. The downturn in trade from the mid 1880s resulting in the minimisation of profits stimulated renewed interest in machine bottle production. As a result of improvements to Arnall's original design by H. M. Ashley, a three mould system with a single parison mould serving the two blow moulds, was successfully patented in 1886. The development led to the establishment of the Ashley-Machine-Made Bottle Co. at Castleford the following year to utilise the 'plank' machine. The significance of Ashley's machine was that it related for the first time the steps used in production of bottles by manual methods, but with one important exception; the mouth was formed as the first rather than final step. In the course of steps designed to enhance the performance of the machine, Ashley introduced the 'blow and blow' technique, thus widening the productive scope whilst reducing the
<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Machine Type</th>
<th>Inventor</th>
<th>Commercial Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1869</td>
<td>Germany</td>
<td>Blow</td>
<td>Berry</td>
<td>1869</td>
</tr>
<tr>
<td>1870</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1870</td>
</tr>
<tr>
<td>1871</td>
<td>England</td>
<td>Blow</td>
<td>Berry</td>
<td>1871</td>
</tr>
<tr>
<td>1872</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1872</td>
</tr>
<tr>
<td>1873</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1873</td>
</tr>
<tr>
<td>1874</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1874</td>
</tr>
<tr>
<td>1875</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1875</td>
</tr>
<tr>
<td>1876</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1876</td>
</tr>
<tr>
<td>1877</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1877</td>
</tr>
<tr>
<td>1878</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1878</td>
</tr>
<tr>
<td>1879</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1879</td>
</tr>
<tr>
<td>1880</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1880</td>
</tr>
<tr>
<td>1881</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1881</td>
</tr>
<tr>
<td>1882</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1882</td>
</tr>
<tr>
<td>1883</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1883</td>
</tr>
<tr>
<td>1884</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1884</td>
</tr>
<tr>
<td>1885</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1885</td>
</tr>
<tr>
<td>1886</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1886</td>
</tr>
<tr>
<td>1887</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1887</td>
</tr>
<tr>
<td>1888</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1888</td>
</tr>
<tr>
<td>1889</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1889</td>
</tr>
<tr>
<td>1890</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1890</td>
</tr>
<tr>
<td>1891</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1891</td>
</tr>
<tr>
<td>1892</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1892</td>
</tr>
<tr>
<td>1893</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1893</td>
</tr>
<tr>
<td>1894</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1894</td>
</tr>
<tr>
<td>1895</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1895</td>
</tr>
<tr>
<td>1896</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1896</td>
</tr>
<tr>
<td>1897</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1897</td>
</tr>
<tr>
<td>1898</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1898</td>
</tr>
<tr>
<td>1899</td>
<td>France</td>
<td>Blow</td>
<td>Berry</td>
<td>1899</td>
</tr>
</tbody>
</table>

**Table Notes:**
- (p) Probably invented in U.S.A. but introduced and used in Yorkshire.
- (c) Details of British Patents.
- (d) Modification of Ashley Machine.

**Source:** Turner W. S., J. S. C. L., XXI, 92, 1938, Table II, p. 256.
amount of operational labour. The introduction of the Ashley-Arnall machine was of great significance in influencing the course of technical development as all future machines were based on the concepts incorporated in its design. The rapid development of semi-automatic machines which the Ashley-Arnall machine stimulated is seen in Table 9:1.10

Table 9:1 shows comparable development in Britain, and on the Continent during the second half of the nineteenth century. It is interesting to note that despite the earlier adoption of the Siemens regenerative furnace on the Continent, it was not until the advent of the 'Plank' machine that a significant development occurred there. A partial explanation of this fact is the retardation of trade as a result of the Franco-Prussian War, the effect of the subsequent worldwide trade depression and the latent development of overseas trade. Of further significance is the plentiful supply of cheap labour in each country and the effect of anti-labour legislation as a factor in the retardation of trade unionism. The Table reflects the intensified competition amongst the principal nations of Europe during the closing decade of the century. A similar proliferation of semi-automatic machines is also evident in the U.S.A. One authority has estimated a 92% increase in usage from 20 machines in 1897 to 250 by 1905, as manufacturers resorted to capital-intensive investment to increase productive capacity in response to expanding domestic markets aggravated by the scarcity and high cost of labour.12 It was from America that the next and most significant development in machine bottle making appeared. Michael J. Owens, superintendent of the Libbey Glass Co., Toledo, devised a fully automatic machine in 1903. The machine manufactured bottles by sucking-up metal from a rotating auxiliary furnace pot, thus dispensing with the gatherer who had been a necessary adjunct in semi-automatic machine operation. The first Owens Automatic was a six-arm machine containing a separate gathering and finishing mould. Rapid development of the Owens machine took place during the first decade of the twentieth century and by 1914, a 15-arm mould with a productive capacity five times greater than that of the original 'A' type, and with a daily output equivalent to that of 50 manual producers was in operation.13

Table 9:2 indicates the continued development of semi-automatic machines throughout western Europe during the early years of the twentieth
<table>
<thead>
<tr>
<th>Type of Machine</th>
<th>Inventors</th>
<th>Commercial Patent Date</th>
<th>Commercial Patent Date of Origin</th>
<th>Machine Type</th>
<th>Commercial Inv. Date</th>
<th>Commercial Inv. Date of Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blower-Blower</td>
<td>Blow and Blow and Blow and Blow</td>
<td>1983</td>
<td>1983</td>
<td>Kuehner F. M.</td>
<td>1990</td>
<td>1990</td>
</tr>
<tr>
<td>Blow</td>
<td>Blow and Blow and Blow and Blow</td>
<td>1991</td>
<td>1991</td>
<td>Germany</td>
<td>1990</td>
<td>1990</td>
</tr>
<tr>
<td>Blow</td>
<td>Blow and Blow and Blow and Blow</td>
<td>1993</td>
<td>1993</td>
<td>France</td>
<td>1990</td>
<td>1990</td>
</tr>
<tr>
<td>Blow</td>
<td>Blow and Blow and Blow and Blow</td>
<td>1994</td>
<td>1994</td>
<td>Germany</td>
<td>1990</td>
<td>1990</td>
</tr>
<tr>
<td>Blow</td>
<td>Blow and Blow and Blow and Blow</td>
<td>1995</td>
<td>1995</td>
<td>Australia</td>
<td>1990</td>
<td>1990</td>
</tr>
</tbody>
</table>


Table 9.2: Development of Semi-Automatic Machines for Container Production in Europe 1900 - 1990
century. A feature of the Table is the stimulation provided post 1905 as a result of the widening use of the Owens Automatic Machine. The smaller manufacturers, excluded from the adoption of the Automatic by economic considerations and the licensing policy of the Owens Company, increasingly resorted to use of semi-automatic machine production to narrow the gap in productive capacity opened up by the Owens machine. The Table therefore represents a revolution within the container industry in terms of displacement of manual production methods, and also the prolifery of the various types of semi-automatic machine. A further aspect of technological stimulation produced as a result of the restrictive policy of the Owens Company was the development of the gravity-fed process of automatic machine production. The system was invented by Homer Brooke, an expatriate Yorkshireman living in the U.S.A., who obtained a patent for the device in March 1903. Although Brooke was initially unsuccessful in the commercial application of his invention, the potentiality of the device challenged the technological and economic superiority of the Owens Automatic, facilitating adaption to a range of semi-automatics, converting them to automatic capacity and breeding a new generation of machines such as the American Lynch and O'Neill, and the French Roirant, in succeeding decades. Thus, within twenty years following the introduction of the Ashley-Arnall Machine, the Yorkshire container industry had undergone a technical revolution which transformed a labour intensive hand-crafted trade into a capital intensive highly-mechanised industry with great consequence for the artisan unions.

(b) The Ashley (Man-Made) Bottle Company: a case study.

Despite the technological breakthrough represented by the advent of the Ashley-Arnall bottlemaking machine, 1866, the device was far too crude to have instant commercial application. Subsequent experiments at Armley, Leeds and later at the Eagle Works, Castleford, resulted in the construction of a three parison mould replacement of the single-mould original. The new machine was, however, labour-intensive, requiring the attention of seven boys and a skilled gatherer for its operation. The productive potential of the new machine was about 150 bottles per hour and was inferior economically to the productive capability of a five-man chair of hand-workers. Despite its obvious limitations, the patents were offered for sale and purchased by the Sykes Macvay & Codd Bottle Company, Albion Works, Castleford, late in 1887. Early the following year the Ashley
(Machine-Made) Bottle Company was formed under the Chairmanship of G. W. Hastings JP., MP., to take over the patents including the Sykes Macvay & Codd works. The incomplete stage of the machine is evident from the final terms of the agreement, dated 17th December 1887, which stipulated that

"The Company shall provide labour, materials, machinery, buildings and money, necessary for the purpose of completing and developing a complete machine under the said patents."

The rising developmental costs requiring a high degree of capital investment was the probable reason for the somewhat premature launching of the project. The confidence of the directors had been stimulated by the outcome of tests conducted on the embryonic but improved machine designed on a rotary principle and shown to the admiring and uncritical gaze of representatives of the Press when

"The celebrated Mr. Cottam came down from London with his progeny of Claguers to trumpet to the nation its capabilities."

The extent to which the machine technology was unquestionably accepted may be judged from a local press report -

"Another familiar landmark is going. The glass bottle trade is in process of being melted down into new 'parisons' without blowpipes and blowers, and instead of five men being necessary to evolve an imperial receptacle for beer or aerated water, it almost looks as if five innocently occupied adults might discover a pastime in watching the conjoined labours of a machine and a youth in placing bottles at the service of good liquor as fast as they can be counted ....... Never since the days of the Pharaohs has anything so clever in glassmaking been devised, nor anything so simple."

A meeting of the Company directors held 1st March 1888, decided

"That Mr. Ashley be requested to complete his drawings and to obtain a machine complete for work with as little delay as possible and that the models of the machine be obtained for the Company."
Four of the new designs patented by Ashley were subsequently obtained from the Yorkshire Engine Co., Sheffield. Each machine simultaneously processed four bottles, and was capable of producing 200 bottles per hour, thus matching the performance of a chair of manual glassmakers. The rotary machine required the attention of a gatherer and a boy labourer only and therefore represented a saving in both labour and wages. The prospectus issued by the Company confidently asserted that the machine by producing bottles at one tenth the manual cost, would ensure a profit of £106,000, on the first year’s trading, a figure equivalent to 80% of the subscribed share capital. In addition, it was estimated that at least £50,000 per annum would be received by the Company in royalties for machines used under licence. A productive yield of 8 gross per day, six days per week, at 3d per gross, compared to 7 gross daily, five days per week, at a cost of 3s 10d, per gross under the manual system, with a 33% saving in waste through the elimination of 'cocks' was predicted. It was claimed that this would yield a saving of £780 weekly in production costs and thereby save the British Bottle Industry by redeeming the ground lost in recent years as a result of high wages. Translated in terms of the 60 hole Sykes Macvay factory, where the machines were to be introduced, the figures projected a rise in output from 420 to 4,800 gross per week. The claims were later denounced by the G.B.Ms leader as being on a scale 

"..... not only ridiculously absurd, but which no sane person having any knowledge of the trade could have swallowed without choking, " a statement which calls into question the business judgement if not the honesty of the directors of the new company. Nevertheless, upon issue the prospectus attracted over £200,000 of public money leaving more than £6,500 to be returned to would-be investors. 

Machine production commenced mid-1888, with five of the new Ashley machines housed in a separate machine department adjacent to the bottle houses in which chairs of manual workers continued to operate. Greenwood noted that artisan displacement would have been of no consequence 

".... if the Company could have dispensed with their labour altogether and have superseded them by the 'Iron Man'. "
The fact was that, aside from the demand for huge investment capital for machine installation, retention of hand-workers was essential as the machines were capable only of producing containers of simple design and incapable of matching the manual workers in adaptability to variable metal texture and size and complexity of mould design. The Company thus became a victim of its own propaganda. Having publicised the merits of machines as an economic alternative to expensive labour-intensive production the Company now found itself dependent upon skilled labour to subsidise the technical deficiencies of the machine, the nature of which was undisclosed to the stockholders. This fact explains why the directors of the Company surreptitously used £6,500 subscribed for machine development, for the rebuilding of the largest and best glasshouse for exclusive hand production, hoping thereby to increase production and cover the shortfall in machine output. The Company had also given insufficient consideration to the psychological effect of its public pronouncements regarding machine potentiality and utility on the artisan workforce. Thus, fear of eventual displacement was intensified when by November 1888, the Company had increased the number of operational machines to 19. In a show of strength and craft status, the artisans refused to make quart bottles knowing these could not be produced by machine. The management, aware that stoppage of the works would involve them in legal proceedings with the shareholders, acknowledged the supremacy of the men and thereby made themselves hostage to artisan favour thereafter. The artisans, despite their self-imposed exclusion from the machine shop and the Company's apparent policy to deny them access to the "magic circle" were by their proximity to events, able to monitor developments in the sphere of machine production. Greenwood might tongue in cheek requote Company publicity from the London Times to show the non-involvement of his members in the operation of the machine, and truthfully assert that "The men don't touch it, don't go near it, don't use any influence whatever." Nevertheless, the known hostility of the bottlehands provided the rationale for the unsatisfactory performance of the Company when criticism was raised at the first annual meeting of the shareholders, August 1889. Ashley himself affirmed that it was on account of the apprehension of the men's interference "..... members of one of the most powerful, one of the strongest, Trade Unions in the country, if not the strongest,"
that the trading position of the Company was unsatisfactory. The second shareholders meeting in November 1890, revealed a deficit of £6,889-16-9d, over the year's trading. The Company directors sought to justify their faith in the machine by the conclusion that "..... the loss in the hand-made bottles is not only greater in the aggregate but is also heavier in proportion to the amount produced, than is the case with machine bottles. It is important to bear in mind, as it shows that the future expectations of the shareholders must probably be placed in the machine."

The shareholders, however, demanded an impartial report, which was presented at Winchester House, London, 13th January 1891. During the meeting the directors sat in the body of the hall as ordinary shareholders. The Special Commission reported that, "The looseness of the management seems to have been particularly apparent in the machine department, which, ..... was only responsible for 13% of the good bottles turned out during the year ended 31st July 1890, as against 87%, made in the hand department."

The Report revealed that before the first four-mould machine had been tested, three others were ordered, at a cost of £1,100 each, which upon delivery were found to be unworkable and ultimately sold for £15 each as scrap. Clearly the Company had sought to increase its machine capacity both as a means of reducing labour costs and dispensing with hand labour before the inherent hostility of the artisans developed into organised opposition. It was also revealed that despite several applications, no licences had been granted to other bottle-makers for use of the machines, a fact which reinforces the statement of the Committee that "Notwithstanding the sanguine statements in the prospectus, which were certainly calculated to lead subscribers to believe that the patent was then an ascertained success, it now appears that at the date of the formation of the Company, it was really in a completely experimental stage, no complete machine having then been made."

Contributory to the obvious mismanagement was the weakness in the administrative structure of the Company, resulting in imprecise
decisions being taken so that
".... the Ashley patent machines never had a
proper chance under the present system of
management of developing their capabilities." 49

As a result, a new Board was immediately formed, Ashley being replaced by Joshua Horne (the maker of four single-mould machines then in use) as Consulting Engineer to the Company. 50 The assets of the Company were listed as Land & Works, £45,325; stock-in-trade £15,000, cash £12,000 and the Ashley Patents £40,000, making a total of £112,352. 51

At the end of the third year of the Company's existence, a supplementary prospectus was issued for £35,000, 6% Consolidated Mortgage Debentures, for the purpose of redemption of £23,000 of debentures held by financiers, and creditors, and to provide additional capital for expansion of machine production.

"The Directors are .... of the opinion that the
actual value for the security for these deben-
tures is ample, and for that reason can with
certainty recommend them as an investment." 52

It was stated that
"The directors are hopeful of effecting an
early and complete change in the financial
position of the Company; large reductions
have been and are being made in the working
expenses; much better prices are being
obtained for bottles sold; the Ashley
machine is accomplishing more satisfactory
results than have previously been obtained
and the new Mechanical Engineer and
Directors believe that it will effect a
large saving in the cost of manufacturing
bottles."53

A local newspaper reported
"We have it on good authority that the firms
of Messrs E. Breffit & Co., the Ashley Patent
Machine-Made Bottle Co. and the managers of
Cheesbrough's works have railway sidings
facilities second to none in the town and
for this reason the new Company, as regards
the Ashley Works, will undoubtedly reap
very great advantage." 54
The reported amalgamation was without foundation. No doubt the "good authority" from whom the rumour originated, sought to enhance the public image of the Company and attract share capital. The public, however, was less enthusiastic than in 1888 and consequently only part of the factory remained in use. The Company was adversely affected by the climate of deteriorating economic conditions and industrial relations. Throughout 1891 - 1892 only eight machines were in operation and by September 1892, were subjected to a temporary stoppage and although restarted later were finally stopped in 1894.

In September 1894, the Company announced a deficit of £2,500 on trading during the previous twelve months, as a result of which the shareholders decided to place the firm in voluntary liquidation. The Chairman, Mr. A. Backhouse, blamed the glassmakers for the demise of the Company, stating

"The bottle machine never had fair play and he was afraid never would, so long as the works were carried on at Castleford where the Union was in the strongest position, and no bottle hand would either work himself, or allow lads to assist in the working of any of the Company's machines. They had therefore been dependent on non-union labour and very strong hostility was shown to their men."

On the 17th November 1894, Mr. Justice Kekewich in the High Court ordered the winding-up of the Company's affairs and the works, comprising nine bottlehouses, were sold by auction, 22nd March 1899. The sole bidder at the auction, held at the Ship Inn, Castleford, was the North Eastern Railway Company which obtained the property for a mere £2,000. The patents for the Ashley machines were not included in the sale, being separately purchased by Bagley & Co., Knottingley, and Cannington & Shaw, St. Helens. The Railway Company undertook the gradual clearance of the site and within five years the buildings were totally demolished.

Why did the Company collapse? The workmen never interfered with the machines, objecting only to working at the same furnaces where machines were placed. This was a reasonable objection since machine
use necessitated a higher furnace temperature and metal of thinner consistency than for hand production. The known antipathy of the manual workers towards machines however valid in terms of seeking to avoid a deterioration in earnings and workshop conditions was used to create the myth that artisan opposition was the reason for the Company's collapse. Despite Greenwood's adroit use of company statements to the Press to illustrate the non-involvement of his members in the operation of the machines it is obvious that the latent power of the Union was a constraining influence upon the Company. Technical deficiencies allied to the over optimistic predictions of the Company placed the Union in a sufficiently strong position to assert influence without recourse to direct action. To ascribe Union non-cooperation as the fundamental reason for the closure of the works is, however, illogical. The deliberate closure of the nine bottle houses belonging to the Company at a time when 44.9% of Society members were already out of work would have placed an unnecessary burden on Society finances. Furthermore, with the cessation of company trading in 1894, the Union sought to get the works restarted. At the Twentieth National Conference of Glass Bottle Makers, at Leeds, 23rd – 24th November 1894, it was reported that the bank was prepared to carry on the works providing the workmen would each invest the sum of £5. The suggestion was approved by the assembled delegates with proposals for other regional bottlemakers' Societies to subscribe capital proportionate to their respective membership. The following National Conference, 19th – 22nd February 1895, heard a report that the Secretary and President of the Yorkshire Society had "..... interviewed the Receiver, and several (local) gentlemen in order to obtain information and if possible get the works restarted". For unspecified reasons the scheme got no further and the factory was never worked again. Nor can the technical limitations of the Ashley machine be solely ascribed to the difficulties resulting in the demise of the Company, for with slight modifications the same machines were later utilised by other firms on a profitable basis. Clearly, mismanagement was the principal factor in the fate of the Ashley (Machine-Made) Bottle Co. Scoville has noted the effect of inadequate accountancy and cost systems in the bankruptcy of American glass companies, and as late as 1919, the indications are that such factors applied to English glass manufacturers. Certainly the directors
of the Ashley Company were for the most part businessmen who sought to speculate, sometimes somewhat dubiously, in the hope of obtaining quick and substantial gains on invested capital. 68 Being 'outsiders' to the trade they knew little of the practical aspects of glass production and less of the psychological factors which underlay the attitude of the skilled manual workers within the trade.

(c) Industrial Expansion.

The technical advances described above exerted a significant influence upon the physical expansion of the Yorkshire container trade. The effect of the technological change was most noticeable post 1880 but had in fact commenced with the introduction of the tank furnaces at certain factories during the previous decade.

As early as mid 1869 a manufacturer at Castleford was stated to have installed a 'box' tank in one of his bottle houses 69 and by 1872, two similar tanks utilising the regenerative principle had been built at the Providence Works, Thornhill Lees, by Kilner Bros. 70 Although a third tank of this type, together with a continuous glass melting, gas-fired furnace tank had been added by early 1873, 71 of the forty stated to be in operation at that time, only those at Thornhill appear in the 'Comparative Statement' compiled by the C.S. of the G.B.M. Society. 72 In 1874, Alexander & Austin introduced a Siemens continuous gas furnace at their Hunslet works and early the following year Sykes, Macvay & Co. commenced the construction of a new glass house to accommodate a continuous furnace. 73 The combination of adverse circumstances surrounding the introduction of the new technology (cf section (a) supra) caused the Castleford firm to abandon their proposal, 74 while at Hunslet similar problems resulted in the operation of the furnace at a loss. 75

Diverse factors retarded the adoption of the new furnaces by Yorkshire manufacturers before 1880, although by the middle of that decade all the major firms within the County had a portion of their workers engaged at tanks 76 and by 1888, the proliferation of tank furnaces had so promoted the increase in the number of functional bottle holes that the schedules of the G.B.M. Society which had previously used the number of bottle houses working and standing at any particular quarter-end as the measure of the condition of trade began to
incorporate data concerning the number of bottle holes, as this provided a more accurate basis of calculation.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER OF BOTTLE HOUSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>87</td>
</tr>
<tr>
<td>1881</td>
<td>88</td>
</tr>
<tr>
<td>1882</td>
<td>88</td>
</tr>
<tr>
<td>1883</td>
<td>93</td>
</tr>
<tr>
<td>1884</td>
<td>101</td>
</tr>
<tr>
<td>1885</td>
<td>101</td>
</tr>
<tr>
<td>1886</td>
<td>103</td>
</tr>
<tr>
<td>1887</td>
<td>92</td>
</tr>
<tr>
<td>1888</td>
<td>96</td>
</tr>
<tr>
<td>1889</td>
<td>95</td>
</tr>
</tbody>
</table>

Source: G.B.M. Reports, Volume XXII, pp 80 - 84 passim.

The developmental pattern is seen by reference to Table 9:3. The number of bottle houses, each based on one furnace, increased from 87 in 1880 to reach a peak of 103 by 1886, a 15.5% increase which was particularly pronounced following the partial recovery of trade after 1882. The significant drop in numbers post 1886 occurred chiefly as a result of the widespread installation of tank furnaces which facilitated a considerably greater number of operational chairs of workmen. Thus, using the four pot furnace, which was standard throughout the County at the time of the survey of 1872 - 1873, as the yardstick, the 95 houses in existence in 1889 would sustain a total of 380 artisan chairs, or holes. The total number of bottle holes existing at that date was, however, 794. The adoption of tank furnaces therefore increased the number of productive outlets in the order of 52% and, using the same criteria, represented an increase of 56% over the entire decade.

The relativity of bottle houses and bottle holes during the period 1890 - 1909 is shown in Table 9:4 which indicates a general stability in the number of bottle houses up to the end of the first decade,
TABLE 9:4  NUMBER OF GLASS BOTTLE HOUSES AND GLASS BOTTLE HOLES IN YORKSHIRE FACTORIES 1890 - 1909.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER OF BOTTLE HOUSES</th>
<th>NUMBER OF BOTTLE HOLES</th>
<th>YEAR</th>
<th>NUMBER OF BOTTLE HOUSES</th>
<th>NUMBER OF BOTTLE HOLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890</td>
<td>92</td>
<td>801</td>
<td>1900</td>
<td>89</td>
<td>938</td>
</tr>
<tr>
<td>1891</td>
<td>94</td>
<td>822</td>
<td>1901</td>
<td>92</td>
<td>955</td>
</tr>
<tr>
<td>1892</td>
<td>95</td>
<td>884</td>
<td>1902</td>
<td>90</td>
<td>927</td>
</tr>
<tr>
<td>1893</td>
<td>94</td>
<td>903</td>
<td>1903</td>
<td>89</td>
<td>917</td>
</tr>
<tr>
<td>1894</td>
<td>95</td>
<td>897</td>
<td>1904</td>
<td>81</td>
<td>892</td>
</tr>
<tr>
<td>1895</td>
<td>97</td>
<td>926</td>
<td>1905</td>
<td>78</td>
<td>905</td>
</tr>
<tr>
<td>1896</td>
<td>96</td>
<td>906</td>
<td>1906</td>
<td>78</td>
<td>873</td>
</tr>
<tr>
<td>1897</td>
<td>95</td>
<td>912</td>
<td>1907</td>
<td>73</td>
<td>861</td>
</tr>
<tr>
<td>1898</td>
<td>96</td>
<td>946</td>
<td>1908</td>
<td>71</td>
<td>833</td>
</tr>
<tr>
<td>1899</td>
<td>96</td>
<td>940</td>
<td>1909</td>
<td>69</td>
<td>811</td>
</tr>
</tbody>
</table>

Source: G.B.M. Reports, Volume XXII, pp 84 -87 and p 278, passim.

with only four more at the end of the decade than at the beginning. The second decade, however, witnessed a 22.4% decrease in the number of bottle houses, particularly after 1903. By contrast, the number of bottle holes increased by 14.7%, with 139 more in 1889 than in 1880. Although a decline of 15% from a peak of 955 in 1901, to 811 by 1909 is evident, the number of bottle holes at the latter date was still 1.2% more than in 1880, compared with a 25% reduction overall in bottle houses. The growing impact of tank installation is seen in the ratio of holes to furnaces. In 1890, a ratio of 8.7 holes to 1 bottle house applied. By 1899 the ratio had risen to 9.7 and ten years later stood at 11.7. The decrease in bottle houses occurred from demolition of obsolescent and unused capacity as furnace tanks replaced pot furnaces, but contributory factors were the conversion of some bottle houses to flint production and to the German or 'block' system of production. Thus in May 1880, it was reported that a house at Ryebread works, Castleford was converting to medical (i.e. flint) ware, while in September 1888, the G.B.M. Report noted that a house at Black Flagg, Castleford had been worked by flint hands for some time past. Again, in December 1890, 10
German holes and three medical flint houses were operational at Castleford, while in 1892, four medical houses were being worked at Ashleys works and one each at Ryebread, and Peacocks works, Castleford. A similar conversion was taking place at the Albert Works, Hunslet. Other examples are recorded at Swinton, 1893, Breffits, Castleford and Stairfoot 2nd, 1895. The Quarterly Returns of the G.B.M. Society contain frequent references to furnace conversion and its effect. Continuous furnaces were installed at John Kilner & Sons, Wakefield 1880, Alexander & Co. Hunslet 1888 and two were in operation at the Ryland works, Stairfoot, the same year. In December 1890, it was stated that "frequent furnace changes" occurred at Kilners' Thornhill Lees factory, while the following year saw a gas-fired furnace built at Canning Town Works, London.

A shop on Breffit's Ryebread site was rebuilt in mid 1893 and an entirely new unit added in 1895 to the existing works at Thornhill Lees to accommodate another continuous tank furnace. The proliferation of such furnaces used in conjunction with machinery from the mid 1880s caused a reduction in both bottle houses and the number of bottle holes. In September 1888, the Ashley (Machine Made) Bottle Company were operating five machines and by the end of the year this number had increased to 19, while Rylands Stairfoot factory was producing machine-made jars by 1890. The failure of the Ashley Company and the victory of the G.B.M. Society in the trade dispute of 1893 (cf Chapter 15 infra) caused some retardation of the transitional pace. Nevertheless, plant obsolescence resulted in closure and ultimate demolition at several sites. A bottle house at Millwall was closed permanently in 1890, followed by another at Blaydon three years later, and the factory at Kilnhurst closed in 1894. Obsolescence caused the permanent closure of the Ferrybridge Glassworks by 1901, and its demolition some years later, while the site of the Ashley (Machine-Made) Bottle Company, Castleford, was purchased by a railway company and demolished piecemeal between 1901 and 1905. It is interesting to note that both the above factories contained at least one continuous tank furnace, indicating that the instrumental factor in their obsolescence was failure to attract sufficient capital investment to adapt existing furnace technology to new machines, a problem made more difficult in the case of the Ferrybridge site where the owner of the works had no commercial interest in glass
<table>
<thead>
<tr>
<th></th>
<th>101</th>
<th>34</th>
<th>67</th>
<th>93</th>
<th>27</th>
<th>66</th>
<th>88</th>
<th>24</th>
<th>64</th>
<th>88</th>
<th>54</th>
<th>34</th>
<th>87</th>
<th>50</th>
<th>37</th>
<th>57</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTALS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAFF(5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LONDON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHEFFIELD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEWCASTLE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BISHOP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WAKEFIELD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PENRITH(2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>THORNTHILL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEWCASTLE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CASTLEFORD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: G.B.M. Reports 1880 - 1889, Quarterly Branch Returns - Final quarter of each year, passim.*

**TABLE 9.5 Number of furnaces working and standing at individual branches comprising the Yorkshire glass bottle makers' society.**
<table>
<thead>
<tr>
<th>Year</th>
<th>S</th>
<th>M</th>
<th>TOTAL</th>
<th>S</th>
<th>M</th>
<th>TOTAL</th>
<th>S</th>
<th>M</th>
<th>TOTAL</th>
<th>S</th>
<th>M</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1888</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1887</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1886</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1885</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Table 9.5 continued**
<table>
<thead>
<tr>
<th>Branches</th>
<th>Hull</th>
<th>Wombwell</th>
<th>Starfoot and</th>
<th>London</th>
<th>Newport</th>
<th>Bridlington &amp; Cayton</th>
<th>Filey</th>
<th>Kilnhurst</th>
<th>Mexborough</th>
<th>Conisbrough</th>
<th>Barry</th>
<th>Wetherby</th>
<th>Thorne</th>
<th>Wakefield</th>
<th>Pontefract</th>
<th>Castleford</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totals</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bottle Houses</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Source:** G.M. Reports 1890-1899, Quarterly Branch Returns - Final quarter of each year - passim.

**Note:** Table 9.6

**Table 9.6:** Number of Class Bottle Houses and Class Bottle Houses at Individual Branches Comprising the Yorkshire G.M. Society.
<table>
<thead>
<tr>
<th>Branch</th>
<th>Bottle Houses</th>
<th>S</th>
<th>M</th>
<th>W</th>
<th>S TOTAL</th>
<th>M</th>
<th>W TOTAL</th>
<th>M</th>
<th>W TOTAL</th>
<th>M</th>
<th>W TOTAL</th>
<th>M</th>
<th>W TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hull</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wombwell</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storrfoot and Storrfoot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>London</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newport</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newport</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glyfnon-on-Tyne Glyfnon-on-Tyne</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storrfoot Storrfoot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kirtlingham Kirtlingham</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maskro</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constable Constable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barroway Barroway</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wakefield Wakefield</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perthbridge Perthbridge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thornhill Lees Thornhill Lees</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hexham</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hexham</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swinton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swinton</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Castleford Castleford</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data continued:
production. The obverse is evident at Bagley & Co., Knottingley and Rylands Ltd., Stairfoot, where new machine shops began operating in 1905 - 1906, causing diminution of bottle holes. The clearest indication of successful technical development was at John Lumb & Co., Castleford, which from 1905 dispensed with bottle hands completely, and thereafter solely undertook machine production.

Table 9:5 indicates physical development within individual areas comprising branches of the G.B.M. Society between 1880 - 1889. A high degree of numerical stability is evident. Locations such as Castleford, Hunslet and Wakefield where gas-fired furnace tanks were installed pre 1880 reveal minimal change over the decade as a result of stifled technological initiative arising from Unionism and the slow recovery from trade depression. Likewise, at small factory sites such as Masbro, Kilnhurst, Blaydon, Newport and Shirehampton, lack of investment capital prevented the adoption of advanced technology. Indeed, the two first mentioned factories had an economic interest in preserving the existing pot furnaces because of their involvement with the flint glass trade. The factories at Newport and Shirehampton were but newly opened and insufficiently established to consider immediate expansion, a situation indicated by the decrease in the number of operational houses and the eventual closure of the Shirehampton works. The fluctuation in bottlehouse numbers at Barnsley was due to the incorporation of data concerning Wombwell and Stairfoot branch factories as a result of disrupted trade relations (cf Chapter 15 infra) and is therefore of no direct relevance in analysing technological impact. The obvious signs of technical advance is seen by reference to Thornhill Lees and Ferrybridge districts. At Thornhill Lees, heavy investment in both 'day' and continuous furnaces is shown by the reduction in the number of bottlehouses, particularly post 1886. At Knottingley, the installation of a continuous furnace tank at Bagley's works took place in June 1882 marking the beginning of the firm's long association with technological innovation. In general, however, there are only indications of the effect of technical change during the 1880s, and it was not until the subsequent decade that the full significance of the technological investment of the mid 1880s began to be noticeable. Two distinct phases are discernible in the data covering the period 1890 - 1909. A rise in the number of bottle holes in the individual areas
## Table 9.7

The table below presents the number of class bottle houses and glass bottle houses at individual branches, comprising the Yorkshire GBM Society 1900 - 1994.

<table>
<thead>
<tr>
<th>Year</th>
<th>Bottle Houses</th>
<th>Total</th>
<th>Branch</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1902</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: GBM. Reports 1900 - 1909, Quarterly Branch Returns, Final quarter of each year, passim.*
<table>
<thead>
<tr>
<th>BRANCH</th>
<th>1993</th>
<th>1994</th>
<th>1995</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottle Houses</td>
<td>Bottle Houses</td>
<td>Bottle Houses</td>
<td>Bottle Houses</td>
<td></td>
</tr>
<tr>
<td>CASTLEFORD</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>36</td>
</tr>
<tr>
<td>BELFAST</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>NEWCASTLE</td>
<td>2</td>
<td>16</td>
<td>16</td>
<td>34</td>
</tr>
<tr>
<td>EXETER</td>
<td>9</td>
<td>3</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>BRISTOL</td>
<td>1</td>
<td>6</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>LONDON</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>SWINDON</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>MIRA</td>
<td>3</td>
<td>8</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>MILDENHALL</td>
<td>1</td>
<td>2</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>KILMARNOCK</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>MARLTON</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>PRESTON</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>WAREHAM</td>
<td>6</td>
<td>15</td>
<td>32</td>
<td>53</td>
</tr>
<tr>
<td>THORNHILL</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>HUNTINGDON</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>SWINTON</td>
<td>5</td>
<td>12</td>
<td>18</td>
<td>35</td>
</tr>
<tr>
<td>GLOUCESTER</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>HEDON</td>
<td>6</td>
<td>7</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>LONDON</td>
<td>3</td>
<td>8</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>STAFFORD</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>BIRMINGHAM</td>
<td>2</td>
<td>12</td>
<td>12</td>
<td>26</td>
</tr>
<tr>
<td>BOLTON</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>STOCKPORT</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>MANCHESTER</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>LIVERPOOL</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>WAKEFIELD</td>
<td>6</td>
<td>7</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>WARRINGTON</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>WIDNES</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>WARRINGTON</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>WIDNES</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>WARRINGTON</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>WIDNES</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>WARRINGTON</td>
<td>2</td>
<td>3</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>WIDNES</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Branch</td>
<td>1906</td>
<td>1907</td>
<td>1908</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>S</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Bottle Houses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**TABLE 9.7** continued:
<table>
<thead>
<tr>
<th></th>
<th>822</th>
<th>906</th>
<th>416</th>
<th>49</th>
<th>27</th>
<th>2</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HULT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOMEN</td>
<td>2</td>
<td>4</td>
<td>18</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>STAIRFOOT (2nd)</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LONDON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEWPORT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLAXDON-ON-TINE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAIRFOOT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KILHNURST</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MASBO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COWSBRO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BARNSLER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WAXFIELD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PERRYBIDGE (a)</td>
<td>9</td>
<td>2</td>
<td></td>
<td>11</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>THORNHILL LEES</td>
<td>2</td>
<td>3</td>
<td></td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HINSENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SJMON</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CASTLEFORD</td>
<td>6</td>
<td>2</td>
<td></td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>W</th>
<th>S</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottle Houses</td>
<td>Bottle Houses</td>
<td>Branch</td>
</tr>
<tr>
<td>609</td>
<td>1909</td>
<td>9197</td>
</tr>
</tbody>
</table>

TABLE 9:7 continued:
is clearly evident during the ten years covered by Table 9:6. The increase is particularly noticeable at Conisbro where a new unit built early in 1892 by Kilner Bros. and described as ".... a model shop, the only one of its kind in the country" resulted in a 29% increase between 1890 - 1893. A 20% increase occurred at Rylands, Stairfoot factory between 1893 - 1894 as a tank with a 670 ton capacity "the largest factory in the trade" was reconvered from machine use to manual production. Swinton district saw a 19% increase, from 109 to 135 bottle holes at the beginning of the decade, while Ferrybridge expanded only slightly less as a result of industrial expansion at nearby Knottingley, with an advance from 59 holes in 1894 to 72 a year later. Expansion also took place in the London district as a result of furnace installation at Canning Town Glassworks which more than offset the diminution caused by the closure of a factory at Millwall in 1890. By 1892, the number of holes at Canning Town rose from 4 to 10, and this increased to 18 by the middle of the decade, reaching a peak figure of 22 as a result of rising trade, before reverting to near 1891 level as trade prosperity declined at the close of the decade.

A distinct variation is noticeable between the different branches represented in Table 9:7, covering the years 1900 - 1909. Single factory branches situated outside Yorkshire, such as Blaydon and Newport, seem, according to statements concerning the condition of trade published in the Quarterly Reports, to have experienced more temporary trade than many located within the County and as a result retained a general consistency in the number of potential units of manual production (i.e. bottle holes). Likewise, small factory units within the County where a considerable element of flint glass manufacture was a feature of production. Factories at Hunslet, Barnsley, and Masbro, or those such as Wakefield, Stairfoot, Swinton and London, where circumstances precluded early adoption of machines, retained roughly the same number of holes or, in the case of the two latter, actually increased the number. Elsewhere, the combination of bad trade and recourse to machine production is evident in the decreasing number of bottle holes over the decade.

Table 9:8 shows a high consistency in the number of glass bottle manufacturers in Yorkshire and allied districts of the trade between 1880 - 1910. The degree of stability indicates that industrial expansion
TABLE 9:8 NUMBER OF GLASS BOTTLE WORKS SITUATED IN DISTRICTS OF THE YORKSHIRE G.B.M. SOCIETY, 1891 - 1909

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>NUMBER OF GLASS BOTTLE MANUFACTURERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1891</td>
</tr>
<tr>
<td>Castleford</td>
<td>5</td>
</tr>
<tr>
<td>Swinton &amp; Mexbro</td>
<td>3</td>
</tr>
<tr>
<td>Hunslet</td>
<td>3</td>
</tr>
<tr>
<td>Thornhill Lees &amp; Savile Town</td>
<td>3</td>
</tr>
<tr>
<td>Ferrybridge &amp; Knottingley</td>
<td>2</td>
</tr>
<tr>
<td>Barnsley</td>
<td>2</td>
</tr>
<tr>
<td>Wakefield</td>
<td>1</td>
</tr>
<tr>
<td>Consibro</td>
<td>-</td>
</tr>
<tr>
<td>Masbro</td>
<td>1</td>
</tr>
<tr>
<td>Stairfoot</td>
<td>1</td>
</tr>
<tr>
<td>Wombwell</td>
<td>1</td>
</tr>
<tr>
<td>Kilnhurst</td>
<td>1</td>
</tr>
<tr>
<td>Blaydon on Tyne</td>
<td>1</td>
</tr>
<tr>
<td>Newport</td>
<td>1</td>
</tr>
<tr>
<td>London</td>
<td>1</td>
</tr>
<tr>
<td>Hull</td>
<td>-</td>
</tr>
</tbody>
</table>

**TOTAL**                        | 25   | 29   | 27   | 26   |

Source: G.B.M. Reports, 1891 - 1909 passim.

occurred largely within the parameters of existing sites and underlines the contributory role of the tank furnace in such expansion through the development of multiple bottle holes within prescribed spatial limits. Of the 29 firms in 1899 whose staple production was the common bottle, 12 were also producing flint glass containers, with a combined total of 19 flint bottle shops. In addition to those factories numbered in Table 9:8, were several exclusively engaged in flint glass production, such as the Hope Glass Works, Knottingley, Borough Flint Glass Works, Barnsley, York Glass Co. and Lax & Shaw, and Peter Gilston & Co., Hunslet, all small units which expanded considerably throughout the following decade.

The pattern of development within individual factories is shown in Table 9:9. The increased ratio of holes to furnaces is most evident in the larger companies such as Breffits, Rylands and Kilners. This is to be expected since these companies had throughout the preceding decades, adopted a more progressively innovative outlook than their business rivals and being capital intensive could more easily afford to speculate on new technological processes. By the turn of the
<table>
<thead>
<tr>
<th>Week</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Mon</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Wed</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Thu</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Fri</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Sat</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Name of Firm</th>
<th>Nature of Business</th>
<th>Number of Bottles</th>
<th>Number of Glass Bottles</th>
<th>Number of Tin Plates</th>
<th>Number of Tin Cans</th>
</tr>
</thead>
<tbody>
<tr>
<td>6061</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6068</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1668</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 9.9: Contained

<table>
<thead>
<tr>
<th>GRAND TOTALS</th>
<th>111</th>
<th>112</th>
<th>113</th>
<th>114</th>
<th>115</th>
<th>116</th>
<th>117</th>
<th>118</th>
<th>119</th>
<th>120</th>
<th>121</th>
<th>122</th>
<th>123</th>
<th>124</th>
<th>125</th>
<th>126</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitts Glass Bottle Co.</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>London Works</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sheffield Works</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mawson &amp; Co.</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

**Source:** Report of the Correspondence and Meetings on the Wage Question and Agreement made for 1891, pp 102–103.
century the investment by Bagley & Co. and Redfern Bros. in furnace
technology had dramatically increased their productive capacity,
enabling them to lay the foundations for machine production. The
majority of firms featured in the table retained roughly the same
productive capacity throughout the period. Such firms strapped by
capital limitation and with natural caution heightened as a result
of the failed technological venture of Sykes Macvay in launching the
Ashley (Machine Made) Bottle Co., undertook capital investment suf-
ficient to ensure business survival. Several small companies fea-
tured in the table, folded from lack of capital investment or busi-
ness acumen. Indeed, the Table reveals the growing polarisation
within the trade between the companies with capital resources to en-
able the adoption of mechanised production as the basis of future
expansion and those whose capital limitation precluded such a course
but which were compelled to find an adequate response or perish.
The response of many firms was the replacement of bottle hands by
flint hands or in some cases, by foreign artisans working the German
or Swedish system.\textsuperscript{108} Such a course had the advantage of being less
expensive and providing manufacturers with greater productive flexi-
bility since both types of replacement workers were willing to work
in shops in which semi automatic machines were in operation at adja-
cent holes.

Table 9:10 gives some indication of the expansion of the flint glass
bottle production in the early years of the present century. Of 24
factories primarily associated with the manufacture of common bottles,
9 were also undertaking flint glass bottle production. The Table,
however, is based on an incomplete return of the N.G.B.M. Society
and does not include three firms at Knottingley and three at Castle-
ford, also operating dual systems. The number of such factories
was almost compatible with the total recorded in March 1899,\textsuperscript{109} but
whereas at that date 18 flint bottle houses were in existence, by
1906 the number had increased to 31, a rise of 58\% in capacity. In
addition, the number of factories engaged solely in flint glass prod-
duction had risen by 2 at York and one at Sheffield, while factories
at Wombwell and Kilnhurst had reopened, the latter exclusively for
flint bottle production. IN terms of membership ratios the propor-
tion of flint glass bottle makers had increased the relative position
of the two Societies from $\frac{1}{4}$ to $\frac{1}{3}$ between 1880 - 1906,\textsuperscript{110} but the sig-
nificance was in the fact that expanding flint bottle production was
<table>
<thead>
<tr>
<th>LOCATION</th>
<th>BOTTLE HANDS</th>
<th>FLINT HANDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FIRMS</td>
<td>W</td>
</tr>
<tr>
<td>BARNESLEY</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>CANNING TOWN</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>CASTLEFORD</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>CONISBRO</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>HULL</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>HUNSLET</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>KILNHURST</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KNOTTINGLEY</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>MASBRO</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>MEXBRO</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>SHEFFIELD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAIRFOOT</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>SWINTON</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>THORNHILL LEES</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>WOMBWELL</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>YORK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLAYDON</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>NEWPORT</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>TOTALS</td>
<td>24</td>
<td>46</td>
</tr>
</tbody>
</table>

Sources:  
(i) N.G.B.M. MAGAZINE, Volume 2, pp 178 - 179  

(a) Hull temporarily closed.  
(b) Beatson Clark & Co., Masbro, referred to as Rotherham District by flint hands.  
(c) York factories employing non-Society men.
undertaken at the expense of glass bottle makers' work, increasing the surplus of unemployed glass hands already dispossessed by growing mechanisation.

TABLE 9:11 NUMBER OF MACHINE SHOPS SITUATED IN YORKSHIRE GLASS BOTTLE WORKS AT VARIOUS DATES 1899 - 1910

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>NAME OF FIRM</th>
<th>NUMBER OF MACHINE SHOPS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1899</td>
</tr>
<tr>
<td>Castleford</td>
<td>E. Breffit &amp; Co.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Ashley (Machine Made</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bottle Co.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>J. Lumb &amp; Co.</td>
<td>1</td>
</tr>
<tr>
<td>Thornhill Lees &amp; Savile Town</td>
<td>Kilner Bros.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Turner &amp; Co.</td>
<td>1</td>
</tr>
<tr>
<td>Knottingley</td>
<td>Bagley &amp; Co.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Jackson Bros.</td>
<td>1</td>
</tr>
<tr>
<td>Conisbro</td>
<td>Kilner Bros.</td>
<td>1</td>
</tr>
<tr>
<td>Newport</td>
<td>Sth. Wales G. Bottle Co.</td>
<td>1</td>
</tr>
<tr>
<td>Stairfoot</td>
<td>Rylands Ltd.</td>
<td>1</td>
</tr>
<tr>
<td>Wakefield</td>
<td>J. Kilner &amp; Sons.</td>
<td>1</td>
</tr>
<tr>
<td>Masbro</td>
<td>Beatson &amp; Co.</td>
<td>1</td>
</tr>
</tbody>
</table>

**TOTALS** | 3 | 8 | 13 | 13½ | 16

Sources: (i) G.B.M. Reports, Volume XVII, pp 16 - 17
(ii) G.B.M. Reports, Volume XX, p 4
(iii) G.B.M. Reports, Volume XXII, pp 146 - 147 and pp 684 - 685

The half figures quoted in the Table represent furnaces worked jointly by flint hands and machine hands.

Table 9:11 shows a five-fold increase in the number of machine shops over the ten year period. Despite the technical breakthrough occasioned by the Ashley machine in the 1880s, manufacturers were slow to adopt bottle making machines and as the Table indicates, it was not until the Owens Automatic machine had revealed its commercial potentiality, circa 1905, that British manufacturers undertook installation of semi-automatic bottle machines in an attempt to compete with Owens licensees. John Lumb & Co., Castleford, who as early as 1905 had dispensed with manual
production methods did not open a second machine shop until 1907. Similarly, Turner & Co. of Savile Town, Dewsbury, although the latter, like many manufacturers, retained an element of manual production. In this respect the position of Breffit & Co. is interesting for although the Table indicates some concession to machine manufacturing, the firm principally sought to compete against machine production by recourse to flint and German systems of manufacture. The decision marked the final phase of a decline which had commenced almost imperceptibly upon the death of Edgar Breffit in 1885. The Table is also notable for its inclusion of small companies such as Jackson Bros., Knottingley and Beatson & Co., Masbro, who, like Bagleys and Lumbs before them, had utilised the intuitive skills of their own workers to improve the design of early semi-automatic machines and enhance their productive capabilities. Indeed, limited range and output, together with high installation costs and labour-intensive operation placed early forms of semi-automatic machines at decided disadvantage, hence the slow process of adoption and the recourse of manufacturers to alternative systems of manual production. The economic ascendency of machines resulted in a decline in the number of flint glass bottle holes post 1906 and by mid 1909 of 12½ flint houses in existence at glass bottle factories, only 9½ were operational, less than a quarter of those recorded three years earlier.
CHAPTER NINE: Aspects of Technical Change


3. Ibid.


6. Ibid.


8. Ashley was a lodger at Arnall's home and had been manager of Ferrybridge Foundry prior to retirement cf English loc cit, p 325. The term 'Plank Machine' (also referred to as the 'Pillar Machine') was derived from the fact that the moulds were fixed to a rectangular board which was attached to an upright pillar of iron cf loc cit, p 326, fig. 2.
9. The original machine was labour intensive, requiring several hands for its operation. In addition, the production of narrow-mouthed ware was restricted to bottles with a sufficiently prominent shoulder to enable the press plunger to force the glass into the narrow neck. Ashley overcame the technical difficulty by inverting the parison mould and applying a preliminary blast of air to the metal following its introduction into the mould (cf Hodkin & Cousen op cit, p 314). The redesigned 'blow and blow' machines required two men for their operation (cf Douglas & Frank op cit, pp 175 - 178.

10. The term 'semi-automatic' is generally applied to all types of early bottlemaking machines prior to the introduction of the Owens Automatic machine. Although there is some justification for the term as all pre-Owens machines were operated by a combination of mechanical and manual activity, it is more correct to regard pre 1890 machines as 'hand machines' since these were rotated by hand as well as being reliant upon manual effort for the sundry intermediate operations to assist the process mechanical production. Post 1890, the machines were automatic except for the filling of the parison mould with metal gathered from the tank and the conveyance of the finished bottle to the lehr by the taker-in.


15. For details of Brooke's life and work cf J.S.G.T., Volume 9, 1925, p 283T. Brooke had actually filed his patent in March 1898, cf Hodkin F. W., J.S.G.T. Volume XXVII, 1953, p 30T.
16. The potentiality of the gravity-fed system so alarmed the Owens Company that they purchased all the Brooke patent rights in order to control the device and thereby safeguard the position of the Owens Automatic Machine, cf J.S.G.T. 1925, loc cit.

17. For details of the Lynch and O'Neill, and other latter-day bottle making machines ibid, pp 32 - 56. Also Hodkin & Cousens op cit, Chapters XXXII and XXXIII.


22. Ibid.

23. Ashley received £40,000 from the sale of the Patents, a large share of which was reputedly paid to Mr. John Hardcastle, accountant, of Leeds, who had realised the commercial potential of Ashley's invention and had subsidised previous development costs, ibid, p 332.


25. Leeds Mercury, 17th December 1887.


28. Ibid.

29. G.B.M. Society, Miscellaneous Articles and Statistics 1905 - 1910, p 741. Cocks or Wasters was the name given to faulty and therefore unsaleable bottles.
    J.S.G.T., Volume 7, 1923, p 331.

31. G.B.M. Society, Miscellaneous Articles and Statistics 1905 - 1910, 
    p 741.

32. Ibid.

33. English S. loc cit, p 330.

34. G.B.M. Reports, Volume XI, p 486.


36. G.B.M. Reports, Volume XIII, Appendix II, p 10. Also G.B.M. 
    Society Miscellaneous Articles and Statistics 1905 - 1910, p 325, 
    for references to machines being used for easy work while the 
    G.B.M. were required for more difficult wares.

37. Ibid, p 744.

38. G.B.M. Reports, Volume XI, p 552.

39. G.B.M. Society Miscellaneous Articles and Statistics 1905 - 1910, 
    p 744.

40. Ibid.

41. Ibid, p 740.

42. The fact that Greenwood was himself employed in a managerial 
    capacity within the hand bottle section of the Company doubtless 
    assisted Union assessment of the ongoing situation. cf his 
    emphatic tone concerning developments at Castleford, Ibid.

43. Ibid.

44. Ibid.

45. Ibid, p 746.

46. Ibid, p 747.
47. Ibid.


49. Ibid, p 333.

50. The Company had originally ordered 31 Horne machines, 26 of which were delivered complete, whilst five others were built by the Company's own mechanics. Of these machines, eleven were sold to a foreign company, four were working in 1890, while the remainder were cast aside. Ibid, p333. Also G.B.M. Society Miscellaneous Articles and Statistics 1905 - 1910, p 742.

51. Ibid. The works were known as the Albion and Eagle Works, the latter, formerly known as Hardy & Rickards, having been purchased by Sykes & Macvay, which was later reorganised as the Sykes, Macvay & Codd Bottle Co. The Albion Works site comprised some 4790 square yards, and the Eagle Works, some 6800 square yards. Ibid, p 743.


54. Pontefract and Castleford Express, 5th September 1891. The name of the new Chief Manager should read William Breffit, son of Edgar Breffit, the latter having died in 1885.


57. Pontefract and Castleford Express, 5th September 1894.


59. The Ashley Patents were offered to the Yorkshire Glass Bottle Manufacturers Association who declined to purchase, leaving Bagley & Co. and Cannington & Shaw to enter into a private arrangement, G.B.M. Society Miscellaneous Articles and Statistics 1905 - 1910, p 744.
60. In December 1899 three glasshouses were demolished. Two more were demolished in March 1900, and in December 1904, all four others were demolished. Ibid.

61. Ibid, p 740.


63. The Abstract Reports and Minutes of the National Conferences of The Glass Bottle Makers of Great Britain and Ireland, Volume I, 1893 - 1895, p 114.

64. Ibid, p 133.

65. Douglas and Frank, op cit, p 178.


67. Dearden Mills J. Manufacturing Costs in the Glass Industry, J.S.G.T. 1919, III, pp 14 - 26. Also Sweeting F. 'A Costing System for a Glass Factory, loc cit, pp 27 - 37. Both articles indicate ad hoc systems in which whilst a more 'scientific' approach was being adopted, the individuality of the manufacturer was the chief characteristic.

68. The first chairman of the Company was sentenced to five years penal servitude for misappropriation of trust funds, adjudged a bankrupt, and expelled from the House of Commons, G.B.M. Reports, Volume XIII, p 248. John Hardcastle, an associate of the Company was also arrested and imprisoned as an absconding debtor after fleeing to Argentina following his failure at 'company promoting', cf Yorkshire Evening Post, 18th November 1907, and Yorkshire Post, 19th November 1907.


70. G.B.M. Reports, Volume III, p 418.
The figures are calculated on the total operational ability of each unit. In actuality, some bottle holes were always non-operational due to the need for maintenance, slack trade, or very occasionally, want of journeymen. Thus, of the 794 holes referred to above, only 624 were working and approximately one fifth standing unused.

Some indication of unused capacity may be gained by reference to houses and holes standing at the final quarter of each of the following years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Holes</th>
<th>Houses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890</td>
<td>72.7%</td>
<td>71.5%</td>
</tr>
<tr>
<td>1899</td>
<td>78.5%</td>
<td>71.5%</td>
</tr>
<tr>
<td>1909</td>
<td>48.4%</td>
<td>57.9%</td>
</tr>
</tbody>
</table>

G.B.M. Reports, Volume XXII, pp 84 - 87 and p 278 passim.


89. *G.B.M. Reports*, Volume XII, p 666.


94. *G.B.M. Reports*, Volume XII, p 666.

95. *G.B.M. Reports*, Volume XIV, p 390 for reference to the abandonment of a machine shop and its reconversion to a hand bottle shop at Stairfoot 2nd Branch.


103. *G.B.M. Reports*, Volume XIII, p


106. Hope Glass Works 1874 - 1974, **Gregg & Co. (Knottingley) Ltd.** (1974), private publication, no pagination. The company is the sole privately owned factory still in production at Knottingley and one of only two within the County of Yorkshire, the other being Beatson Clark plc, Rotherham.


108. **G.B.M. Reports**, Volume XI, p 496. Attempts by Yorkshire manufacturers to introduce 'alien' techniques were carefully monitored by the G.B.M. Union and only tolerated because they were geared to the production of high quality, seamless bottles which constituted a very small element of overall production, and then only because the foreign workmen were supposed to teach Yorkshire artisans their technique. The 'German Block System' was introduced at Breffits, Castleford in 1889 and continued into the twentieth century when it was also adopted by Bagley & Co., Knottingley and Cole & Jude, Hull. cf **G.B.M. Society Miscellaneous Articles and Statistics**, 1905 - 1910, pp 870 (b)-(c).


110. Quarterly Returns published by each Society show that the total Yorkshire membership of the F.G.M. Society in 1880 was 25.6% of the G.B.M. Society membership. By 1906, the figure was 30.3%.


CHAPTER TEN:

WAGES AND OVERWORK RATES 1880 - 1909

The previous chapter revealed how capital limitation and lack of technological refinement prevented widespread utilisation and successful commercial application of machine production. The onset of severe trade depression in the late 1870s and the consequent intensification of industrial competition thus induced necessitated economies in production costs. As technical shortcomings prevented the aims of the manufacturers to replace high-cost skilled labour by machinery being realised, the obvious corollary was to hold down prices by obtaining a reduction in artisan wages.

The rapid advance in the money wages of the Yorkshire Glass Bottle Makers between 1860 - 1876 meant that by the latter date basic wages were more than 50% in advance of those paid sixteen years earlier. The prosperity of the glass workers was further enhanced by the fact that average retail prices increased but little over the period and therefore ensured that artisan earnings represented a significant increase in real terms.\(^1\) The fall in prices as a result of the trade depression which commenced in 1876 provided the conditions in which the newly-established Manufacturers' Association successfully sought to enforce reduction in basic wage levels and between late 1879 and mid 1883, basic chair wages of £3-12-0d per week, were the lowest for twenty years.\(^2\) A pro rata increase of three shillings per week admitted some recovery in money wages but in January 1890, Alfred Greenwood stated,

"... When the circumstances of the trade and the nature of the work are considered, the men's wages are not so good now as they were in 1854."

Greenwood's remark clearly indicates an awareness of the debasement in the quality of life of his members in terms of working conditions and general lifestyle and the statement is given particular emphasis by Greenwood's further assertion that the wages were

"... really worse on the average from 6s to 10s per week, per man, than they ought to be, and but for the Society's influence - the combination of the men - they would have been 10s a week less now than they are."\(^4\)

What formed the basis of Greenwood's assertions and to what extent are
they substantiated by wage data? In economic terms a twofold assault on wage levels is discernible: the reconstitution of List numbers and payments and the reduction in the level of overwork rates.

In September 1880, Edgar Breffit proposed some alteration to the 1878 List. The Manufacturers' Association supported the proposal and negotiations were undertaken with various Lists and revisions being printed and considered by both sides of industry. The List dated 22nd December 1880, established throughout the trade, was gradually forced upon the workmen who never formally agreed to it. By the terms of the Third List, which came into operation 1st January 1881, overwork rates were considerably reduced, which taken in conjunction with the reduction of 3 shillings per week in journeyman rates some eighteen months earlier meant that workmen received less wages for producing 100 dozens of bottles per day than they had received 28 years earlier.

In addition, the manufacturers inserted a new reckoning clause adopted from the system practised within the sphere of flint bottle manufacture. By the terms of the new clause the numbers constituting a week's work were taken off the entire week's production before overplus payments were calculated. The system was obnoxious to the bottle hands because it abolished the payment of wages to workmen whilst under contract of service, at times when employment could not be found for them. A chair, for instance, having formerly worked three of the five journeys constituting the week's work and then being prevented from working due to circumstances beyond their control such as the stoppage of production through a broken furnace, would receive basic wages for three moves, together with overplus payments well in excess of basic wage levels for each of the three days of productive labour. In addition, half wages were payable by custom throughout the trade when work could not be found for the workmen. Under the new system, however, the same circumstances would result in the two lost moves being 'clawed back' from the overplus production, thereby reducing overwork earnings by approximately two thirds. The new system of reckoning ensured that the half wages died a lingering death for although the workmen at some Yorkshire factories obtained some slight modification of the new rule, such instances were few. The measures adopted by the manufacturers resulted in a significant loss of status, both socially and economically, for the Yorkshire bottle hands who were "... put on a level with the coal miners - no work, no pay."

- 416 -
without even the guarantee of the 'eight bob a day' associated with the miners slogan. In its operation at one Castleford factory an instance arose of a chair of hands spending time equal to six journeys and at the end of the week being paid one journey's wages.\(^8\) Tangible signs of improved trade in 1883 resulted in an application for an advance of 3 shillings per week, pro rata, and restoration of the original reckoning clause, together with payments for bad metal and stoppage of work. The intransigent stance of the manufacturers was overcome when following a ballot vote (the first in the Society's history) the workmen served notice of withdrawal of labour and the manufacturers grudgingly conceded the men's terms.\(^9\) The increase restored wage levels to 30s., 28s., and 23s., being the level at which they stood between August 1854 to November 1856. The new level was retained until January 1887, when in addition to seeking the removal of the 3 shillings on basic wages, the employers sought to reduce by one shilling all overwork at 4 shillings and sixpence per gross and other values in proportion, equivalent to 14.5% off total earnings.\(^10\) Following a County-wide lock-out to enforce their demands, the men eventually accepted a reduction of 25% in all overwork rates. The reduction represented almost 8% off the total earnings of the workmen and was the first time in the history of the trade that overwork rates were reduced below the standard wage rates.\(^11\) Noting the importance of the departure from traditional practice, Brundage has presented the situation as a deliberate strategy on the part of the employers to apply pressure to the workers to increase output by speeding up the process of production in order to maintain total money wages.\(^12\) The outcome of the measure undoubtedly caused a 'speed-up' effect which was a contributory factor in the radical politicisation of the glass bottle hands during the following decade (cf chapter 13 infra). The extent to which this was clearly engineered by the manufacturers is debatable in view of the diverse attitudes of the employers at the time of the dispute.\(^13\) Nevertheless, the attack on overwork rates provided a new device for the regulation of wages which had an adverse effect upon the socio-economic standing of the artisan glass makers. The importance attached by each side to the situation is evident from the abortive nature of the protracted negotiations which took place between 1888 – 1890. The men sought restoration of the 25% cut in overwork payment for bad metal and a compensatory payment of two thirds for bottles cracked or melted in the course of annealing. It was only as a result of the practical exposure of the degree of undercutting by manufacturers, in violation of their own imposed List
of 1881, that a new list of uniform prices was formulated. The Fourth List which became effective 1st January 1889, advanced overwork rates by 10%, and was the first trade Agreement to be formally ratified solely by the Secretaries of each organisation. The following year saw the restoration of the 15% overwork rates and the next year, the restoration of the 3/- on basic wage rates, thus bringing wage levels into line with those paid prior to the trade dispute of 1876.

![Table 10:1 Basic Chair Earnings in Various Glass Bottle Making Regions Circa 1890](image)

<table>
<thead>
<tr>
<th>REGION</th>
<th>BOTTLEMAKER</th>
<th>BLOWER</th>
<th>GATHERER</th>
<th>TOTAL WEEKLY CHAIR EARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£  s  d</td>
<td>£  s  d</td>
<td>£  s  d</td>
<td>£  s  d</td>
</tr>
<tr>
<td>YORKSHIRE</td>
<td>1 13 0</td>
<td>1 11 0</td>
<td>1  6 0</td>
<td>4 10 0</td>
</tr>
<tr>
<td>LANCASHIRE</td>
<td>1 13 0</td>
<td>1  9 0</td>
<td>1  5 0</td>
<td>4  7 0</td>
</tr>
<tr>
<td>NORTH OF ENGLAND</td>
<td>1  7 0</td>
<td>1  7 0</td>
<td>1  0 0</td>
<td>4  4 0</td>
</tr>
<tr>
<td>SEAHAM HARBOUR</td>
<td>1  9 9</td>
<td>1  7 1</td>
<td>1  3 6</td>
<td>4  1 2</td>
</tr>
<tr>
<td>GLASGOW</td>
<td>1 10 0</td>
<td>1  7 0</td>
<td>1  1 0</td>
<td>3 18 0</td>
</tr>
<tr>
<td>PORTABELLO</td>
<td>1 10 0</td>
<td>1  4 0</td>
<td>1  4 0</td>
<td>3 18 0</td>
</tr>
<tr>
<td>BRISTOL</td>
<td>1 14 0</td>
<td>1 10 0</td>
<td>1 10 0</td>
<td>4 15 0</td>
</tr>
<tr>
<td>BRIERLEY HILL</td>
<td>1 13 0</td>
<td>1  7 0</td>
<td>1  7 0</td>
<td>4  7 0</td>
</tr>
</tbody>
</table>


Table 10:1 allows comparison of the Yorkshire G.B.M. basic wages with those paid in other bottlemaking regions in 1890. It will be seen that with the exception of Bristol, the Yorkshire artisans' basic wages were the highest in the country. At Bristol, Portobello and Brierley Hill, however, the flint glass system of gatherer/blower was applicable, hence the wide differential between the finisher and the other chair members. Seaham Harbour bottle hands were paid the Yorkshire rates, less 10% (which was also allowed off in the number) because of North of England customs and privileges such as accommodation rent and coals. Overwork payments varied according to the type of container being produced but Greenwood's estimates of 15s each
for the bottle maker and blower, and 6s 8d for the gatherer, brought the average individual weekly earnings to:

- **Bottle Maker**: £2-5-0
- **Blower**: £2-3-0
- **Gatherer**: £1-9-6

producing average weekly chair earnings of £5-17-6d. On the basis of these figures the Yorkshire Glass Bottle hands comfortably meet Hobsbawm's criteria for inclusion within the ranks of the 'super aristocracy' (i.e. those earning 40 shillings and more per week). Brundage has shown that the wages paid to the Yorkshire Glass Bottle Makers were considerably in advance of those paid to the next highest category of workers within the County bottle works, the founders and furnace men whose weekly wage averaged £1-2-0d. Furthermore, Brundage reveals that some skilled workers within the Castleford building trades were paid wages lower than those obtained by bottle hands some fifteen years earlier. If the total money wages of the G.B.Ms were comparatively high what did they represent in real terms? Bennett has presented the period 1873 - 1896 as one of crisis for capitalists, but not for wage earners who as a result of falling prices gained increased purchasing power and were able to maintain the improved standard of living obtained during the 'Golden Age' 1850 - 1873. Duffy, whilst concurring that the period 1888 - 1891, was one in which workers won wage advances and trade concessions which kept them in the vanguard of rising prices, indicates a change between 1891 - 1893, marked by a drop in money wages and a rise in retail prices which caused a fall in real wages also, a trend accompanied by increasing unemployment. Data drawn from the Fiscal Blue Book of 1903, as interpreted by Sir Robert Ensor, indicates that prices zig-zagged during the period 1878 - 1896. Using an index of 100 in 1878, Ensor has calculated prices as 70 at the latter date. The same criteria applied to money wages in 1900, reveals an average of about 85% during the period 1875 - 1890. By combining the two aspects, real wages show an improvement of 77% in general terms between 1860 - 1900, with roughly a fourth of the progress being attributable to the last decade. Measured by the same yardstick bottle hands basic wages, while in advance in real terms, were only minimally so, while the cut backs in overwork rates between 1887 - 1890 applied in conjunction with the earlier increase in List numbers, represented an erosion in the level of artisan prosperity post 1878. In calculating the economic position of the bottle hands, however, it must
be borne in mind that no allowance is made for broken time, an important consideration at a time when the Great Depression had caused high seasonal unemployment to be consistently high, thereby effecting regularity of earnings and prospects of social security. It is these considerations, allied to the deterioration in working conditions and the implied, if not yet actual, threat to craft status, from mechanisation, which explains the growing militancy of the G.B.M. Society in the last quarter of the nineteenth century. Underlying the trend was a 'psychic income' factor which defined the attitude of the glassmaker in regard to his material standard by comparison to other occupational groups. Crowley has suggested that workers during the period of the Great Depression paid more attention to money wages than real wages, making comparison of the period with that of the prosperous Sixties and Seventies so far as wages and occupational security were concerned. The suggestion is reinforced and expanded by Duffy who concludes that growing dissatisfaction arose as a result of emphasis on the size rather than the purchasing power of wages. As a result a new social element was introduced into negotiations in which the quality of life in its physical, cultural and material aspects were considered in their relationship to wages and working conditions. Allied to such trends of thought were the more traditional ones regarding high wage maintenance.

"Skilled labour, will always demand better wages than unskilled ....." wrote the C.S. of the Flint Glass Makers' Society in 1877, pointing out that the difficult art of glassmaking with its protracted apprenticeship at inadequate wage levels, demanded subsequent high artisan wages to compensate

"...... or what is the advantage of sacrifice to rise to skilled status?" The epitome of the psychological attitude of the Yorkshire G.B. Makers is clearly evident in the view expressed by Greenwood upon analysis of wages and overwork payments by a leading manufacturer during 1890. This showed the combined weekly average earnings of a single artisan group as £1-17-Od each for 44 weeks, including 2 weeks stoppage for want of fuel. Greenwood wrote,

"... the question we ask the employers is -- What is there extraordinary in these wages, even if the men worked 50 weeks in a year, especially considering the nature of the
labour and the circumstances under which it has to be performed ...... Why, the men would rejoice if they all had the opportunity to earn these wages, but there are hundreds who have not known for years what it is to see them, much less handle them and spend them to best advantage. And we again affirm .... that if the Bottle Hands wages had improved in proportion to the wages of other artisans throughout the Kindgdom, that the Bottle Hands would now be in an enviable position and that instead of their wages being below par as they are, they would be, perhaps, not less than 20 shillings a week more per man than they are at present."28

In posing the question as to why the Bottle Hands' wages were disproportionate to the improvement in wages of artisans whose labour was less arduous and less skilled, Greenwood concluded that the employers policy of cut-throat competition, subsidised through the debasement of wage levels was the explanation. Greenwood also noted the benefit which might have been obtained as a result of a common policy based on standardisation of prices, stating,

"The Glass Bottle Trade has been in the hands of a few. They have had it entirely in their power to make it a profitable business, but they have cut down prices and reduced the men's wages until it has become absolutely necessary that the workmen use all the means in their power to secure better renumeration for their labour."29

The synthesis of practical experience and psychological interpretation formed the basis of the workmen's determination to restore the conditions of the trade which it was claimed

".... is fast becoming an occupation comparatively not worth following. There is no inducement for good lads to enter the trade. The conditions of labour are now such as only to command an indifferent
class - the refractory, careless and indifferent ones - many of whom would not be employed in other trades, and the workmen have to make the best they can with this class."

It is clear that the G.B. Makers regarded the deterioration in wages and workshop conditions in the wider social perspective but equally evident that they regarded the economic dimension as the principal status element from the adoption of a six-point programme which formed the basis of the 1891 Working Agreement. Supplemental to the proposal for a 3 shilling advance in journeyman wages was the demand for half wages for lost time, occasioned through fires out for furnace repairs or stoppage of work for other causes. Payment for bad metal or insufficiency, thus preventing attainment of the numbers was also sought. A compensatory payment for bottles cracked or melted during annealing and an allowance against loss occurring through flown marbles when making Codds Patent bottles, was desire. Finally, regularisation of working hours throughout the trade. The protracted negotiations which marked the trade Agreements of 1891 and 1892 were frequently punctuated by vehement and even bitter exchanges which by their nature presaged the industrial conflict of 1893, an event made more probable by the successful attainment of the aims of the workmen which were described as

"..... the most important Agreement that had been entered into by the trade." }

On December 5th 1892, the General Meeting of the Manufacturers' Association, justifying their action on grounds of bad trade and foreign competition, precipitated a 16 week dispute by locking out their men in order to enforce a wage reduction of 3 shillings per man per week and modification of the 1892 Agreement. The eventual outcome of the dispute was the manufacturers acceptance of the terms of the 1892 Agreement, effective until the end of 1894. The losses sustained by both sides had a sobering effect on future wage negotiations and the retrospective spirit of compromise so clearly evident in the C.S's Address in the G.B.M. Quarterly Report of March 1893 subsequently bore fruit in the trade agreements made between 1894 and 1909. During these years fluctuations in wages and overwork payments were undertaken by mutual consent. The votes of the members of the G.B.M. Society concerning wages proposals in the immediate post-dispute period indicate that the spirit of conciliation and co-operation manifested by the leaders of the Union had the support of a
minority of the membership only. What factors may be acribed to the co-operative attitude of the Union leadership? Crowley has suggested that although old trade unions did not subscribe to a wage-fund doctrine, the leaders nevertheless seem to have sought a 'natural' level and thereby revealed an acceptance of contemporary economic doctrines which precluded unrestrained wage bargaining. In addition to an upsurge in unemployment which exercised a cautious influence on Union leaders post 1893, the cost of living continued to decline until 1896 so that those in work experienced a rise in real wages. The plurality of the situation is well illustrated in the case of the Yorkshire Glass Bottle trade where seasonal factors engendered wide fluctuations in unemployment levels occasioned by more general trade conditions. Thus, of the 28 trade quarters covering the period 1893 - 1900, 12 reveal unemployment levels of 20% or less while the remainder show rates which varied between 20% and 50%, depending on general market conditions. The situation resulted in the variable application of overwork rates from 1894, with a 15% reduction for 9 months and a 25% reduction for the remaining period, forming the basis of the annual Agreement. In 1897 - 1898 the system was elaborated with overwork payments of between 5% and 20% being made in accordance with three defined phases of trade within each year. The increasingly sophisticated regulation of overwork earnings was accompanied by an increase in basic wages, shown in Table 10:2

TABLE 10:2 ARTISAN WAGE RATES IN THE YORKSHIRE GLASS BOTTLE INDUSTRY 1896 - 1909

<table>
<thead>
<tr>
<th>DATE</th>
<th>BOTTLE MAKER</th>
<th>BOTTLE BLOWER</th>
<th>GATHERER</th>
<th>BASIC ARTISAN EARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£</td>
<td>s</td>
<td>d</td>
<td>£</td>
</tr>
<tr>
<td>1st Jan 1896</td>
<td>1</td>
<td>10</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1st Jan 1897</td>
<td>1</td>
<td>13</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5th Feb 1900</td>
<td>1</td>
<td>14</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>2nd July 1900</td>
<td>1</td>
<td>16</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2nd Feb 1903</td>
<td>1</td>
<td>15</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>1st Feb 1904</td>
<td>1</td>
<td>12</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4th Feb 1907</td>
<td>1</td>
<td>14</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3rd Feb 1908</td>
<td>1</td>
<td>16</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Sources: (i) G.B.M. Reports, Volume XXI, pp 47 - 48, (ii) G.B.M. Reports, Volume XXII, p 12.
The Table shows a rise of 18% in basic chair earnings between 1896 - 1900, reflecting the increase in money wages in response to the growing cost of living. The increases also reflect the short period of trade boom at the turn of the century with two increases in basic wage rates within the year 1900. Together with the 5% advance on List rates of overwork the increases, calculated on the customary measurement of £2-0-0 per week overplus, made average journeyman earnings about £7 per week. Between 1903 - 1907, however, depressed trade resulted in a two phase reduction in basic wages and overwork rates, resulting in a decrease in chair earnings of 13.5% overall. From 1907, a rising trend commenced with an increase of 6.8%, supplemented by a further 6.0% increase in 1908, so that by that date artisan wages equalled the rates applicable during the boom periods of 1873 - 1876 and 1900 - 1903.

The variable course of wage payments occurred against a background of widening influences. The increasingly complex fluctuation in overwork rates post 1894, emphasised the danger of working to full capacity to ensure the highest possible piecework earnings and thereby engendering further rate reduction and exacerbating the high level of artisan unemployment through overproduction. In addition, payment by results because of inherent variations in earnings as a result of differences in job types, variable materials, workshop conditions and differences in the productive ability of chair groups promoted wage negotiations of a more comprehensive nature. Emphasis was placed on payments for broken time and work sharing as a means of equalising earnings and employment opportunities. Underpinning the above tendency was the psychological belief in the finite degree of employment which held that a self-imposed restriction in productivity by one worker ensured a greater degree of work for another. Contemporaneous influences such as the adverse effect on wage levels arising from increased foreign and domestic competition prompted attempts to foster wider artisan unity via the establishment of the International Union (1889) and the National Conferences of the Regional Societies of the trade from 1892, with a view to procuring a uniform list of numbers and rates of payment. Paradoxically, the divergent regional conditions created a cohesive element within the Yorkshire trade based on the tacit desire of employers and workmen to safeguard the pre-eminence of the County container trade. Influences such as these go far to explain the scheme for an Alliance of Masters and Men proposed in mid 1898. The scheme which was basically
designed to fix the selling prices of bottles with wages governed in accordance with prices, represented an attempt by the Yorkshire manufacturers to rebut the effects of foreign competition through a united approach which obviated domestic competition. The Union leaders had long regarded price-fixing as the key to industrial and ipso facto, artisan prosperity. The scheme, with its acceptance of sliding scales therefore represented an attempt to bring order and uniformity into an increasingly complex arena of wage negotiation with its competitive bargaining. Unfortunately, the scheme coincided with the previously mentioned attempt to impose a uniform list of wages and overwork throughout the entire national trade with the result that one scheme militated against the other causing the collapse of both. The positive benefits arising as a result of a common policy formulated by a Joint Wages Board are conjectural. More easily discernible are, the consequent industrial developments occurring as a result of the failure to establish an Alliance. The industry remained characterised by an out-moded system of competitive wage bargaining with seasonal and cyclical trends dictating the outcome of wage settlements. The competitive element intensified the efforts of manufacturers to reduce labour costs by recourse to machine production, or as an intermediate measure, adoption of flint glass and continental systems of manufacture. Against the economic background of Britain's free trade policy and the protectionist policies of foreign powers, and the rise of the indigenous glass manufacturing within the Colonies, the home producers were increasingly denied access to overseas markets. Consequently, they were compelled to seek outlets in domestic markets increasingly infiltrated by cheaper foreign bottles. In an effort to stave off the challenge, British glass manufacturers resorted to price cutting, seeking to redress the balance by reductions in wages and overwork rates, thereby perpetuating the conflict of capital and labour. The vicissitudes through which the Yorkshire trade had passed since 1880 had undoubtedly resulted in the regression of the social and economic standing of the artisan glassworkers within the workshop and society in general. Thus, although the years of good trade and rising prices combined to produce high wage levels in 1909, and thereby mask the degenerative process, the decline was to become increasingly apparent thereafter.
CHAPTER TEN: Wages and Overwork Rates, 1880 - 1909


3. G.B.M. Reports, Volume XII, p 450.

4. Ibid.


7. Ibid.

8. Ibid.

9. The Proposition was made subject to a $\frac{2}{3}$ majority, the voting being 579 to 60, a majority in favour of submitting Notices of 519, with 57.8% of the total membership participating in the ballot. cf G.B.M. Reports, Volume IX, p 223.


11. Ibid, p 54.


13. Some manufacturers desired a straight reduction of basic wage rates; some, a basic reduction and a partial reduction of overwork rates, and others solely an assault on overwork rates cf G.B.M. Reports, Volume VIII, p 53.

14. The workmens' deputation attended the Conference of June 4th 1888 with statistics showing variable prices for bottles despite the terms of the 1881 List. The manufacturers, however, pro- fessed to pay according to List prices. At a subsequent meeting
the workmen brought along a quantity of actual bottles made at
different firms for the purpose of comparing them and proving
their statements regarding variable payments, an action which
resulted in the retrospective payment of due wages and the

Written evidence submitted by Alfred Greenwood.


17. Wages Book 1890 – 1895. Beatson & Co., Rotherham, quoted in
Brundage op cit, p 28. Brundage notes that the head founder
might earn as much as £1-7-0 per week.

18. Ibid. Brundage's statement is based on data in the Board of
Trade Report on the Cost of Living of the Working Classes (1908)
Cd 3864, CVII, p 145.


21. Memoranda Statistical Tables and Charts prepared in the Board
Trade with reference to various matters bearing on British and
Foreign Trade and Industrial Conditions (CD. 1761). Edited by


23. Ibid.


Movement from Liberalism 1875 – 1906. University of London,


29. Ibid.


31. The sealed mouthed bottles known as Codds Patents were the invention of Hyram Codd in 1871. cf Beattie G. 'The Genius of Hyram Codd', Bottling, April 1958, pp 49 - 58.

The bottles were sealed by a marble which was manufactured in a press machine and later inserted into newly made bottles. Owing to the difference in the constitution and temperature between the marble and the bottle itself, the annealing process frequently caused the marble to force its way out of the mouth of the bottle and therefore render the bottle useless.

32. The 1891 Agreement was negotiated between June 1890 and December 1890, cf Preface to Report of Correspondence ...... Negotiations re 1892 Agreement commenced October 1891, and continued until February 1892, cf G.B.M. Reports, Volume XXI, p 55. For full terms of the 1892 Agreement cf G.B.M. Reports, Volume XIV, pp 530 - 531.

33. G.B.M. Reports, Volume XXI, p 55.

34. G.B.M. Reports, Volume XIV, p 3 and p 7.

35. Ibid, pp 520 - 527.


42. cf Crowley, op cit, pp 13 - 14.
WORKING CONDITIONS AND HEALTH

(a) Working Conditions.

The impact of technological change was not merely confined to the material status of the artisan glassmakers. A noticeable deterioration in working conditions occurred post 1880 as a result of the gradual changes in the workplace, with a corresponding deterioration in the health of the workers.

The widespread adoption of tank furnaces after 1880 resulted in overcrowding of existing work space and greater intensification of heat and furnace glare. At the same time a substantial increase of the workforce during the boom of the early-1870s had resulted in a similar increase in Union membership. The onset of the depression of the 1880s meant a considerable strain was imposed upon Union finances as a consequence of high unemployment and increased demand for sickness, superannuation and death benefits. The latter development not only caused a greater awareness of the degree of sickness disability and mortality within the ranks of the membership, but necessitated the adoption of strategies designed to procure better working conditions and reduce the economic strain experienced by the unions in the administration of welfare benefits. Allied to the socio-economic factors were those concerning the nature of the Unions which by the 1890s had gained legal and social acceptance, a high degree of centralisation and, in the case of the G.B.M. Society particularly, a radical political attitude. Such influences engendered conditions inducive to the study and elimination of the harmful effects of industrial technology. An additional factor underlying Union attitude was the general agitation of the Union Movement in the industrial legislation of the period 1880 - 1895 and the disappointment arising from it, particularly aspects concerning employers' liability and compensation. 1

Although the attitude of the G.B.Ms. Executive concerning health and safety undoubtedly had the support of and, indeed, may have been urged by an element within the rank and file, 2 it seems probable that agitation to obtain improvement of existing working conditions was confined to the radical minority of the membership. The protracted
and desultory nature of negotiations concerning the subject following its official introduction onto the agenda of items for negotiation between manufacturers and the men's representatives in 1891 was, perhaps, as much an indication of the indifference and even fatalism on the part of the majority of the workers in matters concerning standards of health, safety and hygiene as acceptance by the Union leadership of economic constraint. Adherence to customary observance meant that even where the inadequacies of workshop design resulting in excessive temperature, atmospheric pollution and poor ventilation were known by the workmen to be inimical to health and comfort, the wilfulness of a few could for good or bad reasons, subjugate the desire for change.\(^3\) The attitude of the employers was primarily governed by cost consciousness. For some years previous to 1891 the Union had sought to bring the subject within the framework of the Joint Consultative Committee which, since its establishment as a wage negotiating body in 1882, had widened its remit to include relative aspects.\(^4\) The agitation for improved working conditions commenced at a time when despite a phase of brisk trade, the manufacturers were experiencing the effect of low profit as a result of domestic and foreign competition. Consequently, when pressure to discuss the men's grievances became too strong to resist, the manufacturers through the Secretary of their Trade Association, adopted the line that action to secure improvements was a matter for discussion between individual employers and their workmen.\(^5\) In this attitude the manufacturers were influenced by the awareness that business rivals who were not members of the Manufacturers Association would be spared the expense arising from a formally negotiated Agreement on the subject and therefore obtain a competitive advantage.\(^6\) The dismissiveness of the employers was countered by the emphatic observation of the workmens' delegation at the Joint Conference, 3rd November 1891, that although the manufacturers

"..... had decided that the questions of Apprentices and Sanitation should not be considered the workmen had decided that they should, either sooner or later be considered."\(^7\)

Having enforced the acceptance of the subject as one for negotiation within the ambit of the joint negotiating machinery seems to have been the primary object of the Union. Although doubtless anxious to procure better working conditions for the membership, the Union
representatives appear to have realised the constraint of prevailing circumstance and to have used the issue of health and sanitation as a strategy by means of which to ensure a satisfactory settlement of wage and overwork rates. The subject of working conditions was therefore

"left open for a more convenient season"

although Greenwood assured his members

"It is not dead – but sleeppeth." 

The growing attention to matters of health appears to have had its genesis in the decision of the Union to make the first of its annual grants to Leeds Infirmary in 1866. The decision was followed by a donation towards the building of Rotherham Infirmary a few years later, and further supplemented in August 1885, by the decision to make an annual donation of £2-0-0 to the Askern Bath Charity to enable the Society to send a number of members for treatment at the Spa. On behalf of the manufacturers it was claimed that all desired to improve their works and that despite low profits some had already carried out extensive alterations enabling comparison with any in the country. While acknowledging the fact with regard to the factories of Alexander, and Barrons, Greenwood stated that improvements could be effected at minimal cost by simple means such as fitting cowls over furnaces, particularly gas-fired furnaces, to extract heat and fumes through the shop roof and thereby assist ventilation. Greenwood also cited the resistance of employers for over twenty years to complaints by the workmen regarding the state of factory workshops in general. Such factories Greenwood asserted

"ought to be condemned by the Factory Inspector or closed by Act of Parliament as unfit to work in".

Greenwood's assertion that Section 3 of the 1878 Factory Act governing workshop conditions was a dead letter as far as glasshouses were concerned and his threat to invoke government inspection under the terms of Buxton's 1899 Bill may have been instrumental in persuading the employers to include discussion of working conditions on the agenda for joint consultation. More importantly the threat presaged a change in attitude by the Union leadership from one of independent action to one of increasing dependence upon government support in keeping with the emergent trend amongst the unskilled Unions then beginning to dominate the T.U.C.
Between 1892 - 1894 Greenwood and William Wheater undertook a visitation of all glass manufacturing sites throughout Yorkshire, compiling a survey as a preliminary to further discussion with the Employers Association. Debate on the subject was stifled by the advent of the industrial dispute of 1892 - 1893 and subsequent need to minimise the injurious aspects of the trade and present a united front with the Manufacturers Association in the attempt to have the Glass Trade excluded from sub-section 5, clause 13 of the Factories and Workshops Act of 1898. The provisions of the Act restricted the employment of boys under 16 and prohibited young persons working at night. The evidence offered by a deputation from the trade which met Home Secretary, Herbert Asquith, 30th April 1895, claimed that the continuance of boy labour was essential to the general well-being of the trade. The stance was supported by statements claiming that not only was the work well within the capacity of young boys, but that

"The works in which the manufacture is carried on are spacious and well ventilated," and that

"The health of the workers is generally sound." Such assertions were at obvious variance with the general conditions within Yorkshire glassworks where young boys walked a distance in excess of 20 miles per day as takers-in. The statements were also in clear contradiction of evidence given by Alfred Greenwood to the Royal Commission on Labour in 1892, in which he had complained that

"... the furnaces are more like Dante's inferno than structures approachable by human beings of flesh and blood" and where even in the winter season

"the workmen may be half roasted." The wisdom of the alliance with the employers was questioned and Greenwood and his Executive criticised by several branches of the Society. Nevertheless, the degree of support from the branches in general indicates the willingness of the rank and file to subvert considerations of physical well-being to the cause of capital in the hope that the sacrifice would ensure regularity of employment. In parrying branch criticism Greenwood reiterated his determination to obtain better working conditions throughout the trade, if necessary by enlisting the aid of the Factory Inspectorate and even appealing directly to the Home Secretary. Clearly, Greenwood, and by implication his Executive Council, regarded political action as
<table>
<thead>
<tr>
<th></th>
<th>Castleford Branch</th>
<th>Barnsley Branch</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Average</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>PER ANNUM 16</strong></td>
</tr>
<tr>
<td><strong>YEAR</strong></td>
<td><strong>NO.</strong></td>
<td><strong>NO.</strong></td>
</tr>
<tr>
<td>1981</td>
<td>1150</td>
<td>6750</td>
</tr>
<tr>
<td>1982</td>
<td>1327</td>
<td>6350</td>
</tr>
<tr>
<td>1983</td>
<td>1130</td>
<td>5650</td>
</tr>
<tr>
<td>1984</td>
<td>1556</td>
<td>8530</td>
</tr>
</tbody>
</table>

**Table 11.1: Comparison of number of weeks and jornuines lost through sickness at two branches of the Yorkshire C.G.M. Society during the periods 1978 - 1981 and 1984 - 1987.**

**Source:** C.G.M. Reports, Volume XIX, p. 508.
a supplemental adjunct to secure industrial objectives and valued
the role of the recent trade deputation in providing a personal
entree into government circles. On the basis of the evidence pre-
presented to the Labour Commissioners two years before, the G.B.M.
Society drew up an agenda regarding sanitation, smoke, sulphur and
working space, contending that

"Few trades, if any, are to be found where
the workmen have to endure such a con-
tinuous physical strain as the Glass Bottle
Makers." 22

The basis of the Union assertion was that the widespread adoption of
continuous gas-fired furnaces had raised working temperatures dramat-
tically and at the same time increasing six-fold the number of men
and boys working at each furnace due to the size of the tanks. By
their continuous operation founders and furnace men were having to
work simultaneously with the journeymen and apprentices, thereby
exacerbating the overcrowded conditions. 23 The close proximity of
the bottle houses also inhibited adequate ventilation, increasing
levels of sickness and mortality. The effect at two Yorkshire branches
is shown in Table 11:1.

The Table shows a dramatic increase in lost production at both branches
through sickness following the introduction of gas-fired furnaces.
While the data does not allow for consideration of external influences
such as deficiencies of housing and sanitation within the context of
the wider urban environment, it is likely that such conditions were
subject to general improvement, whereas those within the glassworks
are known to have worsened. In terms of space for instance, the
number of bottle holes per furnace had almost doubled at Castleford
and more than trebled at Barnsley over the period. The consequences
of such overcrowding was clearly a factor behind the rising illness
indicated in the Table.

Table 11:2, based on the sample of 114 incapacitated bottlehands forced
into premature retirement as a result of illness other than deficien-
cies of vision between 1898 - 1906, shows that 58% of the total sample
suffered from disorders arising from or at least exacerbated by the
nature of their work and the conditions under which it was conducted.
The incidence of heart and respiratory disabilities indicates the
principal causes of mortality among G.B. hands.
### TABLE 11:2
MISCELLANEOUS DISEASES CAUSING INCAPACITATION OF MEMBERS OF THE YORKSHIRE G.B. MAKERS' SOCIETY 1898 - 1906

<table>
<thead>
<tr>
<th>DISEASES</th>
<th>MAKERS</th>
<th>BLOWERS</th>
<th>GATHERERS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Disease</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Kidney Disease</td>
<td>7</td>
<td>2</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Blood Vessels</td>
<td>7</td>
<td>1</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td>Emphysema</td>
<td>5</td>
<td>2</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Nervous Diseases</td>
<td>4</td>
<td>3</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Phthisis</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>10</td>
<td>2</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>44</td>
<td>19</td>
<td>3</td>
<td>66</td>
</tr>
</tbody>
</table>

Source: G.B.M. Reports, Volume XXI, p 126
### TABLE 11:3

**CAUSES AND NUMBER OF JOURNEYMAN'S DEATHS, YORKSHIRE**  
**G.B.M. SOCIETY, 1893 - 1910**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL J/M DEATHS</th>
<th>CAUSES OF DEATH</th>
<th>AVERAGE J/M AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>RESPIRATORY</td>
<td>FEVER</td>
</tr>
<tr>
<td>1893</td>
<td>18</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>1894</td>
<td>25</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>1895</td>
<td>25</td>
<td>10</td>
<td>2</td>
</tr>
<tr>
<td>1896</td>
<td>23</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>1897</td>
<td>24</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>1898</td>
<td>35</td>
<td>18</td>
<td>1</td>
</tr>
<tr>
<td>1899</td>
<td>22</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>1900</td>
<td>31</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>1901</td>
<td>27</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>1902</td>
<td>33</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

1903 (a) STATISTICS WANTING

1904

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL J/M DEATHS</th>
<th>CAUSES OF DEATH</th>
<th>AVERAGE J/M AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1905</td>
<td>24</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>1906</td>
<td>33</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>1907</td>
<td>36</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>1908</td>
<td>35</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>1909</td>
<td>50</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>1910</td>
<td>21</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

| TOTALS | 462 | 168 | 11 | 59 | 10 | 21 | 29 | 11 | 1 | 11 | 17 | 12 | 112 | 46.5 |

Source: G.B.M. Reports, 1893 - 1910 passim.

(a) Statistics unavailable for 1903 - 1904
The data in Table 11:3 is based on the obituary details published within the Quarterly Reports of the Yorkshire G.B.M. Society from 1893 onward. Categorisation is based on the types of disease and illness most commonly associated with glass trade workers.

A caveat should be entered, however, regarding the categorisation arising from the lack of uniformity in medical certification and the emphasis regarding the primary source of death ascribed by individual medical practitioners. Consequently, where two causes of death are given, that first recorded has been taken as the major cause. The Table indicates the prevalence of respiratory illness with 35.3% of deaths ascribed to this source. Second in importance is the occurrence of heart disease responsible for 12.7% of recorded deaths and of increasing frequency in the closing years of the period covered. While reflecting the prominence assumed by this disease during the present century, it may not be entirely unconnected with the pace and intensity of manual production within a trade in which machine production was becoming ascendant. The frequency of strokes is also an indication of the accumulative strain of the work and the circulatory conditions resulting in death was doubtless an allied contributory factor in the inducement of seizures. Almost three deaths in every hundred occurring as a result of suicide may reflect the tenor of life in general rather than being the result of direct trade practices. It must, however, be noted that the high incidence of unemployment and consequent deterioration of socio-economic status among bottle hands would feature prominently in depression and disillusionment arising from debasement of general lifestyle. Despite the dangerous nature of the trade it is noticeable that none of the accidental deaths occurred as a result of mishaps at work but conversely, few artisans died from natural causes. The Table also provides an indication of the average life span of glass bottle hands calculated from the ages of members recorded in the obituary columns of the G.B.M. Reports. The data shows that the average life span was almost 43 years from 1893 to the closing of the decade. From 1900, however, a significant leap is evident with the annual average rising from 46 years at the turn of the century to 53.9 by the end of the first decade, giving an average overall of 49 years.

Table 11:4 shows that in the 23 years 1880 - 1902, of 826 deaths amongst members of the F.G.M. Society, including those of the Yorkshire district, 20.4% died from respiratory conditions. Heart disease
<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL J/M DEATHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>32</td>
</tr>
<tr>
<td>1881</td>
<td>31</td>
</tr>
<tr>
<td>1882</td>
<td>35</td>
</tr>
<tr>
<td>1883</td>
<td>26</td>
</tr>
<tr>
<td>1884</td>
<td>28</td>
</tr>
<tr>
<td>1885</td>
<td>34</td>
</tr>
<tr>
<td>1886</td>
<td>25</td>
</tr>
<tr>
<td>1887</td>
<td>31</td>
</tr>
<tr>
<td>1888</td>
<td>40</td>
</tr>
<tr>
<td>1889</td>
<td>31</td>
</tr>
<tr>
<td>1890</td>
<td>42</td>
</tr>
<tr>
<td>1891</td>
<td>44</td>
</tr>
<tr>
<td>1892</td>
<td>35</td>
</tr>
<tr>
<td>1893</td>
<td>34</td>
</tr>
<tr>
<td>1894</td>
<td>40</td>
</tr>
<tr>
<td>1895</td>
<td>49</td>
</tr>
<tr>
<td>1896</td>
<td>44</td>
</tr>
<tr>
<td>1897</td>
<td>39</td>
</tr>
<tr>
<td>1898</td>
<td>42</td>
</tr>
<tr>
<td>1899</td>
<td>34</td>
</tr>
<tr>
<td>1900</td>
<td>47</td>
</tr>
<tr>
<td>1901</td>
<td>28</td>
</tr>
<tr>
<td>1902</td>
<td>35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAUSES OF DEATH</th>
<th>RESPIRATORY</th>
<th>FEVER</th>
<th>HEART</th>
<th>LIVER</th>
<th>STROKE</th>
<th>TUMOR</th>
<th>CIRCULATORY</th>
<th>BLOOD</th>
<th>SUICIDE</th>
<th>ACCIDENTAL</th>
<th>NATURAL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>5 3 3 2 2 3 2</td>
<td>4 8</td>
<td>48.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1881</td>
<td>7 1 2 3 1 1 1 2 14</td>
<td>1 2</td>
<td>40.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1882</td>
<td>14 1 3 1 3 1 1 1 10</td>
<td>1 1</td>
<td>48.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1883</td>
<td>5 2 3 1 2 1 1 12</td>
<td>1</td>
<td>53.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1884</td>
<td>14 1 1 1 1 2 9</td>
<td>2</td>
<td>47.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1885</td>
<td>11 4 1 1 1 1 1 1 16</td>
<td>1</td>
<td>51.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1886</td>
<td>4 3 3 1 1 1</td>
<td>1 1 16</td>
<td>55.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1887</td>
<td>6 4 1 1 1 1 1 1 15</td>
<td>1</td>
<td>60.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1888</td>
<td>11 1 2 3 1 1 1 3 18</td>
<td>2</td>
<td>58.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1889</td>
<td>2 1 1 1 1 1 1 1 2 13</td>
<td>1</td>
<td>44.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1890</td>
<td>8 3 1 1 1 1 1 29</td>
<td>2</td>
<td>54.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1891</td>
<td>9 1 1 1 1 1 1 1 25</td>
<td>1</td>
<td>54.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1892</td>
<td>10 1 1 1 1 1 1 1 24</td>
<td>2</td>
<td>52.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1893</td>
<td>9 2 2 1 1 1 1 1 1 17</td>
<td>3</td>
<td>55.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1894</td>
<td>11 4 1 1 1 1 1 2 20</td>
<td>1</td>
<td>57.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1895</td>
<td>11 3 1 1 2 1 2 2 28</td>
<td>1</td>
<td>55.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1896</td>
<td>7 1 1 2 1 1 1 1 29</td>
<td>1</td>
<td>56.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1897</td>
<td>6 1 1 1 1 1 1 2 27</td>
<td>2</td>
<td>58.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1898</td>
<td>5 1 3 4 1 1 1 7 22</td>
<td>4</td>
<td>58.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1899</td>
<td>4 1 3 1 1 1 1 2 23</td>
<td>3</td>
<td>58.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1900</td>
<td>4 1 1 1 1 2 1 3 1 32</td>
<td>1</td>
<td>59.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1901</td>
<td>2 1 2 1 1 1 2 4 16</td>
<td>1</td>
<td>58.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1902</td>
<td>4 1 1 1 1 2 9</td>
<td>1</td>
<td>58.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| TOTALS           | 826 169 12 40 7 33 12 23 1 12 51 482 | 54.1  |

Source: F.G.M. Magazines 1880 - 1902, passim.
accounted for 4.8%, whilst a further 3.9% of deaths were as a result of strokes, allied to a further 3.0% caused by circulatory conditions. The principle causes of death compares in general with those concerning the G.B. Makers shown in Table 11:3 supra. It is noticeable, however, that although the number of years featured in Table 11:4 is greater than the period covered by the former table, the incidence of fatal disease in each category is generally greater amongst the G.B. Hands. This may be explained in part by the fact that the data in Table 11:4 is provided by a wider geographical sample thus encompassing more varied environmental conditions. However, as F.G. Hands based in Yorkshire bottle works comprise only 14% to 35% of the total sample over the period, it is reasonable to assume that comparative differences may arise, at least in part, as a result of differing conditions within the two spheres of glass manufacture. Thus, the fact that significantly more F.G. Hands died of natural causes may be indicative of less strenuous and healthier working conditions than those applicable to the G.B. Hands, a fact which may also be indicated by the considerably lower number of deaths occasioned by malignant growths and in a mental context, by comparison of the number of suicides. The extraneous influences underlying the tabular data impose a subjective element on such analysis but this is less apparent in terms of the lifespan of each artisan group since the degree of longevity was dictated by both the conditions of work and of the wider environment. It is interesting to note that the average age of deceased flint hands is several years in advance of that of the bottle hands.

Table 11:5 which shows the degree of mortality among Flint Glass Bottle Makers, permits a more direct comparison with the Bottle Hands during the early years of the present century. As the majority of each group was employed in Yorkshire glassworks, members of each group frequently shared the same place of employment and residence, thus validating the comparison. The Table replicates the trends revealed in the two previous tables regarding the principal causes of death among journeyman glassworkers, but it is, however, of particular significance that the average age of the deceased Flint Glass Bottle Makers at 47.1% almost accords with the 46.5% of the Glass Bottle Makers and is considerably less than that of 54.1% shown in the case of the Flint Glass Makers in general. The fact suggests that bottle making by whatever manual method was more arduous, and the working conditions within Yorkshire glassworks, less salubrious than the system.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL J/MAN DEATHS</th>
<th>RESPIRATORY</th>
<th>FEVER</th>
<th>HEART</th>
<th>LIVER</th>
<th>STROKE</th>
<th>TUMOR</th>
<th>CIRCULATORY</th>
<th>BLOOD POISONING</th>
<th>SUICIDE</th>
<th>ACCIDENTAL</th>
<th>NATURAL</th>
<th>OTHER</th>
<th>AVERAGE J/MAN AGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1903</td>
<td>9</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>34.0</td>
</tr>
<tr>
<td>1904</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>44.0</td>
</tr>
<tr>
<td>1905</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>43.7</td>
</tr>
<tr>
<td>1906</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.2</td>
</tr>
<tr>
<td>1907</td>
<td>14</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>46.4</td>
</tr>
<tr>
<td>1908</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>61.8</td>
</tr>
<tr>
<td>1909</td>
<td>23</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39.2</td>
</tr>
<tr>
<td>TOTALS</td>
<td>76</td>
<td>13</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>46</td>
<td>1</td>
<td>2</td>
<td>46</td>
<td>47.1</td>
<td></td>
</tr>
</tbody>
</table>

Source: N.G.B.M. Magazine, 1903 - 1909 passim
and conditions generally applicable in the traditional sphere of flint glass production.

The comparative tabular data provides a context for the emphasis placed on health and working conditions by the G.B. Makers' Society post 1880 and the action taken to obtain an improvement.

In order to eliminate the overcrowded conditions within the bottle houses the Union demanded in 1897 a minimum of 5 foot of space between bottle holes, with marvers to be situated at least 14 feet from the furnace wall and the external walls of each bottle house to be 22 feet in length with manoeuvrable windows to ensure controlled ventilation. Workshop roofs were to have a 12 foot pitch from eves to ridge with trellised casements of conical design to a height of 9 feet above the roof ridge to aid ventilation. These and other minor demands, were considered by a sub-committee of masters and men and reluctantly conceded by the former group out of fear of implementation of Greenwood's threat of direct government intervention. Complaints cited by Greenwood concerning individual factories showed the danger to life and limb arising from bad working conditions, particularly at Breffits Works, which fully justified the contention that

"The muscular strength now required to work in the glasshouse is such that a considerable portion of men will be crippled and their constitutions will be broken down when they should be in their full vigour and prime of life, and this result is being accelerated through the workshops not being fit to work in."  

In addition, it was shown that the majority of Yorkshire glass bottle works were below the standards imposed by the Union and although the manufacturers response to the workmen's grievances was to rectify minor complaints, lack of capital prevented immediate implementation of large-scale reconstruction. The years between 1898 and 1901 were spent in the formulation of formal procedures which were incorporated into the Annual Trade Agreement of the latter year. By the terms of the agreed procedure grievances were initially a matter for representation and discussion at individual factories with subsequent referral to the Joint Sub-Committee in the event of initial deadlock.
The formulation of the grievances procedure was in effect a compromise. Whilst recognising the original contention of the masters that the diversity of conditions within the trade made the issue a matter for individual negotiation, the collective acceptance of formally established machinery ensured for the Union an immediate degree of minor improvement and a long term commitment to major reconstruction designed to procure conditions conducive to better standards of health among glass artisans and apprentices. The basis of negotiation for the reconstruction or building of new factories was published in a circular issued to the trade, 2nd December 1900. However, the advent of machine production dictated the actual lay-out and dimensions of new and reconstructed plants. Many less wealthy and less progressive firms continued to utilise manual systems of production for many years. The economic circumstances inherent in the competition between the increasing efficiency of the machine and the decreasing value of manual based systems meant that the Unions, who were compelled to give prior consideration to the threat posed to the members' livelihoods by the rapid technical change, had neither the power to enforce, nor the manufacturers the wealth to implement, the desired reforms regarding betterment of working conditions.

The advent of machine production was a catalyst for change in the practical, social and psychological condition of the workers within the glass trade. The detrimental effect on the operatives of the attendant noise and bustle from machine utilisation was manifested increasingly in nervous disorders and dulled hearing as well as in the imposition of barriers to comradeship arising from social isolation on the shop floor, the extent of which is indefinable. Psychologically, by transforming the worker to the role of human accessory, the veritable extension of the machine process, the socio-economic status which was the foundation of the exclusively artisan based union power was destroyed. State paternalism and the implementation of government sponsored legislation, became the alternative refuge of the glassworker, thus producing the fin de siècle to the process of direct government intervention threatened by Alfred Greenwood a generation earlier.

(b) **Diseases of Occupation.**

"The making, blowing and engraving of glass occupies a prominent place among unhealthy trades"
stated an eminent medical authority in 1902, and blamed the general conditions in which work was undertaken for the high incidence of serious health problems occurring within the trade. In 1908, the same authority, using data based on research by doctors Prettin and Liebkind drawn from a sample of 230 German glassmakers, aged between 25 and 65 years of age, working in conditions analogous to those in British glassworks, claimed evidence of rising mortality within the industry since 1881. The German researchers found that 20% of their data sample suffered from diseases directly attributable to working conditions such as dust, heat, inadequate ventilation and direct contagion arising from shared blowing pipes. The evidence suggests that no improvement had occurred within the trade since the damming indictment by Engis over half a century earlier. Referring specifically to the extensive use of child labour within the industry Engis had stated

"Many of the children are pale, have red eyes, often blind for weeks at a time, suffer from violent nausea, vomiting, coughs, colds and rheumatism. When glass is withdrawn from the fire, the children must often go into such heat that the boards on which they stand catch fire under their feet." The 4th Report of the Childrens Employment Commission, 1865, while noting that the design of the new urban glassworks situated at Castleford and elsewhere was

"..... remarkable for the amount of light and airiness ..... and certainly seems as if it must be more healthy for the workers. I noticed more colour in their complexions than is usual," nevertheless provided many examples of aspects of the trade injurious to the health of all engaged within it. In pursuance of their trade the workers suffered a myriad minor health hazards, many, however potentially serious. Cuts, burns and bruises were commonplace. Such injuries frequently left untended resulted in blood poisoning, sometimes with fatal consequences. The effect of heat and glare from the adjacent furnace in addition to causing physical exhaustion engendering headaches and langour also, through the conduction of heat along the metal blowing pipes, had a detrimental effect upon
both the hands and mouth. Inflammation of the throat, coughs and colds, due to the heat of the furnace and the sweating this produced made glassworkers susceptible to chills which frequently developed into more serious conditions such as tonsilitis, diphtheria and pneumonia, while more insidiously, diseases such as syphilis and T.B. were transmitted as a result of sharing infected blowing pipes. The incidence of respiratory disease was noted by Oliver as being particularly excessive amongst glassworkers even allowing for its general frequency in late nineteenth century society. Facial deformity was also commonplace within the trade as a result of the strength of the blast required in the process of bottle blowing which one authority estimated to be in excess of eleven times that required for normal expiration of air through closed lips. The cheeks were expanded to the point of transparency during the course of blowing and were known on occasion to rupture, producing the condition known as 'glassblowers mouth'. In addition, blowing induced great strain upon the heart due to the suspension of the blood supply, a fact amply borne out by the suffusion of blood to the face during the blowing process. The arduous nature of the work also placed considerable strain upon the body and stooped shoulders, varicose veins, haemorrhoids, thickening knee joints and fallen arches were common marks of the trade. Continual dehydration as a result of perspiration caused by the great heat from the furnace, was assuaged by the consumption of prodigious quantities of liquor, particularly beer. Consumption of alcohol continued outside working hours and the effect of drink upon the constitution was an important factor in premature ageing and mortality through the inducement of nervous disorders and damaged liver. The detrimental effect of meals taken hurriedly and at irregular times within the insanitary and polluted confines of the workshop was a further contributory health risk. Glassworkers adopted a stoical indifference to such matters. The sweat-soaked clothes were augmented by a short jacket, flat cap, and white silk scarf, regardless of season or weather, with no recognition of the obvious connection between the mode of dress and the coughs, rheumatism and lumbago which were common ailments among the fraternity. Common ailments were treated by traditional remedies or patent medicines. What reasons may be ascribed for the acceptance by the glassmakers of the adverse effect of working conditions upon their state of health? One explanation is to be found in the degree of illness occurring as a direct consequence of the general conditions of urban life which...
made less obvious the debilitating effect of working conditions. Another was the ready acceptance of minor injury and discomfort as a natural adjunct of the job itself and as such to be suffered uncomplainingly. Further, the long-term effects of bad working conditions were unrecognised in the formative decades of the industry as the widespread incidence of cataract was to later prove (cf infra). Customary observance also embraced negative aspects of trade practice only slowly eroded by the gradual introduction and implementation of industrial legislation. Against the brutal background of urban industrialism the glass artisan measured the quality of life and work mainly in terms of the economic dimension. His craft enabled him to afford the luxuries which cushioned him against the worst effects of bad housing and dietary deficiency, and provide the contributions necessary to secure for himself and his family the welfare benefits administered by his trade society. His material and social status assured in relation to the bulk of his working glass contemporaries, by the level and regularity of his earnings, the glassmaker looked for little beyond.

(c) Cataract of the Eyes - A Case Study.

The single most documented aspect concerning the health of glass bottle workers as a direct result of their working conditions is that concerning cataract of the eyes. The condition was so prevalent amongst workers in the trade that it was ultimately designated as 'glassmakers cataract' by medical authorities.

Work in the immediate vicinity of the open mouth furnaces exposed the artisans to heat and light rays of great intensity. This was particularly the case with gatherers and finishers, both of whom worked adjacent to and facing the furnace. The blowers, although subjected to the heat of the viscid glass they manipulated, operated at a greater distance from the furnace and with their backs presented to it.

Despite the high incidence of failing sight among bottle workers throughout the period of research it was not until the closing years of the 19th century that either medical research or industrial action was taken concerning the subject. There are several explanations for the apparent neglect of the causes and consequences of the condition, social, material and psychological. Although commencing quite
early in the working life of a glasshand the opacity initially com-
menced at the pole of the lens and spread so slowly that although
visibility was progressively impaired it was not until between 40
and 50 years of age that the artisan became fully incapacitated. 56
Even when seriously troubled by the condition many artisans refrained
from making their problems known for fear of dismissal by their em-
ployers. Furthermore, it was not until about 1880 that the worsen-
ing effects of furnace technology in which heat and glare from the
intensified gas-fired continuous tank furnaces allied to workshop
overcrowding became manifest in an industry which in national terms,
was of secondary rank and thus comparatively neglected by industrial
legislation. The uncertain basis of the condition was also a factor
which delayed for some years appropriate action to check or eliminate
the disease. Some medical authorities regarded heat rays; some
light rays and others profuse perspiration as the cause of the con-
dition. 57 Prior to the 1880s, the Unions were engaged upon more
immediate issues concerning public acceptance and legality as well
as matters of internal significance such as centralisation and con-
solidation and it was not until about the 1890s that the congruence
of the various factors occurred, making action desirable from the
artisan's point of view. By that time the cumulative effects of
actuarial deficiencies in the establishment of sundry welfare benefits
administered under Union aegis were also being felt, at a time when
industrial conflict was exacerbating the permanently high rates of
unemployment. It is against the above background that the agitation
and controversy concerning glassmakers' cataract must be set.

The frequency of the disease among glassworkers had by 1896, attracted
the attention of Dr. William Robinson who in the course of his duties
as a surgeon at Sunderland and Durham County Eye Infirmary found that
25% of all cataract cases operated upon were bottle finishers, there
being only 200 - 300 bottle finishers in a general population of 1½
million within the County. 58 Subsequent research revealed that the
disease was also found in other members of the glassmaking chair and
a second paper based on a wider investigative sample was produced by
Robinson. 59 Parallel research into the condition undertaken on the
Continent also confirmed Robinson's findings. Dr. Probstring in
France found that 12% of glassblowers aged about 40 years had opaque
crystalline lens with the left eye most affected due to the stance of
the worker when drawing metal from the furnace. 60 In Germany also,
research into the subject confirmed Robinson’s findings. Robinson’s work attracted the attention of Dr. T. M. Legge of the Factory Inspectorate who brought the matter before the attention of the Home Office Departmental Committee established to enquire into industrial diseases to be scheduled under the terms of the 1906 Workmens’ Compensation Act. Legge’s research confirmed Robinson’s findings, showing that 20% of glassworkers suffered lens change as a direct result of occupational conditions.

In the course of administering Superannuation Benefit for the G.B.M. Society, Alfred Greenwood’s attention had been drawn to the high degree of incapacitation occurring among Society members. Learning of Dr. Robinson’s research in the North of England District, Greenwood compiled data concerning 114 superannuates placed on benefit between 1897 and 1906 which with the sanction of the Society’s Executive Committee, was made available to Robinson and ultimately to the Home Office Departmental Committee. The G.B.M. Society hoped to influence the Committee to schedule the disease as such a measure would place the onus for financial compensation on the glass manufacturers and thereby relieve the Society of financial responsibility at a time of financial strain. The fact that from 1897 the Society had retained the services of Dr. Hillman of Castleford, as the sole arbiter in judging superannuation claims lent substance to the data provided by Greenwood, whilst Robinson’s original conclusion that the furnace was the inducive factor concerning the disease provided additional influence.

Robinson’s original statistics were based on a sample of men drawn from three Sunderland bottle works employing a total workforce of about 400 of which ‘blowers, gatherers and finishers’ were engaged in equal proportion, although 25% of the gatherers were still apprentices. Robinson’s examination was confined by circumstance to 40 artisans disabled by cataract and in excess of 50 years of age, this being the necessary requirement for superannuation claims.

Robinson’s findings showed that the condition was most prevalent in bottle finishers and gatherers, the two chair members suffering the greatest exposure to furnace glare. The incidence of cataract amongst glass bottle hands stood in contrast to that of the flint hands and pressed glass workers whose work was undertaken at a
greater distance from the furnace and where heat and glare were less intense. The furnace was therefore confirmed as the source of the disease. 63

The initial report of the Committee on Industrial Diseases referring to glassmakers' cataract stated,

"The employers ..... attached small importance to the ailment, and some were ignorant of its existence as a disease belonging to the trade". 64

Even allowing that the incidence of the disease in individual factories was small in proportion to the number of men employed and that evidence of the disease in individual workmen was deliberately hidden from the employer for fear of dismissal, the evidence of manufacturers such as J. J. Candlish, 65 G. Alexander, 66 and C.B.F. Barron 67 each with a long association with the trade; particularly in the North of England, seems somewhat ingenious. That of Caleb Kilner, an employer with previous artisan status, is scarcely credible. 68 The attempt by William Breffit to ascribe the disease to the intemperate habits of the workmen would seem to suggest a classic example of misplaced paternalism. 69 That the Yorkshire manufacturers were long acquainted with problems experienced by their workers was demonstrated by Alfred Greenwood who, as C.S. of the Bottlemakers' Society, had made representation to the manufacturers and their Managers regarding the effect of the furnace intensity on the eye-sight of the artisans. 70

As one who had experienced the effect of the disease himself, during his 30 years as a practising bottlemaker, Greenwood had insisted on having the fullest possible protection for his eyes, notwithstanding being regarded as

".... a crochet so many degrees below a fad"

by his employers. 71

The attitude of the manufacturers, like that of the Union, was shaped by economic considerations. Scheduling the disease would have involved the manufacturers in considerable costs arising from settlement of claims for compensation at a time when the degree of foreign and domestic competition arising from the depression of trade, was having a severe effect on prices and costs of manufacture. Even an attempt to forestall compensatory claims by regular medical inspection in order to dispense with the services of workers exhibiting the initial symptoms of the disease would have involved the estab-
ment of costly medical apparatus. In addition, the implied costs arising from the demand by the Unions for improved protection once cataract was given official recognition as an occupational disease would have been prohibitive, involving massive injections of capital in redesigning furnaces and bottle houses.

The opposition of the manufacturers was aided by the nature of the disease and the initial controversy concerning its cause and incidence. The aetiology of the disease was such that its symptoms were insignificant in the early stage and even after the onset of the condition they were usually stationary for many years. The latter fact was doubtless a result of natural trade progression in which the stage of blower, less prone to the damaging effect of the furnace, came between the two most susceptible stages of gatherer and finisher. The disease commonly became manifest at the latter stage when a workman had reached the zenith of his trade and had usually served for many years as a bottlemaker. Nevertheless, the facts showed the condition to be an occupational one.

TABLE 11:6 NUMBER OF GLASSMAKERS IN THREE NORTH OF ENGLAND FACTORIES PERMANENTLY INCAPACITATED BY CATARACT OF THE EYES AND AGES AT WHICH DISABILITY OCCURRED

<table>
<thead>
<tr>
<th>AGE-RANGE</th>
<th>41 - 45</th>
<th>46 - 50</th>
<th>51 - 55</th>
<th>56 - 60</th>
<th>61 - 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBERS</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: The Ophthalmoscope, Volume 13, 1915, p 542.

Table 11:6 based on Robinson's research in the closing years of the nineteenth century, shows that of the 21 artisans examined, 67% were permanently incapacitated by the age of 55. Of the sample, 81% were bottlemakers at the time of their incapacitation, with average service of 27 years at that particular stage of the trade.

TABLE 11:7 NUMBER OF THE YORKSHIRE G.B.Ms PERMANENTLY INCAPACITATED DUE TO CATARACT OF THE EYES AND AGES AT WHICH DISABILITY OCCURRED, 1898 - 1909

<table>
<thead>
<tr>
<th>AGE-RANGE</th>
<th>50 - 54</th>
<th>55 - 59</th>
<th>60 - 64</th>
<th>65 - 70</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBERS</td>
<td>11</td>
<td>12</td>
<td>12</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: The Ophthalmoscope, Volume 13, 1915, p 543.
Table 11:7 shows that of 37 Yorkshire artisans disabled by cataract during the eleven years, 1898 - 1909, 62% were incapacitated before their sixtieth year, with a further 32.4% being disabled before the age of 65 years. The group comprised 29 bottlemakers, 4 blowers, and 4 gatherers. Variations in sample size, age groupings and periodisation, precludes direct comparison with data in Table 11:6. It is evident, however, that cataract was particularly prevalent amongst glassmakers and caused permanent incapacitation at a relatively early stage in the working life of both groups of workers.

The point is reinforced by the fact that senile cataract is rarely found before the age of sixty amongst the general public. Despite the clear indications contained in the tabular data, the statistics are less than complete for there are no figures available to indicate the number of artisans still working with cataract or those who, having left the trade for various reasons, later suffered from cataract.

<table>
<thead>
<tr>
<th>STAGES OF TRADE</th>
<th>NUMBER SUPERANNUATED</th>
<th>NUMBER WITH CATARACT</th>
<th>% A - B</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOTTLEMAKERS</td>
<td>79</td>
<td>29</td>
<td>36.7</td>
</tr>
<tr>
<td>BLOWERS</td>
<td>26</td>
<td>4</td>
<td>15.4</td>
</tr>
<tr>
<td>GATHERERS</td>
<td>9</td>
<td>4</td>
<td>44.4</td>
</tr>
<tr>
<td>TOTALS</td>
<td>114</td>
<td>37</td>
<td>32.4</td>
</tr>
</tbody>
</table>

Source: The Ophthalmoscope, Volume 13, 1915, p 543.

Table 11:8 indicates that of 114 Yorkshire artisans superannuated during the period 1898 - 1909, all necessarily over fifty years of age, almost one third were totally incapacitated as a result of cataract of the eyes with greatest degree of incapacitation occurring amongst bottlemakers and gatherers. Robinson's theory of proximity to the furnace is clearly substantiated. Despite the shortcomings of the above examples, sufficient supplementary evidence existed to substantiate the claim for scheduling the condition as an occupational disease. In his written submission to the Board of Health Committee on Industrial Disease, 1907, Greenwood provided additional data concerning 85 further cases of permanent incapacitation of members of

- 451 -
various branches of his Society due to deficient sight, with 15 cases of cataract and 23 arising from defective vision. Of 71 certificated cases, 46.4% were as a result of diseased eyes with 14 remaining cases awaiting certification. In addition, as a result of the data obtained from other regional Societies, Greenwood was able to further substantiate his case. The Lancashire G.B.M. Society had 16.6% of its superannuated members disabled from cataract, while the North of England had 9.9% of its total membership suffering such incapacity. Here, however, many had accepted settlements in lieu of superannuation, while others with varying stages of the condition, were still working at the trade. Dublin's eleven superanuees included eight with cataract and one with defective vision. During the years 1903 - 1905, of the cases of cataract among men admitted to Leeds Infirmary, one out of 14 was a glass bottle finisher, blower, gatherer or founder. Comparatively, the Gateshead Pressed Glass Makers' Society, with 510 members, 33 of whom were superannuated, had 12% incapacity due to cataract. Nevertheless, controversy concerning the prevalence of the disease and its causes resulted in the disease remaining unscheduled pending further investigation by Dr. T. M. Legge. Legge's research sample was drawn from the same three factories which had supplied Robinson's sample, but was composed of men still at work. The findings showed the high incidence of cataract among glass artisans between the ages of 30 - 44, most of whom, although bottle finishers by reason of age could have only served a limited time in that capacity and must therefore have experienced the onset of the disease whilst serving as gatherers. Following Legge's conclusive research the Committee stated

"Our further investigations lead us to the clear conclusion that cataract is many times more prevalent among men who work with molten glass than it is among the rest of the population." Accordingly, the disease was scheduled as an industrial disease and subject to compensatory claims in 1908.

Despite the obvious link between the workplace and optic degeneration, glassmakers were divided on the wisdom of having cataract scheduled as an occupational disease. Fear of premature dismissal in the event of adverse comment following compulsory medical examination was fundamental to this division. Equally divisive was the fear that scheduling might result in artisans being compelled to wear glasses
or goggles to work. Many workmen were convinced that cataract developed from the continual rubbing of the eyes to remove perspiration, a belief which was initially supported by a section of medical opinion. In this mistaken belief, the workmen were naturally averse to wearing glasses while those who regarded them as beneficial scorned to use them because of the frequent necessity to stop work to remove condensation, thereby breaking the rhythm of the chair and reducing earnings. Even when as a result of his own experience Greenwood was able to advocate the use of Lasin as a cheap and effective solution to the problem, the men from pride, fear or inconvenience disdained to wear glasses. A voting schedule sent simultaneously to members of the Yorkshire Society and to the regional Societies comprising the National Federation of the trade, sought to obtain the general view concerning -

(a) the desirability of formulating a trade rule compelling gatherers and bottlemakers to wear spectacles to work,

(b) the disqualification from seeking compensation by those concerned refusing to observe such a rule,

(c) the possibility of an approach to the Home Secretary by the representatives of the trade to request the legal introduction of such a rule.

In addition, anticipating the unfavourable response by the rank and file, the schedule solicited reasons which might be advanced against enforcement of regulations compelling glassmakers to wear glasses or goggles. The approach to the rank and file by the Executive of the G.B.M. Society, while ostensibly in accordance with the concept of primitive democracy, enshrined in the trade vote and the canvass of branch opinion on trade affairs, indicates the dilemma facing Society officials. The Executive was caught between the desire to procure scheduling of cataract as a means of ensuring compensation for their members, thereby alleviating the financial burden of the Society, and the probable imposition on individual freedom of choice arising as a consequence of successful agitation. The returns of the ballot indicated the extent to which the movement to have cataract scheduled was inspired by the Society leadership. Of the fourteen branches of the Yorkshire Society, eleven were against the formulation of any rule regarding compulsion to wear glasses, whilst amongst the
National Federation six of the eight districts were opposed to the suggestion. In each case the membership was overwhelmingly against an approach to the Home Secretary to introduce such a rule. The votes no doubt reflected the opinion of the artisans with their long tradition of independence and self-government, that they were the best arbiters of decisions concerning the trade.\textsuperscript{83} In respect of disqualification from compensation for non-observance of a compulsory rule, opinion was roughly divided in each group, indicating a substantial element of support within the trade for the exercise of individual choice. The view was substantiated by the tenor of the expressions submitted by the districts concerned who frequently indicated that no logical opposition to a compulsory rule could be advanced other than the fact that members, including those already wearing spectacles and realising the benefit, were opposed to the denial of individual choice.\textsuperscript{84} The attitude was largely based on appreciation of the inconvenience caused from wearing spectacles while some branches felt unable to give an opinion for want of knowledge on the subject. It is clear, however, that much indifference existed concerning the issue for three branches of the Yorkshire Society made no returns at all while in the few instances where branch returns included specific voting figures, a low poll occurred, suggesting lack of interest in such a fundamental subject.\textsuperscript{85} The most constructive reason against a compulsory regulation was that advanced by Glasgow District -

"The men here think that spectacles would be a hindrance to them when working and that glass being a conductor of heat, spectacles would injure the eyes."\textsuperscript{86}

While the latter premise was not entirely valid, it was in fact the case that for many years afterwards some glassworkers wore glasses whose chemical composition did little to absorb the rays they were supposedly designed to protect against.\textsuperscript{87} Following the scheduling of the disease it was proved that the condition was induced by infrared (heat) rays and not ultraviolet (light) rays, a fact which assisted research into the means of its prevention. The scheduling of cataract as an occupational disease was recommended by the Committee, 2nd December 1908, with the proviso that compensation should be limited to a period not exceeding six months in all, nor for longer than four months unless the glassworker had undergone an operation to remove the cataract.\textsuperscript{88} The scheduling was coincidental with the decline in manual production occurring as a result of rapid
mechanisation. Consequently, although still featured in the British Workmen's Compensation Act of 1929, the incidence of the disease among glassmakers at that time was minimal compared to that of workers in other metal trades. 89
CHAPTER ELEVEN: Working Conditions and Health


2. Report of the Correspondence etc, etc... *op cit*, p 2 and p 21.

3. Arlidge *op cit*, p 23 provides examples of resistance by glass-workers to beneficial innovations concerning health and hygiene.


6. *Ibid*, p 32. That the manufacturers argument was spurious, at least theoretically, is seen in Greenwood's comment, *ibid*, p 36.


20. The manufacturers claimed that enforcement of the provisions of the Act would result in half the journeymen and boys currently employed being dismissed. Ibid, p 131.


22. Report of the Correspondence... op cit, p 28.

23. Royal Commission on Labour 1894, p 376.

24. It must be noted that without the inclusion of those members engaged in the manufacture of the flint glass bottles, the average age of the residual group of flint hands featured in Table 7:7 would be further extended.


28. Minor alterations to the existing workshop to improve ventilation in Number 3 shop at John Kilners, Wakefield, works, were stated to have cost £300, Ibid, p 34 and p 44.


31. Oliver Sir Thomas (ed) Dangerous Trades, John Murray (1902) p 139.

32. Oliver Sir Thomas, Diseases of Occupation, Methuen & Co. (1908) p 378.


38. Handling the hot pipes induced the formation of fluid below the skin causing blisters on the fingers and palms resulting in a painless deformity of the fingers (main en corcet) cf Arlidge J.T. (ed) *Hygiene, Diseases & Mortality of Occupations*. Percival & Co. (1892), p 534.

39. Blowers in particular were distinguishable by their black lips and gums and a marked absence of teeth, *ibid*. Also cf Oliver, *Dangerous Trades*, p 806.


41. Arlidge, *op cit*, p 534. Also cf William Breffits evidence to the *Royal Commission on Industrial Diseases*, 23rd April, 1907, Q10804.

42. Oliver, *Diseases of Occupation*, p 377 states that bronchitis and pulminary diseases are common to the glassmaking trade. In this regard the bottlemaker was particularly prone to suffer as the sedentary nature of his work with its stoop-shouldered posture caused contraction of the rib-cage and stomach muscles resulting in phthisis and digestive disorders cf observations by Dr. Greenhow in Simon J. *Public Health Reports*, Volume I, p 454, reprinted in Hunter D. *The Diseases of Occupations*, English University Press (5th edition 1873), p 21. For a comprehensive survey of public health during the period cf Whol A.S. *Endangered Lives: Public Health in Victorian Britain* Dent & Sons (1983).

43. Oliver *Dangerous Trades*, pp 805 - 806. Also Arlidge, *op cit*, p 553. The formation of large mump-like swellings extending from the corners of the mouth to the ears was caused by dilation.
of the air duct leading from the interior of the mouth to the purotid gland as a result of the induction of pressurised air. The resultant pressure on the middle ear also caused some deafness.

44. The condition was caused from over-use of the thin, flaccid buccal muscles during blowing which resulted in the mucus membrane of the cheeks developing thick, pale patches (plaques opalines) which hung like dewlaps but could be made to disappear temporarily by the application of finger pressure. The condition was commonly found in the North of England district and was attributed by some glassblowers to faulty technique, cf Oliver, Dangerous Trades, p 805 who cites research by Dr. Schule who found a 25% incidence among continental glassblowers. Also, cf Oliver, Diseases of Occupation, p 378.

45. Arlidge, op cit, p 553.

46. The physical deterioration commenced at an early age as the youngest chair members, the gatherers and takers-in were most involved in the carriage of dense masses of metal and heavy bottles, cf Childrens Employment Commission, 4th Report, 1865, p 260, Evidence of Dr. Adam Jessup of Castleford.

47. Ibid, pp 199 - 200 and p 250.

48. Ibid, pp 248 - 249 for evidence of James Bowron, Glass Manufacturer, Stockton on Tees, who stated that there were fewer tee-totallers among glass makers than any other class and attributed the great mortality within the trade to drink, cf Pollard S, op cit, pp 29 - 30 for similarity with steel-workers.

49. Childrens' Employment Commission, 4th Report, 1865, p 196. Dr. Adam Jessup, former proprietor at Breffits Glassworks, Castleford, calculated that two tons of arsenic per week was used at the works and that several narrow escapes from arsenic poisoning had previously occurred, ibid, p 260. Also ibid, p 186.
The silk scarf was as much a symbol of trade status among the journeymen glassmakers as the bowler or boss hat was to the walking manager. For reference to the 'boss hat' cf Clark, op cit, p 26. Also Hunter op cit, p 24 re glassmakers mode of dress.

Arlidge op cit, p 538. Also Hunter op cit, p 43 for similar attitude of indifference to 'sensible' dress by ironworkers.

Knottingley glassblowers ate pickled snails as a means of lubricating dry and sore throats, a practice introduced into the trade by Italian blowers, years earlier. Sleeping with a sweat-soaked sock tied around the throat was an effective cure for quinsey or throat fever, and croup, while brochitis was relieved by walking the pathways adjacent to the local limestone quarries and breathing the air impregnated by lime-burning in the kilns, cf Blanchard D. (ed), Knottingley its Origins and Industries, Volume I, Polyhedron Press, Cambridge. (1977), p 43.

Hunter D. op cit, p 187 and p 199.

Prior to the widespread adoption of the regenerative furnaces the irregular nature of the industry made factory legislation difficult, cf Childrens' Employment Commission, 4th Report, 1865, p 203. For the intractable attitude of glassmakers Ibid, p 245.


Op cit, p 192, re gestation period of disease.

Ibid, Also, Oliver, Disease of Occupation, p 806.

Robinson W., loc cit.


Probstring, Annals d'Hygiene, 1900, p 358, quoted in Oliver, op cit, p 806.
61. Oliver, *op cit*, p 379.


63. *Loc cit*.

64. Home Office Committee on Industrial Diseases, 1st Report 1907, p 8.

65. Ibid, Q 10738.

66. Ibid, Q 10166.

67. Ibid, Q 10820.

68. Ibid, Q 9880 and Q 9882.

69. Ibid, Q 10804.

70. G.B.M. Reports, Volume XXI, p 179.

71. Home Office Committee on Industrial Diseases. Written evidence submitted by Alfred Greenwood, p 123.


73. G.B.M. Reports, Volume XXI, p 124.


75. Ibid.

76. Snell S. *British Medical Journal*, 5th January 1907. cf Also evidence submitted to Committee on Industrial Diseases, 1907, pp 194 – 197.

78. Committee on Industrial Diseases, 2nd Report, 1908.


80. Meyhofer ascribed the condition to excessive perspiration cf Oliver, Diseases of Occupation, p 806.

81. "G.B.M. Reports, loc cit.

82. Ibid, pp 138 - 139.

83. The attitude is seen in the return of Knottingley Branch. "The trade is not of such a nature that it requires an Act of Parliament to make wearing glasses compulsory", Ibid, p 138.

84. Ibid, pp 138 - 139.

85. This is confirmed by the return of Hunslet Branch which stated a "Lack of knowledge and interest in the matter", Ibid, p 138.

86. Ibid, p 139.


89. During the period 1939 - 1945 only 27 cases of cataract amongst all glassworkers were reported to the Ministry of Labour compared to 131 compensatory claims by workers from other metal trades. Of these claims 16 occurred in 1945, against a single one by a glassworker in that year. Minton, loc cit, p 393.
CHAPTER TWELVE:

TRADE UNIONISM

(a) Society Administration 1880 – 1909.

The single most significant developmental feature in the government of the G. B. M. Society during the above period was the decision to appoint a salaried official to administer Society business on a full-time basis. The move was precipitated by the awareness of the membership of the growing volume and complexity of Society affairs and had its genesis in the action of the Swinton Branch. Despite being one of the most severe critics of the E. C., which a considerable element of the Branch members regarded as being under the domination of the C. S., Swinton proposed early in 1880 that

"... the time has come when we should have a paid Secretary to attend to the affairs of our Society, independent of the trade altogether, and this Branch is in favour of A. Greenwood being appointed to the office."¹

The extent to which formulation of the Swinton resolution was a reaction to the recent repudiation of a centrally negotiated wage settlement and accompanying virulent criticism of the E. C. by rank and file dissidents is problematical, but it was most probably an important consideration in Greenwood's decision to decline the appointment. Greenwood's axiomatic support for the E. C. made him particularly sensitive to the loss of prestige the Council had suffered by the Trade's rejection of the wages question, particularly in the eyes of the manufacturers with all this implied for future industrial relations. In addition, Greenwood's decision was probably tempered by the assessment of his potential earning power as a bottlemaker whose wages were supplemented by the renumeration received in his capacity as a part-time official, compared to the fixed salary of a full-time Secretary. In August, 1886, following an approach to the E. C. by Barnsley Branch, the D. M. put a resolution

"That there be a permanently paid Secretary who shall devote the whole of his time to the Society's business",²

to a ballot vote by the Trade.

Table 12:1 gives details of the ballot vote on the question of an independent Secretary. While only 39.1% of members voted on so
<table>
<thead>
<tr>
<th>Branch</th>
<th>Voting Returns</th>
<th>Branch</th>
<th>Voting Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yorks'</td>
<td></td>
<td>Yorks'</td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td></td>
<td>70.0</td>
<td></td>
</tr>
<tr>
<td>10.4</td>
<td></td>
<td>10.4</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td></td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td></td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>33.3</td>
<td></td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td>17.0</td>
<td></td>
<td>17.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Branch</th>
<th>Voting Returns</th>
<th>Branch</th>
<th>Voting Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yorks'</td>
<td></td>
<td>Yorks'</td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td></td>
<td>70.0</td>
<td></td>
</tr>
<tr>
<td>10.4</td>
<td></td>
<td>10.4</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td></td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td></td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>33.3</td>
<td></td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td>17.0</td>
<td></td>
<td>17.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Branch</th>
<th>Voting Returns</th>
<th>Branch</th>
<th>Voting Returns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yorks'</td>
<td></td>
<td>Yorks'</td>
<td></td>
</tr>
<tr>
<td>70.0</td>
<td></td>
<td>70.0</td>
<td></td>
</tr>
<tr>
<td>10.4</td>
<td></td>
<td>10.4</td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td></td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td>3.2</td>
<td></td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>33.3</td>
<td></td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td>17.0</td>
<td></td>
<td>17.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: G.M. Report, Volume XXI, p. 79.

Table 12:1 Voting Returns on the Proposal by the Yorkshire G.M. Society to Appoint a Permanent

CENTRAL SECRETARY, 1886

Voting Returns on the Proposal by the Yorkshire G.M. Society to Appoint a Permanent
important an issue, the turnout represented a considerable increase on the previous average of membership participation, probably as a result of the introduction of the ballot box. The measure marked the advent of much higher levels of voting during the following decades.\(^3\) It is interesting to note that although the D.M. resolution was carried by a majority of 398 votes, the two largest branches, Castleford and Thornhill Lees, were represented by approximately a fourth of their memberships. Both branches are known to have contained a dissident element highly critical of centralised government, which may have shown contempt by holding aloof from the ballot on the issue. Likewise, Swinton branch with more than one third of its members voting against the resolution, may have expressed the feelings of a substantial minority within that Branch, known to be critical of the E.C. The existence of this hard core may well have influenced Greenwood to again decline the post "under the present circumstances", resulting in the matter being "adjourned for an indefinite period."\(^4\) Greenwood's reluctance, not withstanding the outcome of the ballot (and the vote of 1880), is important in that it reveals rank and file awareness of the need for a full-time official and more importantly, a willingness to make financial provision for such an appointment at a time of adversity within the Society. In 1888, after working at the furnace until a few weeks short of his 51st birthday, Greenwood agreed to become the first full-time salaried official of the Society.\(^5\) The appointment of a permanent Secretary was both a sign of the permanence of the centralised governmental structure and an acknowledgement by the majority of members that the administration of Society business by a full-time official would ensure greater efficiency and thereby serve the common interest. The measure was also an assertion of artisan status consciousness further indicated by the Society's purchase of a property in Wesley Street, Castleford, in May 1894, for use as the Head Office and Secretary's residence.\(^6\) The purchase of the Castleford house may well have represented a deliberate policy of capital investment in 'bricks and mortar', being followed some years later by a £1500 mortgage loan on a chapel building situated at Blaydon on Tyne.\(^7\)

Despite an apparent degree of opposition to the appointment of a salaried, full-time officer, the years 1882 - 1895 are notable for the abatement of criticism by rank and file dissidents. This may
be explained in part by the recovery of the status and financial standing of the Society from 1882, but more probably as a result of the manifestation of socio-political radicalism by the Society leadership from the mid 'eighties (cf Chapter 13 infra). The gradual dissipation of the radical outlook following the Society's success in the 1893 trade dispute, eroded the essential unity of the previous decade and by 1896 signs of the renewal of internal disdissence were apparent. In that year Thornhill Lees Branch, in the face of opposition from both the E.C. and D.M. insisted on being represented on the latter body by their nominee who as a walking manager was ineligible to attend the D.M. The selection of the Delegate by Thornhill Lees was vigorously resisted on grounds of established custom and fear of creating a precedent which would adversely affect the Society in the same way that the Lancashire G.B.M. Society was undermined by having managers on its executive body. The following year, Swinton Branch revived the issue of the replacement of the E.C. by a Representative Council averring that "... such a change is now necessary and will be more satisfactory to members generally." No action was taken by the D.M. but at a subsequent meeting Swinton were invited to submit their ideas in writing.

The Swinton Branch submitted a 14 point proposal which it claimed was a justifiable scheme on grounds of wider membership, more direct representation and greater economy.

Under the Swinton proposals the Council would be drawn from the full Society membership (2451 at that time) instead of the 574 Castleford members. Every Yorkshire branch would have one Council member who would attend the 13 proposed meetings per year (or more if necessary). Stairfoot and Masbro branches would attend alternately whilst the Blaydon, Newport and London branches would send representatives when each considered it necessary or desirable. D.Ms, would be reduced from 4 to 2 per annum and estimated costs of £87-16-1d p.a. would show an annual saving of £2-18-8½d on the £90-14-9½d which was the average cost for the Executive Council and Delegate Meetings over the previous four year period. The assertion of primitive democracy found ready support amongst Branch Delegates who following a 3½ hour discussion decided to refer the question to the trade. An extraordinary fine of 1 shilling per member was levied by the E.C. to ensure the maximum turn-out at branch meetings to consider the Swinton proposal prior to voting.
<table>
<thead>
<tr>
<th>Source: G.B.M. Reports, Volume XVI, p. 15 and p. 54.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TABLE II:2</strong> RETURN OF VOTES BY BRANCHES OF G.B.M. SOCIETY ON THE PROPOSAL TO ESTABLISH A</td>
</tr>
</tbody>
</table>
Table 12:2 shows the outcome of the ballot and indicates that despite the importance of the issue, 754 of the 1566 eligible members of the 2580 strong membership did not vote.\textsuperscript{14} The Table reveals a significant degree of polarisation of branch attitudes with the combined weight of Castleford, Barnsley and Hunslet pulling the 'NO' vote against a larger number of branches who were in favour of the Swinton proposal. The turn-out of 46.9\%, while a good one in the context of previous membership votes, tends to substantiate a later comment by Greenwood that

"..... there were many members of the Society ..... who, whilst they were members of the Trade Union, were not trade unionists."

Another Delegate elaborated this being a case of

"..... some men who simply paid their money into the Society and called themselves unionists but never turned up to help with the work of the Society."

Given the enforcement of membership within the trade which had seen the re-establishment of the closed shop since 1889, a degree of apathy and non-participation among rank and file members is not entirely surprising.\textsuperscript{17} The factor which was most influential in determining the outcome of the ballot was that concerning cost. In the interregnum between the decision to ballot and its implementation, Castleford Branch had challenged Swinton's cost estimates and successfully demanded that the D.M. send the 'corrected' estimates and accompanying correspondence into the branches. The action was condemned by Swinton Branch as a measure calculated to sabotage the impending vote and an indication of Castleford's desire "to rule the trade".\textsuperscript{18} Nevertheless, the D.M. of 10th April 1897, confirmed the voting returns, a decision in which Greenwood's influence was the conclusive factor.\textsuperscript{19} The issue is significant for the cohesive action of the 'interest parties' (i.e. the forces of centralism) to deny the assertion of primitive democratisation. The narrow margin of the trade vote indicated a considerable degree of support for wider rank and file representation on the governing bodies of the Society, indicating the feeling of 'isolation' expressed by some districts arising from bureaucratic formalisation of administrative procedures. To obviate criticism and engender rank and file confidence, the E.C. resolved to receive branch deputations in cases of emergency where it was considered that formal written submission was inadequate for the purpose.\textsuperscript{20} Similarly, the assertion by Swinton Branch that
".... every member should be supplied with a copy of the rules and regulations, seeing that scarcely any member has any knowledge of the existing rules" resulted in the collation and printing of the code of Society Rules published in 1906. Greenwood's past condemnation of government by resolution and trade vote was fully justified in the light of the Swinton Branch assertion which reveals the dilemma of Society government. The system was at once a hindrance to ordered administration, being a source of confusion which bred ignorance and promoted mistrust and suspicion of those charged with the governance of Society, yet one which was regarded by the rank and file as the epitome of democratic expression and was therefore inviolate. The recognition of this fact does much to explain the underlying conflict between the advocates of centralism and the adherents of traditionalism. The E.C. measures were merely palliatives which, while stifling the challenge to centralised government apparatus, were not sufficient to end the complexity of government by resolution and vote which it was hoped the 1906 Code of Rules would accomplish. In 1907, however, the composition of the E.C. was altered with each branch being represented according to the size of its membership. The E.C. members now retired en bloc each June, while a sub-committee consisting of the C.S., Assistant C.S. and Castleford Secretary were empowered to act in all cases of emergency. The establishment of the Representative Council presented a prima facie triumph of primitive democratic sentiment but actually represented a strengthening of centralised bureaucracy. The administrative power was concentrated in the hands of the triumvirate who held the power to summon the D.M. at will and whose permanent tenure of office ensured them a dominant influence in the affairs of the E.C.

The development of a strong governing bureaucracy within the G.B.M. Society stands in complete contrast to the F.G.M. Society in which the conflict between primitive democracy and centralised administration while less apparent was no less real. The failure of the F.G.M. to appoint a permanent, full-time C.S. presents a clear case of rank and file reluctance to widen the power of the Executive even at the expense of effective government, for although mooted as early as 1870, it was not until May 1901, that J.J. Rudge of Manchester was narrowly elected, only to have the decision rescinded shortly
While it is true that Rudge's unbroken service as part-time C.S. during the previous decade marked the further devolution of centralised power which had begun in the late 1870s when the restriction on continuous re-election to office was abandoned, the roots of centralised bureaucracy were deeper within the G.B.M. Society. Thus by the time Greenwood became permanent full-time C.S. he had already more than 20 years continuous service as part-time C.S. and exerted a tremendous influence on the development of centralised government within the Society during its formative years. Greenwood's contribution in this respect explains the difference in attitude between the respective Societies concerning the appointment of a full-time permanent administrator and it is significant that about the same time that the F.G.M. were agonising over Rudge's full-time appointment, the G.B.Ms. were preparing to elect a second secretary on a full-time basis. For the Executive of the F.G.M. Union the inability to assert the same degree of authority as that exercised within the G.B.M's Society was a crucial factor given the changing conditions of trade during the closing decades of the nineteenth century. The dilemma facing a Union in which two distinct spheres of production, each with its own peculiar problems, made separate demands on the central government apparatus, added to the problems of administration. Consequently, the Executive came under increasing criticism as each branch felt insufficiently represented in terms of time given to their interests by the C.S. and C.C. The growth in the size and importance of the Yorkshire flint bottle hands and the uniqueness of the problems facing that element of the trade engendered the feeling that the Midlands based Executive drawn from the table trade were incapable of understanding the bottle trade sufficiently well to produce effective solutions however willingly they might spend time acquiring the requisite knowledge. As a result, the period from the mid 1870s was marked by an intensification of the desire for a devolution of power which would permit the bottle trade a degree of self-autonomy under the Society aegis. The feeling found practical expression in the County Board, established with the tacit approval of the Executive in 1878 (cf Chapter 7 supra).

Although established on a probationary basis the County Board continued to function beyond the initially stipulated 12 months, but with little success in solving the seemingly intractable problems unique to
the district. Indeed, in the nature of the problems lies the probable reason for the continued existence of the County Board.

Examination of the Resolutions passed by the Board at its meeting in April 1881 indicate that during its brief existence not only had a relaxation been made concerning apprentice ratios, but that increases in production and wage reductions had occurred at some district branches. A feature of the disunity amongst Yorkshire branches at this time is the fact that the centrally controlled system of trade promotions was being freely disregarded by some branches - a fact which drew a reassertion of Executive authority.

An element of disharmony at Executive level is also evident at this period for at the County Board Meeting on the 30th April 1881, in the presence of C. S. T. Barnes and three of his Executive members, a resolution to adhere to the Rotherham proposal of July 1878, relaxing the apprentice rule, was passed. The Executive found shortly after that the Rotherham Resolution had subsequently been replaced by a further agreement between the former Central Executive of C. S. H. Packwood and the Yorkshire County Board at a meeting in Leeds in January 1879. By the terms of a Circular emanating from the Leeds meeting, the apprentice ratios had been even further relaxed, but the Packwood Administration, possibly fearing the break-up of the Society, had not revealed the existence of the 1879 Agreement to the trade, nor even to the incoming Barnes Executive. The Barnes Executive was Birmingham based and that district was the most vociferous in its demands that the Yorkshire district be entirely separated from the Society, a fact which may explain the Packwood Executive's attitude regarding that body. A further, and more general explanation may be found in the words of C. S. Packwood at the time of the Rotherham Delegate meeting:

"But no Executive has the power to modify the apprentice law to suit the conditions of any section of the trade...."

and the later statement by a Yorkshire Delegate to C. S. Barnes himself

"It matters not what you legislate upon: it is sure to fail; all Executives have failed and when resolutions have been drawn up, and the backs of the Delegates turned, they are little thought of".

This revealing statement shows the degree of grass roots contempt for centralised authority and the impotence of the Central Executive to
impose uniformity at the expense of district opinion.

To the Barnes Executive, faced with the practical realities of office rather than the theoretical exercise of power, the reality of the situation was that despite its myriad problems the Yorkshire district was quickly becoming the bulwark of the Union. Numerically the annual percentage of members rose from 14.0% in 1881 (when Barnes took office) to 19.0% in 1886 when H. Davis became C.S., and 29.6% in 1894 when J. J. Rudge was elected, finally reaching 33.4% in 1902. The rising importance of the Yorkshire District, however, was not confined to numbers alone, but to financial strength. The long dominant Midlands based table trade had begun to decline in face of foreign competition, whilst an increasing proportion of its artisans became superannuable, thus increasing that section's demands on Central funds. These facts alone explain the changing attitude of the Central Executive to the Yorkshire District and its relationship vis a vis the rest of the Society. Packwood had taken a 'balanced' attitude fearing to favour Yorkshire for fear of alienating the other districts; Barnes had been compelled to modify his anti-Yorkshire attitude and together with his successor, Henry Davis, devote much time and expense to the bottle district to the partial exclusion of the affairs concerning the table section. Under J. J. Rudge the trend continued to the extent that despite dissatisfaction with the Central Executive by an element within the County, there was a definite pro Yorkshire bias and the schism within the ranks of Society was due to conflict between sections of the membership rather than solely between the Bottle Section and the Central Government which had been apparent before the 1893 reform.

Two actions pursued by the Central Executive under Barnes concerning the Yorkshire district were the policy of active recruitment of non-unionists and the use of Central funds to sponsor co-operative production. The failure of the co-operative venture reinforced the indignation of the table districts and led to criticism of central policies and condemnation of the existing system of government by a district based Executive. A letter from J. Husselbee in the F.G.M. Magazine, May 1887, stated

"The fault of the government of the Trade is its too narrow centralisation which limits Executive Government and absolute power in
the hands of any one district for the time being. The needs of our peculiar trade are greater than formerly and for many reasons require a wider, more comprehensive and representative form of government. There is and has been too much isolation and centralisation in the government of our trade. The extremities of the Trade are too far from the centre and no district can adequately understand the wants, nor legislate for the requirements of the various sections of the Trade." 37

As a result of the implications for the future government of the Society arising from mounting dissatisfaction with the existing form of Executive, a Special Conference was convened at Liverpool in August 1889, and a revised code of Rules issued 1st July 1890. 38 The principal changes to the existing Rules concerned superannuation benefit, but a concession was made with regard to representation at future conferences which was to be proportionate to the membership of each district:

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>No. DELEGATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEMBERS</td>
<td>AT CONFERENCE</td>
</tr>
<tr>
<td>20 - 50</td>
<td>1</td>
</tr>
<tr>
<td>50 - 100</td>
<td>2</td>
</tr>
<tr>
<td>100 - 200</td>
<td>3</td>
</tr>
<tr>
<td>200 - 300+</td>
<td>4</td>
</tr>
</tbody>
</table>

The smaller districts located within the same County and with less than 20 members were to be grouped together for the purpose of representation. 39

In September 1893, a more fundamental change took place when the Central Executive Committee also became a Representative Council, each of the following areas sending elected representatives proportionate to their membership:

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>No. REPRESENTATIVES</th>
<th>MEMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midland with London (South)</td>
<td>3</td>
<td>722</td>
</tr>
<tr>
<td>Yorkshire</td>
<td>2</td>
<td>672</td>
</tr>
<tr>
<td>Lancashire</td>
<td>1</td>
<td>322</td>
</tr>
<tr>
<td>Scotland, Newcastle</td>
<td>1</td>
<td>255</td>
</tr>
</tbody>
</table>

The new format did not represent a complete break with the past for the annually elected C.S. still exercised his prerogative to nominate
four members from the 'home' district of the C.S. to complete the 12 man Executive Council. The new system of Society government was therefore a quasi-democratic body of elected and nominated members, the latter being theoretically subject to the approval of the membership.

The reconstitution of the Executive Council seems to have occurred following a County Meeting in June 1890 when Yorkshire District circulated a proposition to the trade

"That the Bottle Districts of Yorkshire shall have a direct Representation on the Executive Committee, to commence with the newly appointed or re-appointed Executive, the Yorkshire County to have its choice of Representatives."

The proposition was rejected by 16 votes, 957 votes for and 973 against. All the Yorkshire districts, except Kilnhurst, voted for the motion, the latter branch casting 7 votes for and 27 against. Of the 15 districts which voted, only Birmingham and Edinburgh supported the votes of the six Yorkshire branches, although this support consisted of 366 votes by the former, and 76 votes by the latter district.

The proposition drew the opposition of the Central Executive Committee which, despite a redrafted version of the circular to overcome Executive objections, no doubt influenced the Trade. The C.S. justified the action of the Executive after the vote by stating that not only did the first circular not express the same meaning as the second, but was 'illegal' as the C.C. were not officially informed of what was proposed.

The action of the Executive may be interpreted as an attempt by Central Government to sway the democratic expression of branch opinion but it was at best a delaying tactic which culminated in the restructured Executive of 1893.

In 1895, the newly constituted Executive issued a Code of Rules to its Yorkshire members. This was considered essential to the good government of the Bottle Department. The Code was justified by a cautious Executive, aware of the claims made by its predecessors
regarding the imprudence and impracticality of such a step, on the grounds that it did not interfere with the General Rules of the Society "beyond improving some of them". It was also claimed that the new rules regularised conditions which had been dictated by unwritten custom-based laws for years, causing much misunderstanding and misappliance.

About this time the strains of undertaking such a demanding role for the Union and yet doing a full day's work in the glasshouse caused a breakdown in the health of C.S. J.J. Rudge. The Executive sought to grant him his weekly wage for a 3 month period in order to enable him to fulfil the duties of office - in effect a proposal to make the post of C.S. a temporary full-time one. The opinion of the Trade was sounded through the Trade Vote and the proposal rejected so emphatically that the Executive was subsequently moved to record the vote as an expression of lost confidence by the membership.

It would appear that some members regarded the Executive proposition as imprecise in its phraseology and others refused to accept the proposition for fear of creating a precedent, to which the Executive replied that if so it would be a good precedent. The reality of the situation has been stated by Matsumura: that the membership, jealous of the traditions of primitive democracy were suspicious of encroachments by central Authority and regarded the Executive proposal as likely to engender a sharp break with tradition. Justification for the unsympathetic attitude of the membership was expressed in the view that a small Society such as theirs had neither need nor resources for full-time officials.

The result of the two votes taken on the Executive proposition showed the centre of opposition to be the Midlands districts, a fact which drew critical comment from F. Swan, the Hunslet District Secretary, who claimed that the Midland districts sought to perpetuate themselves as the "ruling power" and claiming predominance for the Yorkshire district. This opened a spate of correspondence within the Magazine concerning the merits and demerits of the old and new systems of government, particularly in terms of cost effectiveness. A statement from the Midlands that they "..... do not mean to be governed either by Manchester of the bottle trade" and one from former C.S., T. Barnes that,
"Those who have passed through the office of C.S. know that it was impossible for the bottle section to be ruled under our rules."50 indicate the polarity of opinion between the supporters of the 'old' and 'new' systems of Society government. Barnes also stated, regarding his district's vote against a temporary full-time C.S.

"Our aim was lofty - that he (J.J.Rudge) should....keep within the pale and traditions of the Society.... The Executive was defeated by its own hands in not knowing its members sufficiently."51

The correspondence seems to have brought to the Executive the realisation that the two branches of the trade were irreconcilably set apart and incapable of being governed under the same Code of Rules. The Executive therefore gave its blessing to the idea of a Yorkshire County Secretary appointed to govern all aspects of trade within the County and following a twelve month trial period advocated its permanent adoption by the trade.52

The instability of the Society as a result of constant propositions effecting changes in the Rules also caused the Executive to attempt a curb on such action by stipulating that in future suggested changes to the Rules should be brought to the Executive by the District Representatives serving on the E.C. All propositions would then be entered in a book and eventually discussed at the Trade Conference.53 Since the convening of a Conference was at the discretion of the E.C. the Executive proposal was at best an ingenious delaying tactic and at worst a denial of democratic expression. The move may owe its origin to the system of forwarding business to the G.B.M. Executive Council instituted by Alfred Greenwood which had strengthened his Executive by 'distancing' direct criticism from the grass roots.54

The motives of the Executive Council in wishing to promote stable and efficient Central government are understandable for the late 1870s are distinguished by the propositions underlining the divergence of opinion between the exponents of the 'old' and 'new' systems of government and reveal the deficiencies to effective government caused by the traditional system of resolution and trade vote, however sound the democratic principles underlining the system.

Disunity within the Union was highlighted by the demands for greater representation on the Executive by the Yorkshire district where
dissatisfaction arising from the settlement of the apprentice issue had resulted in censure of the G.S. and Executive, including the district representatives, by the County membership.

One manifestation of the disunity within the Society was the refusal of the trade in general to vote a salary of sufficient size to enable the office of County Secretary to be filled. Although the trade had given its approval to the appointment of such an official by a majority of 611 votes, disagreement concerning the salary had resulted in the office being held in abeyance for over a year. The refusal of the membership to vote sufficient remuneration for the position to be filled is yet another example of grass roots hostility to the establishment of permanent, paid officials and is paralleled by similar attitude regarding a paid Central Secretary and recruitment officer previously.

The period of the late 1890s is marked by the accumulation of district funds above the level specified by the Society Rules. This was particularly marked in the Midlands districts and suggests a reluctance to supply funds to a Central Executive which was increasingly occupied with the affairs of the Yorkshire district. The result of the Midlands action was that Barnsley Branch defied a direct Executive order to forward funds to the G.S. and thereby signalled by its dissent the ruin and destruction of the Society. The action brought home to the Executive the need to accept the demands of Yorkshire for greater representation. From this point Executive recommendations that the bottle district have its representation increased to four members and assume full administrative responsibility for district affairs through the appointment of a County Secretary were issued. Rudge's recommendations were underlined by a warning to the membership that:

"They (i.e. Yorkshire) today, are the backbone of Society, and the day is not far distant when they will be the absolute power of Society." With the exception of one member, the Executive had approved the G.S's recommendation that a Yorkshire County Secretary be appointed at an annual salary of £20. The dissenting member had suggested as an alternative that the office of G.S. become a full-time one. It is significant that in placing the proposals before the trade the Executive gave instructions that the proposals were not to be voted upon
but the subject of written submissions by district delegates after sounding out district opinion. In by-passing the direct expression of members through the trade vote with its element of regional prejudice and custom-based conservatism, the Executive doubtless hoped to avoid the danger of a split in the unity of the Society and find a solution to the issue by the less emotive and more flexible method of delegate interpretation. The outcome, however, showed opinion to be against both proposals and particularly against that suggesting a County Secretary. A subsequent trade vote accepting the proposition for increased representation for Yorkshire on the E.C. was, however, passed by a majority of 516 votes.

In considering various alternative suggestions designed to ease the workload of the G.S., the Executive sought to obtain the appointment of a General Financial Secretary at a salary of £20p. a. In the ensuing election, J. B. Winterbottom of Rotherham, was appointed to the post. The central administration was now split with general direction of Union affairs emanating from Manchester and the financial administration based in Yorkshire. The power base of the Union was even more emphatically a Northern preserve and the consequent dissatisfaction of the table districts led to a General Conference being called at Liverpool in September 1899. As a result the Executive Council was again restructured with J. J. Rudge as G.S. and J. B. Winterbottom as G.F.S. and the Executive of elected representatives proportionate to district membership viz:

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>MEMBERS</th>
<th>No. REPRESENTATIVES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yorkshire</td>
<td>801</td>
<td>4</td>
</tr>
<tr>
<td>Midlands</td>
<td>800</td>
<td>4</td>
</tr>
<tr>
<td>Lancashire and Scotland</td>
<td>588</td>
<td>3</td>
</tr>
<tr>
<td>London</td>
<td>169</td>
<td>1</td>
</tr>
</tbody>
</table>

The Executive were empowered to temporarily alter any portion of the new arrangement found to be unworkable. In an effort to minimise costs a Sub-Executive Committee of three representing the Northern, Yorkshire and Midland districts, was formed to meet and take action as required.

Early in 1901, J. J. Rudge was dismissed from his employment in the glasshouse because of his work for the Society. This prompted
Rotherham District to suggest his employment in a full-time capacity. The subsequent vote of the trade adopted the Executive proposition by 1,015 votes to 990, a majority of only 25.66

The Returns of the 26 districts comprising the 2,000 Society members not only reflect the conservatism of the membership but the divide between the Midlands based traditionalist element of the trade and the more 'radical' element, mainly Yorkshire based, representing the new system of representative centralisation.

Of the 704 Yorkshire votes cast, 190 were cast against the proposition and it is not without significance that of these 190 votes no less than 158 were cast by the Hunslet Branch. This branch had been the most disputatious branch of the Yorkshire trade and its vote reflects its dissatisfaction with past Executive conduct, particularly that of C. S. Rudge, and also the hostility of the Hunslet Branch towards its County critics of whom Rotherham, the proposers of the resolution, was the most outstanding.

The 614 votes of the Yorkshire district in favour of the proposition, together with the 199 of the 'home' branch of Manchester, provided the bulk of the pro vote, whilst Birmingham with 275 and Stourbridge with 344 were the major districts opposing the proposal.

In all, 6 districts voted entirely for, and no district entirely against the proposition. Of the 9 branches comprising the Yorkshire district, 4 voted entirely in favour. Dublin, Longport and Shelton sent no returns and three districts, Edinburgh (23), Hunslet (7) and Stourbridge (5), recorded a total of 35 neutral votes.68

At the subsequent Executive Meeting, 24th August 1901, J. J. Rudge, fearing the disunity arising from acceptance of the post of permanent G.S. resigned in order that the matter could be tested by a second trade vote. The Executive accepted Rudge's resignation on condition that he retained the office of G.S. as previously constituted.

The Second Trade Vote was more emphatically against a permanent full-time General Secretary. The figures were 1007 for; 1,133 against; 11 neutral, a majority against of 125. Twenty five of the 26 districts voted on the issue, Tutbury sending no returns. Of these districts four voted entirely in favour and four entirely against the proposal.
The returns of the 9 Yorkshire branches show only one, Knottingley, entirely for, although with the exception of Hunslet all other Yorkshire branches were overwhelmingly in favour. The total vote of the Yorkshire branches was 763 of which 524 favoured the proposition and 238 were against, with 200 of the anti-votes cast by Hunslet Branch and one being neutral.

Again, polarization was a feature of the voting, with the division of opinion reflecting the previous vote. The outcome represented a triumph for traditionalism and brought in its wake demands for the simplification of Central government based on a three-man Executive representative of three trade regions, similar to that of the existing Sub-Executive Committee. The proposal was denounced by the G.S. who concluded that:

"The trade will make a sad mistake if ever it reduces the government to three members."

The irreconcilability of the two sections of the trade resulted in an act of separation by the Yorkshire members who in March 1903, formed the independent National Glass Bottle Makers' Society with 868 members, governed from Castleford. The action left the Central Executive in the arms of the decaying table section of the flint glass trade to enter the long and continuing decline as Britain's smallest Trade Union.

The new Society naturally adopted the system of government utilised by its parent Society since 1899, with a 12 member elected Executive Council drawn from the County branches of the flint glass trade, plus the London flint glass bottle makers. The Chief Officers of the Society were the Central Secretary, General Financial Secretary and President. An Executive Sub-Committee of three nominated by the full Executive from their ranks, plus the G.S. formed an 'action' group to assist the Central Executive Committee. Election to the full Executive was staggered with ¼ of the Council retiring annually, thereby ensuring an element of continuity.

By mid 1904 in an effort to save Society finances, the Executive was reduced to 6 members plus the ex officio G.S. and G.F.S, the Council members being designated as 'trade' rather than 'district' representatives. This rearrangement drew much criticism from a section of the membership whose hostility was regarded as being a sufficient threat to the continued existence of the Society. As a result,
when in March 1905, an important consideration concerning a 15% wage reduction arose, the Executive decided to augment its constitution by co-opting a delegate from each branch not already represented on the Executive. This decision was later challenged as illegal but was sustained by the Rules of the Society which may perhaps indicate the awareness of the framers to make such provision in order to avoid the schism which had proved so fatal for the previous government of the Flint Glass Makers' Society.

To ensure full consideration of district views, other than by the customary practice of resolution and trade vote, provision was made for a County Conference at which branch delegates would debate issues of importance prior to Executive action. The Executive Sub-Committee was redesignated as the Emergency Committee in October 1905.

The Executive, aware of the strife caused by the existence of large numbers of non-Society men within the County during the 1870s and 80s, and the difficulties to the Flint Glass Makers' Society owing to lack of organising machinery in a Union where elitist attitudes precluded its establishment, decided to avoid such problems by the creation of an Organising Committee. The Committee established in 1904, was composed of the three chief officials of the Society and aimed to persuade the 150 non-Society men operative within the County flint glass trade to enrol in the Union.

A permanent full-time General Secretary was canvassed by an element within the membership by late 1907. The proposal had the unanimous approval of the Executive who pleaded the necessity of a full-time G.S. to allow more time to be spent organising non-unionists. The District delegates, aware of the inherent opposition of their members to such a suggestion and also to the sensitivity of the members regarding the expense arising from the duties of the G.S. in his part-time capacity, rejected the proposal at Conference and the idea was shelved for the dozen or so years of the Society's independent existence.

(b) Membership.

Between 1879 - 1883 the Glass Bottle Makers' Society suffered a decline in membership as a result of the combination of bad trade and industrial disruption which caused the diminution of the Society's
TABLE 12:3

ANNUAL MEMBERSHIP OF THE YORKSHIRE G.B.M. SOCIETY,
1880 - 1909

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MEMBERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>1061</td>
</tr>
<tr>
<td>1881</td>
<td>1026</td>
</tr>
<tr>
<td>1882</td>
<td>1014</td>
</tr>
<tr>
<td>1883</td>
<td>1227</td>
</tr>
<tr>
<td>1884</td>
<td>1415</td>
</tr>
<tr>
<td>1885</td>
<td>1578</td>
</tr>
<tr>
<td>1886</td>
<td>1542</td>
</tr>
<tr>
<td>1887</td>
<td>1470</td>
</tr>
<tr>
<td>1888</td>
<td>1536</td>
</tr>
<tr>
<td>1889</td>
<td>1717</td>
</tr>
<tr>
<td>1890</td>
<td>1899</td>
</tr>
<tr>
<td>1891</td>
<td>2340</td>
</tr>
<tr>
<td>1892</td>
<td>2389</td>
</tr>
<tr>
<td>1893</td>
<td>2440</td>
</tr>
<tr>
<td>1894</td>
<td>2482</td>
</tr>
<tr>
<td>1895</td>
<td>2525</td>
</tr>
<tr>
<td>1896</td>
<td>2553</td>
</tr>
<tr>
<td>1897</td>
<td>2643</td>
</tr>
<tr>
<td>1898</td>
<td>2683</td>
</tr>
<tr>
<td>1899</td>
<td>2788</td>
</tr>
<tr>
<td>1900</td>
<td>2840</td>
</tr>
<tr>
<td>1901</td>
<td>2901</td>
</tr>
<tr>
<td>1902</td>
<td>2909</td>
</tr>
<tr>
<td>1903</td>
<td>2885</td>
</tr>
<tr>
<td>1904</td>
<td>2851</td>
</tr>
<tr>
<td>1905</td>
<td>2754</td>
</tr>
<tr>
<td>1906</td>
<td>2623</td>
</tr>
<tr>
<td>1907</td>
<td>2532</td>
</tr>
<tr>
<td>1908</td>
<td>2483</td>
</tr>
<tr>
<td>1909</td>
<td>2443</td>
</tr>
</tbody>
</table>

Source: G.B.M. Reports, Quarterly Branch
Returns 1880 - 1909 passim.
prestige and authority. At the end of 1882 the Society had 135 fewer members than it had at the end of 1879, a drop in membership of 11.5%. Yet the adverse circumstances which had resulted in high artisan unemployment and financial stringency and had broken the Society's membership monopoly had clearly had a minimal effect in terms of falling membership.

Table 12:3 shows that with the single exception of the year 1887, when the workforce at the Stairfoot factory of Dan Rylands were detached from Union membership, the Society's membership rose, increasing at an annual average of 4.49% and reaching its apogee by 1902 at which time the near three thousand members represented an increase of 63.5% since 1880. From 1902, changes in the economic and technological development of the trade began to take effect with growing rapidity, making marked inroads into the system of manual production as a result of which a 16.0% decline in membership occurred by 1909 when the Society had 2,443 members.

A significant feature of membership growth throughout the period was the extension of Society membership to newly created branches of the trade beyond the County boundaries. The measure which arose from the migration of journeyman members of the Yorkshire Society to establish new factories in areas of non-organised labour conformed to the policy of the Yorkshire Society to create a national basis of union organisation and present a strong, united, trade front to counter the growing unity and power of the manufacturers. Thus, the creation of 'outside' branches helped to fill the void during the period between the failure to effect an amalgamation of regional Societies of glass bottle makers under the aegis of the Yorkshire Society, 1882 - 1883, and the formation of the National Federation in 1892. (cf Chapter 13 (c) infra).

Allied to the industrial expansion which led to the establishment of branches beyond the County borders, was the development within the Yorkshire branches.

Table 12:4 reveals the extent of the industrial expansion in terms of individual branch membership. In 1880, Castleford and Swinton were the only branches with memberships in excess of one hundred, the latter branch having less than one third the Castleford total. By
<table>
<thead>
<tr>
<th>TOTALS</th>
<th>1876</th>
<th>1877</th>
<th>1878</th>
<th>1879</th>
<th>1880</th>
<th>1881</th>
<th>1882</th>
<th>1883</th>
<th>1884</th>
<th>1885</th>
<th>1886</th>
<th>1887</th>
<th>1888</th>
<th>1889</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statfrook &amp; Wombwell</td>
<td>48</td>
<td>46</td>
<td>42</td>
<td>11</td>
<td>8</td>
<td>11</td>
<td>11</td>
<td>12</td>
<td>9</td>
<td>10</td>
<td>9</td>
<td>11</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>London</td>
<td>73</td>
<td>73</td>
<td>59</td>
<td>52</td>
<td>51</td>
<td>53</td>
<td>53</td>
<td>52</td>
<td>52</td>
<td>51</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Newport</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Central</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Shirebrook</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Conisbro</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>Wombwell</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>Statfrook</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Durham</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Castleford</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>1880</td>
<td>1881</td>
<td>1882</td>
<td>1883</td>
<td>1884</td>
<td>1885</td>
<td>1886</td>
<td>1887</td>
<td>1888</td>
<td>1889</td>
<td>1880</td>
<td>1881</td>
<td>1882</td>
<td>1883</td>
</tr>
</tbody>
</table>
x cn
o rr
rw

En
0
h
CD

r

N"

tirn

r
0
w
a

O
0

O

w
z
CD r
*
w

'd

o
'i
K

°
rr

1c

00
O
0
P

e

ä

c"

0'
o
co
CD
a
W. o

0
O
B

H.

:K

rt

n
CO
h-A

h

cn

CD V
O
9
'1
OW
rt

0

V

c"
rt
w

H.

tif+,

7'°
w
r
0

fD
F-

0

r

a-"
C
ºi

0

to

p

cn
cr

h
0

bd

I-xi

w

w

m

a

CD

ºý

pv

n

rw
fD

ýc

_

rn
H.
fD

1

0

o
p

1-c
av
H.
H

P-A ä:
P.
00

°

I-+

x

En

0

H.

rý
fD
rt

rt
0

rn

0

O

c'
p

y

Cr

rfD

td

S

M

0

N

t

CD
°

0

CD

h-i
Oo
10
10

r

N

N
N
r

N

W

00

O
ICI
ý
w

4

N
W

In

V

N

W

In

y0

IO
N

r
A
Gý

UI
V

Vº
ON

N
UI

N

Lu

O

O

O'

N
C,% r
O
%O

In
0

%G
W

In

%0

ý-+
ON

N

A

"O
%0

r
V
N

L

CO 0.-

%O 0

lJ1
W
W

In

UI

00

N

W

In

V

ý
%0
ý -+
+

N

O

W

N

N
W

N

W

N
W

00

°'

V

UI

r
a--

ON

OD

W

10

r

r

P% -'V

r
N

r
4

r

r
00

r
00

r

r
ýO

V
-4

1-+

%D

,P-

W

%D

V

W

'0

N

r
(I
.i

r
W
V

-.
W
r

N

to

OD

r
N

W

r

A

UI

N

r

'

W
-+

W
r

W
W

-

N
N

r
t'J

V

rLA3

V

r4's

N
-i

N

O

W

r

O

LA
Ln

-!

CO

0

V

V

00

W

t.

r

In

r"
CO
N

03
ON

P0
00

N
00

r

W

UI

N

Oro

'

W

W
O
N

In

ý'
p0
.-

CA)

tn

OD

O

UUI

co
%

r
N

t-j
tý1

N

ýO

Op

tj
N

ýo

0

Ln
LA

10

Ö
00

C%

-

1

I
V

co
N

ý
C%

r
O

N
º-+

LA)

C'

"

10

ON

p.

Ln

Ln

l
Ui

Ln

00

v

0

000

0

O'
OD
N
V
OD

W

O

W

.

r

0

ý-'

r
C)

f. +

0

CN
1-"

485
-

1N+

0

C)

N
U's

Pj

00

N

W

%4 %D N
0

1-

V

w

r.%

Ln

ý

r

00
'O


<table>
<thead>
<tr>
<th>Branch</th>
<th>2443</th>
<th>2483</th>
<th>2523</th>
<th>2574</th>
<th>2624</th>
<th>2674</th>
<th>2724</th>
<th>2774</th>
<th>2824</th>
<th>2874</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>40</td>
<td>30</td>
<td>40</td>
<td>30</td>
<td>40</td>
<td>30</td>
<td>40</td>
<td>30</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>88</td>
<td>118</td>
<td>99</td>
<td>116</td>
<td>96</td>
<td>100</td>
<td>96</td>
<td>100</td>
<td>96</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>66</td>
<td>105</td>
<td>69</td>
<td>105</td>
<td>69</td>
<td>105</td>
<td>69</td>
<td>105</td>
<td>69</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wanting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>142</td>
<td>142</td>
<td>142</td>
<td>142</td>
<td>142</td>
<td>142</td>
<td>142</td>
<td>142</td>
<td>142</td>
<td></td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>159</td>
<td>159</td>
<td>159</td>
<td>159</td>
<td>159</td>
<td>159</td>
<td>159</td>
<td>159</td>
<td>159</td>
<td></td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>48</td>
<td></td>
</tr>
</tbody>
</table>

**THE ABBEY**

<table>
<thead>
<tr>
<th>Branch</th>
<th>2443</th>
<th>2483</th>
<th>2523</th>
<th>2574</th>
<th>2624</th>
<th>2674</th>
<th>2724</th>
<th>2774</th>
<th>2824</th>
<th>2874</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE I:2 Continued**
1890, eight of the fourteen Society branches had a hundred members, or more. A decade later eleven branches, nine of which were situated within the County, could boast a hundred members. The expansion which took place in the face of intensive foreign competition, is largely explained by reason of technological change. The four pot furnace common to the industry in previous decades became increasingly obsolete post 1880, being replaced by tank furnaces. Bottle houses containing multiple chairs of artisan glassmakers, the number of chairs being governed solely by the dimension of each tank, became standard throughout the industry. The general improvement in the conditions of trade from 1882, promoted Society recruitment as factories increased their workforces. Throughout the closing decades of the nineteenth century, Castleford Branch dominated the trade; however, a slight indication of decline is evident after 1887, when membership reached a peak of 584. The decline may be ascribed to a combination of bottlehouse conversion to flint bottle houses and the advent of the German 'block' system. Of greater, long-term significance was machine production which following its disastrous introduction at Castleford, (cf Chapter 9 (b)) was developed in other County districts. The general pattern of branch membership considered in proportion to that of Castleford indicates the greater scope for industrial development in rural areas where more space was available for the construction of larger bottle houses containing regenerative gas-fired tank furnaces than was the case in the confined urbanised Castleford district. The fact is reflected in the increased membership of branches such as Thornhill Lees, Conisbro, Swinton. Stairfoot, where a second branch was opened in 1891 witnessed a dramatic increase in branch membership when the 670 ton capacity tank of the machine shop was converted to manual production, creating 22 bottle-making chairs, in June 1894. By contrast, are the small single factory branches such as Masbro (Rotherham) in which traditional flint glass wares had been superceded by flint glass bottle production and in which the manufacture of common bottles was a secondary feature of production. At such sites membership of the G.B.M. Society retained the levels of previous decades at best, or actually declined to the point where the branch was closed and the members transferred to neighbouring branches, as was the case with Kilnhurst and Wopwell.

The 'external' branches of the Society reveal a variable pattern of membership in accordance with the fortunes of the individual factories upon which the branches were constituted. Blaydon-on-Tyne was
established by Yorkshire artisans in the mid 1850s and adopted the native customs and methodology of the Yorkshire trade while functioning as an independent body. Following the abortive attempt by the Yorkshire Society to form an amalgamation of regional bottlemakers Societies in 1882, (cf Chapter 13(a) infra), Blaydon decided to sacrifice its self-governing status, becoming a branch of the Yorkshire G.B.M. Society in 1884. The process of absorption saved the Blaydon branch from the adverse effects suffered by the North of England trade as foreign competition hit the staple black bottle trade, which financially crippled the small independent Societies such as Blyth, Seaham and Sunderland. The remaining 'external' branches, Shirehampton, Newport and London, in contrast to Blaydon with its 30 years of successful trade and self-government, underwent an initial period of gestation during which the factories held no formal branch status. The workers at these locations retained their membership of the Yorkshire Society on an individual basis, forwarding their contributions to central Office as per 32nd Rule. As the embryonic branches developed organisationally the 'Central Branch' register was discarded and the factories were formally designated as Society branches. Shirehampton set the pattern in 1883, followed by Newport 1886, and London three years later. The Shirehampton Branch, organised by expatriate artisans of Castleford Branch, was of brief duration. Situated in the Bristol area which had for some decades been a declining centre of glass bottle production, the Branch had only grown from 28 to 33 members by the time of its closure in 1855. The factory at Newport, again, organised by Castleford artisans, was by contrast, very successful, with more than a hundred members by the end of the nineteenth century. Less spectacular, but generally successful, was London Branch which grew from 12 to 43 members in the closing decade of the century, largely due to the installation of a gas-fired tank furnace at the Canning Town factory in 1891. The development more than offset the loss of members arising in consequence of the permanent closure of the factory at Millwall during the previous year. Membership of the London Branch suffered slight diminution about the turn of the century, members being excluded for working machines and also for going to South Africa (to fight in the Boer War?) without E.C. sanction.

Brundage has suggested the affiliation of the 'outside' branches as an explanation for the expansion of the membership of the G.B.M.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10th January 1876</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1st November 1879</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26th December 1879</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8th December 1880</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1876 - 1880</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources:

- (1) G.B. Reports, Volume VI, p 333 and p 311.
- (2) G.B. Reports, Volume VII, p 206 and p 439.

Table 12.5: Arrerars Existing at Branches of the Yorkshire C. B. M. Society and Total Society Arrerars at Various Periods 1876 - 1880.
Society post 1884 while somewhat minimising its importance by noting that such branches "never constituted a highly significant proportion of the Yorkshire Union's total membership."\(^8\)\(^1\) By 1890, the 'outside' branches constituted a mere 7.3% of the total Society membership, and although the proportion had increased to 8.7% a decade later, and reached 13.4% by 1909, the numbers were of minimal importance within the context of overall membership statistics. In terms of influence upon Society policy and government the numbers were even less important as the memberships of the external branches were so far removed from the centre of the trade.

Acknowledgement of the above fact substantiates a further conclusion by Brundage, that the establishment of the 'outside' branches occurred as much as a result of the strength of the Yorkshire Society as a cause of it.\(^8\)\(^2\) Clearly then, one must seek additional considerations to explain the increase in Society membership. Three contributory elements of Society policy may be discerned in arresting the decline in membership which took place between 1876 – 1882. The most important was the deliberate effort by Union officials to reclaim lapsed members. Despite the rigourous attitude concerning payment of contributions as expressed in Rule 21 of the Society's Code of 1865,\(^8\)\(^3\) artisan arrears had grown substantially during the late 1870s. The incidence of high unemployment rendered some journeymen incapable of maintaining regular contributions, thus adding to arrears accruing from indifference. In addition, the growing threat of unemployment caused some journeymen to default on membership contributions "under the delusion that they would retain their situations by becoming non-Society men."\(^8\)\(^4\)

Table 12:5 shows the growing dimension of the problem. From the end of 1875, to the following year-end, the amount of arrears had risen by 61.2%. Within the next three years it was to rise by a further 23.4% and within the space of the following year by a staggering £421, an annual increase of 80.7%. The overall percentage increase of 94.2% for the period with arrears rose from 2.5% to 14.7% of the total membership. By June 1876, the practice of writing-off members' accounts had been adopted. In that year of eleven accounts written-off, four were those of deceased members, but by 1880, of eighteen accounts written-off, all were for default of membership contributions. The arrears situation for the subsequent years up to 1886 is shown in Table 12:6.
**TABLE 12:6  ACCOUNTS IN ARREAR AND WRITTEN-OFF BY YORKSHIRE G.B.M. SOCIETY, 1881 - 1885**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>DEFAULT ACCOUNTS</th>
<th>DECEASED ACCOUNTS</th>
<th>TOTAL No. ACCOUNTS WRITTEN OFF</th>
<th>VALUE OF A/Cs WRITTEN OFF</th>
<th>AMOUNT PER MEMBER OF SOCIETY PER A/Cs WRITTEN OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>£  s  d</td>
<td>£  s  d</td>
</tr>
<tr>
<td>1881</td>
<td>164</td>
<td>5</td>
<td>169</td>
<td>407 16 2</td>
<td>7 11\text{\text{\frac{1}{2}}}</td>
</tr>
<tr>
<td>1882</td>
<td>112</td>
<td>16</td>
<td>128</td>
<td>272 14 10</td>
<td>4 5\text{\text{\frac{1}{2}}}</td>
</tr>
<tr>
<td>1883</td>
<td>48</td>
<td>10</td>
<td>58</td>
<td>68 19 4</td>
<td>1 1\text{\text{\frac{1}{2}}}</td>
</tr>
<tr>
<td>1884</td>
<td>49</td>
<td>12</td>
<td>61</td>
<td>132 10 5</td>
<td>1 10\text{\text{\frac{1}{2}}}</td>
</tr>
<tr>
<td>1885</td>
<td>37</td>
<td>14</td>
<td>51</td>
<td>90 6 6</td>
<td>1 1\text{\text{\frac{1}{2}}}</td>
</tr>
<tr>
<td>TOTALS</td>
<td>410</td>
<td>57</td>
<td>467</td>
<td>972 7 1</td>
<td></td>
</tr>
</tbody>
</table>

Sources: (i) G.B.M. Reports, Volume X, p 274
(ii) G.B.M. Reports, Volume XI, p 66.

The Table reveals a significant reduction in the number and amount of arrears written off from 1883, largely as a result of the new Contributions and Arrears Rule which was formulated in April 1882 and the Executive Council's Resolution of May 1884, relating to re-admission of bad members. As a result, £680-11-0d of the total arrears written off during the period 1881 - 1885, accumulated during the first two years, representing 63.5% of the total of written-off accounts. The abatement of the arrears as a result of reclamation policies adopted by the Society was only attained at the cost of some status as may be judged from the remarks of Alfred Greenwood to the assembled delegates of regional bottlemakers' Societies in 1883:

"The Yorkshire Society has for some time past been reclaiming its 'bad and non members' and holding out inducements to reinstate them in the Society ..... There was a time when Yorkshire would not have taken them in at £15 per man. Since then the tide of affairs has changed and Yorkshire has come down to lift these men up."

Some indication of the situation arising from the reclamation of the feckless type of artisan is seen in Greenwood's comment of September 1882 concerning members excluded for arrears who had re-entered and
been excluded several times subsequently.

"Many are now playing a game of in and out, just like cricketers; except that they are not satisfied with being bowled out once only, but must needs have several innings, in some cases half a dozen or more."  

Short term exigency whilst beneficial in arresting the decline in membership left a terrible long-term legacy. In the three years 1887 to 1889, 336 exclusions and 210 re-admissions occurred, while in the five years 1901 - 1905, 494 exclusions took place. During the thirty years 1879 - 1908 some 2,755 accounts were written off, averaging 90 per year, all journeymen, with Society membership ranging from 958 in January 1878, to 2255 in December 1908. In spite of the apparent limitations, the reclamation of members was greatly assisted by the Society's 'work sharing' policy which by ensuring a measure of artisan employment at times of slack trade, acted as an inducement to lapsed members whilst maintaining the support of existing ones (cf Chapter 15 infra). The measure, allied to a gradual improvement in trade, did not manifest any obvious benefit to the Society until the late 1880s, however, and it was not until 1891 that formal acceptance of work-sharing as of right, rather than as a discretionary favour, was conceded by the Yorkshire manufacturers. Nevertheless, as Brundage has noted, the Society policy of work-sharing amongst its unemployed members was a factor in helping to maintain the support of the men. More importantly, in the decade following its formal introduction, the work-sharing clause enabled the Society to regain the control of the glass bottle making workforce by restoring the closed shop membership which had applied during the years 1866 - 1876. Less significant, but no less deliberate, was the policy of the G.B.M. Executive in closing and reopening branches of the Society in accordance with developments within the County trade. This policy is seen in the closure of Consibro branch and the transfer of its members to Swinton Branch between 1876 and late 1883, and the incorporation of Stairfoot and Wombwell within Barnsley Branch from 1880 - 1888, thus removing artisan members from the influence of non-Society men working at factories constituting these branches and in so doing minimising the risk of psychological and material damage to the Union.

The observed trends affecting the G.B.M. Society are paralleled by those concerning the Flint Glass Makers during the same period. Here, however, the impact of trade depression and foreign competition caused
a decline in membership some years in advance of that within the G.B.M. Society. From a peak of 2094 members in late 1876, the Society's membership fluctuated while undergoing a general decline and by the beginning of 1880 stood at 1987.

Table 12:7 reveals the continued decline which by mid 1882 totalled 1898 members, almost the same number as that a decade earlier. Thereafter the membership began to rise and by 1889 had again reached a figure in excess of two thousand. Following a stagnatory phase during

<table>
<thead>
<tr>
<th>YEAR</th>
<th>(A)</th>
<th>(B)</th>
<th>$(B)/(A) \times 100$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>1963</td>
<td>277</td>
<td>14.1</td>
</tr>
<tr>
<td>1881</td>
<td>1919</td>
<td>262</td>
<td>13.6</td>
</tr>
<tr>
<td>1882</td>
<td>1944</td>
<td>296</td>
<td>15.2</td>
</tr>
<tr>
<td>1883</td>
<td>1953</td>
<td>322</td>
<td>16.4</td>
</tr>
<tr>
<td>1884</td>
<td>1969</td>
<td>329</td>
<td>16.7</td>
</tr>
<tr>
<td>1885</td>
<td>1985</td>
<td>356</td>
<td>17.9</td>
</tr>
<tr>
<td>1886</td>
<td>1993</td>
<td>392</td>
<td>19.6</td>
</tr>
<tr>
<td>1887</td>
<td>1971</td>
<td>410</td>
<td>20.8</td>
</tr>
<tr>
<td>1888</td>
<td>1964</td>
<td>408</td>
<td>20.7</td>
</tr>
<tr>
<td>1889</td>
<td>2012</td>
<td>430</td>
<td>21.3</td>
</tr>
<tr>
<td>1890</td>
<td>2123</td>
<td>535</td>
<td>25.2</td>
</tr>
<tr>
<td>1891</td>
<td>2123</td>
<td>572</td>
<td>26.9</td>
</tr>
<tr>
<td>1892</td>
<td>2153</td>
<td>633</td>
<td>29.4</td>
</tr>
<tr>
<td>1893</td>
<td>2162</td>
<td>760</td>
<td>35.1</td>
</tr>
<tr>
<td>1894</td>
<td>2153</td>
<td>633</td>
<td>29.4</td>
</tr>
<tr>
<td>1895</td>
<td>2162</td>
<td>688</td>
<td>31.8</td>
</tr>
<tr>
<td>1896</td>
<td>2182</td>
<td>702</td>
<td>32.1</td>
</tr>
<tr>
<td>1897</td>
<td>2247</td>
<td>727</td>
<td>32.3</td>
</tr>
<tr>
<td>1898</td>
<td>2327</td>
<td>781</td>
<td>33.5</td>
</tr>
<tr>
<td>1899</td>
<td>2301</td>
<td>811</td>
<td>35.2</td>
</tr>
<tr>
<td>1900</td>
<td>2447</td>
<td>788</td>
<td>32.2</td>
</tr>
<tr>
<td>1901</td>
<td>2378</td>
<td>853</td>
<td>35.8</td>
</tr>
<tr>
<td>1902</td>
<td>2378</td>
<td>853</td>
<td>35.8</td>
</tr>
</tbody>
</table>

Source: F.G.M.M. Quarterly Branch Returns 1880 - 1902, passim
the middle of the next decade, the upward trend continued. An overall increase of 2.4\% during the period 1880 - 1889, was followed by an increase of 7.7\% between 1890 - 1899. By 1903, when the Yorkshire Districts of the Society formed an independent breakaway Union (cf Section (a) Supra), the national membership was again declining, falling by 2.8\% after 1900.

Table 12:7 also illustrates how important a part the Yorkshire District played in the membership growth of the F.G.M. Society throughout the period 1880 - 1902. In 1880, the 227 members belonging to branches within the Yorkshire District constituted 14.1\% of total Society membership. By the end of the decade a 35\% increase had occurred in the number of flint hands engaged in the Yorkshire trade, as manufacturers faced with intensified competition in traditional markets increasingly adapted to container production. As a result, while membership of other districts contracted, that of Yorkshire expanded and by 1889, Yorkshire District comprised 21.3\% of the total membership of the F.G.M. Society. A further increase of some 47\% in the next decade meant that by 1899, the proportionate membership of the Yorkshire District was 35.2\% of the entire Society.

Table 12:8 shows the membership growth in the context of individual branches. The data indicates stagnation at traditional centres of flint glass manufacture such as York and Rotherham. The tendency stands in contrast to districts such as Hunslet and Barnsley where an increase in both the number and size of factory units boosted Society membership. Unlike the common bottle trade, manufacture of flint glass bottles continued to utilise pot rather than tank furnaces. For this reason the expansion in areas such as Hunslet, Barnsley and Castleford owed less to technical innovation than the replacement of bottle houses by flint bottle houses. The prevailing trend is seen by reference to Castleford where in addition to displacement of bottle hands by flint hands, the F.G.M. attempted to establish a co-operative factory in the mid-eighties. (cf Chapter 14 (b) infra). Again, the trend is emphasised in the case of Kilnhurst, a single factory branch, which gradually converted to flint glass bottle production methods from the mid eighties, as an economy measure. The measure was unsuccessful, however, resulting in the closure of the factory a decade later. The overall pattern is one of expanding membership. In 1880, eight County districts totalled 277 members, 24 less than the
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTALS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: F.G.M. Quarterly Branch Returns, 1880 - 1992, passim

**Table 12.8** Memberships of Individual Branches of the Yorkshire District of the F.G.M. Society, 1880 - 1992

<table>
<thead>
<tr>
<th></th>
<th>1880</th>
<th>1881</th>
<th>1882</th>
<th>1883</th>
<th>1884</th>
<th>1885</th>
<th>1886</th>
<th>1887</th>
<th>1888</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Districts:**
- Sheffield
- Thornhill Lees
- Mexborough
- Knottingley
- Castleford
- Barnsley
- Doncaster
- Rotherham
- Kirkintilloch
- Hunslet
- York
- Manchester
<table>
<thead>
<tr>
<th>Districts</th>
<th>853</th>
<th>855</th>
<th>878</th>
<th>881</th>
<th>884</th>
<th>781</th>
<th>721</th>
<th>722</th>
<th>724</th>
<th>633</th>
<th>636</th>
<th>760</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheffield</td>
<td>24</td>
<td>42</td>
<td>43</td>
<td>40</td>
<td>42</td>
<td>38</td>
<td>38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thornhill Lees</td>
<td>1</td>
<td>71</td>
<td></td>
<td>70</td>
<td>1</td>
<td>61</td>
<td>61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexborough</td>
<td>61</td>
<td>62</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knottingley</td>
<td>61</td>
<td>62</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catterick</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>York</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rothernham</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kibburn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hustler</td>
<td>23</td>
<td>29</td>
<td>189</td>
<td>226</td>
<td>226</td>
<td>226</td>
<td>226</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Castleford</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barnsley</td>
<td>127</td>
<td>137</td>
<td>131</td>
<td>135</td>
<td>135</td>
<td>135</td>
<td>135</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: I.B.I.
total for the same number of districts four years earlier. Despite a reduction in the number of factory branches, the number of Society members within the County stood at 430 by 1889 and a decade later had further increased to 811. The establishment of a 24 member branch at Sheffield in 1901, although of short duration, raised the number of County flint hands to 853 and to some extent disguised the onset of a decline arising in consequence of recourse to machine production and the closure of some factories from the closing years of the old century.

The establishment of the breakaway Union of flint bottle hands in 1903 marked a new era in membership. Ten Yorkshire branches were joined by flint bottle hands at factories in Conisbro, Wombwell and Stairfoot. In addition, the new Union took a parallel course to that pursued by the G.B.M. Society twenty years earlier, by admitting to membership artisans in 'external' branches at Glasgow and Canning Town. Knottingley and Mexbro also joined the breakaway Society but withdrew during the first year of its administration. The impact of machine production in the former branch and fear of job loss in the latter, as the brief phase of trade prosperity which straddled the turn of the century declined, probably provides a reason for the withdrawal.

Table 12:9 gives details of membership of the N.G.B.M. Society during its formative years. Following an initial drop of 5.9% the decline

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MEMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1903</td>
<td>847</td>
</tr>
<tr>
<td>1904</td>
<td>839</td>
</tr>
<tr>
<td>1905</td>
<td>812</td>
</tr>
<tr>
<td>1906</td>
<td>797</td>
</tr>
<tr>
<td>1907</td>
<td>807</td>
</tr>
<tr>
<td>1908</td>
<td>828</td>
</tr>
<tr>
<td>1909</td>
<td>950</td>
</tr>
</tbody>
</table>

Source: N.G.B.M. Magazine, Quarterly Branch Returns, 1903 - 1909, passim.
<table>
<thead>
<tr>
<th>BRANCH</th>
<th>1903</th>
<th>1904</th>
<th>1905</th>
<th>1906</th>
<th>1907</th>
<th>1908</th>
<th>1909</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnsley</td>
<td>85</td>
<td>92</td>
<td>84</td>
<td>89</td>
<td>89</td>
<td>93</td>
<td>88</td>
</tr>
<tr>
<td>Canning Town</td>
<td>50</td>
<td>48</td>
<td>47</td>
<td>43</td>
<td>39</td>
<td>37</td>
<td>36</td>
</tr>
<tr>
<td>Castleford</td>
<td>112</td>
<td>120</td>
<td>118</td>
<td>123</td>
<td>143</td>
<td>163</td>
<td>269</td>
</tr>
<tr>
<td>Glasgow</td>
<td>12</td>
<td>12</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Hunslet</td>
<td>254</td>
<td>250</td>
<td>239</td>
<td>240</td>
<td>255</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Kilnhurst &amp; Wath</td>
<td>36</td>
<td>35</td>
<td>30</td>
<td>31</td>
<td>29</td>
<td>30</td>
<td>28</td>
</tr>
<tr>
<td>Rotherham</td>
<td>42</td>
<td>42</td>
<td>43</td>
<td>41</td>
<td>45</td>
<td>44</td>
<td>46</td>
</tr>
<tr>
<td>Sheffield</td>
<td>30</td>
<td>29</td>
<td>30</td>
<td>30</td>
<td>25</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>Stairfoot</td>
<td>34</td>
<td>33</td>
<td>34</td>
<td>22</td>
<td>11</td>
<td>11</td>
<td>-</td>
</tr>
<tr>
<td>Thornhill Lees</td>
<td>35</td>
<td>34</td>
<td>21</td>
<td>20</td>
<td>14</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>York</td>
<td>83</td>
<td>86</td>
<td>85</td>
<td>78</td>
<td>79</td>
<td>77</td>
<td>81</td>
</tr>
<tr>
<td>Conisbro</td>
<td>36</td>
<td>33</td>
<td>32</td>
<td>33</td>
<td>30</td>
<td>29</td>
<td>36</td>
</tr>
<tr>
<td>Wombwell</td>
<td>38</td>
<td>39</td>
<td>39</td>
<td>39</td>
<td>37</td>
<td>37</td>
<td>42</td>
</tr>
<tr>
<td>Newcastle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gateshead</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Knottingley</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexbrough</td>
<td>84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The membership returns for these two branches are for the first quarter of the year. Neither branch continued Society membership in subsequent years.

| TOTALS       | 847  | 833  | 812  | 797  | 807  | 828  | 950  |

Source: G.B.M. Quarterly Branch Returns, 1902 - 1909 passim.
in membership was arrested as a result of improved administration and positive recruitment and an increase in excess of 16.0% occurred between 1907 - 1909. An important factor in the reversal was the recruitment of machine hands. The decision to open entry to machine operators was basically an attempt to accommodate an increasing element of the members whose transfer to machine production precluded continued membership of the Society. The extension of membership helped offset growing unemployment amongst Society members and the attendant drain on Society finances while obviating the threat to the power of the Society and the status of its members. As the body of machine operators did not solely consist of transferred flint artisans, the recruitment decision was a de facto abandonment of the exclusive craft basis which had hitherto characterised Society membership. The development was also the tacit acknowledgement of the end of an epoch in which industrial power and socio-economic status were the quantitative expression of artisan skill.

Table 12:10 shows details of membership of individual branches of the N.G.B.M. Society during the years 1903 - 1909. The salient feature is the consistent level of branch memberships over the period. This stands in contrast to the generally declining tendency within the branches of the G.B.M. Society during the period, a fact which may indicate a lesser degree of initial displacement amongst flint hands as a result of mechanisation. Two peripheral features are the rise of Castleford as the largest branch as a result of the incorporation of the reclaimed Knottingley artisans, and the establishment of the Society's Machine Section in the autumn of 1909. The two events are not mutually exclusive. The Machine Section was largely based on the Bagley factory at Knottingley where the semi-automatic Ashley-Arnall and the fully automatic Owens machines were a feature from the beginning of the century.

(c) Financial Structure.

The vicissitudes of trade conditions between 1880 - 1909 is clearly revealed in the general financial position of each of the glass-makers Societies during the period.

Table 12:11, which shows the position of the G.B.M. Society, reveals that after 1880 the decline in Society funds caused by the adverse trade conditions and industrial disruption from 1876, was arrested.
### TABLE 12:11 ANNUAL INCOME AND EXPENDITURE OF YORKSHIRE G.B.M.
SOCIETY 1880 - 1909

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ANNUAL INCOME £ s d</th>
<th>ANNUAL EXPENDITURE £ s d</th>
<th>SOCIETY FUNDS £ s d</th>
<th>AMOUNT PER MEMBER £ s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>3149 17 3</td>
<td>6036 6 10½</td>
<td>7655 19 6½</td>
<td>7 4 4</td>
</tr>
<tr>
<td>1881</td>
<td>2690 3 2</td>
<td>2589 1 8</td>
<td>7757 1 0½</td>
<td>7 11 2½</td>
</tr>
<tr>
<td>1882</td>
<td>2079 7 1</td>
<td>1674 19 7</td>
<td>8161 8 6½</td>
<td>8 0 11½</td>
</tr>
<tr>
<td>1883</td>
<td>2453 11 4</td>
<td>2472 10 1½</td>
<td>8142 9 9½</td>
<td>6 12 6½</td>
</tr>
<tr>
<td>1884</td>
<td>4131 9 10</td>
<td>3991 5 6</td>
<td>8282 14 1½</td>
<td>5 17 1</td>
</tr>
<tr>
<td>1885</td>
<td>4056 5 11</td>
<td>3743 13 4½</td>
<td>8595 6 8</td>
<td>5 8 11</td>
</tr>
<tr>
<td>1886</td>
<td>5586 10 8½</td>
<td>9576 9 6½</td>
<td>4605 7 10</td>
<td>2 19 9</td>
</tr>
<tr>
<td>1887</td>
<td>5430 5 4½</td>
<td>3753 7 3½</td>
<td>6282 5 11</td>
<td>4 5 5½</td>
</tr>
<tr>
<td>1888</td>
<td>5029 2 7½</td>
<td>2918 12 3½</td>
<td>8392 16 3</td>
<td>5 9 3</td>
</tr>
<tr>
<td>1889</td>
<td>7232 1 3</td>
<td>3812 0 7</td>
<td>11812 16 11</td>
<td>6 17 7</td>
</tr>
<tr>
<td>1890</td>
<td>6321 7 3</td>
<td>2598 1 6½</td>
<td>15536 2 7½</td>
<td>8 3 7½</td>
</tr>
<tr>
<td>1891</td>
<td>9102 3 6</td>
<td>2577 1 3½</td>
<td>22061 14 0</td>
<td>9 8 6½</td>
</tr>
<tr>
<td>1892</td>
<td>9291 17 6½</td>
<td>5265 0 3</td>
<td>26088 2 1½</td>
<td>10 18 5</td>
</tr>
<tr>
<td>1893</td>
<td>11566 5 3</td>
<td>25488 1 0½</td>
<td>12166 6 4</td>
<td>4 19 8½</td>
</tr>
<tr>
<td>1894</td>
<td>12576 0 6½</td>
<td>11216 18 3½</td>
<td>13525 8 7</td>
<td>5 9 0</td>
</tr>
<tr>
<td>1895</td>
<td>11546 8 5</td>
<td>9458 14 8</td>
<td>15613 2 4</td>
<td>6 3 8</td>
</tr>
<tr>
<td>1896</td>
<td>10705 1 8½</td>
<td>5646 0 9</td>
<td>20627 3 3½</td>
<td>8 1 7</td>
</tr>
<tr>
<td>1897</td>
<td>10955 9 5½</td>
<td>5706 5 5</td>
<td>25921 7 4</td>
<td>9 16 2</td>
</tr>
<tr>
<td>1898</td>
<td>11599 7 9</td>
<td>6388 13 9</td>
<td>31132 1 4</td>
<td>11 12 1</td>
</tr>
<tr>
<td>1899</td>
<td>12104 12 3</td>
<td>4292 2 6½</td>
<td>38944 11 0½</td>
<td>13 19 4½</td>
</tr>
<tr>
<td>1900</td>
<td>10517 6 6</td>
<td>5396 8 2</td>
<td>44065 9 4½</td>
<td>15 10 4</td>
</tr>
<tr>
<td>1901</td>
<td>10881 6 1½</td>
<td>8421 14 10½</td>
<td>46525 0 7½</td>
<td>16 0 9</td>
</tr>
<tr>
<td>1902</td>
<td>9646 6 5</td>
<td>14011 6 3</td>
<td>42160 0 9½</td>
<td>14 9 10</td>
</tr>
<tr>
<td>1903</td>
<td>10101 8 6</td>
<td>13418 4 8</td>
<td>--- ---</td>
<td>--- ---</td>
</tr>
<tr>
<td>1904</td>
<td>10455 18 8</td>
<td>14550 0 11</td>
<td>--- ---</td>
<td>--- ---</td>
</tr>
<tr>
<td>1905</td>
<td>11055 6 10</td>
<td>13418 7 8</td>
<td>32386 1 6½</td>
<td>11 15 2</td>
</tr>
<tr>
<td>1906</td>
<td>11751 17 5</td>
<td>10639 8 5½</td>
<td>33498 10 6</td>
<td>12 15 5</td>
</tr>
<tr>
<td>1907</td>
<td>12214 7 7</td>
<td>7530 16 1½</td>
<td>38209 1 11½</td>
<td>15 1 9½</td>
</tr>
<tr>
<td>1908</td>
<td>11396 5 0</td>
<td>8586 13 3</td>
<td>41018 13 8½</td>
<td>16 10 4½</td>
</tr>
<tr>
<td>1909</td>
<td>10973 6 2</td>
<td>10360 16 7½</td>
<td>41631 3 3</td>
<td>17 0 10</td>
</tr>
</tbody>
</table>

**TOTALS 302784 10 1 264957 13 5**  

Source: G.B.M. Reports, Volume XXII, pp 568 - 569
A general upward trend during the decade from 1881 is evident, with annual income exceeding expenditure, facilitating the accumulation of surplus funds, so that by 1892, the positive balance of 1875 was almost restored. But for the adverse balance occasioned by the dramatic increase in the level of unemployment in 1886, the 1875 balance would have been surpassed. The reduction of Society funds of nearly 54% in 1886 was followed by a further 47% reduction in 1893 as a result of the Lock-Out, after which consistent financial stability was experienced until 1902 - 1905 when a period of bad trade produced abnormally high levels of unemployment and an imbalance between income and expenditure.

Table 12:12, showing the financial position of the F.G.M. Society replicates the general tendencies revealed by the previous table. In the case of the F.G.M. Society, however, it is interesting to note that the annual average increase in the surplus funds of the Society between 1880 - 1886 of 24.2%, far outstrips the modest 2% of the G.B.M. Society, indicating the disadvantages to the latter of specialised production and regionalised organisation at times of adverse trade cycles.

From 1886, an upsurge in unemployment resulted in the excess of annual expenditure over income. The effect on the F.G.M. Society was, however, more protracted than that experienced by the G.B.M. Society as the increasing level of unemployment among the Yorkshire-based flint bottle makers added to the existing levels occurring as a result of the intensification of foreign competition. Consequently, the annual imbalance extended until 1890 and was supplemented by further periods of financial adversity in 1893 - 1895, 1897 and 1900 - 1902. During the period 1880 - 1892, the Society's assets increased by more than a third to reach a record level of £13,249. During the following decade a decline of almost 50% occurred despite an increase in membership of 10.4%. Clearly, the income produced by the increase in annual subscriptions was insufficient to offset the financial demands. The unprecedented levels of unemployment exacerbated the actuarial miscalculations which undermined superannuation provision and were further compounded by increased demands for sickness and death benefit arising from the deterioration of living and working conditions throughout the survey period. The resultant financial crisis polarised attitudes between the two spheres of the flint glass trade and was an important contributory factor in the separation of the two elements of Society in 1902.
## TABLE 12:12 ANNUAL INCOME AND EXPENDITURE OF FLINT GLASS MAKERS' SOCIETY, 1880 - 1902

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ANNUAL INCOME</th>
<th>ANNUAL EXPENDITURE</th>
<th>SOCIETY FUNDS</th>
<th>AMOUNT PER MEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ s d</td>
<td>£ s d</td>
<td>£ s d</td>
<td>£ s d</td>
</tr>
<tr>
<td>1880</td>
<td>6606 13 11½</td>
<td>7500 11 7½</td>
<td>4498 6 6½</td>
<td>2 5 10</td>
</tr>
<tr>
<td>1881</td>
<td>6953 16 10½</td>
<td>5024 11 5½</td>
<td>6488 15 9</td>
<td>3 7 7½</td>
</tr>
<tr>
<td>1882</td>
<td>6732 6 7½</td>
<td>5113 5 7½</td>
<td>8028 7 4½</td>
<td>4 2 7</td>
</tr>
<tr>
<td>1883</td>
<td>6469 13 10</td>
<td>5045 8 11</td>
<td>9519 12 11</td>
<td>4 17 6</td>
</tr>
<tr>
<td>1884</td>
<td>6328 14 3</td>
<td>5215 5 9</td>
<td>10751 8 1</td>
<td>5 9 2½</td>
</tr>
<tr>
<td>1885</td>
<td>6316 15 10½</td>
<td>5777 5 5½</td>
<td>11033 9 10½</td>
<td>5 11 2</td>
</tr>
<tr>
<td>1886</td>
<td>6181 2 4½</td>
<td>6856 10 3</td>
<td>10560 14 6½</td>
<td>5 6 0</td>
</tr>
<tr>
<td>1887</td>
<td>6757 5 4</td>
<td>7107 13 8</td>
<td>9406 15 11½</td>
<td>4 15 5½</td>
</tr>
<tr>
<td>1888</td>
<td>7424 14 9½</td>
<td>7881 9 10</td>
<td>8988 8 9½</td>
<td>4 11 6½</td>
</tr>
<tr>
<td>1889</td>
<td>7675 5 3</td>
<td>7680 17 0</td>
<td>7448 19 5</td>
<td>3 14 0½</td>
</tr>
<tr>
<td>1890(a)</td>
<td>8789 0 3</td>
<td>5801 1 4½</td>
<td>10020 0 1½</td>
<td>4 19 7</td>
</tr>
<tr>
<td>1891</td>
<td>8363 6 4</td>
<td>6016 15 10½</td>
<td>12431 1 2</td>
<td>5 17 1½</td>
</tr>
<tr>
<td>1892</td>
<td>7957 8 7</td>
<td>7100 3 9</td>
<td>13249 13 2</td>
<td>6 3 10</td>
</tr>
<tr>
<td>1893</td>
<td>7266 12 10</td>
<td>7864 11 7½</td>
<td>12647 4 11½</td>
<td>5 17 0</td>
</tr>
<tr>
<td>1894</td>
<td>7805 6 8½</td>
<td>9116 14 9</td>
<td>11391 17 4</td>
<td>5 5 10</td>
</tr>
<tr>
<td>1895</td>
<td>7195 13 9</td>
<td>7640 15 2½</td>
<td>11639 0 8</td>
<td>5 7 8</td>
</tr>
<tr>
<td>1896</td>
<td>8066 16 8</td>
<td>7386 0 11½</td>
<td>12007 9 4</td>
<td>5 10 7</td>
</tr>
<tr>
<td>1897</td>
<td>8522 14 5½</td>
<td>9024 11 9½</td>
<td>11451 4 3½</td>
<td>5 1 11</td>
</tr>
<tr>
<td>1898</td>
<td>8625 13 0½</td>
<td>7207 14 11½</td>
<td>12677 14 10½</td>
<td>5 10 2½</td>
</tr>
<tr>
<td>1899</td>
<td>8824 14 6</td>
<td>8359 11 4</td>
<td>13071 10 1</td>
<td>5 6 10</td>
</tr>
<tr>
<td>1900</td>
<td>8972 13 8½</td>
<td>9884 5 9</td>
<td>12322 13 4</td>
<td>5 3 7½</td>
</tr>
<tr>
<td>1901</td>
<td>8608 9 11½</td>
<td>8625 16 4</td>
<td>12375 12 7½</td>
<td>5 4 1</td>
</tr>
<tr>
<td>1902</td>
<td>9187 18 7½</td>
<td>12685 19 10½</td>
<td>8856 11 9½</td>
<td>3 14 6</td>
</tr>
</tbody>
</table>

**TOTALS** 173890 18 7 170441 2 6

Source: F.G.M.M. Quarterly Returns 1880 - 1902, passim.

(a) No figures available for one quarter of year, therefore that quarters total based on average of other three quarters figures.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>ANNUAL INCOME</th>
<th>ANNUAL EXPENDITURE</th>
<th>SOCIETY FUNDS</th>
<th>AMOUNT PER MEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ s d</td>
<td>£ s d</td>
<td>£ s d</td>
<td>£ s d</td>
</tr>
<tr>
<td>1903</td>
<td>10341 0 9½</td>
<td>6186 8 8½</td>
<td>1058 16 8</td>
<td>7 4</td>
</tr>
<tr>
<td>1904</td>
<td>10367 17 4½</td>
<td>6808 7 1</td>
<td>1728 13 3</td>
<td>12 1½</td>
</tr>
<tr>
<td>1905</td>
<td>6946 19 5</td>
<td>5280 5 11</td>
<td>1736 12 10</td>
<td>17 7½</td>
</tr>
<tr>
<td>1906</td>
<td>7559 13 3½</td>
<td>4903 1 1½</td>
<td>2171 18 4½</td>
<td>16 6¼</td>
</tr>
<tr>
<td>1907</td>
<td>7748 18 11</td>
<td>5128 5 0</td>
<td>3945 12 4</td>
<td>1 11 2</td>
</tr>
<tr>
<td>1908</td>
<td>6518 5 7½</td>
<td>4180 14 4½</td>
<td>5309 4 3</td>
<td>2 2 9</td>
</tr>
<tr>
<td>1909</td>
<td>5290 0 2½</td>
<td>4085 2 9½</td>
<td>6066 16 8</td>
<td>2 9 8</td>
</tr>
<tr>
<td>TOTALS</td>
<td>54772 15 9½</td>
<td>36572 5 0</td>
<td>———</td>
<td>———</td>
</tr>
</tbody>
</table>


Table 12:13 indicates the financial position of the newly-formed National G.B.M. Society between 1903 - 1909. Despite the coincidence of administrative adjustment and particularly poor trade between 1903 - 1906, the Society recorded a healthy fiscal balance accompanied by a consistent increase in its surplus funds which in spite of the prevailing conditions within the bottle trade suggest the secession of the bottle making section from the parent F.G.M. Society was a financially beneficial development. Within the Yorkshire G.B.M. Society two areas of increased expenditure which placed strain upon the finances during the survey period were the rising cost of government administration and the provision of welfare benefits...

(d) Welfare Benefits.

Reviewing the years 1885 - 1886, Alfred Greenwood pointed out that financial reform notwithstanding the position of the Society was far from satisfactory -

"The continual increase of obligations contracted by the Society will of themselves, without any extraordinary expenditure taking place through disputes with the masters .... be sufficient to drain the Society of its funds."95

That the extension of areas of benefit provision during the prosperous period of the previous decade had become a self-imposed burden is clear...
but more alarmingly, the fact that members had quickly assumed the guaranteed permanence of such benefit provision with little regard to the relativity of income and expenditure is obvious from Greenwood's assertion that —

"There seems to be a uniform expectation that benefits must be paid in the future as they have been in the past, and the fact seems to have been lost sight of altogether that there was a time in the history of the Society, and that within the recollection of many still "in the land of the living", when the Society did not hold itself liable to pay the benefits which have for some years been paid." 96

That the artisans expected the maintainance of a wide range of welfare benefits is a reflection on their status awareness.

Regulation of benefit provision in accordance with prevailing financial conditions might be condoned by the members however reluctantly, but benefit curtailment was clearly unacceptable for reasons of pride as much as economic necessity. For this reason those artisans in work accepted the levies which were imposed in addition to the normally high contributions. Thus, in addition to the 3 shillings per week, imposed in 1880, two-thirds of which was to offset the decrease in Society funds, 97 a further 6d per quarter was levied in 1882 to create and sustain a fund for the relief of distressed members 98 (cf section (d) vi, infra). The increased unemployment amongst Society members during the decade resulted in a levy of 3d per week to meet the demands of Donation allowance. 99

In April 1884 the traditional contribution of 1 shilling per week was abandoned and the rate increased to 1s 6d per week, making a total membership contribution of 18s per quarter. 100 Owing to the adverse condition of Society Funds the quarterly payment was twice increased in 1866, each increase being sanctioned by trade vote. 101 By January 1887 each working member was contributing the staggering sum of £1-16-0d per quarter, 102 more than 11% of basic journeyman wage levels. In April of that year specific levies were abandoned and thereafter all levies were of a general nature in accordance with the financial needs of the Society. 103

Nor was such financial sacrifice confined solely to self-preservation
for imposed levies included financial provision in response to appeals for assistance from the general labour movement (cf Chapter 8 (d) supra). The increasing surplus in Society funds during the period 1890 – 1902, meant that interest from invested capital eased the demand made on membership contributions. Between 1880 – 1899, a 75.3% increase occurred in income from contributions, levies and allied sources, and following a decade of decline, income from bank interest increased by 69.9% between 1891 – 1910. Against a background of uniquely high unemployment, accompanied by correspondingly high levels of arrears, and at a time when the wage differential with other groups of skilled workers was narrowing, the effort of the G.B.Ms is an indication of their status consciousness and their determination to ensure its preservation. The magnitude of the financial demand and the artisan response is made clear by reference to the individual benefits during the period.

(i) Unemployment.

The provision of unemployment donation during the period 1880 – 1909 was the largest single financial demand on the funds of either glassmakers' Society. Over the period the G.B.M. disbursed a total of £131,568, while the F.G.M. paid out £79,057, up to 1902, with £22,151 donated to the bottlemaking flint hands of the Yorkshire District. From 1903, a further £13,849 was disbursed in unemployment donation to the latter element by the N.G.B.M. Society. Table 12:14 showing the comparative percentage of unemployment of the G.B.Ms and the Boilermakers and Iron & Steel Shipbuilders during the 24 years 1880 – 1903, provides an indication of the magnitude of the problem facing the G.B.Ms. The Table shows that of G.B.Ms. actually in pursuance of their trade at each year-end throughout the sample period, the annual average unemployment level was 25.2%. When the members unemployed but withdrawn from the trade (i.e. 32nd Rule members) are added, the annual average unemployment level is 31.3%. The mean percentage of the G.B.Ms' Society provides a more comparable basis for calculation. The data shows a mean percentage per annum of 22.2% compared to the Boilermakers 9.2%. Nor is the example unique, for comparison of the annual percentage of unemployment and per capita costs with five other leading artisan trade societies during the period commonly referred to as the 'Great Depression', is shown in Table 12:15.

The Table reveals considerable differences in the levels of artisan unemployment and benefit expenditure between the various societies.
Table 12:14 COMPARISON OF ANNUAL PERCENTAGE OF UNEMPLOYED MEMBERS OF YORKSHIRE G.B.M. AND BOILERMAKERS AND IRON STEEL SHIPBUILDERS SOCIETIES 1880 - 1903

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER OF G.B.Ms. UNEMPLOYED</th>
<th>% UNEMPLOYED MINUS 32nd RULE MEMBERS</th>
<th>% UNEMPLOYED INCLUDING 32nd RULE MEMBERS</th>
<th>MEAN % UNEMPLOYED G.B.Ms.</th>
<th>% UNEMPLOYED BOILERMAKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>247</td>
<td>26.9</td>
<td>32.2</td>
<td>38.4</td>
<td>8.0</td>
</tr>
<tr>
<td>1881</td>
<td>242</td>
<td>27.8</td>
<td>36.5</td>
<td>20.0</td>
<td>1.8</td>
</tr>
<tr>
<td>1882</td>
<td>171</td>
<td>19.3</td>
<td>25.8</td>
<td>18.7</td>
<td>0.7</td>
</tr>
<tr>
<td>1883</td>
<td>223</td>
<td>20.4</td>
<td>24.7</td>
<td>15.4</td>
<td>2.1</td>
</tr>
<tr>
<td>1884</td>
<td>305</td>
<td>24.7</td>
<td>28.0</td>
<td>17.8</td>
<td>20.8</td>
</tr>
<tr>
<td>1885</td>
<td>432</td>
<td>32.0</td>
<td>53.3</td>
<td>18.5</td>
<td>22.2</td>
</tr>
<tr>
<td>1886</td>
<td>796</td>
<td>59.5</td>
<td>63.9</td>
<td>32.7</td>
<td>21.6</td>
</tr>
<tr>
<td>1887</td>
<td>246</td>
<td>19.6</td>
<td>25.6</td>
<td>21.7</td>
<td>16.7</td>
</tr>
<tr>
<td>1888</td>
<td>380</td>
<td>28.4</td>
<td>32.5</td>
<td>17.9</td>
<td>7.3</td>
</tr>
<tr>
<td>1889</td>
<td>201</td>
<td>13.6</td>
<td>16.7</td>
<td>15.6</td>
<td>2.0</td>
</tr>
<tr>
<td>1890</td>
<td>210</td>
<td>13.2</td>
<td>16.9</td>
<td>13.4</td>
<td>3.4</td>
</tr>
<tr>
<td>1891</td>
<td>231</td>
<td>12.5</td>
<td>15.6</td>
<td>10.5</td>
<td>5.7</td>
</tr>
<tr>
<td>1892</td>
<td>545</td>
<td>27.8</td>
<td>32.6</td>
<td>16.6</td>
<td>10.9</td>
</tr>
<tr>
<td>1893</td>
<td>430</td>
<td>21.2</td>
<td>26.2</td>
<td>36.1</td>
<td>17.9</td>
</tr>
<tr>
<td>1894</td>
<td>950</td>
<td>44.9</td>
<td>49.3</td>
<td>34.5</td>
<td>16.2</td>
</tr>
<tr>
<td>1895</td>
<td>580</td>
<td>26.9</td>
<td>31.5</td>
<td>31.1</td>
<td>13.0</td>
</tr>
<tr>
<td>1896</td>
<td>528</td>
<td>24.0</td>
<td>30.6</td>
<td>21.3</td>
<td>9.5</td>
</tr>
<tr>
<td>1897</td>
<td>444</td>
<td>19.5</td>
<td>25.3</td>
<td>19.1</td>
<td>8.6</td>
</tr>
<tr>
<td>1898</td>
<td>350</td>
<td>15.2</td>
<td>21.2</td>
<td>17.0</td>
<td>4.7</td>
</tr>
<tr>
<td>1899</td>
<td>325</td>
<td>13.6</td>
<td>19.6</td>
<td>13.7</td>
<td>2.1</td>
</tr>
<tr>
<td>1900</td>
<td>268</td>
<td>10.9</td>
<td>17.2</td>
<td>14.7</td>
<td>2.3</td>
</tr>
<tr>
<td>1901</td>
<td>645</td>
<td>25.5</td>
<td>32.2</td>
<td>18.9</td>
<td>3.6</td>
</tr>
<tr>
<td>1902</td>
<td>902</td>
<td>34.8</td>
<td>42.0</td>
<td>32.8</td>
<td>8.3</td>
</tr>
<tr>
<td>1903</td>
<td>1124</td>
<td>43.4</td>
<td>51.8</td>
<td>37.9</td>
<td>11.7</td>
</tr>
<tr>
<td>1904</td>
<td>1074</td>
<td>42.3</td>
<td>52.4</td>
<td>35.8</td>
<td>--</td>
</tr>
<tr>
<td>1905</td>
<td>966</td>
<td>39.1</td>
<td>50.3</td>
<td>38.3</td>
<td>--</td>
</tr>
<tr>
<td>1906</td>
<td>823</td>
<td>34.7</td>
<td>45.5</td>
<td>36.3</td>
<td>--</td>
</tr>
<tr>
<td>1907</td>
<td>376</td>
<td>16.3</td>
<td>31.6</td>
<td>19.3</td>
<td>--</td>
</tr>
<tr>
<td>1908</td>
<td>685</td>
<td>30.3</td>
<td>44.4</td>
<td>25.3</td>
<td>--</td>
</tr>
<tr>
<td>1909</td>
<td>788</td>
<td>32.2</td>
<td>44.5</td>
<td>37.6</td>
<td>--</td>
</tr>
</tbody>
</table>

AVERAGES 514.9 26.6 33.9 24.2 9.2

Source:  
(i) G.B.M. Miscellaneous Articles and Statistics  
(ii) G.B.M. Reports, Volume XXII, Quarterly Branch Returns, passim.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>7.4</td>
<td>7.8</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
</tr>
<tr>
<td>1980</td>
<td>3.3</td>
<td>4.3</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>1981</td>
<td>2.3</td>
<td>2.1</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
<td>7.8</td>
</tr>
<tr>
<td>1982</td>
<td>2.9</td>
<td>3.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
<td>4.9</td>
</tr>
<tr>
<td>1983</td>
<td>2.3</td>
<td>3.2</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>1984</td>
<td>2.1</td>
<td>1.1</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>1985</td>
<td>4.2</td>
<td>2.2</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>1986</td>
<td>5.0</td>
<td>1.0</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
<td>7.2</td>
</tr>
<tr>
<td>1987</td>
<td>6.3</td>
<td>1.1</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>1988</td>
<td>6.3</td>
<td>1.1</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
</tr>
<tr>
<td>1989</td>
<td>6.3</td>
<td>1.1</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
<td>8.0</td>
</tr>
</tbody>
</table>

**ARTISAN TRADE SOCIETIES, 1980-1995**

Table 12:15 Annual percentage of unemployed members and per capita cost of unemployment benefit of five
over the period. The Ironfounders and Engineers most closely approximate to the G.B.M. Society. In each case, however, the annual levels of out of work members and benefit costs are vastly below the level experienced by the numerically much smaller G.B.M. Society. The mean percentage of the G.B.Ms. over the period was 14.9% higher than the level of unemployment amongst the Ironfounders, while the total per capita expenditure of £1-14-5d of the G.B.Ms. was 1s-9d more than that of the Ironfounders. Figures issued by the Board of Trade for the years 1899 - 1908 and covering the general level of unemployment nationally give the average level of unemployment generally as

<table>
<thead>
<tr>
<th>Year</th>
<th>Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1899</td>
<td>2.0%</td>
</tr>
<tr>
<td>1900</td>
<td>2.5%</td>
</tr>
<tr>
<td>1901</td>
<td>3.3%</td>
</tr>
<tr>
<td>1902</td>
<td>4.0%</td>
</tr>
<tr>
<td>1903</td>
<td>4.7%</td>
</tr>
<tr>
<td>1904</td>
<td>6.0%</td>
</tr>
<tr>
<td>1905</td>
<td>5.0%</td>
</tr>
<tr>
<td>1906</td>
<td>3.6%</td>
</tr>
<tr>
<td>1907</td>
<td>3.7%</td>
</tr>
<tr>
<td>1908</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

Even allowing for Brundage's point that the tighter organisation of the G.B.M. Society permits more accurate calculation and obviates the degree of statistical understatement concerning the unemployment data of the larger artisan societies, a wide distinction in unemployment levels is still obvious. How can such a distinction be explained? One reason is to be found in the impact of foreign competition which grew in volume throughout the period. The volume of foreign trade struck a double blow at the Yorkshire container trade by depriving it of production outlets abroad and by making inroads into home markets. The development resulted in the intensification of domestic competition, breaking the County's previously enjoyed monopoly of the pale metal trade. In addition, the speciality of the Yorkshire trade made it particularly vulnerable to the vagaries of climate and the capriciousness of public taste and economic circumstance. Thus, in an industry largely addressed to the production of bottles for beer, soda water and cordials and containers for preserves, the advent of a bad summer or the circumstantially enforced curtailment of consumer spending, affected demand which gave greater permanence to the seasonal unemployment within the trade. Paradoxically, the widening of the market to embrace a greater proportion of working class consumption emphasised the vulnerability of the trade as the depression deepened during the eighties. Consequently, the degree of unemployment amongst the Yorkshire G.B.Ms. which even in the boom years of the 1870s had been higher than that experienced by craftsmen in
<table>
<thead>
<tr>
<th>YEAR</th>
<th>ANNUAL AMOUNT UNEMPLOYMENT DONATION</th>
<th>PERCENTAGE OF ANNUAL INCOME</th>
<th>COST PER SOCIETY MEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ s d</td>
<td></td>
<td>£ s d</td>
</tr>
<tr>
<td>1880</td>
<td>2200 0 0</td>
<td>69.8</td>
<td>2 1 5½</td>
</tr>
<tr>
<td>1881</td>
<td>1456 18 5</td>
<td>54.1</td>
<td>1 7 10½</td>
</tr>
<tr>
<td>1882</td>
<td>617 18 7</td>
<td>29.6</td>
<td>12 1½</td>
</tr>
<tr>
<td>1883</td>
<td>970 0 0</td>
<td>39.5</td>
<td>17 2</td>
</tr>
<tr>
<td>1884</td>
<td>2629 14 3</td>
<td>63.6</td>
<td>1 18 7</td>
</tr>
<tr>
<td>1885</td>
<td>2462 13 0</td>
<td>60.7</td>
<td>1 12 4½</td>
</tr>
<tr>
<td>1886</td>
<td>6013 18 0</td>
<td>107.6</td>
<td>3 17 4½</td>
</tr>
<tr>
<td>1887</td>
<td>1509 10 0</td>
<td>27.7</td>
<td>1 0 6½</td>
</tr>
<tr>
<td>1888</td>
<td>1850 0 6</td>
<td>36.7</td>
<td>1 4 1</td>
</tr>
<tr>
<td>1889</td>
<td>2351 13 8</td>
<td>32.5</td>
<td>1 7 4½</td>
</tr>
<tr>
<td>1890</td>
<td>1262 5 1</td>
<td>19.9</td>
<td>13 3½</td>
</tr>
<tr>
<td>1891</td>
<td>945 5 6</td>
<td>10.3</td>
<td>8 1</td>
</tr>
<tr>
<td>1892</td>
<td>3346 3 5</td>
<td>36.0</td>
<td>1 8 0</td>
</tr>
<tr>
<td>1893</td>
<td>4939 1 0</td>
<td>42.7</td>
<td>2 0 6</td>
</tr>
<tr>
<td>1894</td>
<td>8056 5 0</td>
<td>64.0</td>
<td>3 4 11</td>
</tr>
<tr>
<td>1895</td>
<td>6906 1 0</td>
<td>59.8</td>
<td>2 14 8½</td>
</tr>
<tr>
<td>1896</td>
<td>3290 15 0</td>
<td>30.7</td>
<td>1 5 9½</td>
</tr>
<tr>
<td>1897</td>
<td>2978 8 6</td>
<td>27.2</td>
<td>1 2 6½</td>
</tr>
<tr>
<td>1898</td>
<td>3894 8 0</td>
<td>33.5</td>
<td>1 9 0½</td>
</tr>
<tr>
<td>1899</td>
<td>1683 0 0</td>
<td>13.9</td>
<td>12 1</td>
</tr>
<tr>
<td>1900</td>
<td>2277 9 0</td>
<td>21.6</td>
<td>16 0½</td>
</tr>
<tr>
<td>1901</td>
<td>3208 5 6</td>
<td>29.4</td>
<td>1 2 1½</td>
</tr>
<tr>
<td>1902</td>
<td>10751 6 11½</td>
<td>111.4</td>
<td>3 13 11</td>
</tr>
<tr>
<td>1903</td>
<td>10329 18 6½</td>
<td>102.2</td>
<td>3 11 7½</td>
</tr>
<tr>
<td>1904</td>
<td>10982 19 9</td>
<td>105.0</td>
<td>3 17 0½</td>
</tr>
<tr>
<td>1905</td>
<td>9769 11 4½</td>
<td>88.3</td>
<td>3 10 11½</td>
</tr>
<tr>
<td>1906</td>
<td>7849 19 1</td>
<td>66.7</td>
<td>2 19 10½</td>
</tr>
<tr>
<td>1907</td>
<td>4571 2 0</td>
<td>37.4</td>
<td>1 16 1½</td>
</tr>
<tr>
<td>1908</td>
<td>5554 11 4½</td>
<td>48.7</td>
<td>2 4 7</td>
</tr>
<tr>
<td>1909</td>
<td>6909 5 0</td>
<td>62.9</td>
<td>2 16 6½</td>
</tr>
<tr>
<td>TOTALS</td>
<td>131568 7 6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: (i) G.B.M. Reports, Volume XI, pp 663 - 664 passim.  
(ii) G.B.M. Reports, Volume p 54  
(iii) G.B.M. Reports, Volume XXII, pp 564 - 566 passim.
the engineering and ship-building industries, was consistently high. The advance of unemployment among the G.B.M. may be seen by reference to Table 12:14 which shows a mean percentage of 21.6% between 1880 - 1889, 21.3% between 1890 - 1899, rising to 29.6% during the decade 1900 - 1909, as the rapid onset of mechanisation added to existing problems of trade, a fact evidenced by the growing number of 32nd Rule members. The figures contrast sharply with the average of 2.7% which marks the decade 1870 - 1879. Even so, there were only 37 quarters of the 80 between 1889 - 1908 when unemployment fell below 20%, and only one year in the entire 30 year period that the level fell below 15.2% (1900). A caveat must be entered, however, concerning the calculation of the statistics which include as unemployed the G.B. hands working alternate weeks in lieu of discharge because of furnaces being stopped for bad trade, thus causing some inflation in the number presented as being permanently unemployed. Nevertheless, the level of unemployment among the G.B.Ms. was clearly in excess of that of other groups of skilled workers during the period and posed a threat to the regularity of earnings which resulted in depreciation of living standards and occupational security. It is against this background that the amounts of unemployment donation featured in table 12:6 must be examined. The Table shows a degree of fluctuation in each decade in accordance with market conditions. Thus the downward trend of the early eighties reflects the gradual recovery from the depression of trade, which commenced in the closing years of the previous decade, only to rise again as foreign competition began to exercise a direct effect on the pale metal trade. The significance of this development is seen in 1886, when a short-term depression caused the cost of unemployment benefit alone to exceed total Society income. The variable pattern was repeated in the following decade which in general terms was marginally better and would have proved considerably better but for the effect of the industrial disputes within the glass and coal industries during the middle years of the decade. The prosperous trade of 1896 - 1901 witnessed a fall in the average annual level of unemployment, accompanied by a reduction of unemployment benefit as a proportion of Society income, from one third to 13.9%. Thereafter a rapid acceleration occurred with an increase in the level of unemployment which averaged 77.8% for the remainder of the decade and for three consecutive years, 1902 - 1904, caused donation to exceed Society income. Table 12:17 reveals the same pattern of fluctuation concerning the
TABLE 12:17

UNEMPLOYMENT BENEFIT PAID ANNUALLY TO YORKSHIRE DISTRICT MEMBERS OF THE F.G.M. SOCIETY, 1890 - 1902

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL SOCIETY UNEMPLOYMENT BENEFIT £ s d</th>
<th>UNEMPLOYMENT BENEFIT YORKSHIRE DISTRICTS £ s d</th>
<th>( \frac{(B)}{(A)} \times 100 )</th>
<th>PER CAPITA COST OF BENEFIT £ s d</th>
<th>ANNUAL INCOME %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>4916 2 10</td>
<td>755 8 0</td>
<td>15.3</td>
<td>2 10 1</td>
<td>74.4</td>
</tr>
<tr>
<td>1881</td>
<td>2740 14 4</td>
<td>443 8 0</td>
<td>16.2</td>
<td>1 8 6(\frac{1}{2})</td>
<td>39.4</td>
</tr>
<tr>
<td>1882</td>
<td>2334 16 4</td>
<td>317 15 0</td>
<td>13.5</td>
<td>1 4 0</td>
<td>34.6</td>
</tr>
<tr>
<td>1883</td>
<td>2363 18 7(\frac{1}{2})</td>
<td>249 5 0</td>
<td>10.5</td>
<td>1 4 2(\frac{1}{2})</td>
<td>36.5</td>
</tr>
<tr>
<td>1884</td>
<td>2170 10 1</td>
<td>240 1 0</td>
<td>11.1</td>
<td>1 2 0(\frac{1}{2})</td>
<td>34.2</td>
</tr>
<tr>
<td>1885</td>
<td>2250 7 10</td>
<td>363 11 0</td>
<td>16.3</td>
<td>1 2 8</td>
<td>35.6</td>
</tr>
<tr>
<td>1886</td>
<td>3465 8 6</td>
<td>607 2 8</td>
<td>17.5</td>
<td>1 14 9(\frac{1}{2})</td>
<td>56.0</td>
</tr>
<tr>
<td>1887</td>
<td>3914 6 4</td>
<td>813 17 0</td>
<td>20.7</td>
<td>1 19 8(\frac{1}{2})</td>
<td>57.9</td>
</tr>
<tr>
<td>1888</td>
<td>3981 6 3</td>
<td>1145 9 0</td>
<td>28.7</td>
<td>2 0 6(\frac{1}{2})</td>
<td>53.6</td>
</tr>
<tr>
<td>1889</td>
<td>3746 18 6</td>
<td>956 12 0</td>
<td>25.5</td>
<td>1 17 2(\frac{1}{2})</td>
<td>48.8</td>
</tr>
<tr>
<td>1890</td>
<td>2038 7 11</td>
<td>528 11 0</td>
<td>25.9</td>
<td>1 19 2(\frac{1}{2})</td>
<td>23.2</td>
</tr>
<tr>
<td>1891</td>
<td>1938 12 10</td>
<td>288 12 0</td>
<td>14.8</td>
<td>1 18 2</td>
<td>23.2</td>
</tr>
<tr>
<td>1892</td>
<td>2917 17 5</td>
<td>864 15 8</td>
<td>29.6</td>
<td>1 7 1(\frac{1}{2})</td>
<td>36.6</td>
</tr>
<tr>
<td>1893</td>
<td>3941 13 10</td>
<td>1403 11 0</td>
<td>35.6</td>
<td>1 16 5(\frac{1}{2})</td>
<td>54.2</td>
</tr>
<tr>
<td>1894</td>
<td>4972 11 4</td>
<td>1574 5 0</td>
<td>31.6</td>
<td>2 6 2(\frac{1}{2})</td>
<td>63.7</td>
</tr>
<tr>
<td>1895</td>
<td>3322 17 1</td>
<td>1278 5 0</td>
<td>38.4</td>
<td>1 10 8(\frac{1}{2})</td>
<td>46.2</td>
</tr>
<tr>
<td>1896</td>
<td>3165 7 0</td>
<td>1104 12 8</td>
<td>34.8</td>
<td>1 9 0(\frac{1}{2})</td>
<td>39.2</td>
</tr>
<tr>
<td>1897</td>
<td>4279 10 10</td>
<td>1251 10 8</td>
<td>29.2</td>
<td>1 18 1</td>
<td>50.2</td>
</tr>
<tr>
<td>1898</td>
<td>2854 17 4</td>
<td>983 4 0</td>
<td>34.4</td>
<td>1 4 6(\frac{1}{2})</td>
<td>33.1</td>
</tr>
<tr>
<td>1899</td>
<td>3195 7 8</td>
<td>1461 2 4</td>
<td>45.7</td>
<td>1 7 9(\frac{1}{2})</td>
<td>36.2</td>
</tr>
<tr>
<td>1900</td>
<td>4372 8 4</td>
<td>1473 5 4</td>
<td>33.6</td>
<td>1 15 8(\frac{1}{2})</td>
<td>48.7</td>
</tr>
<tr>
<td>1901</td>
<td>3565 1 0</td>
<td>853 12 0</td>
<td>23.9</td>
<td>1 9 11(\frac{1}{2})</td>
<td>41.4</td>
</tr>
<tr>
<td>1902</td>
<td>7329 3 11</td>
<td>2293 6 3</td>
<td>31.2</td>
<td>3 1 2(\frac{1}{2})</td>
<td>79.7</td>
</tr>
</tbody>
</table>

**TOTALS** 79051 18 1\(\frac{1}{2}\) 22151 1 7 28.0

Source: *F.G.M.M. Quarterly Returns, 1880 - 1902, passim.*
unemployment payments made by the F.G.M. Society between 1880 - 1902. Contrary to the G.B.Ms, however, the middle years of the eighties were ones of moderate expenditure, a feature also of the percentage of the benefit expended on the Yorkshire Districts and signifying that the impact of foreign competition had less effect on the flint bottle hands than on the G.B.Ms. at this period. The downturn in trade from 1886 adversely affected both the table and bottle elements of the flint trade as a result of which the Society at the prompting of the Castleford flint hands, embarked on the strategy of co-operative production. The stated aim was to employ the 30 or so members of the District who were on the funds, each receiving 10s per week. Although the trade experienced a recovery during the years 1889 - 1891, this was curtailed by the industrial upheaval of the mid-nineties. From that time on the demands of the Yorkshire District reflect the generally high unemployment within the container trade, with the percentage of benefit expended on the bottle section being one third on average during the decade 1893 - 1902. The position of the newly independent Yorkshire District from 1903 - 1909 is shown in Table 12:18.

TABLE 12:18 UNEMPLOYMENT BENEFIT PAID ANNUALLY BY N.G.B.M. SOCIETY 1903 - 1909.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AMOUNT PAID TO UNEMPLOYED £ s d</th>
<th>AMOUNT PAID TO TEMPORARY UNEMPLOYED £ s d</th>
<th>TOTAL UNEMPLOYMENT BENEFIT £ s d</th>
<th>PERCENTAGE OF ANNUAL INCOME</th>
<th>COST PER SOCIETY MEMBER £ s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1903</td>
<td>1778 3 4</td>
<td></td>
<td>1778 3 4</td>
<td>17.2</td>
<td>12 4</td>
</tr>
<tr>
<td>1904</td>
<td>2913 17 1</td>
<td></td>
<td>2913 17 1</td>
<td>28.1</td>
<td>1 0 5½</td>
</tr>
<tr>
<td>1905</td>
<td>2053 10 0</td>
<td></td>
<td>2053 10 0</td>
<td>29.5</td>
<td>14 11</td>
</tr>
<tr>
<td>1906</td>
<td>943 17 0</td>
<td>651 2 0</td>
<td>1594 19 0</td>
<td>21.1</td>
<td>12 2</td>
</tr>
<tr>
<td>1907</td>
<td>257 19 0</td>
<td>877 8 6</td>
<td>1135 7 6</td>
<td>14.6</td>
<td>8 11½</td>
</tr>
<tr>
<td>1908</td>
<td>348 3 0</td>
<td>1239 14 6</td>
<td>1587 17 6</td>
<td>24.3</td>
<td>12 9½</td>
</tr>
<tr>
<td>1909</td>
<td>440 18 0</td>
<td>2345 1 0</td>
<td>2785 19 0</td>
<td>52.6</td>
<td>1 2 9½</td>
</tr>
</tbody>
</table>

TOTALS 8736 7 5 5113 6 0 13849 13 5

Source: N.G.B.M. Magazine, Quarterly branch Returns, 1903 - 1909, passim.

The Table shows that like the G.B.M. Society, the N.G.B.M. Society experienced an upsurge in unemployed members in the early years of the
present century. By March 1905 although trade was reported as "fairly good all round" the unemployed roll remained large, with almost one third of the members being out of work. The resultant "spirit of dissatisfaction at being so long out of work" and the strain imposed on Society finances caused the Executive to summon an Emergency Conference which in the view of the General Financial Secretary

"... against all reasons, increased rather than reduced benefits".

The explanation for this action would appear to lie in the fact that the Executive did not feel justified in advocating a reduction in unemployment benefit without similarly reducing the rates of superannuation, a recommendation which was anathema to the rank and file facing with sharp increases in living costs and an awareness that "at thirty years of age the glassworker begins to decline.... And at forty years of age he is only considered fit to do second rate jobs." The obvious corollary was that the glassworker could expect incapacitation at a relatively early age and regarded Union benefit, particularly superannuation, as a buffer against the socio-economic debase-ment which was the adjunct of declining power and skill. To balance the budget a twofold division was made by which members temporarily employed had benefit deferred for the first two weeks. The saving to Society was accompanied by a period of improved trade which reduced expenditure on the number of unemployed. However, by 1908 an upward trend was once more discernible as poor trade and mechanised production displaced manual skill. By 1909 expenditure on unemployment relief swallowed more than half the Society income.

(ii) Superannuation.

The problems caused by inadequate actuarial provision of superannuation benefit resulted in periodic adjustment of entitlement and levels of payment by both Societies. By 1880, the funds of the G.B.M. Society were already depleted to the point where it became obvious that adjustment was necessary if they were to remain capable of sustaining the increasing demand for superannuation benefit. The minimum age qualification was, therefore, increased from 45 to 50 years, below which all current recipients were excluded. As a result of this measure 14 of the 21 superannuees were immediately disentitled. At the same time a sliding scale of payment was adopted by which clear members received benefit based on reckonable service dating from the
confrirment of journeyman status viz:

- 15 years – 3s per week
- 20 years – 4s per week
- 25 years – 5s per week

However, in June 1882, against a background of rising trade, Castleford Branch proposed an amendment restoring 45 as the age of eligibility and reducing the terms of membership to 9, 12 and 15 years. The situation stood akin to that almost a decade earlier when the funds of the Society were some £5,000 more than those of 1882.121 Clearly, to adopt the Castleford proposal was unsound economics. Nevertheless, the D.M., while rejecting the proposed term of membership did restore 45 as the age of eligibility. The action of the D.M. presents a prima faci case of compromise in the face of rank and file radicalism, particularly when viewed in the light of previous agitation.

Further consideration suggests, however, that the 1882 challenge to the system was not the result of the irresponsible exercise of rank and file power but one which arose in consequence of the obvious awareness of deterioration in the socio-economic status of the members. Allied to the growing volume of artisan unemployment was the increase in the numbers compelled to withdraw from the trade as a result of illness and disability. The number of members declaring on the 32nd Rule between December 1876 and January 1882 increased by 69.7%.122 While it is true that some artisan withdrawals occurred as a result of the diminishment of the prospect of full employment and regular earnings, it is more probable that most withdrawals were caused by the illness and disability which traditionally characterised withdrawal from the trade. Such an assumption is valid in view of the evidence of worsening working conditions. Lack of data concerning the age at which withdrawal from the trade occurred confines consideration of the subject to speculation but it does not seem unreasonable to assume that an increasing number of artisans left the trade at an increasingly early age, experiencing a decline of living standards until the qualification for superannuated status afforded a measure of economic relief. Given this background the agitation of Castleford Branch and the subsequent compromise of the D.M. become comprehensible. From 1886 the downturn in trade, and worsening industrial relations, culminating in the Lock-Out of 1893, precipitated a financial crisis within the Society so that by 1897 further
<table>
<thead>
<tr>
<th>YEAR</th>
<th>NUMBER AT EACH YEAR-END</th>
<th>ANNUAL AMOUNT SUPERANNUATION BENEFIT</th>
<th>PERCENTAGE OF ANNUAL INCOME</th>
<th>COST PER SOCIETY MEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ s d</td>
<td>£ s d</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1880</td>
<td>10</td>
<td>121 19 0</td>
<td>3.8</td>
<td>2 4</td>
</tr>
<tr>
<td>1881</td>
<td>10</td>
<td>139 1 0</td>
<td>5.2</td>
<td>2 8 ½</td>
</tr>
<tr>
<td>1882</td>
<td>16</td>
<td>165 10 0</td>
<td>7.9</td>
<td>3 3 ½</td>
</tr>
<tr>
<td>1883</td>
<td>19</td>
<td>172 12 0</td>
<td>7.0</td>
<td>2 9 ½</td>
</tr>
<tr>
<td>1884</td>
<td>26</td>
<td>249 17 0</td>
<td>6.0</td>
<td>3 6 ½</td>
</tr>
<tr>
<td>1885</td>
<td>28</td>
<td>251 10 0</td>
<td>6.2</td>
<td>3 2 ½</td>
</tr>
<tr>
<td>1886</td>
<td>32</td>
<td>330 12 0</td>
<td>5.9</td>
<td>4 3 ½</td>
</tr>
<tr>
<td>1887</td>
<td>35</td>
<td>307 15 0</td>
<td>5.6</td>
<td>4 2 ½</td>
</tr>
<tr>
<td>1888</td>
<td>36</td>
<td>348 15 0</td>
<td>6.9</td>
<td>4 0</td>
</tr>
<tr>
<td>1889</td>
<td>37</td>
<td>441 6 0</td>
<td>6.1</td>
<td>5 1 ½</td>
</tr>
<tr>
<td>1890</td>
<td>37</td>
<td>373 10 0</td>
<td>5.9</td>
<td>3 11 ½</td>
</tr>
<tr>
<td>1891</td>
<td>37</td>
<td>410 5 0</td>
<td>4.5</td>
<td>3 6</td>
</tr>
<tr>
<td>1892</td>
<td>49</td>
<td>499 11 0</td>
<td>5.3</td>
<td>4 2 ½</td>
</tr>
<tr>
<td>1893</td>
<td>54</td>
<td>614 8 0</td>
<td>5.3</td>
<td>5 0 ½</td>
</tr>
<tr>
<td>1894</td>
<td>58</td>
<td>653 3 0</td>
<td>5.2</td>
<td>5 3 ½</td>
</tr>
<tr>
<td>1895</td>
<td>59</td>
<td>696 5 0</td>
<td>6.0</td>
<td>5 1 ½</td>
</tr>
<tr>
<td>1896</td>
<td>67</td>
<td>545 17 0</td>
<td>6.9</td>
<td>5 10</td>
</tr>
<tr>
<td>1897</td>
<td>77</td>
<td>882 3 0</td>
<td>8.1</td>
<td>6 8</td>
</tr>
<tr>
<td>1898</td>
<td>81</td>
<td>980 4 0</td>
<td>8.4</td>
<td>7 3 ½</td>
</tr>
<tr>
<td>1899</td>
<td>94</td>
<td>1092 7 0</td>
<td>9.0</td>
<td>7 10</td>
</tr>
<tr>
<td>1900</td>
<td>96</td>
<td>1304 17 0</td>
<td>12.4</td>
<td>9 2 ½</td>
</tr>
<tr>
<td>1901</td>
<td>108</td>
<td>1276 18 0</td>
<td>11.7</td>
<td>8 9 ½</td>
</tr>
<tr>
<td>1902</td>
<td>107</td>
<td>1394 2 0</td>
<td>14.5</td>
<td>9 7</td>
</tr>
<tr>
<td>1903</td>
<td>113</td>
<td>1453 0 0</td>
<td>14.4</td>
<td>10 0 ½</td>
</tr>
<tr>
<td>1904</td>
<td>126</td>
<td>1613 2 0</td>
<td>15.4</td>
<td>11 7 ½</td>
</tr>
<tr>
<td>1905</td>
<td>125</td>
<td>1688 19 0</td>
<td>15.3</td>
<td>12 3</td>
</tr>
<tr>
<td>1906</td>
<td>37</td>
<td>943 11 0</td>
<td>8.0</td>
<td>7 2 ½</td>
</tr>
<tr>
<td>1907</td>
<td>95</td>
<td>1034 19 0</td>
<td>8.5</td>
<td>8 2</td>
</tr>
<tr>
<td>1908</td>
<td>100</td>
<td>1056 16 0</td>
<td>9.3</td>
<td>8 6 ½</td>
</tr>
<tr>
<td>1909</td>
<td>99</td>
<td>1136 15 0</td>
<td>10.4</td>
<td>9 3 ½</td>
</tr>
</tbody>
</table>

TOTALS 22379 9 0

Source:

(i) G.B.M. Reports, Volume XVIII, p 23.

(ii) G.B.M. Reports, Volume XII, pp 564 - 566, passim.
reconstruction of the superannuation scheme was necessary. Table 12:19 shows the details concerning the G.B.M. superannuation benefit between 1880 - 1909. The reform of 1880 had reduced the number of superannuees by two thirds, but the number of eligible members had risen from 7 to 77 by 1897. An 86.2% increase in expenditure cost each member of Society 4s-4d per annum, compared to 2s-4d in 1880. The pace of the increase may be judged by reference to Castleford Branch in which the 33 members superannuated between 1866 - 1890 was almost doubled between 1891 - 1896. The economic impracticability of the situation is shown by the fact that but for the reform of 1880, three members having paid minimal contributions, would by 1896, have received sums varying between £240 and £400 in benefit, while several others who were eligible in 1896, had received sums well in advance of their contributions. In June 1896, the Society paid 5s per week to 50 members, 4s to 3 others, and 3s to a further 11. On the recommendation of a Special Delegate Committee, the Society raised the minimum term of benefit elegibility to 18 years, in September 1897, and lengthened the intermediate stages to 22 and 26 years membership, at the same time creating a new category of 6 shillings per week for 30 year members. The latter step may have been a conscious attempt to stifle rank and file criticism by appearing to present necessary economy while preserving and seeming to extend what was commonly regarded as 'workers rights'. That rank and file objection existed is evident from the fact that the full D.M. considered it socially prudent to disavow their Committee recommendation that the minimum age of elegibility be raised to 50 years, despite its obvious economic advantages. Indications that the D.M. was motivated by necessary social considerations are seen in the provision to pay incapacitated members under 45 years of age, whose membership dated from their 21st year, an ex gratia payment of £30 in lieu of superannuation. The measure thus drew the sting of opposition to proposed change while modifying future benefit demand. By September 1905, a further 91 members had qualified for superannuation and almost two thirds of the amount spent since the inception of the benefit had been expended within the previous eight years, an increase of 72%, while the rate of journeyman membership had increased by a mere 9.2%. In terms of cost per member the benefit had increased by almost 46%, reflecting a slightly larger increase in the proportion of annual income required for administration to the 126 beneficiaries at that date. On 7th October 1905, the D.M. resolved to revise the superannuation Rule making 50 the
minimum age qualification and fixing the scale at 4s per 25 years, and 6s per 35 years Society membership. In addition, restrictions were placed on superannuees receiving income from occupations outside the trade. The proposal roused much rank and file hostility not least because of tendency for prices to outstrip wages at this period. Rank and file hostility is evident in the refusal of some branches to return votes on the subject and others to vote against the proposal until supplied with a printed copy of the revised Rule. As a result, the proposal was rejected by 388 votes to 327. Consequently the D.M. was compelled to bow to the demands of the rank and file and supply printed Rules, tempered by "a few explanatory remarks and information on the Superannuation Question" from the C.S. as a preliminary to reballoting the issue. Of the 2,097 members eligible to vote, 45.5% participated in the second ballot, with 481 being in favour and 473 against the Revised Rule. The narrow margin of 8 votes indicates the degree of rank and file opposition which was fuelled by a degree of suspicion concerning the motives of the Rules Revision Committee, a charge rebutted by Greenwood. Although the mistrust appears to have arisen from fear of individual disenfranchisement the very fact of its existence is an indication of the importance attached by the rank and file to the provision of superannuation benefit in both terms of contributory rights and supplemental necessity. In the first year following revision, benefit fell by £725 as a result of the reduced number of recipients from 126 to 91. Nevertheless, although the measures adopted reduced the percentage of the Society's annual income spent on superannuation by almost 48%, an upward trend occurred during the years to 1909 as the increase in the number of superannuees outpaced a decrease of 6.8% in Society membership. By the latter date costs were once again in the order of two thirds the amount at the time of the revision, proof of Greenwood's assertion that the steps taken in 1905 occurred forty years too late.

Table 12:20 shows the situation within the F.G.M. Society between 1880 - 1902. The Table shows the heavy toll exacted by superannuation benefit on the Society's finances throughout the entire period. The fiscal burden is emphasised by comparison with the previous Table showing details of the G.B.M. Society benefit expenditure. The earlier establishment of the F.G.M. Society and its larger membership pre 1891, explain to some extent the wide variation in the financial aspect of each Society. During the period 1880 - 1890, the membership
<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL SOCIETY SUPERANNUATION BENEFIT</th>
<th>SUPERANNUATION BENEFIT YORKSHIRE DISTRICTS</th>
<th>( \frac{(B)/(A)}{\times 100} )</th>
<th>PER CAPITA COST OF BENEFIT</th>
<th>% ANNUAL INCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>1461 1 10</td>
<td>143 5 0</td>
<td>9.7</td>
<td>14 10(\frac{1}{2})</td>
<td>22.1</td>
</tr>
<tr>
<td>1881</td>
<td>1351 11 8</td>
<td>95 11 0</td>
<td>7.0</td>
<td>14 1</td>
<td>19.4</td>
</tr>
<tr>
<td>1882</td>
<td>1507 8 0</td>
<td>113 5 0</td>
<td>7.3</td>
<td>15 6</td>
<td>22.4</td>
</tr>
<tr>
<td>1883</td>
<td>1534 13 0</td>
<td>125 16 0</td>
<td>8.1</td>
<td>15 8(\frac{1}{2})</td>
<td>23.7</td>
</tr>
<tr>
<td>1884</td>
<td>1767 17 4</td>
<td>137 0 0</td>
<td>7.7</td>
<td>17 11(\frac{1}{2})</td>
<td>27.9</td>
</tr>
<tr>
<td>1885</td>
<td>1904 4 6</td>
<td>166 12 0</td>
<td>8.7</td>
<td>19 2(\frac{1}{2})</td>
<td>30.1</td>
</tr>
<tr>
<td>1886</td>
<td>2500 9 0</td>
<td>164 0 0</td>
<td>6.5</td>
<td>1 5 1</td>
<td>40.4</td>
</tr>
<tr>
<td>1887</td>
<td>2205 1 6</td>
<td>194 3 0</td>
<td>8.7</td>
<td>1 2 4(\frac{1}{2})</td>
<td>32.6</td>
</tr>
<tr>
<td>1888</td>
<td>2254 13 4</td>
<td>212 14 0</td>
<td>11.1</td>
<td>1 2 11(\frac{1}{2})</td>
<td>30.4</td>
</tr>
<tr>
<td>1889</td>
<td>2367 13 4</td>
<td>234 18 0</td>
<td>9.8</td>
<td>1 3 6(\frac{1}{2})</td>
<td>30.8</td>
</tr>
<tr>
<td>1890</td>
<td>2020 2 8</td>
<td>231 9 0</td>
<td>11.4</td>
<td>19 0(\frac{1}{2})</td>
<td>22.9</td>
</tr>
<tr>
<td>1891</td>
<td>2058 13 6</td>
<td>205 18 0</td>
<td>9.9</td>
<td>19 4(\frac{1}{2})</td>
<td>25.8</td>
</tr>
<tr>
<td>1892</td>
<td>2207 2 4</td>
<td>229 19 0</td>
<td>10.3</td>
<td>1 0 6</td>
<td>30.4</td>
</tr>
<tr>
<td>1893</td>
<td>1935 18 0</td>
<td>195 11 0</td>
<td>10.1</td>
<td>17 11</td>
<td>26.6</td>
</tr>
<tr>
<td>1894</td>
<td>2197 2 4</td>
<td>208 13 0</td>
<td>9.4</td>
<td>1 0 5</td>
<td>28.1</td>
</tr>
<tr>
<td>1895</td>
<td>2130 15 4</td>
<td>224 15 0</td>
<td>10.5</td>
<td>19 8(\frac{1}{2})</td>
<td>29.6</td>
</tr>
<tr>
<td>1896</td>
<td>2465 18 4</td>
<td>250 15 0</td>
<td>10.1</td>
<td>1 2 7(\frac{1}{2})</td>
<td>30.5</td>
</tr>
<tr>
<td>1897</td>
<td>2560 2 8</td>
<td>265 4 0</td>
<td>10.3</td>
<td>1 2 9(\frac{1}{2})</td>
<td>30.0</td>
</tr>
<tr>
<td>1898</td>
<td>2587 4 4</td>
<td>284 0 0</td>
<td>10.9</td>
<td>1 2 2(\frac{1}{2})</td>
<td>29.9</td>
</tr>
<tr>
<td>1899</td>
<td>2619 3 0</td>
<td>290 9 0</td>
<td>11.1</td>
<td>1 2 9</td>
<td>29.7</td>
</tr>
<tr>
<td>1900</td>
<td>2801 10 5</td>
<td>283 9 6</td>
<td>10.1</td>
<td>1 3 2(\frac{1}{2})</td>
<td>31.2</td>
</tr>
<tr>
<td>1901</td>
<td>2948 19 4</td>
<td>386 16 0</td>
<td>13.1</td>
<td>1 4 9(\frac{1}{2})</td>
<td>34.2</td>
</tr>
<tr>
<td>1902</td>
<td>2926 11 4</td>
<td>374 10 0</td>
<td>12.7</td>
<td>1 4 7(\frac{1}{2})</td>
<td>31.8</td>
</tr>
</tbody>
</table>

| TOTALS | 50313 17 1 | 5018 12 6 | 9.97 | - | - |

Source: F.G.M.M. Quarterly Returns, 1880 - 1902, passim.
of the F.G.M. Society increased by a mere 2.4% and its annual income by 13.9% while the demands of superannuation increased by 38.2% compared to the 72.5% increase in superannuation provision incumbent upon the Yorkshire Society which though much greater was offset by a 38.2% increase in membership and a 56.4% increase in annual income. Furthermore, the reform of the Yorkshire Scheme in 1880 had somewhat modified the rate of increase in superannuation expenditure by the Society so that despite growing demand, the percentage of its annual income taken by superannuation was confined to single figures for a further decade. That of the F.G.M. Society was only marginally under 20% of total annual income on one occasion during the period and reached 40.4% by 1886 before levelling out at about 30% by the end of the decade. Clearly, both immediate and long-term prospects demanded reformulation of the Rule. At the Liverpool Conference of 1889, a Committee of Delegates advocated a five tier scale of benefit with weekly payments between 2s and 6s based on Society membership of 10 to 35 years, with a minimum age qualification of 56 years. As with the G.B.M. Society, the entrenched conservatism of the rank and file combined with growing economic deprivation arising from artisan unemployment resulted in opposition to reform. As a result the supplementary proposals by the Committee that time spent in receipt of sickness benefit should be discounted as reckonable service for purposes of superannuation, and that obviously incapacitated members should be placed on the superannuated list instead of running through the various scales of unemployment or sickness benefit before transference in accordance with existing Rule, was rejected. Again, there is a parallel with the inadequacy of the G.B.M. Society's reform two years earlier. By 1894, C.S. J.J. Rudge was citing examples of 19 cases concerning Society members in receipt of benefits of which only in 4 cases had individual contributions exceeded receipts, and of the first 6 cases which came to hand, the members had received amounts between £69 and £171 in excess of contributions. Denied the desired economies by the intransigence of the rank and file, the F.G.M. Executive proposed that 15 years be the minimum period of membership qualification for receipt of the basic donation of 2s per week. The provision of an extra 1s per week to unemployed and superannuated members from December to March 1985, was both an acknowledgement by the Executive of the hardship imposed by the measure on rank and file members, and an indication of the deterioration of the living standard of those members subject to the lowest
supplementary income levels. The fact was particularly significant during the winter period when lack of warmth and nourishment was frequently accompanied by sickness.\textsuperscript{142}

From 1890 - 1899, the number of superannuated F.G.Ms increased in excess of 13\%, taking almost one third of the Society's annual income. Membership of Society increased by only 7.7\%, being largely confined to the Yorkshire District. As the latter constituted more than 35\% of Society membership but required only 11\% of total superannuation payments, a figure which had increased by only 1.4\% since 1880, a degree of tension was created, adding to the existing divisions within the two sections of the Society. In August 1899, the first Conference for a decade was convened and decided to separate the superannuation Rule and Benefits from those of the Society in general, a decision which the C.S. declared "..... ought to have been done many years before".

Financial necessity overrode rank and file opposition and adopted the rejected clauses of 1889.\textsuperscript{143} A Superannuation Fund of £3,000, plus interest, was set aside from Society funds as future security and 7d per week deducted from the 2s per week journeyman contribution.\textsuperscript{144} Striking members were given the option of eligibility by payment of 7d per week or accepting disentitlement for periods of industrial action. In addition, grants in lieu of all further claim to superannuation were introduced with amount varying in accordance with length of Society membership,\textsuperscript{145} while existing benefit rates remained unchanged.

The reformation of the F.G.M. scheme seems to have been ineffectual and in the three years following its introduction the average cost of benefit was 32\% of the Society's total income. At the time of the breakaway by the Yorkshire Districts to form the National Glass Bottle Makers' Society, each member was subsidising the superannuation fund at a cost of £1 - 4 - 7½d per annum. The Yorkshire District with 31 superannuated members received 12.7\% of the sum spent on the Society's superannuees.

Table 12:21 shows the financial benefit the schism afforded the Yorkshire flint hands, whose contribution per capita towards superannuation benefit provision fell by 15s-11½d, being 2s per member less than the sum paid by the G.B.M. Society members. In a bold measure which may have been calculated to boost the membership of the newly sprung
TABLE 12:21 SUPERANNUATION BENEFIT BY N.G.B.M. SOCIETY,
1903 - 1909

<table>
<thead>
<tr>
<th>YEAR</th>
<th>COST OF SUPERANNUATION BENEFIT</th>
<th>% OF ANNUAL INCOME</th>
<th>COST OF BENEFIT PER MEMBER</th>
<th>No. OF SUPERANNUEES AT YEAR END</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£</td>
<td>s</td>
<td>d</td>
<td>£</td>
</tr>
<tr>
<td>1903</td>
<td>375</td>
<td>13</td>
<td>0</td>
<td>7.1</td>
</tr>
<tr>
<td>1904</td>
<td>428</td>
<td>12</td>
<td>0</td>
<td>4.1</td>
</tr>
<tr>
<td>1905</td>
<td>500</td>
<td>4</td>
<td>0</td>
<td>7.2</td>
</tr>
<tr>
<td>1906</td>
<td>510</td>
<td>18</td>
<td>0</td>
<td>6.7</td>
</tr>
<tr>
<td>1907</td>
<td>521</td>
<td>18</td>
<td>0</td>
<td>6.7</td>
</tr>
<tr>
<td>1908</td>
<td>655</td>
<td>16</td>
<td>0</td>
<td>10.0</td>
</tr>
<tr>
<td>1909</td>
<td>783</td>
<td>6</td>
<td>0</td>
<td>14.8</td>
</tr>
<tr>
<td>TOTALS</td>
<td>4139</td>
<td>16</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: N.G.B.M. Magazine, Quarterly Branch Returns, 1903 - 1909 passim.

Society, the Executive announced new benefit scales, more favourable than those of either of the rival Societies. If the Executive was motivated by such considerations their ploy was a failure for membership fell in the years before 1907. At the same time an increase from 31 to 41 in the number of superannuated members, with a leap of almost 20% in recipients in 1906, led to the advocacy of the establishment of a separate Superannuation Fund. At the Conference of 1906 convened to place the Society on "a more equitable basis" all benefits were reduced with the exception of superannuation. The refusal to condone any reduction indicates the value placed on the benefit by the rank and file who mindful of the dangerous unhealthy nature of their occupation regarded the provision of adequate superannuation benefit as a safeguard against pauperism. The attitude of the members was condemned by the Society's General Financial Secretary, who regarded the 20 year minimum benefit threshold as a "young man's pension" which the Society was incapable of affording since the average life span of the 4s per week member ensured double the amount received by a member receiving 7s per week following 40 years membership of Society. Nor was the weakness of the system confined to the extremities of the scale for it was stated that those in receipt of 5s per week received benefit which over a 5 year period outstripped their contributions, both chronologically and financially. The Executive recommendation that the minimum scale become payable after
25 years Society membership found no support at Conference despite the charge that the existing structure allowed unscrupulous members to obtain doctors certificates testifying to incapacitation and therefore access to superannuation benefit while enabling the recipient to undertake work outside the glasshouse. It was precisely because such widespread abuse existed that the G.B.M. Society had introduced revisionary clauses into their Rules to reduce superannuation benefit when 'external' earnings were in excess of a stipulated amount and why, as early as the 1897 revision, incapacitation was subject to diagnosis by the Society's own medical practitioner. The extent to which abuse of and adherence to the existing system was motivated by necessity or greed is problematical, but given the state of the trade and the general economic background in the early years of the twentieth century it is not unlikely that the one condition engendered the other. How great was rank and file attachment to this particular benefit is seen in the reaction to G.F.S. Frank Swan's attempt to reconstitute the N.G.B.M's Superannuation Benefit within its existing structure, post 1906. Submitted to the Society Branches for consideration prior to the Conference of 1908, the proposed scheme was returned drastically altered. As a result the proposed minimum age of entitlement of 60 years was reduced to 50 years. Members of 40 to 45 years of age with 20 years Society membership, were left free to pursue other occupations while remaining eligible for superannuation benefit, or alternatively, taking settlements in lieu of benefit, ranging from £15 to £40 according to length of membership. At the same time, rank and file opposition ensured the retention of financial anomalies by which payments continued to be made as superannuation which would have been more appropriate to the General Fund. As a result of the Conference decision to cut the level of members' contributions by one third, superannuation payments increased by 3.3% to claim 10% of the Society's annual income in 1908, rising to 14.8% by the end of the following year at which time the cost had more than doubled since 1903, while income had decreased by 48.8% over the same period. In an effort to control the situation a separate fund was established by the Executive in 1909, the sum of £500 being invested with Barnsley Corporation and Trustees elected by the Society members administering the fund which concerned all matters appertaining to death and superannuation benefit.

The entire history of superannuation benefit administration is one of actuarial miscalculation compounded by the resistance of the
memberships from motives of necessity, and mistrust, to the belated attempts by Society officials to rectify the deteriorating economic situation. Consequently, at a time when the vicissitudes of trade placed Union finances under increasing demand, the strain was magnified by rank and file objection to the required remedial reform.

(iii) Funeral Benefit.

The status of the artisan glassmaker was reflected as much in death as in his life. For this reason, despite the constraint imposed upon Society finances by adverse social and industrial conditions, post 1876, the provision of Funeral Benefit as per Rule was sacrosanct and continued unchanged. Allied to Funeral Benefit was the provision of Widow's Benefit which, introduced as a branch administered augmentation of Funeral Benefit in 1866, was incorporated within the centralised financial structure of the G.B.M. Society in 1873. As supplementary and optional benefit and the subject of occasional abuse, the Widows Benefit provided an obvious target for economy. Thus in February 1880, the D.M. convened to overhaul the Society's financial position, reduced the Widows' £30 Grant by one third, reimposing a levy of all working journeyman members to finance its administration. Table 12:22 shows that of the £13,348 spent on Funeral Benefit and Widows Grant during the 30 years from 1880, just over 68.8% of the total was spent on the former benefit. The average annual amount spent on Funeral Benefit was £306, with an average of £141 being spent each year on Widows' Grants, and almost £445 being the annual average amount of total costs. In face of claims arising from the ambiguity of the 24th Rule, the Council proposed, in September 1888, a resolution for the consideration of the trade -

"That the Widows' Grant be considered voluntary and that it is purely optional on the part of the Society whether it shall be paid to any widow who applies for it and that there shall be no appeal whatsoever against the Council's decision."

The Resolution defined eligibility, with a strong moral emphasis, debarring any widow -

"... who does not conduct herself at all times respectfully, or whose character is reproachable, who frequents public houses, or acts in any way dishonestly or immorally."
TABLE 12:22  ANNUAL AMOUNTS PAID BY YORKSHIRE G.B.M. SOCIETY AS FUNERAL BENEFIT AND WIDOWS GRANTS, 1880 - 1909

<table>
<thead>
<tr>
<th>YEAR</th>
<th>(A) FUNERAL BENEFIT £s d</th>
<th>(B) WIDOWS GRANT £s d</th>
<th>TOTAL £s d</th>
<th>PER CAPITA COST £s d</th>
<th>% (B)/(A) x100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>167 0 0</td>
<td>90 0 0</td>
<td>257 0 0</td>
<td>4 10</td>
<td>8.2</td>
</tr>
<tr>
<td>1881</td>
<td>199 0 0</td>
<td>80 0 0</td>
<td>279 0 0</td>
<td>5 4</td>
<td>10.4</td>
</tr>
<tr>
<td>1882</td>
<td>223 0 0</td>
<td>40 0 0</td>
<td>263 0 0</td>
<td>5 2</td>
<td>12.6</td>
</tr>
<tr>
<td>1883</td>
<td>190 0 0</td>
<td>100 0 0</td>
<td>290 0 0</td>
<td>5 1½</td>
<td>11.8</td>
</tr>
<tr>
<td>1884</td>
<td>310 0 0</td>
<td>140 0 0</td>
<td>450 0 0</td>
<td>6 7</td>
<td>10.9</td>
</tr>
<tr>
<td>1885</td>
<td>233 0 0</td>
<td>160 0 0</td>
<td>393 0 0</td>
<td>5 1¼</td>
<td>9.7</td>
</tr>
<tr>
<td>1886</td>
<td>370 15</td>
<td>140 0 0</td>
<td>450 15</td>
<td>5 9¼</td>
<td>8.1</td>
</tr>
<tr>
<td>1887</td>
<td>122 0 0</td>
<td>38 0 0</td>
<td>160 0 0</td>
<td>2 2</td>
<td>2.9</td>
</tr>
<tr>
<td>1888</td>
<td>111 0 0</td>
<td>60 0 0</td>
<td>171 0 0</td>
<td>2 2¼</td>
<td>3.4</td>
</tr>
<tr>
<td>1889</td>
<td>181 0 0</td>
<td>156 0 0</td>
<td>337 0 0</td>
<td>3 11</td>
<td>4.7</td>
</tr>
<tr>
<td>1890</td>
<td>191 0 0</td>
<td>48 0 0</td>
<td>239 0 0</td>
<td>2 6</td>
<td>3.8</td>
</tr>
<tr>
<td>1891</td>
<td>250 0 0</td>
<td>96 0 0</td>
<td>346 0 0</td>
<td>2 11½</td>
<td>3.8</td>
</tr>
<tr>
<td>1892</td>
<td>276 0 0</td>
<td>156 0 0</td>
<td>432 0 0</td>
<td>3 7½</td>
<td>4.6</td>
</tr>
<tr>
<td>1893</td>
<td>224 0 0</td>
<td>168 0 0</td>
<td>392 0 0</td>
<td>3 2½</td>
<td>3.4</td>
</tr>
<tr>
<td>1894</td>
<td>283 0 0</td>
<td>96 0 0</td>
<td>379 0 0</td>
<td>3 0½</td>
<td>3.0</td>
</tr>
<tr>
<td>1895</td>
<td>270 0 0</td>
<td>144 0 0</td>
<td>414 0 0</td>
<td>3 3½</td>
<td>3.6</td>
</tr>
<tr>
<td>1896</td>
<td>335 0 0</td>
<td>144 0 0</td>
<td>479 0 0</td>
<td>3 9</td>
<td>4.5</td>
</tr>
<tr>
<td>1897</td>
<td>246 0 0</td>
<td>252 0 0</td>
<td>498 0 0</td>
<td>3 9</td>
<td>4.5</td>
</tr>
<tr>
<td>1898</td>
<td>374 0 0</td>
<td>96 0 0</td>
<td>470 0 0</td>
<td>3 6</td>
<td>4.1</td>
</tr>
<tr>
<td>1899</td>
<td>290 0 0</td>
<td>204 0 0</td>
<td>494 0 0</td>
<td>3 6½</td>
<td>4.1</td>
</tr>
<tr>
<td>1900</td>
<td>471 0 0</td>
<td>144 0 0</td>
<td>615 0 0</td>
<td>4 3½</td>
<td>5.8</td>
</tr>
<tr>
<td>1901</td>
<td>379 0 0</td>
<td>180 0 0</td>
<td>559 0 0</td>
<td>3 10</td>
<td>5.1</td>
</tr>
<tr>
<td>1902</td>
<td>468 0 0</td>
<td>204 0 0</td>
<td>672 0 0</td>
<td>4 7½</td>
<td>7.0</td>
</tr>
<tr>
<td>1903</td>
<td>316 0 0</td>
<td>204 0 0</td>
<td>520 0 0</td>
<td>3 7½</td>
<td>5.1</td>
</tr>
<tr>
<td>1904</td>
<td>390 0 0</td>
<td>204 0 0</td>
<td>594 0 0</td>
<td>4 2</td>
<td>5.7</td>
</tr>
<tr>
<td>1905</td>
<td>345 0 0</td>
<td>168 0 0</td>
<td>513 0 0</td>
<td>3 8½</td>
<td>4.6</td>
</tr>
<tr>
<td>1906</td>
<td>467 0 0</td>
<td>132 0 0</td>
<td>499 0 0</td>
<td>4 6½</td>
<td>4.2</td>
</tr>
<tr>
<td>1907</td>
<td>455 0 0</td>
<td>168 0 0</td>
<td>623 0 0</td>
<td>4 1¼</td>
<td>5.1</td>
</tr>
<tr>
<td>1908</td>
<td>504 0 0</td>
<td>216 0 0</td>
<td>720 0 0</td>
<td>5 1¼</td>
<td>6.3</td>
</tr>
<tr>
<td>1909</td>
<td>612 0 0</td>
<td>228 0 0</td>
<td>840 0 0</td>
<td>6 10½</td>
<td>7.7</td>
</tr>
</tbody>
</table>

TOTALS 9192 0 0 4256 0 0 1348 0 0 4 1½ —

Source: G.B.M. Reports, 1880 - 1909, passim.
While it is obvious that the E.C. Resolution was dictated by earlier fraudulent claims, the emphatic moral tone of the letter to the branches makes it equally obvious that the Councilmen at least regarded the misconduct of members' wives and widows as the denigration of their craft and social status. The extent to which the view was shared by the rank and file is less obvious, however, for of the 1465 employed members, eligible to vote on the Resolution, only 249 did so, the Resolution being carried by 118 votes.

In common with the G.B.M. Society, the F.G.M. Society revised its Rules in 1880. Funeral and Widows' benefit were provided on a two tier basis with one year members entitlement to Death Grant being £4 and members of two years or more, £8. Likewise the death of a member's lawful wife entitled the member to £5 if a member in excess of two years; those with a lesser period of membership receiving half the amount. Table 12:23 shows that during the 23 year period from 1880 a total of £9,045 was paid in Death Grants by the F.G.M. Society, at an annual average of £393. The figures compare closely with the G.B.M. Society's £9,507 at an average annual cost of £413 over the same timescale, a fact which despite the much lower individual provision of the F.G.Ms, reflects the larger membership of that Society pre 1891. In terms per capita over the 23 years from 1880, the F.G.M. paid almost one shilling per member less than the G.B.Ms. 4s-6d.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>COST OF FUNERAL BENEFIT £ s d</th>
<th>% OF ANNUAL INCOME</th>
<th>COST OF BENEFIT PER MEMBER £ s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1903</td>
<td>105 0 0</td>
<td>1.0</td>
<td>2 5½</td>
</tr>
<tr>
<td>1904</td>
<td>84 0 0</td>
<td>.8</td>
<td>1 10½</td>
</tr>
<tr>
<td>1905</td>
<td>89 0 0</td>
<td>1.3</td>
<td>2 2½</td>
</tr>
<tr>
<td>1906</td>
<td>169 0 0</td>
<td>2.2</td>
<td>4 2½</td>
</tr>
<tr>
<td>1907</td>
<td>230 0 0</td>
<td>3.0</td>
<td>4 3</td>
</tr>
<tr>
<td>1908</td>
<td>172 0 0</td>
<td>2.6</td>
<td>3 4</td>
</tr>
<tr>
<td>1909</td>
<td>163 1 0</td>
<td>3.1</td>
<td>3 4½</td>
</tr>
<tr>
<td>TOTALS</td>
<td>1012 1 0</td>
<td></td>
<td>3 1½</td>
</tr>
</tbody>
</table>

Source: N.G.B.M. Magazine, Quarterly Branch Returns, 1903 - 1909, passim.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>(A)</th>
<th>(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL SOCIETY</td>
<td>FUNERAL BENEFIT</td>
</tr>
<tr>
<td></td>
<td>£ s d</td>
<td>£ s d</td>
</tr>
<tr>
<td>1880</td>
<td>306 6 8</td>
<td>66 0 0</td>
</tr>
<tr>
<td>1881</td>
<td>297 13 4</td>
<td>24 0 0</td>
</tr>
<tr>
<td>1882</td>
<td>343 0 0</td>
<td>44 0 0</td>
</tr>
<tr>
<td>1883</td>
<td>258 13 4</td>
<td>50 0 0</td>
</tr>
<tr>
<td>1884</td>
<td>361 0 0</td>
<td>36 0 0</td>
</tr>
<tr>
<td>1885</td>
<td>332 13 4</td>
<td>19 0 0</td>
</tr>
<tr>
<td>1886</td>
<td>303 17 0</td>
<td>13 0 0</td>
</tr>
<tr>
<td>1887</td>
<td>397 6 8</td>
<td>58 0 0</td>
</tr>
<tr>
<td>1888</td>
<td>381 0 0</td>
<td>34 0 0</td>
</tr>
<tr>
<td>1889</td>
<td>316 19 4</td>
<td>47 0 0</td>
</tr>
<tr>
<td>1890</td>
<td>477 6 8</td>
<td>77 0 0</td>
</tr>
<tr>
<td>1891</td>
<td>459 12 6</td>
<td>75 0 0</td>
</tr>
<tr>
<td>1892</td>
<td>376 6 8</td>
<td>88 0 0</td>
</tr>
<tr>
<td>1893</td>
<td>359 6 0</td>
<td>56 0 0</td>
</tr>
<tr>
<td>1894</td>
<td>415 19 0</td>
<td>82 0 0</td>
</tr>
<tr>
<td>1895</td>
<td>582 16 0</td>
<td>116 0 0</td>
</tr>
<tr>
<td>1896</td>
<td>441 13 4</td>
<td>74 0 0</td>
</tr>
<tr>
<td>1897</td>
<td>358 16 8</td>
<td>84 0 0</td>
</tr>
<tr>
<td>1898</td>
<td>418 3 4</td>
<td>55 0 0</td>
</tr>
<tr>
<td>1899</td>
<td>348 0 0</td>
<td>73 6 8</td>
</tr>
<tr>
<td>1900</td>
<td>413 13 4</td>
<td>95 0 0</td>
</tr>
<tr>
<td>1901</td>
<td>282 6 0</td>
<td>90 0 0</td>
</tr>
<tr>
<td>1902</td>
<td>495 6 8</td>
<td>89 0 0</td>
</tr>
</tbody>
</table>

Source: F.G.M.M. Quarterly Returns, 1880 - 1902, passim.
Table 12:24 shows the payments made by the N.G.B.M. Society as Funeral Grants. The Table shows that an annual average of £144, at an average cost per member of 3½d was expended during the years 1903 - 1909. In the same period, the G.B.Ms' Society spent more than four times the amount paid by the N.G.B.M., the total sum of £4309 being an annual average of £615 at a per capita cost of 4s 3½d. The difference in cost is explained by the fact that under the 1906 Rules, the G.B.M. Society increased the Widows' Grant by £2, making a fixed sum of £12 compared with the variable amount paid by the flint bottle hands which was based on a membership levy.\textsuperscript{165} Finally, it is of significance to note that the Rules of the G.B.M. made provision for the burial "in a respectable manner" of a deceased member having neither kith or kin, thereby maintaining the trade custom which ensured a dignity in death commensurate with the status of the craft.\textsuperscript{166}

(iv) Sickness Benefit.

Faced with the increasing financial burden caused by rising unemployment, the Executive of the F.G.M. Society at the trade Conference convened in July 1880, appealed to the members to support the suspension of Sickness Benefit for a twelve month period. It was claimed that such a measure, in conjunction with the proposed new Code of Rules, would provide a breathing space to enable the resuscitation of Society funds. The proposal was fully supported by the membership as a result of which the suspension of benefit occurred from the following September.\textsuperscript{167} The reformist measures and the improvement of trade enabled the Executive to honour its pledge to "return to the Sick Section at the proper time" and benefit was resumed the following September with the expressed hope, however,

".... that both Secretaries and Members will be vigilant in seeing that it is not imposed upon".\textsuperscript{168}

The comment provides an insight which explains why the benefit suspension was proposed and endorsed by the rank and file for although it is not possible to calculate the extent to which imposition may have previously occurred, the implication of the Executive statement is that such was the case. Upon resumption, Sickness Benefit was paid at a rate substantially less than the rate afforded to the unemployed, the sick receiving 7 shillings per week for the first quarter's illness with benefit reducing by one shilling per week during the second quarter.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>(A) TOTAL SOCIETY SICKNESS BENEFIT</th>
<th>(B) SICKNESS BENEFIT YORKSHIRE DISTRICTS</th>
<th>(B)/(A) x 100</th>
<th>PER CAPITA COST OF BENEFIT</th>
<th>% ANNUAL INCOME</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ s d</td>
<td>£ s d</td>
<td>£ s d</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1880</td>
<td>219 2 4</td>
<td>43 6 0</td>
<td>19.6</td>
<td>2 2‡</td>
<td>3.3</td>
</tr>
<tr>
<td>1881(a)</td>
<td>69 14 4</td>
<td>10 3 8</td>
<td>14.5</td>
<td>0 8‡</td>
<td>1.0</td>
</tr>
<tr>
<td>1882</td>
<td>341 5 8‡</td>
<td>64 4 0</td>
<td>18.7</td>
<td>3 6</td>
<td>5.1</td>
</tr>
<tr>
<td>1883</td>
<td>330 10 2</td>
<td>41 17 0</td>
<td>12.4</td>
<td>3 4‡</td>
<td>5.1</td>
</tr>
<tr>
<td>1884</td>
<td>361 19 4</td>
<td>45 11 0</td>
<td>12.4</td>
<td>3 8</td>
<td>5.7</td>
</tr>
<tr>
<td>1885</td>
<td>468 9 10</td>
<td>43 6 0</td>
<td>9.2</td>
<td>4 8‡</td>
<td>7.4</td>
</tr>
<tr>
<td>1886</td>
<td>453 9 5</td>
<td>76 9 4</td>
<td>16.7</td>
<td>4 6‡</td>
<td>7.3</td>
</tr>
<tr>
<td>1887</td>
<td>502 19 0</td>
<td>59 3 4</td>
<td>11.7</td>
<td>5 1</td>
<td>7.4</td>
</tr>
<tr>
<td>1888</td>
<td>380 8 5</td>
<td>53 13 0</td>
<td>13.9</td>
<td>3 10‡</td>
<td>5.1</td>
</tr>
<tr>
<td>1889</td>
<td>386 16 8</td>
<td>87 2 0</td>
<td>22.5</td>
<td>3 10</td>
<td>5.0</td>
</tr>
<tr>
<td>1890</td>
<td>365 9 9</td>
<td>108 11 10</td>
<td>29.5</td>
<td>3 5‡</td>
<td>4.1</td>
</tr>
<tr>
<td>1891</td>
<td>514 8 4</td>
<td>174 9 0</td>
<td>33.8</td>
<td>4 10</td>
<td>6.2</td>
</tr>
<tr>
<td>1892</td>
<td>523 15 7</td>
<td>99 5 0</td>
<td>18.9</td>
<td>4 10‡</td>
<td>6.6</td>
</tr>
<tr>
<td>1893</td>
<td>484 5 10</td>
<td>130 5 0</td>
<td>26.8</td>
<td>4 5‡</td>
<td>6.7</td>
</tr>
<tr>
<td>1894</td>
<td>538 8 6</td>
<td>185 18 4</td>
<td>34.3</td>
<td>5 0</td>
<td>6.9</td>
</tr>
<tr>
<td>1895</td>
<td>582 13 8</td>
<td>155 15 8</td>
<td>26.6</td>
<td>5 4‡</td>
<td>8.1</td>
</tr>
<tr>
<td>1896</td>
<td>519 17 0</td>
<td>149 0 8</td>
<td>28.7</td>
<td>4 9</td>
<td>6.4</td>
</tr>
<tr>
<td>1897</td>
<td>580 14 0</td>
<td>176 6 0</td>
<td>30.3</td>
<td>5 2</td>
<td>6.8</td>
</tr>
<tr>
<td>1898</td>
<td>591 9 0</td>
<td>195 12 0</td>
<td>32.9</td>
<td>5 1</td>
<td>6.9</td>
</tr>
<tr>
<td>1899</td>
<td>675 3 2</td>
<td>273 1 0</td>
<td>40.4</td>
<td>5 10‡</td>
<td>7.6</td>
</tr>
<tr>
<td>1900</td>
<td>663 10 4</td>
<td>246 10 8</td>
<td>37.1</td>
<td>5 5</td>
<td>7.4</td>
</tr>
<tr>
<td>1901</td>
<td>594 15 4</td>
<td>245 1 0</td>
<td>41.2</td>
<td>5 0</td>
<td>6.9</td>
</tr>
<tr>
<td>1902</td>
<td>588 10 4</td>
<td>316 16 0</td>
<td>53.7</td>
<td>4 11‡</td>
<td>6.4</td>
</tr>
</tbody>
</table>

TOTALS 10739 16 10‡ 2981 7 6 27.7 4 4

Source: F.G.M.M. Quarterly Returns, 1880 - 1902, passim.

(a) Sickness Benefit suspended November 1880 to November 1881.
Further reductions of one shilling in each of the two subsequent half years, followed, finally culminating in a payment of 2 shillings per week for the duration of sickness for all men with ten years membership of Society.\textsuperscript{169} The downgrading of Sickness Benefit from the position of near parity with unemployment donation which existed prior to 1880, marks the need for financial stringency within the Society. The extension of benefit provision during the previous decades of trade prosperity had not only become a major element in the attainment by the Society of 'New Model' status, but in so doing had, like the G.B.Ms, raised the expectancy of the membership that regardless of the financial burden involved, the full range of welfare benefit would continue.

Table 12:25 shows the annual sums expended as Sickness benefit, by the F.G.M. Society generally and to the Yorkshire District particularly during the years 1880 - 1902. The annual average payment by the Society during the 23 years period was £466, and that of the Yorkshire Districts £129, the average per capita being 4s 4d per annum. Despite annual fluctuations the general tendency is one of rising cost culminating in the annual sum of £663 in 1889, which was two thirds more than the amount paid in 1880. The rise, particularly with reference to the Yorkshire District, is partially explained in terms of membership increase, although this was only in the order of 17% overall. The fact suggests that the increased demand for sickness benefit arose as a result of the deterioration in workshop conditions. The assumption, which data paucity renders conjectural, is given prima facie substantiation by the comments and attitude of Union leaders at a time when despite the inadequacies of public health amenities, environmental conditions in urban areas were beginning to improve (cf Chapter 11 (a) supra).

The fact that Table 12:25 shows the Yorkshire section of the F.G.M. Society's share of Sickness Benefit rising from less than a quarter in 1889 to more than half just over a decade later, while the membership growth within the District had increased to just over one third, is suggestive of worsening labour conditions. As a result the demands entailed an increase of Sickness Benefit provision as a percentage of Society income, from 3.3% in 1880 to 7.6% twenty years later. The establishment of the N.G.B.M. Society co-incided with the tendency towards government sponsored welfare provision. As a consequence of the relatively heavy expenditure during the first two years of its
existence, the Society abandoned Sickness Benefit late in 1904.\textsuperscript{170}

Data concerning the G.B.M. Society indicates a substantial increase in the incidence of sickness and industrial injury amongst the members during the survey period, but unfortunately insufficiency of specific data prevents comparative analysis with that of rival Societies.

(v) \textbf{Strike Donation.}

In the Autumn of 1876, the rank and file of the G.B.M. Society repudiated the decision of the D.M. concerning settlement of a trade dispute, insisting on the application of "customary privilege" via the popular vote, although the 40th Rule of the Society explicitly denied the settlement of such issues by this means.\textsuperscript{171} Nevertheless, the sop to primitive democratic sentiment was by sufferance of the Executive and not by legislative enactment and following the adversity suffered by the Society as a result of the protracted industrial upheaval occasioned by the militant rank and file, the Executive was able to re-assert its authority. Writing in 1880, Alfred Greenwood was able to refer to the continued validity of anti-strike sentiments expressed several years before the period of dispute,\textsuperscript{172} and conclude

"... we are all bound to improve the Trade by all 'Social, intellectual and moral means' and not by 'strikes' and their twin brethren 'lock-outs', which according to our experience have invariably proven failures in our Trade".\textsuperscript{173}

Table 12:26 shows how effectively the Executive philosophy was inculcated. The Table indicates the diminishment of the strike weapon as a result of the E.C. being able to capitalise on the discredited industrial militancy and utilise financial control of Strike and Lock-Out Benefit to regulate the course of industrial relations. For that reason, with the sole exception of 1893, the provision of Strike Donation post 1888, never amounted to even 1% of the Society's annual income and it is noticable that fourteen of the fifteen years between 1880 - 1909, when Strike Donation was paid, occurred post 1888.

The two major periods of industrial dispute, 1886 - 1887 and 1893, were instigated by the attempt of the manufacturers to dictate the terms and conditions of the trade. The response of the Society to
TABLE 12:26  ANNUAL AMOUNTS PAID AS STRIKE AND LOCK-OUT BENEFIT

<table>
<thead>
<tr>
<th>YEAR</th>
<th>STRIKE AND LOCK-OUT BENEFIT</th>
<th>PERCENTAGE OF ANNUAL INCOME</th>
<th>COST PER MEMBER OF SOCIETY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£   s    d</td>
<td></td>
<td>£   s    d</td>
</tr>
<tr>
<td>1880</td>
<td>3053 3 6</td>
<td>96.9</td>
<td>2 17 6½</td>
</tr>
<tr>
<td>1881</td>
<td>251 6 6</td>
<td>9.3</td>
<td>4 9⅛</td>
</tr>
<tr>
<td>1882</td>
<td>96 0 0</td>
<td>4.6</td>
<td>1 10½</td>
</tr>
<tr>
<td>1883</td>
<td>31 2 6</td>
<td>1.2</td>
<td>0 6½</td>
</tr>
<tr>
<td>1884</td>
<td>82 16 0</td>
<td>1.9</td>
<td>0 5½</td>
</tr>
<tr>
<td>1885</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1886</td>
<td>2008 14 0</td>
<td>35.9</td>
<td>1 5 10</td>
</tr>
<tr>
<td>1887</td>
<td>932 15 6</td>
<td>17.1</td>
<td>12 8½</td>
</tr>
<tr>
<td>1888</td>
<td>13 16 6</td>
<td>0.2</td>
<td>0 2</td>
</tr>
<tr>
<td>1889</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1890</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1891</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1892</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1893</td>
<td>15537 13 0</td>
<td>134.3</td>
<td>6 8 1</td>
</tr>
<tr>
<td>1894</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1895</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1896</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1897</td>
<td>1 11 0</td>
<td>0.009</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1898</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1899</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1900</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1901</td>
<td>21 0 0</td>
<td>0.19</td>
<td>0 0½</td>
</tr>
<tr>
<td>1902</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1903</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1904</td>
<td>--/--/---</td>
<td>--/---/---</td>
<td>--/---/---</td>
</tr>
<tr>
<td>1905</td>
<td>43 4 0</td>
<td>0.4</td>
<td>0 3½</td>
</tr>
<tr>
<td>1906</td>
<td>114 0 0</td>
<td>0.97</td>
<td>0 10½</td>
</tr>
<tr>
<td>1907</td>
<td>6 0 0</td>
<td>0.049</td>
<td>0 0½</td>
</tr>
<tr>
<td>1908</td>
<td>96 2 0</td>
<td>0.84</td>
<td>0 9½</td>
</tr>
</tbody>
</table>

TOTALS 22289 6 0

Source: G.B.M. Reports, 1880 - 1909 passim.
the challenge posed by the employers is significant for the fact that despite its condemnation of strike action as an industrial weapon, the E.C. was willing to support militant action. Regardless of financial cost and the abnegation of 'New Model' philosophy, the E.C. were clearly willing to sanction strikes when such action was considered necessary for the maintenance of the customary 'rights' which underpinned craft status.

The fact that the N.G.B.M. Society in contrast to the parent F.G.M. Society, found it necessary to make provision for the payment of strike allowance reflects the exigencies of trade circumstance within the Yorkshire District rather than a rejection of the underlying anti-strike philosophy which characterised the F.G.M. Society. During its formative years members of the new Society were involved in labour disputes at several Yorkshire factories which almost resulted in a general strike and included a protracted dispute at Rylands, Stairfoot works of over a year's duration. 174

### TABLE 12:27 ANNUAL AMOUNT PAID AS STRIKE BENEFIT BY N.G.B.M. SOCIETY 1903 - 1909

<table>
<thead>
<tr>
<th>YEAR</th>
<th>COST OF STRIKE BENEFIT</th>
<th>PERCENTAGE OF ANNUAL INCOME</th>
<th>COST PER SOCIETY MEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ s d</td>
<td></td>
<td>£ s d</td>
</tr>
<tr>
<td>1903</td>
<td>1249 0 0</td>
<td>12.0</td>
<td>1 9 5</td>
</tr>
<tr>
<td>1904</td>
<td>1261 2 0</td>
<td>12.2</td>
<td>1 10 0 ½</td>
</tr>
<tr>
<td>1905</td>
<td>1272 1 0</td>
<td>18.3</td>
<td>1 11 3 ¾</td>
</tr>
<tr>
<td>1906</td>
<td>628 4 0</td>
<td>8.3</td>
<td>15 9</td>
</tr>
<tr>
<td>1907</td>
<td>106 18 0</td>
<td>1.4</td>
<td>2 7 ½</td>
</tr>
<tr>
<td>1908</td>
<td>27 17 4</td>
<td>0.4</td>
<td>0 8</td>
</tr>
<tr>
<td>1909</td>
<td>96 0 0</td>
<td>1.8</td>
<td>2 0 ½</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>4641 2 4</strong></td>
<td><strong>54.4</strong></td>
<td></td>
</tr>
</tbody>
</table>

Source: N.G.B.M.M. Quarterly Branch Returns, 1903 - 1909, passim.

Table 12:27 shows the effect of the industrial disruption on Society finances, with over 81% of Strike Benefit paid by the N.G.B.M. Society being disbursed during the first three years of its existence at an average annual cost of £1-10-0d per member. The comparison
with the G. B. M. Society disbursements over the seven year period underlines the enormity of the financial undertaking of the N. G. B. M. Society between 1903 - 1909. The Strike Allowance of the G. B. M. Society was 0.3% of the average annual income, being an average annual sum of £37, whereas payment of £663 per annum by the flint bottle hands at 8.4% of average annual income was greater than the 7.3% mean total of the G. B. M. Society over the three decades from 1880. Comparison of the members' contributions during the period shows that the G. B. Ms. paid weekly sums totalling £61.15.0d per individual member compared to the sum of £54-12-0d afforded by the flint bottle makers. In addition, at times of extraordinary expenditure such as the 1893 Lock-Out, the G. B. M. members unaffected by the dispute were authorised to make contributions of 6 shillings per week and in fact paid amounts from 2 shillings to 6 shillings in excess of the required amount. Apart from the obvious economic status which enabled such payments to be made, the willingness of the G. B. M. to sustain the high level contributions at a time of generally high unemployment indicates an equally high degree of craft pride and fraternity among Society members. While this feeling obviously existed within the N. G. B. M. Society its brief existence and much smaller membership precluded such financial manoeuvre. Indeed, an element of the Society members took pride in the fact that they were required to pay less than the bottle hands, while others blamed the Society's growing financial plight upon the officials and clearly considered existing contributions as sufficient for their purpose. For these reasons neither strike levy nor "strenuous appeal" to other Societies for funds was sufficient to redress the demand on Society funds by strike allowance which was a principle cause of the enforced financial reorganisation of 1906.

(vi) Benevolent Grants.

The replacement of voluntary subscriptions on behalf of members unable to follow the trade due to incapacitation, by a centrally administered Benevolent Grant was introduced by the G. B. M. Society in July 1882. During the 28½ years to December 1909, the sum of £1,686 was disbursed in variable sums between £3 and £7, the amount being based on length of membership. Initially the Grant was awarded at the discretion of either the E. C. or D. M. but from 1885, full responsibility was assumed by the former body.
TABLE 12:28

ANNUAL AMOUNTS PAID AS BENEVOLENT GRANTS BY
YORKSHIRE G.B.M. SOCIETY, 1880 - 1909

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ANNUAL AMOUNT BENEFIT PAID</th>
<th>PERCENTAGE OF ANNUAL INCOME</th>
<th>COST PER MEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£  s  d</td>
<td></td>
<td>£  s  d</td>
</tr>
<tr>
<td>1881</td>
<td>15  5  9⅓</td>
<td>0.5</td>
<td>1£ 1⅓</td>
</tr>
<tr>
<td>1882</td>
<td>56  11  5½</td>
<td>2.6</td>
<td>1£ 1½</td>
</tr>
<tr>
<td>1883</td>
<td>68  0  0</td>
<td>2.7</td>
<td>1£ 4½</td>
</tr>
<tr>
<td>1884</td>
<td>96  0  0</td>
<td>2.3</td>
<td>1£ 1½</td>
</tr>
<tr>
<td>1885</td>
<td>50  0  0</td>
<td>1.2</td>
<td>7½</td>
</tr>
<tr>
<td>1886</td>
<td>81  0  0</td>
<td>1.4</td>
<td>1£ 0½</td>
</tr>
<tr>
<td>1887</td>
<td>41  0  0</td>
<td>0.7</td>
<td>6½</td>
</tr>
<tr>
<td>1888</td>
<td>24  0  0</td>
<td>0.5</td>
<td>3½</td>
</tr>
<tr>
<td>1889</td>
<td>42  0  0</td>
<td>0.5</td>
<td>6</td>
</tr>
<tr>
<td>1890</td>
<td>9   0  0</td>
<td>0.2</td>
<td>1½</td>
</tr>
<tr>
<td>1891</td>
<td>38  0  0</td>
<td>0.4</td>
<td>4</td>
</tr>
<tr>
<td>1892</td>
<td>81  0  0</td>
<td>0.8</td>
<td>8½</td>
</tr>
<tr>
<td>1893</td>
<td>39  0  0</td>
<td>0.3</td>
<td>3½</td>
</tr>
<tr>
<td>1894</td>
<td>62  0  0</td>
<td>0.5</td>
<td>6</td>
</tr>
<tr>
<td>1895</td>
<td>51  0  0</td>
<td>0.4</td>
<td>4½</td>
</tr>
<tr>
<td>1896</td>
<td>79  0  0</td>
<td>0.7</td>
<td>7½</td>
</tr>
<tr>
<td>1897</td>
<td>99  0  0</td>
<td>0.9</td>
<td>9</td>
</tr>
<tr>
<td>1898</td>
<td>48  0  0</td>
<td>0.4</td>
<td>4½</td>
</tr>
<tr>
<td>1899</td>
<td>76  0  0</td>
<td>0.6</td>
<td>6½</td>
</tr>
<tr>
<td>1900</td>
<td>46  0  0</td>
<td>0.4</td>
<td>4</td>
</tr>
<tr>
<td>1901</td>
<td>91  0  0</td>
<td>0.8</td>
<td>7½</td>
</tr>
<tr>
<td>1902</td>
<td>81  0  0</td>
<td>0.8</td>
<td>6½</td>
</tr>
<tr>
<td>1903</td>
<td>82  0  0</td>
<td>0.8</td>
<td>6½</td>
</tr>
<tr>
<td>1904</td>
<td>101 0 0</td>
<td>0.9</td>
<td>8½</td>
</tr>
<tr>
<td>1905</td>
<td>48  0  0</td>
<td>0.4</td>
<td>4½</td>
</tr>
<tr>
<td>1906</td>
<td>67  0  0</td>
<td>0.5</td>
<td>6</td>
</tr>
<tr>
<td>1907</td>
<td>46  0  0</td>
<td>0.4</td>
<td>4½</td>
</tr>
<tr>
<td>1908</td>
<td>35  0  0</td>
<td>0.3</td>
<td>3½</td>
</tr>
<tr>
<td>1909</td>
<td>34  0  0</td>
<td>0.3</td>
<td>3½</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>1686 17 3</strong></td>
<td></td>
<td><strong>0.5</strong></td>
</tr>
</tbody>
</table>

Source: G.B.M. Reports, Volume XVIII, pp 26 - 31
Table 12:28 showing details concerning the Benevolent Fund administration during the period 1881 - 1909, suggests that the effect of introducing fixed rate benefit was to encourage applications by members who had previously held aloof because of the uncertain nature of the voluntary response. The reduction in the number of grants post 1884 would appear to mark the end of the initial response by such members and although conjectural, it is not improbable, that the assumed role of the E.C. as the sole discretionary arbiter in cases of Benefit application, was a measure designed to prevent misapplication by using the grant as a lucrative means of abandoning the trade at times of unsettled conditions. If such was the case, the dramatic rise in the number of grants from 1892, represents a significant increase in the level of genuine incapacitation which conforms with general indications of deterioration of working conditions during the period. The point is reinforced by the fact that the increase occurred at a time when the trade was entering a settled and more prosperous phase following the severe depression and industrial conflict which marked the early years of the decade. Society expenditure on the Benevolent Grant represents only a minute portion of total expenditure, averaging only 0.5% of Society income over the survey period. Nevertheless, the introduction of this benefit at a period when demand concerning existing benefit provision had recently enforced financial reconstruction must imply an awareness of increasing need on the part of an element of the membership and must be regarded as a measure designed to ensure an equitable system commensurate with the status maintenance of the trade fraternity.

(vii) Miscellaneous Grants.

Despite the exigencies of welfare benefit provision after 1880, both Societies of glassmakers upheld the ideals of trade unionism by their practical response to appeals for pecuniary assistance from various sources within the trade union movement.

Table 12:29 shows the annual donations made by the G.B.M. Society which amounted to £6,442, at an average of £214 per year over the 30 year period to 1909. The amounts include regular items of expenditure on subscriptions to Institutions such as Leeds Infirmary, Pontefract Dispensary, Askern Bath Charity and also to trade organisations such as the I.U. and National Federation. In addition were annual subscriptions to political bodies such as the T.U.C. and Labour
TABLE 12:29

ANNUAL AMOUNTS DONATED BY THE YORKSHIRE G.B.M. SOCIETY TO FELLOW TRADES AND INSTITUTIONS 1880 - 1909

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AMOUNTS DONATED PER ANNUM</th>
<th>% ANNUAL INCOME</th>
<th>PER CAPITA COST OF GRANT</th>
</tr>
</thead>
<tbody>
<tr>
<td>£</td>
<td>s</td>
<td>d</td>
<td>£</td>
</tr>
<tr>
<td>1880</td>
<td>12</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>1881</td>
<td>29</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>1882</td>
<td>220</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>1883</td>
<td>560</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>1884</td>
<td>89</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>1885</td>
<td>221</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1886</td>
<td>124</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>1887</td>
<td>23</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1888</td>
<td>78</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>1889</td>
<td>24</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1890</td>
<td>140</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>1891</td>
<td>127</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>1892</td>
<td>107</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>1893</td>
<td>110</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>1894</td>
<td>398</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>1895</td>
<td>594</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>1896</td>
<td>372</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>1897</td>
<td>351</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>1898</td>
<td>199</td>
<td>19</td>
<td>0</td>
</tr>
<tr>
<td>1899</td>
<td>57</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>1900</td>
<td>204</td>
<td>17</td>
<td>6</td>
</tr>
<tr>
<td>1901</td>
<td>2070</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>1902</td>
<td>105</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>1903</td>
<td>73</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1904</td>
<td>10</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>1905</td>
<td>75</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1906</td>
<td>10</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>1907</td>
<td>10</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>1908</td>
<td>10</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>1909</td>
<td>10</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>TOTALS</td>
<td>6422</td>
<td>13</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Quarterly Returns,
G.B.M. Reports, 1880 - 1909, passim.
Party. However, the total expenditure for such purposes was limited to a few tens of pounds, while the bulk of the amount spent was disbursed amongst other trades within and beyond the glass industry. Thus in 1883, the Society while undertaking the revision of its system of welfare benefit donations still provided the North of England G.B.M. Society whose members were in dispute with their employers, with £560 amounting to 22% of the income of the Yorkshire Society.

Likewise, in 1885, when the Yorkshiremen were already paying contributions and levies amounting to 15s 8d per quarter, the members voted in favour of an additional levy of 2s per quarter to assist the locked-out G.B.M. in Scotland. Of the £221 donated in 1885, £180 was remitted to Scotland, while the following year £100 of the £124 granted by the Yorkshire Society was sent to the bottlehands of Dublin also locked out by their employers. The magnitude of the benevolence afforded at a period of financial strain within the Yorkshire Society when viewed within the context of the national glass trade, may be explained in terms of self interested attempts to stabilise conditions in other bottle making regions and thereby maintain the conditions within the Yorkshire trade and preserve the socio-economic status of Society members. The aim is also apparent in the substantial increase in expenditure shown in Table 12:29. From 1890, considerable sums were sent through the aegis of the I.U. to G.B.M. in France, Germany, Denmark and Australia in accordance with the declared aim of the Yorkshire Society to improve wages and conditions abroad and thereby prevent the erosive influence of cheap foreign labour from undermining the socio-economic status of British glassmakers. The culmination of the Society's policy is seen in 1901 when almost £2,000 was donated with an additional sum loaned to the German G.B.M. in an abortive attempt to prevent the destruction of their trade organisations.

The outcome of the German dispute coincided with the downturn in the Yorkshire trade which intensified the problem of artisan displacement as employers increasingly resorted to machine production. The psychological and material blow sustained by the Yorkshire Society constrained financial subsidies to other trades and by 1906 miscellaneous expenditure was solely confined to subscriptions to social institutions and political bodies. The obvious degree of self interest which underlay the Society trade grants does not preclude a degree of altruism. Such benevolence is seen in frequent small donations.
to a variety of trades, particularly to the Yorkshire miners in accordance with the tradition of mutual support. Even where antagonism had soured fraternal relationships, as with the F.G.M. Society post 1894 or where supplication had failed to elicit support for the Yorkshire Society as was the case with the A.S.E. at the time of the 1893 Lock-Out, the G.B.M. were willing to respond positively to a formal appeal. Nor does the motivation of self interest referred to above negate the adherence to the principles of trade unionism which was fundamental to the practical response.

Table 12: 30 shows that the same spirit of altruism permeated the ranks of the F.G.M. Society. The Table shows donations over the 23 year period from 1880 averaged £85 per year, totalling nearly £2,000 and averaging about one percent of the Society's annual income.

The donations from the F.G.M. Benevolent Fund were, however, more frugal than those of the G.B.M. Society, amounting to about one third of the sums granted by the G.B.Ms. The explanation, in part, lies in the different organisational nature of the two groups. The specialist trade background of the Yorkshire Society together with the geographical compactness and a more assertively authoritarian centralist government engendered a common identity of purpose which found expression in the provision of subsidies for the maintenance of the trade at home and abroad. The same considerations formed the basis of support for traditional allies such as the miners and other elements within the localised geographical community. The considerably greater wealth of the G.B.M. Society also influenced the extent of the grants made by each Society for not only did the resources of the former permit more generous dispensation but coloured the psychological outlook of the memberships. As in its attitude towards the appointment of salaried officials, the members of the F.G.M. Society could advocate the need for financial restraint on grounds of small membership and limited resources compared to the larger 'New Model' Unions such as the A.S.E. and A.S.C.J. Nevertheless, the F.G.M. Union cast its benevolence over a range of trades being particularly supportive of allied craftsmen such as glass cutters and bottlemakers, at home and abroad, and also of the A.S.E. in its struggle to establish the eight hour day.
### TABLE 12:30

**ANNUAL AMOUNTS DONATED BY THE F.G.M. SOCIETY TO VARIOUS TRADES 1880 - 1902**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AMOUNTS DONATED PER ANNUM</th>
<th>% ANNUAL</th>
<th>PER CAPITA COST OF GRANT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ s d</td>
<td></td>
<td>£ s d</td>
</tr>
<tr>
<td>1880</td>
<td>-------------------------</td>
<td>0.10</td>
<td></td>
</tr>
<tr>
<td>1881</td>
<td>7 0 0</td>
<td>1.20</td>
<td>10</td>
</tr>
<tr>
<td>1882</td>
<td>81 0 0</td>
<td>1.08</td>
<td>8 ½</td>
</tr>
<tr>
<td>1883</td>
<td>70 0 0</td>
<td>0.25</td>
<td>2</td>
</tr>
<tr>
<td>1884</td>
<td>16 0 0</td>
<td>0.17</td>
<td>1 ½</td>
</tr>
<tr>
<td>1885</td>
<td>11 0 0</td>
<td>0.16</td>
<td>1 ½</td>
</tr>
<tr>
<td>1886</td>
<td>10 0 0</td>
<td>0.48</td>
<td>4</td>
</tr>
<tr>
<td>1887</td>
<td>53 0 0</td>
<td>0.44</td>
<td>6 ½</td>
</tr>
<tr>
<td>1888</td>
<td>30 0 0</td>
<td>0.39</td>
<td>3 ½</td>
</tr>
<tr>
<td>1889</td>
<td>75 0 0</td>
<td>1.19</td>
<td>8 ½</td>
</tr>
<tr>
<td>1890</td>
<td>105 0 0</td>
<td>1.25</td>
<td>11 ½</td>
</tr>
<tr>
<td>1891</td>
<td>220 0 0</td>
<td>2.76</td>
<td>2 0 ½</td>
</tr>
<tr>
<td>1892</td>
<td>297 0 0</td>
<td>4.08</td>
<td>2 9</td>
</tr>
<tr>
<td>1893</td>
<td>75 0 0</td>
<td>0.96</td>
<td>8 ½</td>
</tr>
<tr>
<td>1894</td>
<td>80 0 0</td>
<td>1.11</td>
<td>9</td>
</tr>
<tr>
<td>1895</td>
<td>52 0 0</td>
<td>0.64</td>
<td>5 ½</td>
</tr>
<tr>
<td>1896</td>
<td>135 0 0</td>
<td>1.58</td>
<td>1 2 ½</td>
</tr>
<tr>
<td>1897</td>
<td>262 0 0</td>
<td>3.03</td>
<td>2 3</td>
</tr>
<tr>
<td>1898</td>
<td>10 0 0</td>
<td>0.11</td>
<td>1</td>
</tr>
<tr>
<td>1899</td>
<td>41 0 0</td>
<td>0.45</td>
<td>4</td>
</tr>
<tr>
<td>1900</td>
<td>182 0 0</td>
<td>2.11</td>
<td>1 6 ½</td>
</tr>
<tr>
<td>1901</td>
<td>132 14 0 10 ½</td>
<td>1.43</td>
<td>1 1 ½</td>
</tr>
</tbody>
</table>

**TOTALS**: 1977 15 3 1.12

Source: F.G.M.M. Quarterly Returns 1880 - 1902, passim.
(a) **Society Administration.**


2. The Barnsley Branch proposition recommended Alfred Greenwood for the post and suggested that the salary be mutually arranged between Greenwood and the D.M. *G.B.M. Reports*, Volume X, p 578. For the letter by the Branch to the E.C. which was subsequently passed to the D.M. for consideration cf *Ibid*, p 426.

3. This was the first known instance of a ballot vote of the members who had previously taken decisions on a show of hands. *Ibid*.


5. *G.B.M. Reports*, Volume X, p 426. Greenwood may well have been influenced by an awareness of declining power and skill and the consequent reduction in earning power and opportunity for regular employment in the years ahead. Owing to administrative delay Greenwood did not take up office until 1888. cf *Ibid*, p 578.

6. *G.B.M. Reports*, Volume XIV, p 307. The property at 4 Wesley Street, Castleford, had been used as an office and residence since 1885, being rented by the Society for the purpose. Prior to that date Society business had been conducted from the home of the C.S. at Lumley Street (1869 - 1877), Aketon Road (1877 - 1879), Cambridge Street (1879 - 1885), and in the days of William Bagley's period in office, from Welbeck Street cf *G.B.M. Reports*, 1867 - 1894, passim.

7. The precise details of the investment are not known. From March 1900, the mortgage was listed amongst the Society's investments, showing a yield of 3.5% p.a. which suggests that the Society had lent money to the Chapel Trustees who held the mortgage cf *G.B.M. Reports*, Volume XVIII, p 60. This seems to be confirmed by a reference to expenses incurred re 'Blaydon Chapel loan', Volume XVII, p 323.
8. The retention of Society membership by those appointed to managerial positions was originally at the discretion of the appointee's local branch cf *G.B.M. Reports*, Volume II, pp 227 - 288. Although no specific rule forbade managers serving as Delegates or Councilmen, it was an established custom that such men were excluded from office, *G.B.M. Reports*, Volume XV, p 253.

9. The constitutional issue arose from the attempt by Thornhill Lees Branch to obtain a platform for one of its members previously denied unemployment donation and a supplementary hearing by the E.C. but considered due to such entitlement by the Branch membership. The Branch action therefore represented defiance of the E.C. ruling on the issue. cf *Ibid*, pp 253 - 255 and pp 301 - 309.


13. Castleford, Hunslet and Wakefield Delegates opposed the Swinton proposition but Barnsley, Conisbro and Stairfoot 2nd Branch were in favour subject to the scheme being operated without increasing Society expenditure. Thornhill Lees was strongly in favour of the Swinton proposal, *ibid*, p 12.

14. Of the 2580 members of Society, 2218 were journeymen members and eligible to vote in principle. However, 521 were disqualified, being unemployed, while a further 131 were 32nd Rule members, making 652 disentitled and 1566 entitled to vote. cf Branch Returns, *ibid*, p 54.


subsequently acknowledged the correctness of the Castleford Branch figures but claimed that these were calculated on a number of regularly held meetings which would be unnecessary under the Swinton provision for emergency branch meetings with the C.S. in attendance, which measure it was claimed would reduce administrative expenditure. Castleford Branch replied that this system which assumed the willingness of officials to give their services gratis at such meetings, was not fully explained prior to the ballot and therefore deliberately misleading. Furthermore, the existing Rules made provision for the formation of local committees with the attendance and assistance of the C.S. in emergency situations, and therefore constituted no departure from existing practice, ibid, pp 21 - 22 and pp 358 - 359.

19. Swinton Delegates sought to question the propriety of the Castleford correspondence and sought Greenwood's advice concerning the likely attitude of the E.C. on the issue. Greenwood stated categorically that the E.C. would have endorsed the Castleford Branch correspondence and recommended that the D.M. confirm the returns from the ballot, ibid, p 21.

20. Ibid, p 21. The step was particularly welcomed by the Newport Branch which had frequently complained about the "off-hand" way the E.C. had dealt with important Branch business and had refused to participate in the ballot on the Representative Council issue because of the constraints of bureaucratic procedure. Ibid, p 20.


22. The 1906 code of Rules was the first to be compiled for over 40 years. G.B.M. Rules, 1906, Preface p xii.

23. Ibid.

24. Each branch elected its own representative, one Councilman per 100 journeyman members based on membership at the final quarter of each year, excluding superannuated and 32nd Rule members, G.B.M. Returns of Votes on Propositions, Volume III, 1902 - 1914.
Entry re E. C. Rule n.p. The reconstituted Rule was proposed by the D.M. 30th March 1907, and balloted by the trade and carried by 668 votes to 266. The Rule came into force 15th June 1907, rescinding the entire Rule 17 of the 1906 Code, ibid, ff for Branch Returns.

25. Ibid. Previously half the E.C. membership retired each six months.

26. Ibid.

27. Both the E.C. and the Sub-Committee were empowered to summon the D.M. at will, with the proviso that a D.M. be held at least twice per year. Ibid.

28. Rudge was elected to permanent office by a trade vote majority of only 25 votes, the decision being rescinded by 126 votes the following quarter. F.G.M.M. Volume 8, Third New Series, pp 303 - 307.

29. In May 1903, the D.M. resolved to appoint an Assistant C.S. from the trade and called for Branch nominations. The successful candidate was B. Holmes of Hunslet who polled 731 votes, 511 more than his nearest rival. William Wheater the long-serving Secretary of Castleford Branch who had acted as Assistant C.S. pro tem during the 1893 trade dispute, came third, polling 201 votes. Wheater's performance was undoubtedly impared by the fact that Castleford Branch had five nominees, thus splitting the Branch vote, cf G.B.M. Returns on Votes of Propositions, Volume III, 1902 - 1914, entries 16th May and 14th July 1904, n.p.

30. An example of the disharmony is evident in the acrimonious correspondence between the York and Rotherham Branches featured in the F.G.M.M. during the years 1879 - 1880.


33. Ibid, p 552.
34. F.G.M.M. Volume 5, New Series, p 182.


37. F.G.M.M. Volume 11, New Series, pp 272 - 273 for letter of J. Husselbee, recently defeated candidate of Stourbridge District for office of C.S. The tenor of Husselbee's remarks echoes the sentiments expressed by some branches of the G.B.M. Society at this time.


42. Ibid, pp 295 - 296. For charge of Executive Committee bias and hostility brought by Yorkshire District cf F.G.M.M., Volume 4, Third New Series, p 82.


44. Ibid, p 226.


46. Matsumura, op cit, p 185 and p 89.

47. F.G.M.M. Volume 3, Third New Series p 303. Note the parallel with the Swinton-Castleford altercation concerning the desire of the predominant branch to "rule the trade", supra.

49. R. Leicester of Manchester District pointed out in October 1896, that since 1849, the Midlands had governed the Society for a total of 26 years, nine months, seven years longer than the combined period of government by Manchester (13 years) and Glasgow District (7 years). Ibid, p 46.

50. Ibid.

51. Ibid, pp 308 - 309.

52. The office of County Secretary had existed since the time of Henry Davis' Executive, over a decade earlier but the post was an unpaid, advisory one and carried no executive power. F.G.M.M. Volume 4, Third New Series, pp 76 - 77.


54. The system in which members of both Unions worked in the same factories led to the free interchange of ideas and opinion. The clamour for a Representative Council by the G.B.Ms. shortly after the establishment of that of the F.G.Ms. probably arose from this fact. Conversely, the 'submissions procedure' of the F.G.M. Society may have been inspired by knowledge of its use by the G.B.M. Society.


56. For Barnsley Branch reply to Executive's censure cf Ibid.

57. Ibid, p 298.

58. Ibid, p 290.

59. Ibid, p 393.

60. It is interesting to note that J.J. Rudge was himself opposed to the appointment of a full-time C.S. Ibid, p 406.

61. Ibid, pp 405 - 406.
62. The various proposals included separate editorship of the Magazine, a limit of 3 years tenure of office by the C.S. and a two-tier system of administration with a Corresponding Secretary and a financial secretary. All these suggestions are redolent of a desire for an element of primitive democracy, being regressions to the era of pre-centralisation. F.G.M.M., Volume 6, Third New Series, pp 87 - 88.

63. Ibid, p 366.

64. F.G.M.M. Volume 8, Third New Series, p 423.


66. Rudge had served as C.S. in a part-time capacity for 16 years, being first elected to office in 1885.

67. Newton District was debarred from voting and the returns of the London District were not sent in for more than a month after the 24th June deadline, ibid, p 305.

68. Ibid, p 305.

69. Rudge was subsequently nominated as part-time C.S. by 9 branches, five being situated in Yorkshire. No nominations were submitted by Midland branches, a significant indication of the attitude of the members of that region to the conduct of the Executive in widening the schism between the two spheres of the Society, ibid, p 307.

70. Ibid, pp 421 - 423.

71. Ibid, pp 426 - 436.


73. Ibid, p 429.

74. N.G.B.M.M. Volume 2, p 75.

75. Ibid, pp 69 - 70.
80. Following the abortive attempt to form an Amalgamated Society at the Glasgow Conference of 1883, Stockton and Blyth districts sought to become branches of the Yorkshire Society but were refused. Seaham Harbour separated from the Sunderland Society — all previously had belonged to the North of England G.B.M. Society, cf Report of Thirteenth National Conference, Glasgow, September 1893, p 38 in National Conference Reports, 1893 — 1895.

81. Brundage, op cit, p 47 and p 49.

82. Ibid, p 49.

83. G.B.M. Society Rules, 1865, Rule 21 Reprinted in G.B.M. Reports, Volume IX, p 471. The Rule imposed a fine of 6d and one month's loss of benefit entitlement on any member in arrears of more than a single quarter's contributions. More importantly, clearance of such arrears during the first week of the following quarter was stipulated or the defaulting member was not to be worked with.

84. G.B.M. Reports, Volume XVIII, p 11.


88. G.B.M. Reports, Volume XX, p 293.

89. G.B.M. Reports, Volume XXII, pp 34 — 42.
90. Ibid, p 90.

91. Brundage, op cit, p 49.

Being a small craft-based Society the G.B.M. could not afford to permanently exclude bad members in the way adopted by the larger New Model Unions. For Greenwood's comparison of his own Society's position and that of the A.S.E. cf G.B.M. Reports, Volume IV, p 255.


94. Ibid, pp 549 - 551.

95. G.B.M. Reports, Volume XI, p 583.

96. Ibid. Donations to out of work members, emigration, widows and benevolent grants were examples of extended benefits, the provision of which had absorbed more than £25,000 of Society funds during the previous decade.


98. Ibid, p 348.


100. G.B.M. Reports, Volume X, frontispiece, p vi.

101. Ibid.

102. Ibid.

103. Ibid, p iii. For precise details of journeyman contributions and levies 1883 - 1910 cf G.B.M. Reports, Volume XXII, pp 582A - 582D.

104. For summarised tables of contributions, levies and bank interest cf G.B.M. Reports, Volume XXII, pp 567 - 569 and p 580.
105. Between 1879 - 1908, 1574 cases of arrears were recorded at an average of 52 per year. Additional accounts caused by death, leaving the trade, etc., resulted in a total of 2753 accounts being written off over the period, an average of 91 per year. The total cost of such accounts was £3,893-15-3d. Ibid, pp 33 - 39.

106. Labour Department - Board of Trade Report 1908 (Cd 2337), p 87.


110. Greenwood asserted that journeymen involved in work sharing should be reckoned amongst those who were altogether out of work, stating:

"... We hold that if a furnace is stopped for bad trade and the men agree to share work, and the employers allow them to do so until the furnace starts again, the number of hands stopped ..... who would have been discharged, are unemployed, therefore the equivalent must be counted out of work ..... because while the furnace is standing there is always the same proportion of men working and playing, and those all receive Donations - Unemployed benefit - for the weeks they do not work"

Ibid, p 625.

111. It was during the eighties that the G.B.M. Society introduced its emigration scheme in an attempt to reduce surplus labour. The scheme met with little response, however, and was of short duration, cf Chapter 8, section (c) supra.

112. For details of the F.G.M's co-operative venture, cf Chapter 14 (b) infra.

114. At the height of the busy summer quarter the Society had 28.7% of its members unemployed, *ibid*, p 76.


118. *Ibid*.


120. The influence of other trade societies throughout the 1870s, particularly the A.S.E., was an important factor promoting the revision of the G.B.M's scheme in 1880 cf *G.B.M. Reports*, Volume III, p 82, p 173 and p 249. Also, Volume IV, pp 49 - 50.

121. *G.B.M. Reports*, Volume VIII, p 353. The Society funds in 1874 were £12,983, compared to £7,907 in 1882.


The number of members on the 32nd Rule each year-end was

<table>
<thead>
<tr>
<th>Year</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>1876</td>
<td>23</td>
</tr>
<tr>
<td>1877</td>
<td>30</td>
</tr>
<tr>
<td>1878</td>
<td>31</td>
</tr>
<tr>
<td>1889</td>
<td>40</td>
</tr>
<tr>
<td>1880</td>
<td>50</td>
</tr>
<tr>
<td>1881</td>
<td>58</td>
</tr>
<tr>
<td>1882</td>
<td>76</td>
</tr>
</tbody>
</table>

123. During the 14 years a total of 123 members was superannuated at a cost of £7,403-19-0d, cf *G.B.M. Reports*, Volume XX, p 120.


125. *Ibid*.


- 550 -

128. The proposed changes were sanctioned by the Trade, 573 votes to 88, representing some 34% of members eligible to vote, cf G.B.M. Reports, Volume XVI, p 217.

129. Superannuation benefit during the 7½ year period was £10,374-12-0d, plus a further £1,545-10-6d paid as grants in lieu of benefit. cf G.B.M. Reports, Volume XX, p 120.

130. Ibid, pp 131 - 132. The D.M. proposal was part of a package of benefit reforms advised by a Select Delegate Committee, established 26th August, 1904, "to consider the financial position of the Society, and revise the Superannuation Rule and look into other matters with a view to placing the Society on a safer basis", ibid, p 118.

131. Hunslet and Bladon branches made no return while Consibro voted against, and Barnsley recorded 48 neutral votes, until supplied with a printed Revision, ibid, p 119.

132. Ibid.

133. Ibid.

134. Ibid, p 130.

135. In his Address to the Trade, 16th September 1905, Greenwood wrote

"There is one false and erroneous impression I must meet by saying that the Revision Committee have been prompted by a pure motive in what they have done, and must be acquitted of any intention to cause any individual member to be suspended from receiving the benefit."


136. Ibid. Greenwood had advocated the measures adopted in 1905 as early as January 1865.
137. *F.G.M.M.* Volume 2, Second New Series, pp 378 - 381. The proposed scale of benefit was:

- 10 - 20 years membership - 2s per week,
- 20 - 25 " " - 3s per week,
- 25 - 30 " " - 4s per week,
- 30 - 35 " " - 5s per week,
- 35 + " " - 6s per week.


144. The previously optional ¾ subscription and benefit available to footmen was abolished.

145. The scale of grants was:

- 25 year members not in excess of £20
- 27½ " " " " " " £25
- 30 " " " " " " £30
- 32½ " " " " " " £35
- 35 " " " " " " £40

*F.G.M.M.* Volume 7, Third New Series, pp 100 - 103.

146. The new N.G.B.M. Society scales were:

- 20 - 25 years membership - 4s per week
- 25 - 30 " " - 5s per week
- 30 - 40 " " - 6s per week
- 40+ " " " - 7s per week

The withdrawal of the Yorkshire Districts had resulted in the F.G.M. Society having to reduce previously observed benefit scales, *N.G.B.M. Magazine*, Volume 2, p 281. Also Volume 4, p 91. For a concise account of the problems arising from


148. The average life-span of a 40 year member of Society was stated to be 6 years and that of a 20 year member, 20 years. On the basis of this calculation it was stated that a 20 year member received an average benefit payment of £39, compared to the average of £27, paid to the longer serving member, a difference equivalent to 10 shillings per week for six years, ibid.


150. Ibid, pp 142 - 143.


152. Ibid, p 127 for reprint of 1897 Superannuation Rules. The Society's Rules of 1865 had stipulated that incapacitated members were to supply no less than three doctors' certificates as proof of infirmity cf ibid, p 123 for reprint. Prior to 1865 no specific proof of incapacitation was required and in addition the 1862 Rules had stated that any incapacitated member was free to make what he could outside the glasshouse. It was Alfred Greenwood who drew the attention to the deficiencies in Society Rules regarding medical certification which resulted in the imposition of the 1897 Rule cf G.B.M. Reports, Volume VIII, p 246.


156. G.B.M. Reports, Volume IV, p 34.
157. Widows' Benefit was subject to continuing widowhood and
the optional payment in advance of 1 shilling per annum.
cf Rule 12, 1865, G.B.M. Reports, Volume II, p 175. For
a widow's interpretation of the imprecise wording of the
Rule cf G.B.M. Reports, Volume VII, p 167. For reference
to Benefit abuse cf Chapter 7 (f) iii supra.

The levy was never applied, however, as the D.M. of 21st
February 1880 reconsidered the matter and decided that the
reduced amount continue to be paid direct from central Fund.
G.B.M. Reports, Volume VIII, p 245.

159. Propositins and Returns of Votes 1886 - 1902, entry 14th
September 1888, np.

160. Ibid.

161. Ibid.


163. Ibid. Also C.M.B. Volume 1, p 332.

164. Rules & Regulations of the National F.G.M. Sick & Friendly
Society, July 1880. Reprinted as Appendix to F.G.M.M. Volume
5, New Series, (1880 - 1881).


166. Ibid, Section 6, p 39.


168. Ibid.

169. Rules and Regulations of F.G. Makers' Sick and Friendly Society,
July 1880, Rule 50, p 26. The comparable rates for unemploy-
ment benefit were
10s per week for 13 weeks
8s " " " 13 weeks

- 554 -
6s per week for 26 weeks
5s " " 26 weeks
4s " " 26 weeks

170. Sickness Benefit of £136-13-6d at a per capita cost of 3s-2½d was paid by the Society in 1903, with £161-6-6d at a cost of 3s-10d to each member the following year. Quarterly Returns, *N.G.B.M. Magazine*, Volume 1, passim.


175. The *N.G.B.M.* members paid 2s per week basic contributions and 1s per week Strike Levy, *ibid*, p 332. The *G.B.M.*s contributions and levies varied between 2s in 1903 to 48 in 1905, before reducing to 3s between 1906 - 1909. *G.B.M. Reports*, Volume XXII, p 382c.


180. During the period 1882 - 1885, 14 grants were made on the authority of the D.M. *G.B.M. Reports*, Volume XVIII, p 27.

181. The average state of trade declined from good, mid 1881 and allowing for brief seasonal upturns was at best moderate and described as bad in the final quarter of 1884, *G.B.M. Reports*, Volume XI, p 660. This period coincides with a two-thirds increase in the number of grants to incapacitated members.
182. The annual donations to Leeds Infirmary and the Askern Bath Charity cost £7-5-0d. Subscriptions to trade and political organisations were generally fixed according to the size of Society membership, being one penny or fractional part thereof.

183. By resolution passed at the D.M. 11th April 1885, £60 was granted to supplement the £40 already donated by the E.C., and provision for further monthly sums of £25 to be remitted as long as the dispute continued. The usual allowance made to branch collectors was waived, administrative duty being undertaken voluntarily at each factory, G.B.M. Reports, Volume X, p v.

184. Donations were made to the French G.B.M. in 1887, 1888, 1891 and 1894 - 1895. German G.B.M. received donations in 1894 and 1901 and the Danish G.B.M. received donations in 1897, and 1899, G.B.M. Reports, Annual Accounts 1880 - 1909, passim.

185. The proposal for the loan and levy was carried by a trade vote of 750 - 3. cf G.B.M. Propositions and Returns of Votes, Book 2, 1886 - 1902, n.p. Entry July 1901.

186. During the period 1880 - 1909 donations of varying size were made to trade unions as diverse as Knottingley Potters (1881), Shawcross Miners (1884), Fryston Miners (1885), Glasgow Brush-makers (1890), Yorkshire Miners Federation (1893), London G.B.M. and Wath Miners (1895), Brierley Hill G.B.M. (1895 - 1898), Sailors & Firemens Union (1897), Steam Engine Makers (1897), A.S.E. (1897), Penryn Quarrymen (1897) and the F.G.M. Society (1902). Additional sums were donated to organisations and bodies such as the Thornhill Lees Mine Disaster (1893), Castleford Relief Fund (1895) and Indian Famine Relief Fund (1900), and to testimonial funds for Joseph Leicester, London D.S. F.G.M. Society (189), Ben Tillet (1893), Henry Davies retiring C.S. F.G.M. Society (1894) and the Yorkshire Miners Labour Candidate (1886). G.B.M. Reports, Annual Accounts, 1880 - 1909, passim.

187. Despite the acrimonious nature of the correspondence between the respective Central Secretaries of the F.G.M. and G.B.M.
Societies in May 1899, Greenwood on behalf of the G.B.Ms. wrote,
"If your Society is issuing an appeal for financial support, please send me a copy, and the Society will be very pleased to make you a grant which will, at least, cover the amount received from your Society, and members during the Glass Bottle Hands Dispute in 1893."

G.B.M. Reports, Volume XVII, p 70.

188. Following pressure from the Branches, the D.M. recommended that the Executive Committee reconsider its decision not to respond to the A.S.E. appeal for aid as the Engineers, although appealed to several times, had not rendered assistance to the G.B.Ms during the 1893 Lock-Out. The D.M. recommendation of £50 per week was modified by the Ex.C. to two monthly payments of £50, but eventually two further remittances of £50 each were made. In addition it was stated that "many of our members are subscribing from 3d to 6d per week to the Engineers locally, which subscriptions are being forwarded through Trade Councils".

G.B.M. Reports, Volume XVI, pp 208 – 211.

189. For the close links between the F.G.M. Society and the Glass Cutters, cf Matsumura op cit, pp 110 – 131. The F.G.Ms Society under the influence of the Alliance with the Yorkshire inspired National Federation of G.B.M. made donations to the Yorkshire Society during the Lock-Out of 1893, and also to the Brierley Hill and London G.B.Ms in 1895. The Society also responded to the appeal issued by the Carmaux Glass-workers in 1896 as well as subsidising workers in dispute at individual Midlands based glass works in 1892. Like their Yorkshire contemporaries the F.G.M. identified with the miners with grants to the Miners Federation of Great Britain at the time of the 1893 dispute and to the Micklefield Disaster Fund (1896). F.G.M.M. Quarterly Accounts, 1880 – 1902, passim.

190. The F.G.M. Society gave £100 to the A.S.E. in October 1897 and a further £200 the following quarter, ibid.
CHAPTER THIRTEEN:

TRADE ALLIANCES

(a) Amalgamation

By 1880, the Yorkshire G.B.M. Society had begun to formulate a broad-based industrial strategy to counter the deterioration in artisan living standards arising from the debasement of working conditions, wage fluctuations and high unemployment. Mindful of the limited efficacy of localised industrial action in face of the new found unity of the Yorkshire manufacturers and their response to intensified domestic and foreign competition, Greenwood evolved a strategy of national and international dimension. Particularly when considered within the context of numerically small regionally based trade society operating within an industry of secondary importance, the strategy was 'quite staggering in its comprehensive world view.

Drawing the parallel with 1876 when misplaced emphasis on the power of localised industrial action had resulted in the defeat of his Union and the consequent erosion of its power, Greenwood's first step was an attempt to forge national unity through the amalgamation of the regional bottle making Societies. Consequently, as a result of the Yorkshire initiative, representatives of eight regional bottle-making Societies met at York in May 1882, to consider the issue.

In presenting the Report of the Conference to the Trade, the Conference Secretary remarked that in attending several previous Conferences

".... at none of them have I met with men so friendly disposed to each other.... This is a spirit which I grieve to say has not been shown in times past, for men throughout the various districts have too often looked upon each other with eyes of jealousy, causing a spirit of animosity to exist, which has been the means of keeping each district isolated."

The statement indicates the simultaneous desire for wider unity and the conflicting restraints of adherence to local autonomy. The pressures impelling consideration of amalgamation may be seen by reference to the data concerning the respective positions of the various societies at the time of the Yorkshire initiative.

Table 13:1 shows that although the Yorkshire district was predominant.

- 558 -
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>264</td>
<td>546</td>
<td>2088</td>
<td>2112</td>
<td>1676</td>
<td>1676</td>
<td>1550</td>
<td>1577</td>
<td>1993</td>
<td>2003</td>
<td>117</td>
<td>117</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Details of trade in regional areas of the glass container industry, 1962.
in terms of membership, its trade position was weaker than that of either of its two chief rivals, Lancashire and the North of England. This is reflected in the degree of unemployment, with only 69% of Yorkshire hands currently employed, compared with 83.4% in the North of England and 95.4% in Lancashire. The adversity of the Yorkshire position is reflected in the fact that 43% of bottle houses were unproductive while only 10% of those in Lancashire were standing. The brisk trade situation in the latter District and the recent incursion by Lancashire manufacturers into the pale metal trade, previously a Yorkshire monopoly, presented a bleak prospect for the Yorkshire artisans, made all the more alarming by the fact that 26.3% of employed workers in Lancashire were apprentices undertaking journeymen's work compared to 17.5% in Yorkshire. The implications of diminishing trade and artisan displacement provides a context in which the importance attached to amalgamation by the Yorkshire Society is evident.

### TABLE 13:2 COMPARISON OF CHAIR EARNINGS IN REGIONAL AREAS OF THE GLASS CONTAINER INDUSTRY, 1882

<table>
<thead>
<tr>
<th>DISTRICT</th>
<th>BOTTLE MAKER</th>
<th>BOTTLE BLOWER</th>
<th>GATHERER</th>
<th>CHAIR EARNINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>YORKSHIRE</td>
<td>2-13-0½</td>
<td>2-11-0½</td>
<td>1-11-6½</td>
<td>6-15-6½</td>
</tr>
<tr>
<td>NORTH OF ENGLAND</td>
<td>2-9-6</td>
<td>1-17-10½</td>
<td>1-14-10½</td>
<td>6-2-3</td>
</tr>
<tr>
<td>LANCASHIRE</td>
<td>2-15-10½</td>
<td>2-5-1</td>
<td>1-3-4</td>
<td>6-14-3½</td>
</tr>
<tr>
<td>GLASGOW</td>
<td>2-3-3½</td>
<td>1-16-10½</td>
<td>1-5-2</td>
<td>5-5-4</td>
</tr>
<tr>
<td>DUBLIN</td>
<td>2-7-11½</td>
<td>1-18-7½</td>
<td>1-7-2</td>
<td>5-13-8½</td>
</tr>
<tr>
<td>PORTOBELLO</td>
<td>2-3-3½</td>
<td>1-16-10½</td>
<td>1-5-2</td>
<td>5-5-4</td>
</tr>
<tr>
<td>BRISTOL</td>
<td>2-8-0</td>
<td>2-8-0</td>
<td>1-18-0½</td>
<td>6-14-0½</td>
</tr>
<tr>
<td>BLAYDON</td>
<td>2-13-0½</td>
<td>2-11-0½</td>
<td>1-11-6½</td>
<td>6-15-6½</td>
</tr>
<tr>
<td>BRIERLEY HILL</td>
<td>2-14-2½</td>
<td>2-4-3½</td>
<td>2-4-3½(ª)</td>
<td>7-2-10</td>
</tr>
<tr>
<td>ALLOA</td>
<td>2-3-3½</td>
<td>1-16-10½</td>
<td>1-5-2</td>
<td>5-5-4</td>
</tr>
</tbody>
</table>

Source: Conference Report 1882, p 11.

(a) Brierley Hill worked flint house system of 2 gatherer/blowers.

Table 13:2 shows the weekly chair earnings in each district, based on the calculation of 500 dozen bottles per chair. The Yorkshire chair earnings whilst the highest of any utilising the five member chair system are nevertheless considerably less in proportion than
a decade earlier when Yorkshire rates were 4 shillings more than those paid in Lancashire. The narrowing differential emphasises the restrictive influence of varied district rates on general wage levels, a fact underscored by the low uniformity of the districts within the Scottish region.

Table 13:3 shows the financial position of each bottle making Society in May 1882. While the assets of the Yorkshire Society are well in advance of all others together, the per capita figures represent a considerable depreciation as a result of the adverse situation of the Society post 1876, and standing in sharp contrast to the accumulated wealth of the Lancashire Society. With the sole exception of Lancashire, the position of the regional societies was one of diminished standards made more acute by the variable conditions of production and artisan renumeration throughout the trade, a situation which depended for its solution on willingness to sublimate local considerations to foster uniformity.

Two schemes were presented for the consideration of the Trade. Lancashire and the North of England favoured an amalgamation for strikes and Lock-Outs based on a fund created by a deposit of £1 per member. The Yorkshire scheme was one of complete integration, with a central fund and uniform contributions and benefits. The Yorkshire scheme
sought to eliminate sectionalism by striking out regional boundaries, promoting a single union with each of the existing regional societies forming branches on the same principle as those comprising the Yorkshire Society thus retaining a local committee to ensure the safeguarding of local trade observances and interests. The funds of the various societies were to be absorbed into the Yorkshire funds as a preliminary to equalisation.

Societies with a per capita fund of £2 or more were to obtain instant benefit entitlement while those with under £2 per member were to make up such sum as an entrance fee and undergo a six month waiting period before benefit entitlement. The delegates, however, preferred the less ambitious Lancashire scheme. However, a Conference held at Glasgow in August 1883, resulted in the Yorkshire scheme being resubmitted. Greenwood presented a forceful case for full amalgamation, underlying his argument with data provided by officials of the leading New Model unions, including that of the Flint Glass Makers. The Yorkshire case was additionally strengthened by the fact that as a result of subsidising the Sunderland glassmakers during a dispute which had taken place between Conferences, the funds of the regional societies had suffered erosion which made them inferior to those of the Yorkshire Society both totally and per capita.

The equalisation of funds suggested by Yorkshire therefore represented a premium of £1-13-0d to every apprentice and journeyman member outside the Yorkshire Society. The delegates showed little enthusiasm for the Yorkshire proposals, however, and it was generally accepted that the subject would be closed without a vote on the issue. At the close of the session the Lancashire Delegates stated their intention of convening the following day (Friday 17th August 1883) to form an amalgamation of interested districts on the basis of the Lancashire proposals. The Yorkshire delegates took no part in the proceedings, being mandated solely to adhere to the Yorkshire scheme. Greenwood, however, underwrote the proposed Lancashire amalgamation scheme by pledging the financial support of his Society to its members in time of obvious need.

What reasons may be advanced to explain the reluctance to implement the Yorkshire scheme, when such an attitude was in clear contradiction to the prevailing trend amongst trade societies? Undoubtedly the Yorkshire suggestion of an 'entrance fee' and six month probationary period for benefit eligibility was an important con-
sideration. Acceptance of the Yorkshire proposal meant either the imposition of a levy to procure the £2 per head stipulated, and the assurance of immediate benefit eligibility, a measure which the prevailing conditions in some areas precluded, or the suspension of benefit to members who had made life-long contributions to existing welfare schemes. The Yorkshire E.C. had in fact authorised its delegation to reduce the terms of entry at its own discretion to procure acceptance of the Yorkshire scheme but this was not revealed to the Conference delegates. Some delegates ascribed the failure of the previous amalgamation as being due to the demands arising from over extensive benefit provision and claimed to detect an inconsistency in the Yorkshire attitude between 1872 and 1883 concerning the importance of benefit provision as a unifying influence. Allied to the above reservations was the adherence to regional autonomy which made unacceptable to all but Glasgow district the proposal that the scheme should devolve on the Yorkshire Society's system of government, with a Castleford based E.C. The opposition was justified to the extent that the proposed General Council was based on proportional representation which ensured the predominence of Yorkshire delegates. However, it was the failure of Yorkshire to convince the remaining elements of the trade of the surety of customary observances and local usages which was the principal factor in the rejection of Yorkshire as "the head of the Society". The natural antipathy of the Lancashire Society was reinforced by the unparalleled trade prosperity and consequent expansion within that County. The acerbic nature of the Conference, with the three principal participating organisations levelling and refuting charge and countercharge, based on alleged deficiencies in each other's past conduct, with the forthright Greenwood providing no concessions to diplomacy in his fervour for the Yorkshire cause undermined attempted unity. The resultant lack of discretion reinforced the sectional prejudices Greenwood sought to eradicate. Greenwood however, found it strange that there should have been any cause for misunderstanding "...in a Conference composed of the elite of the Glass Bottle Trade of the United Kingdom, or any cause for misconstructions and misapplicables of the remarks, and false impressions existing in the minds of a portion of the Assembly." The emphasis on the word 'elite' indicates a high degree of artisan self-esteem and not a little implied criticism of its general validity.
The prejudgement which resulted in the sacrifice of wider unity to narrow sectionalism tends to support the implied premise and there can be no doubting Greenwood's opinion that

"If there has been brought out of this Conference one thing more than another of a satisfactory character, and one of which the Yorkshire delegates can congratulate themselves, it is this, that the Yorkshire scheme of amalgamation is said to be too much in advance of the trade and the times - that the Glass Bottle Makers are not ripe for it, and therefore it is impracticable."

The impracticality of the Lancashire Scheme was revealed when, drained of its funds by the demands of the protracted trade dispute in Scotland the Third Amalgamation collapsed in September 1885.

Under the auspices of the International Union, the Yorkshire scheme was revived and reconsidered during the years 1888 - 1893. In the wake of the Glasgow Conference a move towards the Yorkshire position was clearly discernible by a group of smaller societies and by 1888 all societies represented with the exception of Lancashire and the North of England, favoured adoption of the Yorkshire proposals, although the issue had already precipitated schism within the latter district. A further attempt three years later was again wrecked by the intransigence of Lancashire despite the contention of one delegate that

"... if we had been amalgamated upon this principle (i.e. Yorkshire scheme) we should not have been as we are today, but should have been working for about 10s per week more than we are doing at the present time."

Lancashire's objections were on grounds of the financial disparity arising from the establishment of a central fund, and the technicalities of reciprocal membership and benefits. Doubts were expressed regarding the efficiency of the large New Model societies such as the A.S.E. and A.S.C.J. and it was claimed that the Flint Glass Makers' Society was experiencing operational difficulty due to its limited size and that an amalgamation of the bottle makers with approximately the same number of members would prove expensive and impractical. The central point at issue, however, was that
"We cannot see our way clear to allow Yorkshire Committee at Castleford to have power to govern our business .... We do not intend to allow Yorkshire or any other district to be head of the Societies. 34

Why it was asked did not Yorkshire and the districts to whom the scheme was acceptable seek to work it without the participation of Lancashire district?

"Because we believe it is to get Lancashire under their (Yorkshire's) control as they will have the power through the Committee being at Castleford." 35

The latter allegation was not entirely without foundation in as much as the position of works managers was paramount within the Lancashire Society and was influential in dictating wage levels within the County which in turn affected Yorkshire rates. 36 For this reason it was self evident that any amalgamation scheme devolved on the participation of Lancashire Society, thus making the cynicism of the Lancashire delegate's rhetorical question clearly apparent.

The Lancashire stance drew a prophetic response from Greenwood, fully borne out by the events occurring during the 1893 trade dispute. 37 In the immediate aftermath of that dispute the Yorkshire Society presented modified amalgamation proposals to the National Conference. In an attempt to allay Lancashire objections it was resolved

"That the Yorkshire scheme be the form of Amalgamation, but the seat of the Amalgamation and the Central Secretary and the Working Committee of Management be voted on by the trade...." 38

Subsequently, a five man sub-committee drew up a modified scheme for recommendation to the trade. 39 The four-point scheme while adopting in principle the Yorkshire Scheme left to the trade the decisions concerning the appointment of a General Secretary, location of Executive Council, and investment of funds. 40 The withdrawal of the Lancashire Society from the National Federation of the trade on the issue of voluntary wage reduction in November 1893, however, prevented the implementation of the scheme.

In 1907, the National Conference proposed to set up a sub-committee
to draw up a further scheme of amalgamation. The Yorkshire G.B.M. Society carried the unanimous support of the membership but despite the need for national unity in face of the growing threat posed by machine production, the old suspicions and antagonisms prevented amalgamation. The establishment of a Selling Prices Association in 1910 based on the co-operation of employers and workmen in several districts of the trade, produced a cohesion which rendered obsolete further consideration of the subject of amalgamation.

(b) Internationalism

Following the collapse of the International Workingmen's Association in 1873, no immediate attempt to establish a replacement organisation occurred. The labour organisations on the Continent suffered constant restraint and persecution while their British counterparts, occupied by attention to trade union legislation and the administration of centralised systems of government and welfare benefits, concentrated on the demands of the hour. The downturn in trade from the late 1870s revived the spirit of internationalism. The T.U.C. sent a delegation to the International Conferences held at Paris in 1883 and 1886 and as a result the Swansea T.U.C. of 1887 unanimously resolved to make London the venue of the next International Conference. In this respect the T.U.C. leadership, composed of representatives of the conservative craft-based elements of British labour, were reluctantly led by rank and file pressure and though unable to prevent the proposed Conference placed obstacles in its way. The attitude of the Yorkshire G.B.M. concerning the emergent internationalism stands in contrast to that of the majority of skilled labour unions at the time. Likewise the attitude of the Lancashire G.B.M. Society whose initiative formed the basis of international co-operation within the bottle trade.

The International Union of G.B. Makers was established in London, 16th October 1886, as a result of the initiative of the Lancashire G.B.M. Society. The aims of the organisation were twofold: to communicate and co-operate with the Continental workers where possible and to prevent foreign workers coming to Britain (or British hands going abroad) at times of industrial action or high unemployment. The Lancashire initiative arose as a result of the attempt by the firm J. Lyons to engage Swedish, German and Finnish bottle-hands as replacements for their own journeymen, following a trade dispute at the Lyons factory.
The contacts made as a result of the Lyons dispute were extended when following an appeal by the International Secretary, the sum of £50 was sent by British artisans to assist the striking French glassworkers at Montlucon. By 1887 the I.U. Secretary was corresponding with officials of the Noble Order of the Knights of Labour of America in Canada and the U.S.A. The Corresponding Secretary of Montreal, J.F. Thorn, wrote to James Hunter, I.U. Secretary in July 1887:

"..... I would like to open up a correspondence with you, say a letter once a week, and then we both could keep ourselves posted how the trade is getting along on both side of the water." Thorn's letter also requested assistance in preventing British artisans from crossing the Atlantic in search of work as American unionists were currently out of work, a request which prompted Hunter to write to the Secretaries of the British districts advising them not to entertain representatives of American and Canadian firms seeking to recruit British artisans for should they succeed "... it will very much affect the International Union, for I believe - yea, I may say I am sure - that we shall have the American bretheren to join us if there should be nothing to prevent it, but if we commence draughting (sic) men over there already we shall very much deter it." The attempt to foster the transatlantic bond was thwarted, however, as a result of sectionalism. The North of England Secretary, J. Good, overrode the I.U. procedures and despatched a group of his district members to secure work at a newly opened black bottle works in Canada at the expense of a 16 man workforce including J. Hunter himself, chosen by the Lancashire based International Council in response to a direct appeal by the Canadian Union officials. As a result the Lancashire men were unable to obtain work and were abandoned and destitute for two months before the intercession of William Graham, acting I.U. Secretary procured their return home. In January 1888, the North of England men were compelled to return home following the sudden closure of the black bottle works. The whole incident, apart from creating a rift amongst the British section of the I.U. revealed a lack of stability within the American trade making it a less promising prospect to British artisans. A degree
of disillusion with the administration of the Knights of Labour prompted Hunter to observe that

"..... the League or its members are not those whom we have been wont to associate with. They do their business altogether different from what we consider to be the right way of doing it...." 52

Subsequently, the transatlantic connection which was primarily regarded as an outlet for unemployed British artisans and posed no direct threat to the British trade until the advent of the Owens Automatic machine two decades later, was largely neglected and the attention of the I.U. was concentrated upon the more threatening European dimension.

An important element in the change of emphasis was the involvement of the Yorkshire G.B.M. Society in the International movement. Although leading officials of the Yorkshire Society had travelled on the Continent and reported on the types of ware produced and the works in which production was undertaken, 53 and may have made contact with the leaders of the emergent unions, it was not until the 1880s that the threat of foreign competition and constantly high levels of unemployment began to affect the pale metal bottle trade that the need to develop the relationship with Continental operatives arose. The fact that the Yorkshire bottle trade was the last to feel the effects of Continental competition may explain the Lancashire initiative in establishing the first formal contacts and also why the Yorkshire District did not join the I.U. until after the other U.K. districts. By 1888, 54 the Yorkshire Society had become a member of the I.U. The step is significant in its indication of the intellectual transformation which Greenwood and the leaders of the Society had undergone during the previous decade. The deteriorating conditions of work and social status suffered by the Yorkshire bottle hands as a result of attempts by the manufacturers to rationalise labour, speed-up production and introduce technical change, and the failure of traditional measures to combat the problems had compelled analysis of the fundamental nature of the situation in its material and philosophical aspects. The recourse to internationalism was therefore not merely the attempt to find new solutions to the problems besetting the G.B.Makers but a social and political radicalism which was the intellectual manifestation of the omnipresent, under-
lying militancy within the Yorkshire Society, a fact which explains the rank and file support for the transformation from moderatism to radicalism. Membership of the I.U. provided the basis for Greenwood's broad industrial strategy. Brundage has suggested that the influence of the I.U. contributed substantially to the direct involvement of the Yorkshire G.B.Ms. in local politics from the late 1880s (cf section (e) infra), while the 1888 Glasgow I.U. Congress was used as a platform for the attempted revival of the Yorkshire Amalgamation Scheme. The failure to establish an Amalgamation spurred Greenwood's efforts to form a grand trade federation including the flint hands as well as the bottle hands. (cf section (c) infra). The source of Greenwood's inspiration was most likely the Paris Congress of July 1889 which he had attended as a British delegate. In seeking to promote internationalism the Congress resolved

"That trade societies and workmens groups be invited to federate themselves, both nationally and internationally."

It was not until the I.U. Congress held at London in 1891 that Yorkshire District assumed full control of the I.U. The events at the London Congress show how thoroughly Greenwood had paved the way during the years immediate to 1891. The Congress marked the transfer of nominal headship of the I.U. from Lancashire, which had provided the executive arm of the I.U. during the first five years of its existence, to Yorkshire District, with its greater membership and more efficient organisation. Assumption of I.U. administration by Yorkshire District was accompanied by the pre-arranged demand for Rules revision and a change in voting power from a delegate basis to one of proportional representation based on annual returns of membership by each constituent district. The restructured voting system, proposed by Greenwood and seconded by his colleague T.S. Beedel, gave delegates representing 100 members, or a fractional part of 100, one vote, with an extra vote for each additional hundred members or portion in excess of 50. The adoption of the new system gave Yorkshire eleven of the twenty one votes and vested full organisational control of I.U. affairs in the Yorkshire District by enabling it to out-vote the combined strength of the remaining members. The Paris Congress of 1899 had advocated

"That each year, and for one year only, the National Committee of one country shall serve as the central organ for international correspondence under a pledge not to deal with any
question outside the powers conferred upon
it"63 (my italics).

The resolution explains the surrender of administrative control by Lancashire District in 1891 which paved the way for Yorkshire's 'take-over'. The omission of the temporal restriction from the Revised Rules drawn up and submitted by Greenwood considered in conjunction with his instance on the the changed voting power suggests a premeditated act on the part of the Yorkshire E.C. to make the District the seat of I.U. government in perpetuity. The intention is given additional support by the fact Greenwood revealed to the Congress Delegates the decision of the Yorkshire E.C. to withdraw the Society from the I.U. unless the revised Rules were accepted.64 The fact that the Yorkshire Delegates were able to decide the composition of the I.U. Council for the following year without the necessity to refer the matter back to their Executive also suggests the prior sanction of the E.C. in anticipation of the successful outcome of a pre-planned strategy.65 Given that such a course was intended by the Yorkshire Society the manoeuvre was a complete success for in requesting that the seat of I.U. government be sent to Yorkshire "for the next twelve months", the Lancashire delegates appear to have failed to appreciate the significance of the changed circumstances wrought by the revision of the voting system and Rules.66 This assumption is supported by the Lancashire attitude to a similar attempt by Yorkshire District to obtain voting control of the National Federation of G.B.M. Societies in 1895.67 The nomination of Theo Volkel as an I.U. Councilman is also suggestive of a preconceived plan by the Yorkshire E.C. for while Volkel's ability as an interpreter was obviously an advantage in the growing relationship with the Continental workers, Volkel's previous association with the business of the I.U. had not necessitated such an exalted position. Volkel's recent connection with the Yorkshire Society and the importance of his position both as a member of the Yorkshire E.C. and the I.U. Council, indicates a deliberate action by the Yorkshire Society to secure his services on a permanent basis in conjunction with a preconceived attempt to foster international unity under the aegis of the Yorkshire Society and the genership of Greenwood.68 What factors motivated the Yorkshire District in its bid to control the direction of international worker relations and to what extent was the course of action adopted by the Yorkshire Society successful?
The visits to the Continent undertaken in 1888, 1889 and 1890, convinced Greenwood of the necessity for revision of the Rules and administrative structure of the I.U. The revision of the Rules to admit foreign unions to become full members of the I.U. instead of participating as mere observers would promote a unity of labour in keeping with the democratic socialistic fraternism which underlay international worker relations. Such unity was essential in order to combat the growing development of capitalism on an international basis. Thus common membership would ensure mutual influence with Continental Unions obtaining the financial strength arising from the adoption of welfare benefits, essential to mass membership and regularity of contributions, while imbuing their British counterparts with greater political awareness.

Pursuance of common aims through the medium of international union membership would enable the regulation of migratory labour and the attainment of uniform wage levels and hours of labour and act in a centralising capacity to ensure the elimination of self-defeating sectional interest at home and abroad through the encouragement of national amalgamations and trade federations. The viewpoint whilst not exclusively confined to Greenwood or the Yorkshire Executive was best advanced by the leadership of that District due to its size, wealth and administrative capacity, made more effective by Greenwood's appointment as a full-time Union official in 1888, and the underlying radicalism of the District membership. The revitalised and restructured I.U. was seen at its most effective during the period of the Lock-Out of 1893.

Reflecting on the victory achieved by the British G.B.Ms. Edward Aveling expressed the opinion

"That the victory would have been unthinkable if the International Union had not stood up for their English members." Aveling's words were inspired by the awareness of the material assistance provided by the Continental workers which he and his wife, Eleanor Marx, had done so much to obtain. Such assistance was, however, only one contributory element. Allied to the moral and financial support from the Continent was that obtained through the existence of local socio-political alliance and national trade federations, each developed through the direct influence of the international movement. To regard Aveling's words in their wider context is at once a tribute to the fraternalistic nature of internationalism and to the vision
energy and leadership of Greenwood and the E.C. of the Yorkshire Council during and in the years immediately preceding the conflict. The practical achievements of the I.U. were not particularly impressive outside the context of industrial conflict. In part this was because of the wide differences in social, legal and industrial conditions amongst the Continental members and the sectional rivalry and jealousies of the British districts.

A major blow to the unity and co-operation within the I.U. was the death of Eleanor Marx Aveling in March 1898. How vital her contribution was may be ascertained by Greenwood's testimony a dozen years after her demise,

"Her loss to the British Glass Bottle Hands, and to the Glass Workers International Union and the movement in general was irreparable, and the cause has suffered ever since and is suffering now, especially in France, Germany and England (Gt. Britain of course). Events have since taken place in those countries which it may safely be said would not have taken place had she lived to assist in the movement, and the clock has been set back for an indefinite period. Her place has not yet been filled. Several attempts were made to fill it that failed." (my italics) 73

As a result, Greenwood concluded,

"The loss of money may be got over and we may cease to repine regarding that, but there is a train of consequences which has followed the events referred to - from which all have suffered and are still suffering. Consider for a moment what has taken place in the glass bottle trade during the last ten years, not to mention the other branches of the glass industry. The International machinery has got out of gear - and much worse events have taken place in France and Germany...." (my italics) 74

It is obvious that Eleanor Marx Aveling's influence extended far beyond her role as translator to the I.U. and that in organising and encouraging the formation of labour unions among Continental glass workers she inspired mutual confidence and trust based on the
Repressed communistic doctrines which she inherited from her father, and utilised to engender internationalism. To the setback caused by the loss of Eleanor Marx Aveling was added the adversity arising from the impact of technological development. Such was the impact of machine production that the International Congress of 1908 was summoned to consider the problem.

Representatives from sixteen countries gave wide testimony concerning the increasingly urgent and universal problem. The adverse effect of mechanisation in displacing skilled labour and debasing wage levels, together with the successful determination on the part of foreign manufacturers to discourage unionisation had clearly demoralised the hand workers besides debasing social status. The prevailing mood was encapsulated in the statement of Bazanick, the Albi Delegate,

"It would be folly to fight against machines, the only thing [they] could do was to make the best of them." 79

The statement was endorsed by a German Delegate who opined that they "could not stop the capitalistic development." 80 At the conclusion of the discussion a resolution was adopted that it would be useless to fight against machines, and that the glass workers of all countries be urged to improve their organisations in order to better their conditions in spite of the machines. 81 The tone of inevitability and the vagueness of the resolution indicate a degree of passivity and a paucity of ideas to challenge the developing situation which stands in complete contrast with the militant socialism which had characterised the Movement pre 1895. Just as the changed work experience during the 1880s had stimulated the militancy of the crisis years 1890 - 1895, so the advent and pace of mechanisation transformed the background, outlook and expectations of the international fraternity. The philosophical ethos of the 1908 I.U. Congress had ironically been envisaged by Greenwood as early as the Belle Vue Demonstration of 1889. 82 The events post 1895 revealed that no amount of militancy or even organisation could secure the original aims which inspired the establishment of the I.U. The course of technological development did not, however, occur simultaneously throughout the sphere of I.U. activity, and the artisans were ever hopeful of obtaining solutions to prevent the debasement of their status and the destruction of their craft. This reason explains the continued existence of the
I. U. into the third decade of the twentieth century by which time the technological evolution of the industry had resulted in the replacement of hand craftsmen by a new kind of glassworker.

(c) Federation

(i) The G.B.M. Societies.
The establishment of a National Federation of Glass Bottle Makers' Societies arose from a meeting held at St. James Hall, Leeds, 29th October 1892. The purpose of the meeting was for representatives of the various regional Societies to further the interest of the trade by promoting the extension of the 1887 Merchandise Marks Act to cover glassware, thereby stemming the growing volume of imported bottles. The extent to which the establishment of a federation of the trade was incidental, arising from mutual awareness of the growing necessity for common action, or a premeditated policy subtly applied by the representatives of the Yorkshire Society is problematical. Presenting the first volume of National Conference Reports to the trade in 1908, Greenwood, the Secretary of the Federation, stressed the spontaneous beginning of the organisation, but other sources, based on the evidence of Greenwood himself, or official sources close to him, present the establishment of the Federation as a deliberate, conscious action on Greenwood's part. The meeting naturally provided a platform for comparison and discussion concerning the condition of the trade within its component districts. The information provided by the Yorkshire delegates of the proposed reduction of wages and alteration of working regulations by the Yorkshire manufacturers may have been a calculated move by that district to provide a cohesive basis for the formulation of a united policy. If such was the case the strategy was successful for the general implications of the proposals ensured a further meeting on the 19th November, 1892, at which united resistance to any wage reduction and support for the Yorkshire District was pledged by all regions. The probability of a deliberate manoeuvre by the Yorkshire Society is given credence by reference to ongoing developments in other spheres of activity about that time. From the middle of the 1880s, the Yorkshire G.B. Makers had pursued an active interest in the social and political events at Castleford. At the same time the Society had replaced the Lancashire Society as dominant force in the International Union, while a scheme of federation drawn up with the Flint Glass Makers' Society in 1891 was accompanied by a Yorkshire initiative to establish an amalgamation of glass
bottle making Societies on the basis of the Society's 1883 proposals. Although largely circumstantial, the indications are of a 'grand strategy' by Greenwood in order to procure the unity of the trade and arrest the decline in the standard of life and working conditions of the artisan glassmakers. The purpose of the Yorkshire District's action may have been the establishment of a short-term trade alliance in view of the growing indication of the impending trade dispute arising as a result of the challenge to the Union by the Yorkshire manufacturers. The assumption would explain the ad hoc organisational nature during the early stages of the Federation and also the seeming contradiction in Greenwood's statements concerning the subject.

The influence of the Federation in the successful outcome of the 1893 trade dispute and the emphasis this placed on the desire for and potential advantages arising from the amalgamation of the trade were factors ensuring the continuance of the Federation. Consequently, the termination of the dispute was marked by the attempt to establish a broader and more formal organisational structure and ensure the democratic ethos of the Federation. The need was made the more apparent as a result of the unbusinesslike conduct of some delegates at the London Conference in July 1893, and the unsubstantiated allegations of inaccuracies in the Report of the Glasgow Conference in September of that year. The charges resulted in the resignation of Alfred Greenwood as National Secretary during the subsequent Manchester Conference in November 1893. Greenwood's resignation besides focusing attention on the structural deficiencies of the organisation also revealed the vital contribution of the man himself to its function. When as a result of united pressure Greenwood resumed the Secretaryship his confirmation in that office was accompanied by the assertion of the Lancashire delegate, J. Hunter, that

".... if there is a National Secretary there should be a National Committee"

a statement followed by the threat of the withdrawal of Lancashire from the Federation unless a Committee was formed.

The stance adopted by the Lancashire Society presents a prima facie expression of democratic sentiment, when examined in the context of the earlier challenge to Greenwood's right to permanent tenure and the recently conducted incursions into Lancashire by Greenwood and other Federation delegates in order to bypass the Lancashire officials and make direct contact with the membership. However it
seems more probable that the Lancashire stance represented a control mechanism to curb the power of Greenwood and his supporters. The measure was countered, however, by a proposal from Conference Chairman, William Wheater, Greenwood's fellow delegate,

"That there should be a National Committee appointed to consist of three members beside the Secretary and the said Committee to be appointed by the district where the Secretary resides." 90

The Lancashire delegates were outmanouvred, not least in that Greenwood desired the establishment of a Committee and the fact that such a Committee to be readily available for consultation and assistance must needs be located near the residence of the Secretary. Nor was it only that such a consideration embodied the traditional observances of the Flint Glass Makers and other trade societies, including those of the various Societies of bottlemakers, but that on the basis of such consideration the Lancashire Society had presided until quite recently as the seat of the International Union. The necessary acceptance of the underlying logic compelled Lancashire support for Wheater's resolution and endorsed the position of Yorkshire as primus inter pares within the Federation. At the Dublin Conference 1895, the Yorkshire Society made a bid to gain control of the Federation by seeking to replace the hitherto observed voting system based on one vote per delegate, by one of proportional representation based on the annual memberships of the respective Societies. 91 The proposal to adopt the Rule of the International Union was quickly withdrawn when it was revealed by the Lancashire Delegate's that acceptance would confer absolute control of the Federation on the Yorkshire Society by enabling them to out-vote the combined power of the remaining districts. 92 A modified format was proposed which assured Yorkshire the predominant power whilst denying overall control. 93 The willing acceptance of the proposed redistribution by Yorkshire indicates that the Society's motive in seeking a restructured system was not the attainment of an overall majority such as the Society exercised at the International Congress. On vital issues affecting the Lancashire Society the exercise of an overall majority was rendered academic in any case by the practical non-cooperation of that district. A more subtle motivation may be ascribed concerning the action of the Yorkshire Delegates in that proportional representational voting power by Yorkshire and its allies made the removal of Greenwood as National Secretary almost
impossible and thereby ensured Yorkshire leadership of the National Federation in perpetuity. The significance of the measure may be seen in the fact that Greenwood retained the office until his retirement as Secretary of the National Federation in 1920, and was immediately succeeded in that office by the newly elected Yorkshire C.S., John Thompson. Furthermore, the measure provided the Yorkshire District with a moral ascendency which would have made its acceptance as the seat of trade government difficult to challenge in the event of an eventual amalgamation of the Federated Societies. Despite such manoeuvrings the effectiveness of the Federation was limited and its obvious successes confined to the early years following its establishment.

From the start, the narrow sectionalism based on regional self interest defied attempts to transform the Federation into an alliance to attain uniform wages and hours. The principal agent of disunity was the Lancashire Society. Currently the most prosperous district of the trade, with its new found prosperity largely based on the adoption of the pale metal trade, the Lancashire districts continued success depended in great measure in holding and if possible increasing their share of the market previously exclusive to the Yorkshire district. The tendency to self preservation was reinforced by the role of works managers who either occupied or controlled key Union positions and as Union members themselves were able to exert undue and undemocratic influence at Union branch meetings, thus affecting decisions arising.

The prevailing situation explains why in defiance of Federation policy the Lancashire Society accepted wage reductions in 1892 and 1893, undermining the resistance to wage reductions by the Yorkshire and Scottish Societies. On the first occasion the influence of the Lancashire managers ensured that only 92 of the 500 members attended the meeting at which the crucial decision was taken, while the second incident occurred in the middle of a strike by Scottish bottle hands in an attempt to increase their wage rates in response to a call for action by the Lancashire hands who claimed that their employers were unable to compete with the Scottish trade. The Lancashire action of 1892 resulted in the decision by the Federation members to by-pass the officials of the Lancashire district and make a direct appeal to the Lancashire rank and file. Following two general meetings, the Lancashire officials were compelled by rank and file pressure to re ballot the membership on the wages question.
The resultant demand for the reintroduction of the 1892 rates of wages and overwork being rejected by the Lancashire manufacturers led to the withdrawal of labour by the workmen, thereby enabling the Federation to present a solid front which was a crucial element in the success of the workers in the 1893 dispute. The action by Lancashire in submitting to a reduction in wages in October 1893, was given dual justification by the Society officials who contended that the measure would help the County to retain a hold on the diminishing dark metal trade which was a means of ensuring work during the winter when the seasonal nature of the demand for pale metal caused production to be cut back. Further, the Lancashire hands considered that it was unreasonable of the Federated members to expect them to retain their much higher rate of wages while they, working for lesser rates secured work denied to Lancashire. The Lancashire decision had a retrogressive impact upon the entire trade. The men of Scotland were left to obtain the best settlement they could in their dispute, and shortly thereafter experienced a breakup in unity. Likewise, in order to retain their trade the Yorkshire men were compelled to submit to a 3/- reduction and only secured the continuance of the existing conditions of trade (i.e. 1892 Agreement) for a limited period by provisional acceptance of submission to proportional reductions in the event of a further lowering of Lancashire rates.

Greenwood's estimate that
".... if one district descends another must, sooner or later, follow suit," was amply borne out by events. Brierley Hill and Dublin manufacturers locked out their men to enforce wage reductions comparable with Lancashire rates. The attempted reclamation of the black metal trade by Lancashire manufacturers denuded the Scottish and North of England districts which were already most affected by foreign competition through Lancashire's earlier abandonment of the trade in favour of the more profitable pale metal market. Greenwood articulated the longer term effects precipitated by the Lancashire action and the response it drew from his own district,

"The danger is that the Yorkshire manufacturers may tip the Lancashire manufacturers to put the screw on their workmen and their non-resistance may result in the wages descending
to the lowest level, aye, even to the Continental level..."107

The Lancashire action was considered to be an unnecessary response to the slackness of trade arising from the 1893 coal dispute, the effects of which were being felt by all districts of the trade. Following the non-co-operation of the Lancashire officials in furthering direct contact between a delegation from the Federated districts and the Lancashire rank and file, Lancashire District was unanimously condemned and ostracised by the Federation.108 The measure was soon seen to be a mistake, theoretically and practically. Separation removed all moral influence over Lancashire without safeguarding the Federated Districts by the elimination of Lancashire influence over the trade.109

At a practical level the severance of Lancashire resulted in the non-admittance of Federation members to the Lancashire Society, thereby denuding them of all benefit provision,110 while the Scottish District was denied the £400 owed by Lancashire as strike levies.111 When following the example of several other districts, the Yorkshire District was closed against all 'incomers' in December 1893,112 the effect was to lead the Federation members to seek the readmittance of Lancashire in the hope of normalising the situation.113 The Lancashire officials fearful that Greenwoods observation that ".... the Yorkshire Council cannot sit still and see other Districts developing the Pale Metal trade whilst Yorkshiremen were walking about, not simply unemployed, but themselves and their families in a half-starved condition and standing upon their dignity and demanding higher wages and refusing to work as long hours as are worked in other Districts thereby handicapping their own masters,"114 presaged implementation of the frequently threatened retaliatory price war,115 sought and eventually obtained readmission to the Federation.116 The dissentient attitude of the Lancashire Society had, however, ruined all future prospect of practical unity within the trade constraining the National Conference to the role of a sounding board and providing a forum for the expression of regional opinion on trade matters. As an agency for collective action to obtain uniform wages and the control of trade conditions the potential of the Federation remained largely unrealised.
It was, however, because of its continued existence, of value in the establishment of the Selling Prices Association in 1910. The participation of the Yorkshire and Lancashire Societies within the framework of the Association therefore removed the competitive disunity between them and ensured the partial attainment of the aims of the Federation.

The rapid transformation of the trade from manual to mechanical manufacture between the two world wars resulted in the gradual disappearance of the craft unions and the demise of the National Conferences of the trade societies. The interest of the larger labour Unions in the workers employed in the glass trade resulted in the establishment of the National Joint Industrial Council for the Glass Container Industry in 1943. Although a 'horse of a different colour,' the newly established organisation was built on the foundations of its predecessor and therefore a monument to the vision of Greenwood and his contemporaries.

(ii) The G.B.M. and the F.G.M.

The sectionalism which bedevilled unity among the bottlemaking districts was increasingly apparent in the relationship between the bottle hands and the flint hands of the Yorkshire trade. The alienation which became manifest from the late '70s was exacerbated during the following decade by the dual effects of trade depression with its attendant levels of high unemployment, and the intensification of domestic and foreign competition. Allied to these considerations were changes in workshop practice and lay-out occurring as a result of technical advance and the widening range of wares in response to more varied consumer demand. In consequence, the hitherto clearly defined and observed operational spheres, based on the unwritten 'rule' that flint bottle hands made small mainly medical wares, while the bottle hands undertook production of common bottles and larger containers, became increasingly blurred. As the productive spectrum overlapped, employers increasingly capitalised on the situation to play one group of artisans against the other to the long-term disadvantage of both. The growing size and importance of the flint bottle hands as a section of the F.G.M. Society compelled greater attention and understanding by the Executive of the particular problems of the Yorkshire bottle trade. Fraternal contact during the 1880s is seen in the attendance of Joseph Leicester, Secretary of
the London District and doyen of the F.G.M's Society, at trade
demonstrations organised by the G.B.M. Society and the contributions
to the Leicester testimonial appeal by branches of the G.B.M. Soc-

The crystalisation of the socio-industrial relationship
was promoted by official correspondence which sought to achieve
"some scheme of Federation or understanding
for the mutual benefit of the Yorkshire
Bottle Makers Society with our own Society." \(^{120}\)

The ensuing consultations were formalised by the signing in 1891, of
a seven clause concordat designed to prevent the erosion of artisan
wages and conditions arising from the divisive machinations of the
Yorkshire manufacturers. The maintenance of close liaison as the
basis of co-operation was expressed in Clause Two of the Agreement

"That in the event of a dispute arising between
the employers and the workmen of either Society
information shall at once be communicated to
the other Society, in order to prevent the em-
ployers operating upon or in any way using the
members of one Society to the injury of the other." \(^{121}\)

The seal of durability was set by the F.G.M. Society. In its pre-
amble to the Articles of Federation the C. C. atoned for past trans-
gressions

"We hope the seed of brotherhood sown by our
Federation will blossom forth and ripen into
fruit of everlasting benefits and goodwill.
We cannot let this pass without mentioning
the kind and gracious manner with which Mr.
Greenwood and his colleagues met our rep-
resentatives, remembering they have much to
forgive us for" (my italics). \(^{122}\)

The view expressed by the incoming C.S. of the F.G.M's Society
(J.J. Rudge) shows an ideological commitment to the 'grand strategy'
pursued by Greenwood and his Executive

"We have started on this journey by federating
with the Yorkshire Bottle Hands Society ..... 
... I see no reason why we should not push on
and federate with the Glass Cutters, the
Newcastle Press Society, and the rest of the
Societies in the Glass Industry." \(^{123}\)

The growing political awareness of the F.G.Ms. is evident in Rudge's
consideration of federation as a vehicle for direct parliamentary representation. Pointing out the declared commitment of the A.S.E., Boot and Shoe Operatives, the Lancashire Cotton Operatives and several other amalgamated trade societies to such action Rudge concluded

"The maintenance of the Glass Industry is as precious to the glassworker, and his interest as keen in national affairs as any other workman, and there is no reason why we should not advance with the times." 124

In the expression of these sentiments Rudge pronounced the theoretical assumptions shared by Greenwood and his colleagues and already given practical expression in the sphere of local politics at Castleford. (cf Section (e) infra).

During the 1893 dispute the F.G.M. fully supported the bottlehands, contributing £100 to the Lock-Out Appeal and intimating the advance of further sums of money as required. More importantly the F.G.M. Executive resisted the application from the Yorkshire Manufacturers to be furnished with men regarding a rebuff for the bottle hands as inimical to the long-term welfare of their members. The vital importance of the attitude and conduct of the F.G.M. is evident from William Wheater's resolution at the meeting of Castleford Branch, 17th February 1893,

"That this meeting expresses its admiration and entire approval of the conduct of the Castleford medical bottlehands in their effort to carry out the terms of federation." 125

In 1894, the first of two situations arose which revealed that the unity of federation was merely a veneer overlaying the fabric of trade sectarianism. On the 11th October, Frank Swann, leader of the Yorkshire Flint Bottle Hands' Section, informed Greenwood that Breffits proposed to recommence production of small ware at their Ryebread Works, employing flint hands in a bottlehouse which had until its disuse five months previously, been worked by bottle hands. It was stated that Breffitt had intimated that should the flint hands decline to operate the house it would be demolished since he had no intention of re-opening the site as a bottlehouse. The Bottle Hands who were sharing work (i.e. working alternate weeks) until the house restarted objected to Breffits proposal and relying on the support of the Flint Hands, conveyed a D.M. resolution to the Federation
Committee on the 13th October 1894,

"That in the opinion of this meeting the Flint Hands ought not to take the Bottle House at Ryebread (Breffits Works) as it is of the opinion that Mr. Breffit's object is to operate against the men." 126

The Flint Hands, however, put a different interpretation on the situation and agreed to man the house although except for the addition of the 'glory holes' required by the flint system of manufacture, the house was unchanged in appearance from its operation as a bottle house. 127

On the 10th November 1894, in response to the dismissal of six flint hands who had resisted an attempt to increase their numbers, the C.C. of the F.G.M. Society called a strike at the Bagley Works, Knottingley. The company maintained their production utilising two sets of Bottle Hands, apprentices and renegade Flint Hands.

A meeting of the Federation Committee on the 1st December 1894, mutually agreed to withdraw each set of hands operating at Breffits and Bagleys but at a subsequent meeting held on the 29th December, the Flint Hands declared their intention of retaining the Ryebread House and after four hours of argument the Bottle Hands withdrew from the negotiations. A formal letter of protest was despatched to the C.C. of the F.G.M. Society on the 1st January 1895, stating that the action of the Flint Hands was

"... altogether contrary to the spirit and principle of trade unionism and the Federation Rules adopted by the two Societies in 1892." 128

In the Spring of 1895, the F.G.M. Magazine contained a report from the C.C. vilifying the G.B.M. Society for its part in the Knottingley dispute but omitted to mention the role of the Flint Hands at Castleford. 129

A letter of repudiation sent by the E.C. of the G.B.M. Society for insertion in the next issue of the F.G.M. Magazine was not formally acknowledged and dismissed out of hand by the C.C. of the F.G.M. Union, an action which engendered a degree of personal ill-feeling which precluded all possibility of future co-operation. 130

Following the break-up of the Federation a series of incidents arose in which G.B.Ms. were displaced by F.G.M. at Yorkshire factories, 131 resulting in acrimonious articles and reports within the respective trade journals. 132 The bitterness of the G.B.Ms. may be judged by reference to the correspondence between the Secretaries of both Societies following an appeal by J.J. Rudge, C.S. of the F.G.M. Society
for "assistance and support" for his members who were involved in a dispute with Yorkshire manufacturers on the issue of hours of work, in the Spring of 1899.133

The dissolution of the Federation left the F.G.M. Society with no formal guarantee of moral or financial support in the event of incipient dispute. To fill the void the E.C. considered membership of the National Trades Federation proposed at the Norwich T.U.C. in 1894, but the proposed rules were unsatisfactory and deterred affiliation.134 The establishment of a Committee and consideration of sundry schemes failed to further the issue and in 1898 the revised rules of the T.U.C. scheme were referred for the consideration of the members. Despite the urging of the C.S. that "Federate we must, and I hope, will,"135 the scheme was rejected,136 leaving the E.C. to comment, somewhat ambivalently "These rules do not appear to be satisfactory to our members neither do they meet with the approval of your E.C., as we see little or no benefit that would accrue to our members by joining in such a scheme of federation as the one referred to."137

The situation clearly reveals the dilemma facing the F.G.M. Society. The practical necessity for a federation, emphasised by the inability of the Yorkshire members to enforce a rapid settlement of the hours dispute, contrasted with the craft exclusivity which precluded membership of the T.U.C. scheme with its inherently militant elements of unskilled labour, rendering the organisation suspect in terms of cost effectiveness and the furtherance of precise trade aims. Considered in such a context the approach to the G.B.M. Society for assistance in the Yorkshire dispute of 1899, and the conciliatory nature of Rudge's early correspondence in the face of Greenwood's uncompromising attitude clearly represented the desire of the F.G.Ms. to re-establish the federation. The desire was particularly strong as the turbulent industrial relations of the Yorkshire bottle trade was the major element impelling the F.G.M. Society to seek any accommodation. The failure to effect such a scheme was crucial to the unity of the Society promoting the widening of the schism between the two elements of the flint trade and resulting in the breakaway of the Yorkshire members of the F.G.M. Society in 1903, to form the National
Glass Bottle Makers' Society. (cf Chapter 12 supra). Following an abortive attempt to obtain a more secure base by amalgamation with the G.B.M. Society in 1905 the N.G.B.M. Society to join the newly established National Federation of Glass Workers and kindred Trade Unions in 1907, the new organisation aspired to combine all glass workers and allied trades and initially comprised six separate unions federated for the purpose of mutual support and assistance in trade disputes. With the exception of the Lancashire G.B.M. Society, for whom the federation provided the practical embodiment of its long cherished ideals of collective support and autonomous government, the bottle making districts held aloof, retaining membership of the National Federation of G.B. Makers. The new organisation comprised more diverse elements and lacked the cohesion provided by the shared perspectives and administrative experience which the leadership of the Yorkshire District brought to the Bottle Hands Federation. By 1912, the bulk of the constituent members had withdrawn from the Kindred Trades Federation which denied the possibility of survival through an accommodation with the National Federation because of the strained relationship of the motive elements of each organisation, became defunct.

(d) Local Politics

The late 1880s were notable for the active involvement of the leading officials of the Yorkshire G.B. Makers' Society in the sphere of local politics at Castleford. The contributory elements which mark the development are difficult to discern with any precision. The Reform Act of 1884 with its extension of the franchise to many rank and file glassmakers probably stimulated greater political awareness, particularly as this was co-incidental with increased levels of artisan unemployment. The failure of the Liberal Party to respond to the desire of many trade union leaders to develop a more radical outlook also resulted in an intensification of socialist influence. The social effects of high unemployment arising from unparalleled trade depression among the unskilled workers who formed the neighbours of the urban artisans, focused attention on the harshness and deficiencies of Poor Law administration while the insensitivity of the government to the sufferings of the workers and their families, emphasised bonds of common humanity, always strong between the Yorkshire miners and glassmakers despite differences in occupational earnings.
The effect of these considerations was increasing socialist radicalisation and the eventual assumption of local political leadership by Greenwood and other members of his Executive. It is quite probable that Greenwood's transformation was theoretically completed by 1888 when the Yorkshire G.B. Makers joined the I.U. It is most likely, however, that Greenwood's involvement in the business of the I.U. and the contact this brought with radical intellectuals and politically motivated leaders of Continental Unions provided the impetus for the practical manifestation of his political belief.

to which
The extent such contacts deliberately encouraged entry into the political arena is not known but the example of the French glass artisans must have influenced Greenwood and his Executive colleagues in their assessment of the necessity for independent political activity. The necessity for political involvement was also emphasised by the German Unionists. At the Fourth I.U. Congress, London, 1892, a Dresden glass maker while acknowledging the social superiority of the British Unions, drew the contrast with their limited political organisation. The most probable direct influence, however, was that of Eleanor Marx Aveling. In her dual capacity as Corresponding Secretary of the I.U. and Secretary of the newly established Union of Gas Workers and General Labourers, Eleanor, daughter of Karl Marx, was in frequent contact with Greenwood and the close personal relationship which developed between them must have been a seminal influence on Greenwood's political outlook.

Eleanor Marx, and her husband Dr. Edward Aveling, together with Eleanor's brother-in-law, Paul Lafargue, provided the intellectual and ideological stimulation which fuelled the political action and simultaneously sustained the relationship between the G.B. Makers and their Continental contemporaries. The result of the above influences was seen in the establishment of an independent labour party by Greenwood at Castleford in 1889, based on an alliance of miners, flint hands, potters and other branches of local industry. The aim of the organisation was to mobilise the artisan voting power within the area and thereby secure working class representation on the controlling bodies of local government. The formation of the new alliance represented a clear departure from existing political attitudes and observance. The experience of Joseph Leicester of the F.G.Ms' Society illustrates the problems faced by working class candidates seeking office in the national sphere of political representation. Leicester, as President
of the Working Mens' Political League, was invited to stand as Liberal candidate for Southward when W.S. Gladstone declined to represent the constituency in 1878. Despite the support of the League and of the constituency party, Leicester's candidature was rejected by the Liberal Association and although Leicester could doubtless have obtained election on his own merits, he placed the Party above self-interest and withdrew his nomination. Leicester's adherence to Liberalism earned him the official nomination and electoral success at West Ham in November 1885, as one of eleven 'labour' MPs, but in the General Election of June 1886 the seat was lost. Apart from illustrating the impermanence and ineffectuality of a parliamentary career, Leicester's experience also provides an example of Hobsbawm's assertion that the identification of the labour aristocracy with lower middle class social aspirations retarded the formation of an independent working class political party by the containment of political radicalism within the Liberal Party. The argument advanced against Hobsbawm's theory, that the greater literacy and rationality of skilled craftsmen was a likely stimulus for political radicalism would also seem to be refuted by Leicester's case. The fact that Leicester felt the necessity to use the F.G.M. Magazine in 1879 to defend Gladstonian Liberalism against the criticism of a Manchester based correspondent, indicates both the existence of radical influence within the F.G.M. Society, well in advance of the mainstream of working class radicalism, and also the more orthodox political liberalism of Leicester. That Leicester's reply was accompanied by an editorial note barring future use of the Magazine as a vehicle for political controversy in itself indicates a restrained political attitude which tends to confirm the opinion of one labour historian that younger members of craft unions were prone to political radicalism while older artisans clung to prevailing political ideology. Greenwood's labour alliance therefore marked a clear departure from Liberal orthodoxy for which participation in local politics afforded ease of entry at far less cost than that attendant on parliamentary representation while ensuring direct relevance to working class life. The committee of delegates representing the various trades of the alliance obtained immediate success, Greenwood and William Wheater being elected to the Castleford School Board in April 1898. By 1890 the labour alliance had become formalised as Castleford Trades Council and constituted a significant political element within the town. Central to the electoral programme of the Trades Council
was the maintenance of general living standards through the procurement of union negotiated or approved wage levels. To this end the Trades Council advanced "the principle of fair contract," with the demand that public works contracts be awarded only to firms which paid the appropriate district rate of wages. The policy had wide appeal, being as applicable to the wellbeing of the unskilled labourer as his artisan neighbour. In the election of 1892 all six candidates nominated by the Trades Council, four of whom were G.B. Makers, were elected, two to the Local Board, two to the School Board and the remaining pair to the Burial Board. Within a month the successful candidates had secured their objectives, having obtained approval for their demands by the various governing bodies of the town. Quite obviously the Trades Council representatives exercised an influence disproportionate to the number of artisans resident within the Castleford district. Something of the way Greenwood obtained general public support for the alliance may be seen with reference to the relationship between his own Society and the Gas Workers. The brief revival of trade in 1888 released the latent strength of the radical element of unskilled workers. The result was the burst of 'New Unionism' as previously unorganised sections of labour began to combine to improve wages and working conditions. Pre-eminent in the new movement was the Union of Gas Workers and General Labourers established by Will Thorne in 1889. Following a tour of Yorkshire by Thorne and Pete Curr in October 1899, new branches of the Union were formed at Leeds and Sheffield. The attitude of the G.B.M. Society to the organisational activity of the unskilled is particularly significant when considered in the context of the hostility of the craft based unions towards 'New Unionism' as presented by Howell and the Webbs, in terms of artisan exclusivity defined by Hobsbawm. The Webbian interpretation has been challenged by one authority who, whilst acknowledging some hostility on the part of skilled labour, asserts that in overstressing the extent of such hostility, the Webbs have understated the general tendencies of trade unionism pre 1890. Tom Mann and John Burns provide examples of the contributory role of artisan leadership in the establishment of unskilled labour unions. Less known is the support provided by the Yorkshire G.B. Makers for Thorne's Union. The link between the two unions appears to have been established when, following his withdrawal from the trade in 1873, the Castleford Branch Secretary, William Byford, took up residence in London where he met Will Thorne, who married Byford's daughter. Following the establishment of
the Gas Workers Union, Byford's administrative experience was utilised as Treasurer of the Union. By the mid 1890s the G.B. Makers had emerged as the principal administrative officers at several Yorkshire branches of the Gas Workers Union. That this development was not accidental is significantly shown by the adoption of the E.C. of the artisan Society of a policy of dual union membership. Thus, John James, a member of the G.B.M. Executive, referring in January 1893, to the re-establishment of trade unionism at Dan Ryland's Stairfoot factory, after its abandonment four years earlier, stated,

"... all members are not only members with us but also of the Gas Stokers Union..... they had suffered so much that they had (sic) become double Union men."  

The emergence of the G.B. Makers as spokesmen for the unskilled obviously transcended union activity and had a wider social application which is crucial to our understanding of the public support enjoyed by Greenwood's independent labour party. The part played by socialist organisations in the formulation of the independent political movement does not appear to have been significant. Clearly, the Avelings as members of the Social Democratic Federation, and Will Thorne with his Marxist outlook, were representative of a school of thought which regarded the organisation of the working class as an essential step in the transformation of Society rather than the defence of the rights of labour. To that extent their involvement with the G.B.M. should be seen as political rather than mere trade unionism. Likewise, the role of the Independent Labour Party with its predominant artisan membership and its emphasis on immediate reform of housing, schools and work provision, together with improved wage levels and working conditions supported where necessary by State intervention, reflected to a great extent the political attitude of the G.B. Makers. A further likely source of indirect political influence was the Fabian Society which established a branch at Castleford in 1893, following an active propaganda campaign the previous year.

The removal of social barriers created as a result of craft exclusivity was of primary importance to the strength and unity which formed the basis of the political success of the labour alliance. To illuminate this development some examination of the occupational..."
relationship of the G.B.Ms. with the auxiliary elements of unskilled labour at the place of work is required. Brundage has pointed out that although the glass bottle industry required the employment of an element of unskilled labour in the capacity of furnace men, packers, box makers, warehouse and yard labourers, the nature of container production was such that the auxiliary role of the labourer was removed from the immediate area of artisan activity. Consequently, the rigid distinction between skilled and non-skilled labour was natural rather than imposed and not subject to the tensions arising within other skilled trades where working proximity posed a competitive threat to skilled status by the undermining of demarcations of labour activity. Furthermore, the proportion of unskilled to skilled workers within Yorkshire bottle works was on average about 2% of the workforce and posed no numerical threat to artisan power. True, the youths who served as takers-in and wetters-off were unskilled but as the mobility of this section of the workforce was controlled by the terms of potential apprenticeship and trade progression its existence afforded no actual threat to artisan status, particularly by the 1880s when a combination of adverse trade conditions and legislative enactments reduced trade entry. These then, were the immediate considerations which underlay the glassmakers' attitude to unskilled labour and which supplemented by a myriad social, religious and environmental influences, imbue the traditional militancy of the rank and file members of the Yorkshire Society with a markedly radical political outlook during the decade 1885 - 1895. The years after 1895 were characterised by a withdrawal from direct political action which seems somewhat surprising at first sight in view of the commitment to and success of independent political action during the preceeding years. What are the reasons to explain the retreat? Broadly, two explanations may be found: the specific considerations concerning the changes within the trade and the pattern of political development at national level.

The constant high level of unemployment within the trade was exacerbated post 1893 as a result of the Lock-Out which allowed Continental manufacturers to make further inroads into the British trade. In addition to the intensification of foreign competition the rapid deployment of machinery caused increased artisan displacement. Consequently, the Union leaders were increasingly compelled to co-operate
with their capitalist employers in a joint response to the new challenge. Recognition that the issue of domestic competition was no longer the major determinant of socio-economic status is seen in the effort to safeguard British trade through measures such as price-fixing, merchandise marking, and ultimately, Tariff Reform, which demanded Parliamentary agitation rather than local political action.

In the political arena, events post 1895 had rendered participation in local politics less effectual. The introduction of County Councils as the intermediate tier of local government had removed direct control of schools, police, public works and the allied financial management from the sphere of borough administration. In the social context national developments in housing, pensions and insurance during the first decade of the new century provided a semblance of socialist conscience within the Liberal Party which weakened radicalism at local level. The death of Eleanor Marx (1898) removed a direct radical political influence on the Yorkshire G.B. Makers' Society, while the reaction following the militant industrial action of 1893 and the changing pattern of industrial relations thereafter, promoted the influence of people such as Ben Pickard, Ben Turner, politicians and trade unionists of moderate outlook. The banning of trades councils from participation at the T.U.C. from 1895, denied a platform for radicalism to bodies such as Castleford Trades Council and stifled their influence within the Union movement and although the establishment of the Labour Representation Committee by the T.U.C. in 1900, and the formation of the Labour Party, marked a resurgence of socialist influence within the trade union movement, the intervening years had eliminated the effectiveness of and even the necessity for direct labour representation in local politics. Labour Party records indicate that the G.B.M. Society was considering affiliation in 1905. In January of that year the D.M. had proposed "... that it has become absolutely essential in the interests of the workers that they should be directly and adequately represented in Parliament by representatives of their own ranks. Such representatives to be entirely independent of any other political party; ... and .... our organisation should be used to bring about the desired result and with a view to this Society becoming affiliated to the Labour Representation Committee, the principles and policy of which Committee is hereby approved and adopted by this
meeting, the question be submitted to the trade for approval or otherwise.¹⁷⁹ (my italics)

The italicised passage reveals a lingering commitment to the policy of independent political action by the Society. The extent to which the commitment was shared by the rank and file is more problematical. Of 1591 eligible voting members of the Society's total membership of 2439, only 367 votes were cast; of these, 367 were favourable to the D.M. resolution.¹⁸⁰ One explanation for the apparent apathy may be found in the G.B.M. attitude to Tariff Reform. Pelling has noted the support given to the Conservatives in 1906 by Castleford glassmakers who had

"... a leaning to Tariff Reform in view of the foreign competition in their industry."¹⁸¹

It would seem that the G.B.M. Society not unnaturally, placed considerations of trade before political allegiance. Such an attitude explains why Greenwood, at the height of power of his radical labour movement in 1893 felt able to endorse H. J. Reckett, the Liberal candidate for the Pontefract by-election, because of his sympathetic assistance in the cause of the G.B.Makers.¹⁸²

The Quarterly Report for September 1907, shows payment of both Labour Party affiliation fee and membership levy in respect of the Parliamentary Fund,¹⁸³ marking the beginning of the formal relationship of the two organisations which has continued by various means to the present day.
CHAPTER THIRTEEN: Trade Alliances

Amalgamation.

1. In response to the Lock-Out at Thornhill Lees and Conisbro in 1876, Greenwood had advocated either surrender on the masters terms or a County-wide strike but neither course had been followed and local action proved to be ineffectual. Webb T.U. Mss. A 43, p 277.

2. Bristol and Alloa were the only districts not represented in addition to a factory situated at Blythe which was, however, a Yorkshire owned firm employing Yorkshire artisans and working in accordance with Yorkshire Society Rules. Abstract Report of the Conference of G. B. Makers of Great Britain & Ireland, 23rd - 26th May 1882, p 7.


4. Three schemes were considered, that of the North of England agreed with the Lancashire scheme except on one point, the latter proposing a central fund and the North of England proposing separate district funds. The North of England scheme was therefore withdrawn in support of the Lancashire plan. Ibid, p 13.

5. Ibid, p 17.


8. The Glasgow Conference was convened following an approach by the Scottish District to the Yorkshire Society sounding out its support for proposed industrial action to obtain an increase in wages and a reduction in numbers. The Yorkshire Ex. C. returned the opinion that "Unless some kind of Amalgamation were adopted they (i.e. Scotland) would not be able of themselves, with very limited funds, to enter upon a struggle, and .... to fail
would make the position of themselves and others worse than it was."

It was therefore proposed that a Trade Conference be held to consider the affairs in Scotland and the subject of amalgamation, G.B.M. Reports, Volume IX, Appendix p 117.


10. The relative position of the Societies with higher average funds per member in May 1882 was, in August 1883,

<table>
<thead>
<tr>
<th>Society</th>
<th>FUNDS</th>
<th>PER CAPITA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blaydon</td>
<td>304-7-4</td>
<td>5-19-4</td>
</tr>
<tr>
<td>Brierley Hill</td>
<td>79-2-7½</td>
<td>1- 7-3</td>
</tr>
<tr>
<td>Bristol</td>
<td>267-12-0½</td>
<td>4-15-6½</td>
</tr>
<tr>
<td>Yorkshire</td>
<td>7,965-6-4½</td>
<td>7- 4-3½</td>
</tr>
</tbody>
</table>


12. Ibid, p 70. For details of Lancashire amalgamation scheme, ibid, pp 81 - 84.

13. The five societies directly affected were the North of England, Brierley Hill, Glasgow, Portobello and Dublin, together with Alloa which was not represented at Conference. For the financial positions of these Societies cf ibid, p 62.


15. Ibid, pp 57 - 58.

16. The information was withheld from the Conference Delegates, however, in view of the obvious lack of enthusiasm for the Yorkshire scheme, ibid, p 69.


21. The boom in Lancashire paralleled that in Yorkshire during the years 1872 - 1875, with an increase of 40 - 50 bottle holes during the years 1878 - 1883, ibid, p 33 and p 48.

22. Greenwood set the acrimonious tone by reviving the issue of the blacklegs who came to Thornhill Lees and Consibro from the North of England in 1876, ibid pp 43 - 44. Greenwood also criticised the administrative deficiencies in the Lancashire Society's transferrence of artisans, and in addition alluded to the amalgamation scheme proposed by them as "selfish in the extreme" and "not based on moral principles", ibid, p 33 and pp 41 - 42. Blaydon was referred to as a "silent member" of the Yorkshire Society obtaining that Society's benefits at no cost to themselves, ibid, p 33. In contrast the Yorkshire Society complained at the letter of "censure" sent prior to the Conference which took Yorkshire to task for insufficiently supporting the workers of the North of England Society during the dispute at Sunderland in 1882, ibid, pp 74 - 79.

23. Greenwood, accused of "ripping up grievances" replied that his references were merely to show the attendant evils of sectionalism and, quoting Milton, on liberty, en passent, justified his words by stating,

"I see no reason that we should try to find smooth or weak words to court each others favours and thereby weaken or destroy the force of the arguments because we cannot, or do not, see eye to eye, much less should we attempt to curry favour at the expense of failing to discharge our duty to the district which we represent" ibid, p 52.

The paradoxical situation of loyalty to Yorkshire sectionalism being used as a means of illustration to invalidate the sectionalism of the other Societies seems to have escaped Greenwood.

24. Ibid, p 68.

25. The remarks of several delegates indicates their awareness that the issue was prejudged
'Some of us have come with our minds made up, and whatever arguments and reasons may be adduced, we are determined to act in one direction" said one, while a second stated, "We have all come to support a certain scheme, and indeed we were instructed to do so."

As a result the resolution that the discussion should close without a vote being taken, was accepted. *Ibid*, p 59.


28. By 1885 Blaydon on Tyne had successfully sought amalgamation within the Yorkshire Society while applications by Blyth and Stockton were refused on the grounds that these came under the jurisdiction of the North of England district and therefore the Yorkshire Society was not "seeking its own aggrandisment, or trying to proselytize, or split up Districts", cf *Report of Thirteenth National Conference, Glasgow, September 20th - 23rd 1893*, p 38 in *National Conference Reports 1893 - 1895*.


30. Seaham Harbour and Sunderland, both in favour of the Yorkshire proposals, had seceded from the North of England and become independent districts, *ibid*, p 15.


32. The size of the Lancashire funds meant a per capita payment of £4-0-0d more than the Yorkshire Society and £10-3-8d more than the remaining Societies, while ensuring the same benefits. The Lancashire scheme had abolished the entrance fee by free acceptance of members transferring to other districts, *ibid*, p 96.
33. Ibid, p 97.

34. Ibid, pp 96 - 97.

35. Ibid, p 97.


37. Greenwood predicted that
"... although Lancashire can manage its own business at the present, there will be a day when they nor no other District will be able to do so under the Sectional Societies, or the principle we work on at the present time. .... my word today is that this scheme submitted by the Yorkshire District is the only scheme that will prove of benefit to the whole trade."


39. A sub-committee of five consisting of Greenwood (Yorkshire), T. Hamblett (Lancashire), P. Heptinstall (Sunderland), P. McLuskey (Dublin) and T. Volkel (Yorkshire) was formed after Greenwood had declined to draft a modified scheme alone, Report of the 12th National Conference, London, 30th June - 7th July 1893, p 3 in National Conference Reports 1893 - 1895.


41. The International Congress was scheduled for winter when it was more difficult for foreign representatives to travel and when less press coverage was likely, particularly as the date coincided with the reassembly of Parliament and the reports of the Parnell Commission. In addition the approach of


43. Lyons did in fact import 25 Finns but were compelled to dispense with their services when as a result of a National Conference and trade demonstration, convened at St. Helens, the firm came to terms with their workmen. Ibid, pp 5 – 6.


45. Ibid, p 19.

46. Letter from J. T. Thorne, Corresponding Secretary, Noble Order of Knights of Labour of America to James Hunter, General Secretary, G.B.M. International Association, 12th June 1887, reprinted Ibid, p 18.

47. Ibid.


49. Ibid, pp 26 – 32.

50. Ibid, pp 34 – 36.


53. cf A Report on Glass Bottles in the Paris Exhibition, 1878, printed as Appendix to G.B.M. Reports, Volume VI. Also, Volume XI, p 425, and Volume XVI, p 112.

54. The Glasgow Congress of 14th – 17th February 1888, was presided over by C. Sweeting, a member of the Yorkshire E.C. and
T.S. Beedle also attended as a Yorkshire Delegate. Report & Balance Sheet of the I.U. 1886 - 1888, p 12. It would appear that no subscriptions other than the cost of Reports were paid by the Yorkshire District before February 1888, suggesting that the Yorkshire Society merely kept a watching brief prior to that date. Ibid, p 17.

55. "Brundage, op cit, p 50.


57. The proposed amalgamation was thwarted by the opposition of the Lancashire and North of England Districts, ibid, p 13.


59. Ibid. The resolution probably marks the origin of Greenwood's establishment of the united labour movement at Castleford in 1889.


62. Ibid.


64. Ibid, p 84.

65. The members of the Yorkshire E.C. nominated by the Yorkshire Delegates to the 1891 London Congress were:
A. Greenwood (Sec.), R. Fenton, W. Wheater,

66. Ibid.

68. Volkel, a German born bottle maker, may have come to England as one of the early wave of foreign workers recruited by English manufacturers. Volkel was resident in Lancashire in October 1888. I.U. Report & Balance Sheet, 1888, p 6. By 1890, however, he was resident at Castleford and acting as interpreter to the Yorkshire Society. Report of 3rd I.U. Congress, 1891, p 3, but was neither a formal Delegate or Councilman until nominated as such following the Yorkshire 'take over'.


70. Brundage, op cit, p 51.


73. G.B.M. Reports, Volume XVI, pp 309. For a brief memoir of Eleanor Marx by H.M. Hyndman, leader of the Social Democratic Federation of Justice, No. 743, Volume XV, 9th April 1898.

74. G.B.M. Reports, Volume XXII, p 521.

75. Miscellaneous Articles & Statistics 1905 - 1910, p 853.

76. Ibid, p 511.

77. Scott J. W. op cit, p 171.

78. Miscellaneous Articles & Statistics 1905 - 1910, p 511.

79. Ibid, p 510.

80. Ibid, p 512.
81. Ibid. At the Belle Vue Demonstration of 24th August 1889, Greenwood had stated

"Fellow-workmen, if the machine performs one half of what has been represented in the prospectus and other articles which we have seen in newspapers, then the workmen must look for something else to do... However, whether it performs what has been represented or not, the question with us is, what shall we do as workmen?"


Federation:

(i) The G.B.M. Societies.

83. National Conference Reports 1893 – 1895, p 4. The meeting had been called at the suggestion of the International Union. Prefatory Remarks to Reprint of Minutes, op cit, Brierley Hill, Alloa, and Portobello Districts were not represented.

84. Explanatory and Prefatory Remarks, National Conference Reports, 1893 – 1895.

85. An article in the Yorkshire Evening News, 13th June 1907, based on information supplied by Greenwood, states that the Federation was established by him. Greenwood declared at a subsequent National Conference

"I was the originator of the movement;
I am glad to be able to say that though
I did not expect them to run on so long."


While John Thompson, Greenwood's successor as C.S. of the Yorkshire Society, etc. etc., also ascribed the establishment of the National Federation to him cf Pontefract & Castleford Express, 3rd August 1923.


88. When, despite a unanimous vote of confidence by the delegates, Greenwood refused to reconsider his resignation, P. McLuskey who was appointed pro tem to succeed him proposed the unanimously supported resolution:

"That this Conference press upon Mr. Greenwood the importance and absolute necessity of his reconsidering his decision as to having nothing more to do with the position of National Secretary."

The opinion was reinforced by the appendage of a footnote to McLuskey's subsequent Conference Report which stated that:

"... after his (Greenwoods) labours during the past year for the good of the trade surely there is no-one but can see that he has laboured not for the good of self or only for the Yorkshire District, but for the good of all the Districts.... Let us value our leader while we have one .... when once we lose Alf Greenwood the trade will not get another."

Ibid, pp 24 - 25.

89. Ibid, p 8.

90. Ibid, p 24. The restrictive nature of the Lancashire action is further substantiated by the fact that the delegates from that District had, prior to the resolution, again raised the issue of tenure. Ibid, pp 10 - 11.

92. For details of International Union voting structure cf Section (b) supra. The adoption of the system had given the Yorkshire District overall control from 1892.

93. *Op cit*, p 12. On the basis of the current membership of the Societies represented at the Dublin Conference, Yorkshire had 11 votes while the combined total of the remaining Societies equalled 15. The voting was calculated on the basis of 1 vote for each 100 members or fractional part of 100, up to 500, and one vote for every 250 additional members.

94. At the 14th National Conference it was stated that the Lancashire managers had made three attempts to have T. Hamblett the County Secretary, removed as he "was not popular with the employers and they wanted a Secretary who was popular with the employers." It was also stated that at times of slack trade managers would cause union activists to be dismissed thereby automatically debarring such men from eligibility to hold Union office. Consequently

"The workmen of Lancashire were afraid to speak their mind for fear of being boycotted."


95. An example of the undermining of Union democracy by the Lancashire managers is seen with regard to the decision of the workmen to accept the wage reduction in 1892. Of 500 members only 92 were summoned to the meeting during which votes were taken by show of hands, the 'Managers'... sitting around the room watching the men how they voted'. *Ibid.*

It was subsequently claimed that

"Yorkshiremen would not only have had their necks strung with halters, before they would have done such a deed, but would have stood 'a nine feet drop' before they would have sentenced the men on such a vote".

*Reports of 5th Conference, St. Helens, 21st January 1893, p 25, op cit.*

- 603 -


100. Ibid.


108. Lancashire District was not formally expelled but the
'Manchester Resolution'

"That this Conference recommend all the Districts not to recognize or associate with in any way, workmen now in Lancashire District until they repair the damage done"


Another unspoken assumption was that the spring plug tool which was beginning to replace the cranked or dog-leg tool for casting the mouths of bottles, was the sole province of the Bottle Hands being the mark of distinction between them and the 'gloryhole' used by the Flint Hands to finish bottles. As the F.G.M. began to diversify, however, they began to challenge the assumption in both theory and practice, cf G.B.M. Reports, Volume XVI, p 346.

By 1891, the Yorkshire Flint Hands were agitating for direct representation on the Executive Committee of the F.G.M. Society and the right to appoint their own representatives to such office, F.G.M.M. Volume 4, Second New Series, p 264 and pp 268 - 269.

Report of speech by J. Leicester at the G.B.Ms. Stairfoot Demonstration, Barnsley Chronicle, 25th June 1887. Also address given to G.B.Ms. by Leicester at the Theatre Royal, Castleford, in G.B.M. Reports, Volume XI, p 424 for details of G.B.M. subscriptions to Leicester's Testimonial Fund.


Ibid.

F.G.M.M., Volume 1, Third New Series, pp 203 - 204. The F.G.M. Society had considered amalgamating with the Glass Cutters at the time of the 1858 - 1859 Strike and again in 1873 cf Matsumura op cit, p 119 and pp 126 - 128.

F.G.M.M., Volume 1, Third New Series, p 204.


G.B.M. Reports, Volume XV, p 119.
127. The Flint Hands justified working the Ryebread House on the grounds that the customer had specified manufacture by the 'melted mouth' (i.e. flint glass) system and was not therefore in direct competition with the G.B.Ms. cf G.B.M. Reports, Volume XVI, p 346.

128. G.B.M. Reports, Volume XV, pp 118 - 121.


131. G.B.M. Reports, Volume XVI, pp 61 - 64.


137. Ibid, p 216.

138. A meeting between the G.B.M. and N.G.B.M. Societies took place at Leeds, 19th August 1905, following an initiative by the Castleford Branch of the N.G.B.M. Society who desired to
promote a scheme of federation between their Society and the G.B.Ms. The Leeds meeting agreed on an exchange of confidences as a prelude to amalgamation of the Societies, cf N.G.B.M. Magazine, Volume 2, p 77 & p 142. The scheme was abandoned for reasons never actually stated but it would seem that the principal one was the difference in the financial basis of each Society which was emphasised by the failure of the N.G.B.M. Society to produce comprehensive returns concerning their section of the trade, cf Miscellaneous Articles & Statistics 1905 - 1910, p 199 and Tables pp 202 – 204.

139. The original members of the Kindred Trades Federation. In addition to the N.G.B.M. Society, the original members of the Kindred Trades Federation consisted of the National Flint Glass Makers, the Pressed Glass Makers of Gt. Britian, the Birmingham United Glass Bevellers, the London Glass Blowers and the Lancashire G.B. Makers. N.G.B.M. Magazine, Volume 4, pp 172 – 176.

140. The Birmingham Glass Bevellers and the N.G.B. Makers were the two elements remaining in the Kindred Trades Federation cf N.G.B.M. Magazine, Volume V, p 325. The competitive dictates of the changing industrial situation in the Yorkshire bottle trade intensified the rivalry of the G.B.M. and N.G.B.M. Societies, post 1907, precluding all co-operation.


142. Ibid, pp 132 – 133.

143. For indications of the political outlook of French glass-makers cf Scott J.W., op cit, Chapter 5, passim.

144. Workmens Times, 23rd July 1892.


146. Castleford Gazette, 12th April 1899.
147. Ibid.


150. Matsumura, op cit, p 291.

151. Hobsbawm, op cit, p 274.


156. Castleford Gazette, 19th April 1889.

157. Ibid, 5th September 1890.

158. Pontefract & Castleford Express, 26th March 1892.

159. Ibid, 2nd April 1892.

160. Ibid, 27th February 1892 and 26th March 1892.

161. Yorkshire Factory Times, 20th May 1892.

162. Cole, op cit, p 149. Also Ward & Fraser, op cit, p 127.


164. Hobsbawm, op cit, p 275.
165. Duffy, op cit, p 306.

166. Tom Mann, 'Tom Mann's Memoirs' in Ward & Fraser, op cit, pp 121 - 122. Also cf Tom Mann & Ben Tillet, The 'New' Trades Unionism, ibid.


168. Ibid, p 70.


171. Leeson R.A. United we Stand, p 52. Also cf Crowley op cit, p 356. Duffy op cit, pp 373 - 374 quotes the 'unity' element from the Preamble to the Rules of the Gas Workers & General Labourers Union (1892) written by Eleanor Marx and Edward Aveling. This stressed that the interest of one element of trade unionism was the interest of all.

172. Cole op cit, p 154 and pp 160 - 161. Crowley op cit, p 426, notes the largely artisan membership of both the I.L.P. and the provincial branches of the S.D.P. together with the absence of almost all unskilled labourers and offers this fact as an explanation of the assumed leadership of the artisans of the 'New' unions. For the influence of the I.L.P. on local trades councils cf Clegg et al op cit, p 290.


175. Ben Pickard, secretary of the West Yorkshire Miners Association was elected M.P. for Normanton in 1884 as a result of an agreement with the Liberal Party cf Duffy, op cit, p 255. Pickard's stated belief was that "Labour must lean on Liberal crutches and not attempt to walk alone", but his rank and file were more radical, eventually passing under the influence of the I.L.P., ibid, p 984. Many of the railwaymen who were his constituents were of militant radical outlook, being organised by Thorne's Gas Workers Union cf Crowley, op cit, p 414. Pickard frequently shared the platform with Greenwood at Glass Makers Demonstrations cf G.B.M. Reports, Volume XI, pp 84 - 85. Ben Turner, although a member of the I.L.P. was a moderate socialist who organised relief for glass workers at Dewsbury during the 1893 Lock-Out, cf Turner B. 'About Myself 1863 - 1930, Toulmin - Cayme Press, London (1930).


180. Six branches, Thornhill Lees, Wakefield, Barnsley, Consibro, Masbro and London sent no votes although Thornhill Lees and Consibro were stated to favour the D.M. Resolution, ibid, p 557.


182. Pontefract & Castleford Express, 11th February 1893. Reckett who was distinguished support for the Miners Eight Hour Bill also assisted the G.B.M. in their support for the Merchandise Marks Act, thereby obtaining the support of Greenwood and Pickard, cf G.B.M. Reports, Volume XI, p 86. Also, cf Barnsley Chronicle, 25th June 1887.

CHAPTER FOURTEEN:

UNION POLICIES

(a) Apprenticeship.

The leaders of the G.B.M. Society, decrying the conditions within the trade, post 1880, frequently asserted that the trade was "A trade that no right-minded parents would put their children to except from absolute necessity." \(^1\)

Alfred Greenwood stated in 1896 that if he had "1001 boys, not one would have to be a glass bottle hand if it were possible to keep them out of the glass house ...... and the sooner the boys', parents awaken to a sense of the conditions under which the men have to labour now as compared with the conditions of 20 and 30 years ago, the better ...." \(^2\)

Yet despite such denunciations recruitment of youths to the trade continued apace and as the branch rolls featured in the Quarterly Reports throughout the period indicate, the tradition of families within the trade remained a characteristic element of trade entry. \(^3\) The reason was partly lack of employment opportunities. In areas where glassworks were located alternative occupations such as those available in mining or the pottery trades offered little better physical conditions and were vastly inferior in terms of the economic dimension. Despite the depreciation in the wages of G.B.M. compared to other skilled workers and the obvious deterioration high unemployment levels implied for the standard of living of the bottle hands, their potential earnings ensured enhanced social status within the community which arising from pride of craftsmanship, was an important factor in trade recruitment. The recruitment was encouraged by the masters who saw the employment of boys engaged on long apprenticeships as a cheap and profitable source of labour. \(^4\) As the terms of trade indenture guaranteed employment to apprentices it was the journeyman members of Society who were laid off at times of slack trade or furnace reconstruction and apprentices were frequently served with notice of dismissal upon completion of their period of indenture. The position of the employers was strengthened by the technical improvements to the implements of the trade (cf Chapter 9
supra) which enabled the craft to be learned fairly quickly while the weak position of the Union from 1876 prevented restrictions on trade entry and the amount of time spent on tutelage being as tightly observed. Table 14:1 shows the effect of manufacturers increasing recourse to boy labour after 1880.

TABLE 14:1 COMPARISON OF APPRENTICES AND JOURNEYMEN MEMBERS OF THE YORKSHIRE G.B.M. SOCIETY EMPLOYED ANNUALLY 1880 - 1891

<table>
<thead>
<tr>
<th>YEAR</th>
<th>BOTTLE HANDS EMPLOYED</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(A) JOURNEYMEN (B) APPRENTICES (B)/(A)</td>
<td></td>
</tr>
<tr>
<td>1880</td>
<td>552 129 23.3</td>
<td></td>
</tr>
<tr>
<td>1881</td>
<td>628 173 27.5</td>
<td></td>
</tr>
<tr>
<td>1882</td>
<td>711 132 18.5</td>
<td></td>
</tr>
<tr>
<td>1883</td>
<td>870 133 15.2</td>
<td></td>
</tr>
<tr>
<td>1884</td>
<td>927 189 20.3</td>
<td></td>
</tr>
<tr>
<td>1885</td>
<td>917 229 24.9</td>
<td></td>
</tr>
<tr>
<td>1886</td>
<td>541 205 39.8</td>
<td></td>
</tr>
<tr>
<td>1887</td>
<td>1008 216 21.4</td>
<td></td>
</tr>
<tr>
<td>1888</td>
<td>956 200 20.9</td>
<td></td>
</tr>
<tr>
<td>1889</td>
<td>1277 228 17.8</td>
<td></td>
</tr>
<tr>
<td>1890</td>
<td>1369 314 22.9</td>
<td></td>
</tr>
<tr>
<td>1891</td>
<td>1608 465 28.9</td>
<td></td>
</tr>
</tbody>
</table>

Source: G.B.M. Reports, Quarterly Branch Returns, 1880 - 1891, passim.

Table 14:1 shows the proportion of apprentice labour to employed journeymen at each year end between 1880 and 1891. The Table reflects the tendency to engage apprentices in years of good trade and to rely on apprentice labour to a great extent in periods of adverse trade. Thus, in 1881 an increase in the number of apprentices occurred in excess of 25% and an increase of almost 27% took place in 1884, while the years 1889 - 1891, saw increases of 12.2%, 27.3% and 32.4% respectively, giving an overall increase of 72.7% for the entire period. The effect on journeyman employment is illustrated by the fact that in only three of the twelve years represented by the Table did the percentage of apprentices, compared to employed journeymen, fall below 20%. The effect is most
dramatically seen in 1886 when the percentage of apprentice labour was almost 40% of the total hands employed. The general tendency and significant increase from 1889 onward explains why the 'Apprentice Question' increasingly occupied the attention of the G.B.M. Society throughout the period. By mid 1890 when negotiations commenced concerning the working Agreement for the following year the question was introduced by the Union following branch consultation. The solicitor to the Employers' Association replying to the Union C.S. stated,

"I must give you to understand that they (i.e. the Yorkshire Manufacturers) cannot enter upon the question of apprentices as any alteration in that respect would be in breach of our arrangement for the year. The employers in many Districts find great difficulty in finding boys to be apprentices, and they must not be fettered in this respect." 

The solicitor's reply indicates the value to them of the status quo and this is underlined by the fact that the issue was still undecided when the 1891 Agreement was finally settled. How valid was the claim of the workmen concerning the imposition of a ratio of three apprentices to five bottle holes because of excessive numbers at certain factories is shown in the table overpage.

Table 14:2 shows 573 bottle holes were working at the 27 factories employing members of the G.B.M. Society in December 1890. The holes consisted of 377 apprentices and 1365 journeymen, making a total of 1742 hands altogether. On the calculation of three men per hole a total of 1719 men would be required to operate the 573 holes. The percentage of apprentices to journeymen is 27.5%, averaging slightly more than 3 to 5 holes overall. However, as this ratio would require only 343 apprentices for its operation there is clearly a surplus of apprentice labour, sufficient to supply 56 additional holes in the same proportion. Clearly, the claim of the Society was a justifiable one and one which unchecked contained inherent danger for the future status of the journeyman members. The situation is given further emphasis by analysis of the stages of the trade occupied by the apprentice labour force.
<table>
<thead>
<tr>
<th>Firms</th>
<th>No. of Holes &amp; Workmen</th>
<th>Total</th>
<th>Ratio of Apps. To Holes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Holes</td>
<td>Apps</td>
<td>J/Men</td>
</tr>
<tr>
<td>Castleford</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breffits</td>
<td>78</td>
<td>37</td>
<td>187</td>
</tr>
<tr>
<td>Ashleys</td>
<td>32</td>
<td>9</td>
<td>90</td>
</tr>
<tr>
<td>Lumbs</td>
<td>33</td>
<td>18</td>
<td>83</td>
</tr>
<tr>
<td>Cheesbrough Phillips</td>
<td>4</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Peacocks</td>
<td>4</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Swinton</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilkinson</td>
<td>23</td>
<td>22</td>
<td>47</td>
</tr>
<tr>
<td>Mexbro</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barrons</td>
<td>36</td>
<td>55</td>
<td>54</td>
</tr>
<tr>
<td>Waddingtons</td>
<td>13</td>
<td>14</td>
<td>26</td>
</tr>
<tr>
<td>Hunslet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alexanders</td>
<td>22</td>
<td>20</td>
<td>49</td>
</tr>
<tr>
<td>Brookes</td>
<td>20</td>
<td>16</td>
<td>44</td>
</tr>
<tr>
<td>Woods</td>
<td>8</td>
<td>5</td>
<td>19</td>
</tr>
<tr>
<td>Thornhill Lees</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilners</td>
<td>46</td>
<td>13</td>
<td>128</td>
</tr>
<tr>
<td>Turners</td>
<td>20</td>
<td>14</td>
<td>47</td>
</tr>
<tr>
<td>Adamsons</td>
<td>7</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>Ferrybridge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bagleys</td>
<td>42</td>
<td>31</td>
<td>95</td>
</tr>
<tr>
<td>Burdins</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Wakefield</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilners</td>
<td>42</td>
<td>35</td>
<td>103</td>
</tr>
<tr>
<td>Barnsley</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redf erns</td>
<td>21</td>
<td>16</td>
<td>48</td>
</tr>
<tr>
<td>Dobsons</td>
<td>26</td>
<td>15</td>
<td>63</td>
</tr>
<tr>
<td>Consibro</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilners</td>
<td>39</td>
<td>10</td>
<td>106</td>
</tr>
<tr>
<td>Mabsro</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beatsons</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Kilnhurst</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blunns</td>
<td>4</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Stairfoot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Redf erns</td>
<td>6</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Rylands</td>
<td>WITHDRAWN FROM SOCIETY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blaydon On Tyne</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alexanders</td>
<td>21</td>
<td>11</td>
<td>56</td>
</tr>
<tr>
<td>Newport</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Wales Glass</td>
<td>16</td>
<td>9</td>
<td>39</td>
</tr>
<tr>
<td>London</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City Glass</td>
<td>4</td>
<td>1</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: Report of Correspondence... 1891, Appendix to G.B.M. Reports, Volume XIII pp 102 - 103.
<table>
<thead>
<tr>
<th>District</th>
<th>177</th>
<th>1</th>
<th>2</th>
<th>33</th>
<th>58</th>
<th>277</th>
<th>56</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newport</td>
<td>9</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blaydon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steartfoot (a)</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kilmarnock</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maestro</td>
<td></td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consbro</td>
<td>10</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barnsley</td>
<td>35</td>
<td>2</td>
<td>26</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheffield</td>
<td>32</td>
<td>4</td>
<td>17</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fortbridge</td>
<td>31</td>
<td>2</td>
<td>7</td>
<td>20</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thorneville Lees</td>
<td>31</td>
<td>2</td>
<td>6</td>
<td>27</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Syton</td>
<td>41</td>
<td>2</td>
<td>19</td>
<td>10</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Castleford</td>
<td>67</td>
<td>1</td>
<td>15</td>
<td>44</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total**: 70

**TOTAL**: 70

---

TABLE 14.3. Number of Apprentice Members of the Yorkshire C.B.M. Society at Each Stage of the Trade 1890

---

(4) Rylands Steartfoot Works not included.

---

Source: Report of Correspondence...1891, Appendix to C.B.M. Reports, Volume XIII, pp 104 - 105
Table 14: 3 reveals 67% of the apprentices at work at the end of 1890 were employed as gatherers, with almost another 15% at the intermediate stage of wetting off and gathering and an equal percentage which had progressed to the stage of training to blow bottles. The Table reflects the substantial recruitment of apprentices to the bottle making trade in the closing years of the previous decade. More significantly, the data reveals the threat to the artisans arising from future overmanning both in terms of artisan displacement occurring as a result of the existing apprentices reaching the upper stage of the trade and from the projected levels of unrestricted apprentice recruitment. While the tabular data is testimony to the effectiveness of Union control over the degree of tutelage which governed the pace of promotion through the stages of the trade, it nevertheless reveals the necessity for more restrictive trade entry. As a result of the short boom in trade from 1890, the G.B.M. Society was able to enforce observation of the apprentice ratio of three apprentices to five bottle holes in the Trade Agreement of 1892. The gain incurred the resentment of the employers and fuelled the great trade dispute of 1893, in which the issue of apprentice restriction has been regarded by some historians as the principal contributory factor. Although the victory of the Union in the 1893 dispute ensured the continued observation of the existing ratio the Society position was theoretically weakened by the support given to the representations of the employers in their opposition to the proposals of the 1895 Factory and Workshop Act to restrict boy labour. In this regard the attitude of the Union was decreed by the awareness that the longer hours and inferior conditions of foreign glassworkers was the reason why the Continental manufacturers were able to undersell their British counterparts. The continued application of boy labour in British glassworks was an essential economic element in keeping production costs to a minimum, thereby ensuring the fullest possible employment of British artisans at the highest possible wages. Seen in this way the attitude of the Yorkshire Society (and others) represents the compromise of its apprentice policy for safeguarding the future economic status of its journeyman members. In one other respect the rigid application of the 1892 apprentice ratio proved counterproductive through causing employers to have greater recourse to the establishment of flint bottle houses to produce wares which were previously regarded as the sole preserve of bottle hands, or alternatively, seeking to work both systems at the same furnace.
In general, however, the Union adhered to the 1892 ratio while maintaining promotional control through the stages of the trade. Rigid control even precluded the customary concessions in favour of the sons of bottlemakers and also blocked entirely entry into the trade beyond the age of 20. In furtherance of its policy the Union successfully prohibited the promotion of apprentices to the status of bottlemaker by deferring tuition concerning that stage of the trade before 21 years of age. The action was a breach of trade custom which was that such tuition began at 20, enabling full apprentice proficiency by the last year of apprenticeship. By such means the G.B.M. Society was not only able to resist the challenge of one particular manufacturer who asserted his right to put forward apprentices, but to insist that he and several others, utilise unemployed journeymen to fill bottlemaking vacancies created as a result of the trade boom in 1898. Similar problems faced the flint glass bottle hands at this time. In March 1897, a meeting of County hands, anxious about overcrowding in the workshops and journeyman unemployment caused by unregulated apprentice promotion, voted to reduce the existing ratio from 5 apprentices to six or seven chairs, to 4 to six chairs. The masters objections on the grounds that the proposed ratio would increase production costs rendering them incapable of competing with foreign and non-unionist manufacturers was ignored and it required a threat to lock out the men to force the Union to the negotiating table. Despite protracted negotiations, however, the Union rejected the manufacturers claims and imposed a de facto settlement on its own terms. Against the background of general prosperity which marked the bottle trade at the turn of the century, the negotiations continued, while employers frequently violated the Apprentice Rule in both terms of numbers and trade promotions. As a result, the newly established N.G.B.M. Society accepted an increase in the ratio of 5 apprentices to 6 chairs. By 1905, following the downturn of trade, the decision was seen to be a mistaken one, leaving the E.C. to conclude that ".... by our present Apprentice Law, we are making more Glassworkers than the Trade demands...... At the present time there is no degree of certainty that any young man serving his apprenticeship, and being a capable workman, can live at the trade afterwards. We are as a class very slow
to move in anything, but the Apprentice question is the most vital one today; and it behoves every member to try and evolve some idea how to remedy the present state of affairs." 23

The Society's solution to the increased level of journeyman unemployment was a proposal restricting the number of apprentices to 3 per six holes or suspension of trade entry for twelve months. 24 The employers refused to take such a step arguing that this represented a substantial increase in wages at a time when invested capital was being lost due to the condition of the trade. 25 The Union position was undoubtedly weak as a result of its policy of attempting to secure employment for its members by allowing them to work with non-unionists and a willingness to work in the same shops as bottle and machine hands. In addition, the desire to seek an accommodation with the employers had prevented the rigid enforcement of apprentice ratio to the detriment of the Society's position. 26 As a result the Executive of the N.G.B.M. Society was by 1906 compelled to recommend acceptance of the employers conditions which assured future observance of a ratio of 4 apprentices to 14 journeymen and only retained the 'Apprentice Law' at the forfeiture of a wage demand which sought to restore a 5% reduction suffered some 18 months previously. 27

The settlement thus represented debasement of economic status and living standards while leaving the manufacturers as arbiters of apprenticeship levels. Although the Trade Agreement of 1910 - 1911 widened the ratio to 4 apprentices to 7 chairs (i.e. 21 journeymen) 28 the easement must be seen in the context of a natural reduction in trade entry arising from displacement of hand workers by machinery and compared with the position of the G.B.M. Society, tends to vindicate the rigidly exclusive attitude of the latter concerning trade entry and craft progression. 29

(b) The F.G.M. Co-operative Works: a case study.

In 1886, the flint bottle hands of Castleford District, faced with unparalleled levels of unemployment, and following consultation with the Union Executive, issued a circular to the trade proposing "That the Trade invest £500 in the purchase of works in the Castleford District, and the carrying on of the same upon Co-operative principles." 30
The basis of the enterprise was to alleviate the strain imposed on Union funds by creating work for unemployed members but the venture in common with those established by other trades at this period, is also significant for the psychological dimension engendered by the synthesis of Owenite idealism and emergent Socialism. The establishment of a co-operative works represented the practical realisation of the desire for regeneration of former values and principles, a fact which helps to explain the ready approval given to the scheme by the F.G.M. Executive and the wide support for the proposal from the normally conservative minded rank and file. Despite the awareness of the universal failure of such schemes in the past, the men were stated to be prepared to take up 200 shares themselves, being confident of success. An unidentified bottle house was available at a cost of £300, through a 'Banking Company' which had given the District one month to consider their offer on the site which it was claimed was

"a large property worth double the money asked" and
"would be money well spent" ensuring that "Members who take up shares will have no cause to regret." Put to the trade vote the issue, described by C.S. Thomas Barnes as "unquestionably the great question of the age", was approved by 808 votes, 1197 members being in favour of the scheme and 389 against. Analysis of the Branch Returns indicates a high degree of polarisation with 11 branches voting entirely in favour and 2 branches being unanimously against the scheme, while a further 7 made no returns. The Yorkshire branches which comprised about 20% of the total Society membership, recorded 154 votes in favour and 109 against and may have been influenced by knowledge of the failure of the G.B.Ms. co-operative some thirty years earlier, when the circumstances of trade, albeit less severe were not dissimilar to the current situation. It is noticable that the scheme received the unanimous support of the Midland Districts, representing almost 40% of Society members, reflecting the enthusiasm of the Birmingham based Executive. It is interesting to note that the pattern of votes cast on the subject appears to be contrary to the existing fervour for co-operative trading which on the evidence of one contemporary authority was strongest in the North of England and Scotland and less strongly supported in the Midlands. It would seem possible that the more detached table branches of the trade increasingly aware of the demands made on Society by the developing and more turbulent bottle trade, but lacking appreciation of the problems which
beset the Yorkshire District, regarded the proposed co-operative as a panacea as much valued for its practical benefit as the fulfilment of an ideal. The delay occasioned by seeking the opinion of the trade caused the Union to be upstaged by an unidentified capitalist who obtained the works at £50 more than the original purchase price and then offered the site to the Society for £750. The Union declined the offer and began to negotiate with the Steward of Sir John Ramsen for the lease of the Ferrybridge Glassworks recently vacated by Breffit & Co. The works consisted of two bottle houses each capable of working 8 - 12 chairs, two pot arches and packing rooms, stables, offices and outbuildings. In addition, a large dwelling house and nine cottages existed on the site. Subject to immediate acceptance of the premises at an annual rental of £172, the landlord was willing to effect repairs at his own expense or alternatively deduct the cost from the rent if borne by the Company. It was considered that about £70 per annum could be obtained by subletting the house and cottages, thus reducing the rent to £102. In considering the method of raising floatation capital the Executive discounted a membership levy in favour of individual investment. The share option was advocated as a system by which every person could invest according to his means and receive benefit in proportion to the size of his shareholding. By its action the shrewd Executive placed the onus of capitalisation on the advocates of co-operative production, obviated criticism arising from the imposition of an enforced levy on opponents of the concept, and at the same time sought to secure the potential benefits of the scheme for the Society while reducing the level of direct financial involvement by the Society. The proposal to invest the administrative control of the works in the hands of six directors was further evidence that the scheme had more in common with capitalism than co-operatism but such considerations did not inhibit the attempt by the C.S. to enthuse the rank and file "... We have no doubts about the scheme ... success is assured .... now is your time .... if you refuse this opportunity the mistake will not be theirs [i.e. the C.C. members] but yours..... if you put your shoulders to this great and noble work, labour will be emancipated, and you and your sons and families will reap a golden harvest." The appeal to self-interest was reinforced by the call for an altruistic response based on artisan pride and fraternal loyalty,
"we not only have to consider ourselves, but those who come after us ... if we fail we shall be the laughing-stock of the country ...... It is impossible for the Directors single-handedly to make the scheme a grand success if the Trade will not assist them in the proportion it should.... Let it be understood, that if such a calamity were to befall the Trade, that the scheme should fall through, it will not be the fault of those who have its control, but those who held aloof when assistance should have been gladly given." 41

The conditional nature of the coda may represent a genuine foreboding on the part of the Executive of the possibility of the failure of the scheme and the attendant loss of social prestige. The likelihood may have been exaggerated in order to stimulate the antithetical response of the rank and file and at the same time ensure an economic safeguard for Union funds in the event of the collapse of the works. It is not improbable, however, that the attitude of the Executive was governed by an awareness of the growing dissatisfaction of a proportion of the Society membership with the proposed scheme and the role of the Executive in its implementation. The opposition centred on the powerful Stourbridge District which regarded the negotiation of the lease, the issue of the prospectus and the proposal that the C.S. be nominated as President of the Board of Directors with the trade nominations for his fellow directors as an exercise designed to secure Executive control of the Co-operative.

"We object to and decline the right of an Executive to self-elect themselves on the Board of Directorate, such an action being unwarrantable, and a gross violation of the pure principle of free and direct representation," 42 claimed a Stourbridge District Circular issued to the trade. As President, the C.S. could use his casting vote, it was claimed, to .... paralyze or veto any action or shares of Government in the concern by the six properly elected representatives of the trade who would
be absent while the undivided Executive six would be close in Council and unanimous in policy." 43

Clearly, the Stourbridge District considered that the wide catchment area from which the elected directors would be drawn would restrict the frequency of their meetings, leaving the de facto control of the co-operative in the hands of the C.S. and his centralised Council nominees. More fundamental was the challenge to the deeply imbued traditions of Primitive Democracy posed by conduct and alleged intention of the Executive. The fact suggests an explanation why despite the assurance of the Executive that its previous actions had arisen from the need for some agent to assume responsibility for launching the scheme, the Stourbridge District remained obdurate and refused to withdraw the Trade Circular, 44 which it asserted was designed to

"... protest against the dangerous and unprecedented self-constituted authority, against which at some critical time the Trade would have no power of appeal." 45

The members, however, overwhelmingly backed the Executive and rejected the counter proposition of the Stourbridge District in the ensuing trade vote. 46

Support for the Executive may be ascribed to the fact that the issue was considered as one of confidence. The outcome should therefore be regarded as the desire to avoid a crisis in the government of the Society by the rank and file, many of whom saw co-operative production as the antidote to the unprecedented level of unemployment, rather than the negation of the concept of primitive democracy. 47

The triumph of the Executive seems, however, to have been a pyrrhic victory for although it was stated that many members were committed to share purchase, only 783 shares at a value of £123 were actually purchased in addition to the £500 block purchased by the Society. 48

The C.C. expressed some surprise but convinced that members were awaiting the outcome of the Trade Vote, proceeded with the election of the Company Board. In the ballot to elect six of the eighteen nominees for directorships, which took place in December 1886, only about 40% of the total of 11,958 possible votes were actually cast by the 1993 strong membership. Four districts with about 21% of the possible total vote did not participate. Even allowing for the unlikely fact that participation by these Districts had resulted in
a wholly favourable outcome, the residual 39% indicates a significant body of the membership holding aloof either from opposition to the co-operative scheme or as a result of the rift which had arisen concerning the democratic concept. Administrative delay seems to have cost the Society the opportunity to rent the Ferrybridge Works for a meeting at Hunslet early in 1887, the newly appointed directors were, for unspecified reasons, unable to decide on a site for the co-operative works. Eventually a seven year lease was undertaken on the Black Flagg Works at Castleford, with a provision to surrender the same after three years in the event of business failure. William Coates, Secretary of Rotherham Branch, was appointed Works Manager, and preparations were undertaken to commence production by September, 1887. Despite boundless optimism featured in reports in the F.G.M. Magazine of favourable trading opportunities and the cheapness of basic materials, the frequent exhortation to members to take up shares shows the underlying fear of the Executive that insufficiency of working capital would either result in the collapse of the company or the involvement of speculative shareholders, outsiders such as those involved in the Ashley Company (cf Chapter 9 (b) ) who would take the Co-operative's affairs out of the control of the Society. After trading for only four months the directors, supported by the members of Castleford Branch, proposed

"That the Society invest another £500 of its funds in shares in the above works.

The directors claimed that the time and expense taken in putting the house into working order, together with the limited ability of the members to invest in the works, was the reason for seeking financial assistance. More ominously, however, the statement that

"... some members are at the present time throwing cold water on this questions"

indicates the doubt engendered by lack of working capital. A balance sheet, based on the first four months' trading, and presented to inspire the confidence of the trade, nevertheless reveals the marginal financial position of the company. The Trade voted in favour of further investment. Although the directors' appeal to the Trade had claimed the support of the newly installed Manchester based C.C., it is noticable that the tone of C.S. Henry Davis, was markedly less enthusiastic than that of his predecessor, Thomas Barnes. Whilst stating that £500 would be invested in accordance with the vote of the Trade, Davis added significantly, "... when we have the money

- 624 -
to invest", pointing out additionally that during its six months in office the Executive had paid out £187-0-0d despite the fact that the terms of the original prospectus had stipulated that no more than one call of £62-10-0d should be made in any half year. Davis, pointing out the precarious condition of Society funds and added with a side swipe at the former Birmingham Executive, that whilst not opposed to the co-operative principle or industrial partnership, he "could not share the enthusiasm of some to rush into this scheme without regard to whether we can afford to do so or not, or whether conditions of investment are financially sound or not."57

The adherents of the co-operative ideal denounced the faintheartedness of the Executive past and present, claiming that the advocacy of individual shareholding, particularly by 'outsiders', was unsound and that the Society ought to have possessed the concern entirely.58

In August, 1888, the Black Flagg Co-operative reported a deficit of £791-19-2½d, over the years trading, with assets of £287-16-6d, and liabilities of £1,519-2-6d. Of 1282 shares issued, 1,000 were held by the F.G.M. Society. Ten shillings per share had been payable on allotment and the calls of 2s-6d each had been made subsequently of which amount the Society was £175 in arrear, with a further £50-4-6d being owed by non-Society shareholders. The company assets comprised plant valued at £229-5-4d, and stock at £287-16-6d. The sum of £2,580-14-6d had been paid as annual wages, of which sum £659-9-5d was paid to the artisan glassworkers. Wages for the Manager amounted to £112-10-0d.59 Comparison of the above statistics shows labour costs to material costs in the ratio of 3:1 which provides an indication of the motives of the Yorkshire manufacturers in seeking to depress artisan wage levels while simultaneously promoting the replacement of skilled workmen by machines, utilising unskilled and boy labour. The lack of business acumen was revealed by the Auditors Report which criticised the method of book-keeping and concluded that the Company had been "greatly underselling the real market price" by offering a discount on stock of 7½% in the hope of attracting customers.60 The Auditors Report was undertaken at the suggestion of C.S. Henry Davis, who at a Board Meeting held in August 1888, had declared himself dissatisfied with Company affairs. The action precipitated the resignation of Thomas Mawson as a director of the Company. Mawson, noting that the Board did not enjoy
the confidence of the Society Executive suggested that a member of
the C.C. should be co-opted to the Board in an ex officio capacity
for the duration of the Executive's term of office. 61 More ominous
indications of the way the rank and file had begun to regard the ven-
ture is apparent in the proposition of the London District
"That in consequence of the deplorable condition
of the Co-operative Flint Glass Bottle Works at
Castleford which shows a deficit of £792, with
no prospect of improvement, which will eventually
lead to further losses and positive ruin if not
stopped, this District calls upon the Executive
to take immediate steps for the winding up of
the Company to prevent further losses and danger
to our Society." 62
The London District secretary supplying reasons to justify this ac-
tion stressed the difficulties of pursuing a productive co-operative
at a period of adverse trade since
"It assumes a demand for labour when the markets
are stagnant for it sends goods to a market
which is overcrowded with goods and thus tends
to lower prices and of necessity reduces
wages already too low. It actually does what
a trade union should prevent." 63
In addition,
"It further supposes profits.....will admit a
margin of increase [when]..... the fierce compe-
tition of the last twelve years has long since
reduced profits to their lowest point." 64
It was claimed, significantly, that a local manufacturer involved
in a dispute with the Union had engaged boy labour which had under-
mined the viability of the nearby Co-operative works by undercutting
production costs and concluded that
"The whole thing was founded on sentiment.
There were no real business ideas in the
affair..... the utter failure of forty such
places in Paris should surely have its
lessons." 65
This sentiment was echoed in a letter of the same period which claimed
that the venture was not only foredoomed, being a Socialist utopia
which did not embrace any of the fundamental principles of co-opera-
tion. The writer who claimed to be "a firm adherent" of co-operation
- 626 -
went on to state that

"Trade Societies have no business to connect themselves therewith, the spirit of the two institutions has proved to be incompatible."66

The writer concluded by defending capitalism stating that the concern for the welfare of the poor exhibited by the affluent classes was the reason the nation had been spared from "social disunion".

By November 1888 the Company deficit had grown to £980-11-1d, an increase of £188-12-812d during the previous quarter.67 The Executive in urging the members to adopt the London proposition condemned the directors for not taking a more active part in company affairs and for leaving its entire control to the manager.68 It was stated in February 1889 that the furnace was out for want of fuel which drew the further comment that

"... those who, with plausible sophistry persuaded the trade to adopt their fad, knew nothing about the principle of productive co-operation, and the hard-earned savings of the members has been squandered recklessly away, and the idea of being our own masters has received its death blow from the hands of such advocates."69

Clearly, the Executive line was to condemn the nature of the venture and the flawed thinking of its promoters and by stressing the economic loss sustained by the investors, so discredit the scheme in the minds of the members that agreement could quickly be reached to terminate the Company before the Society was bankrupted by financial liabilities. The ensuing vote in favour of closing the works was carried overwhelmingly, enabling circulars to be issued to all shareholders consenting to the winding up of the firm by the C.S. on behalf of the Society.70 The closure of the works and the threat of legal proceedings by some creditors led the Executive to send the C.S. and the Society President to take possession of the books and make an inventory of the stock and plant. The step was challenged by the directors of the Company who asserted that they were thus denied the opportunity to publish an account of their stewardship.71

To clear up this and other issues concerning the future of the Union, the Executive proposed that a General Conference be held at Liverpool, August 1889.72
In view of the impending Conference, T.C. Barnes, Chairman of the Co-operative works, retained a prepared report which was written for publication in the May issue of the F.G.M. Magazine. The same issue contained details of debt clearance by the C.S. on behalf of the Company including the payment of two weeks' wages in lieu of notice to the Company workers.

The Conference heard a defence of the directors read by T.C. Barnes following which Henry Davis explained the Executive position. The ensuing discussion appears to have been brief and a resolution "..., that a report be printed and distributed to members of the Society and further, that we representatives of the Society regret the incompetence displayed by the Board of Management," was opposed by the C.S. The emphasis was clearly to close ranks and prevent internal disharmony but also to prevent embarrassing details becoming public knowledge. To this end the C.S. suggested that delegates carry a verbal report of the proceedings back to the rank and file members. The resolution being accepted, a further resolution from the Stourbridge Delegate "That all the effects belonging to the Society at the 'Black Flag' works be left in the hands of the Executive to dispose of to the best advantage: and that they shall be given necessary notice to terminate the Society's Tenancy of the Works," was carried.

In accordance with this resolution the C.S. met Mr. Wright, a Castleford accountant, to arrange to sell the effects, as soon as possible. A meeting with the Agent of Breffits, the works owners, to try and compromise the terms of the lease was unsuccessful and the Union was left to bear the burden of the tenancy until July 1890, the works being advertised for sale shortly thereafter. The events bore out the foreboding of a corresponding member, who, prior to the commencement of the works wrote that the "Silly and absurd notions about co-operation and our loss of precious money .... is the most hazardous and dangerous that could be entered upon."
Lack of precise details concerning the administration of the co-operative works confine analysis of the reasons for its failure to general speculation. It is obvious that the prediction of a former C.S. Joseph Woolley, that the success of the venture would depend largely on the management of the works was correct. The directors through infrequent contact and lack of business experience were unable to exercise effective control and this left the administration of Company affairs to the Manager who was equally lacking in business skills. Furthermore, the venture was obviously founded with insufficient capital and established at a time when poor trading conditions were reducing the demand for goods and labour. The conditions engendered unemployment and trade disputes which further drained the depleted financial resources of the Union. The situation was accompanied by the lowering of the market price of glassware which was in turn offset by reduced wages promoted by surplus labour. Zeal thus outpaced caution with disastrous results for the co-operative works. The following decade saw the commencement of the 'brewers wars' with its amalgamations to form large-scale companies and the subsequent stimulation of the glass bottle trade. The latent desire amongst artisan glassmakers for a share of the wealth produced by their craft skill is evident in the proposition by the D.M. of the G.B.M. Society, 29th July 1885, that the Society funds be used to obtain shares in the Saville Town Bottle Works. The proposal was subsequently rejected by a vote of the membership, by 735 votes to 337. Although less than half the members voted on the issue the minority vote serves to indicate a continued dedication to the co-operative spirit. To what extent such feeling represents support for syndicalism born of co-operative ideas or merely reflects the growing influence of Socialism with its emphasis on the wider distribution of industrial wealth is conjectural. One feature common to the Black Flagg Co-operative and the proposed Saville Town shareholding is the way the leaders of the respective Unions sought to lead the members from theoretical support to a position of active participation. That the motives of the leaderships was sincere is beyond doubt, but what is debatable is the extent to which the leaders reflected the overall feeling of their memberships and whether they allowed their private hopes and visionary ideas to miscalculate rank and file opinion and in so doing override the practical aspects of the members true interests. Some indication of desire tempered by caution born of experience, is evident in the commitment of Frank Swan, the Hunslet based leader of
the N.G.B.M. Society, a long-term advocate of co-operative production. Commenting on correspondence in the N.G.B.M. Magazine in 1911, urging the establishment of a co-operative works, Swann stressed the need for a scheme which clearly defined the role of producers and consumers, source and amount of capital and the relationship of capital and labour. Regarding the Black Flagg concern, Swann had evidently formed the retrospective view that the venture

"... never was a co-operative, never approached co-operation .... industrial partnership is not co-operation and that would have been a more fitting title for the Black Flagg concern."  

On the eve of the First World War the issue was still very much alive and it would appear that a great degree of support existed for the establishment of a co-operative glassworks, although considerable difference of opinion existed as to whether such a factory should be established by means of increased membership contributions. Again Swann's enthusiasm is clearly apparent

"There is a grand opportunity before us and a time is ripe for the development of such an enterprise".

Perhaps to allay fears arising from the abortive Black Flag enterprise, Swann decried that venture as one

"... which was badly managed and where robbery was ripe."

Even as late as 1916, a former official of the N.F.G.B.M. Union was submitting outline proposals for consideration by the members; proposals which had much in common with the ill-fated Black Flag co-operative, and justifying his prospectus with the opinion that

"There is no trade where the principles of co-operation could be so well applied or so profitably practised as with us."

Such expressions of co-operative support were, however, the last vestiges of a century old ideal, for in the aftermath of the Great War a slow yet certain decline in the skill and influence of the artisan glassmakers took place against the dual threat of economic depression and automatic machine production. Henceforth the Unions were fully occupied in their fight for survival. A further war and the concentration of the glass industry into giant conglomerates sealed their fate and laid the 1887 prophecy that
"... in a few years men (will) combine and become their own masters and work for themselves and so reduce the large manufacturers that the districts... will be studded with scores of small houses." 87

(c) Mechanisation.

In a statement in the employers' journal 'Capital and Labour', published in 1877, Alfred Alexander, referring to the attitude of the G.B.M. Union to the introduction of a continuous tank furnace at his Hunslet Glassworks some time previously, asserted,

"I have no hesitation in saying there is as much enterprise existing in manufacturers now as ever, but they naturally ask why they should go to some thousands of pounds in outlay....with the risk of the interference of Trade Unions, who look upon any improvement as an infringement of their rights and privileges." 88

The sentiment was echoed in the Presidential Address given by Alexander Siemens to the Institute of Electrical Engineers in November 1904. Siemens claimed that the G.B.Ms.

".... have a rooted objection to seeing machines being worked by unskilled men, on the mistaken notion that such are replacing skilled men. They also have another fetish - that all workers should be treated alike, no preferences being given, and so ignoring the industrious and capable men who are more deserving than the lazy and careless." 89

Between the dates of the above statements incidents such as the collapse of the Ashley (Machine Made) Bottle Company (cf Chapter 9 (b) supra) and the abortive attempt by the Rylands Company to introduce three-shift working (cf Chapter 15 infra) during the 1880s, fuelled the general belief that the attitude of the G.B.M. Society towards all aspects of technical innovation was one of suspicion and hostility. 90 The willingness of the G.B.M. to adapt to technical changes, each of which represented a move away from traditional practice, is a matter of record (cf Chapter 4 supra) and was discernible post 1880.
despite trade depression and unprecedentedly high levels of artisan unemployment. Indeed, the active participation of the G.B.M. Union in introducing the 'German Blocking' system at Breffits in 1887, at a time when industrial relations were at a generally low ebb within the trade, is a direct example of the Society's awareness of the need to adopt new technology to enable English glass bottle manufacturers to compete with foreign rivals and thus ensure the maintenance of the status of English artisans. The radical nature of the measure may be judged by the fact that the adoption of the new methodology necessitated financial subsidisation by the Union and a change in Society Rules to facilitate the economic and technical requirements of the innovative method within the structure of the existing system.

Other forms of adaptability are seen in the willingness to accept new moulds and improved hand tools which necessitated mental and physical adjustment, increased productive capacity and the pace of work, and by rendering mastery of the trade more easy, intensified the competition between the G.B.M. and F.G.M. by blurring the spheres of craft demarcation. The acceptance of innovative methodology also had inherent implications for deregularisation of craft progression and continuing high levels of journeyman unemployment. Viewed in the above context the canard of Union opposition to technical change, the source of which invariably lies with disgruntled manufacturers and their capitalist associates, is clearly refutable.

Yet despite the obvious bias, such opinion was informed by a degree of experience of Union intransigence to some aspects of technical development. What then was the nature and extent of the Union opposition? Two areas of opposition are discernible, the regenerative tank furnace, and the bottle making machine. In his critical review of the glass trade Alexander Siemens overlooked the fact that intermittent 'fire box' tanks were widely utilised by the general trade from the 1860s and during the following decade were introduced into the Yorkshire region without enquiring industrial unrest. The potential of the regenerative tank was such that it threatened the socio-economic basis of artisan status. The required metal temperature made the workshop akin to "Dante's Inferno," while the productive capacity of the regenerative tank resulted in the proliferation of bottle holes causing problems of overcrowding. More significantly, the reconstitution of working hours, initially through the introduction of double-shift working, increased the pace of labour and artisan unemployment, rendering obsolete the traditional use of the 'tantum' as a means of regulating the degree of seasonal
unemployment. Nevertheless, the exigencies of the trade situation resulted in the widespread adoption of the Siemens' tank furnace by the 1880s and its de facto acceptance by the bottle hands. It was only when Rylands attempted to introduce three-shift working in order to fully capitalise on the economic potential of 24 hour operation the tank afforded, that the workmen's deep-rooted objection to such technology became translated into open hostility. The basis of the workmen's attitude had been clearly revealed as early as 1875 when in correspondence addressed to William Siemens, Alfred Greenwood had written:

"For the satisfaction of your thoughts,
I may just state that night-work is objectionable to the Glass Workers.
I am not aware of any other objection to the Continuous Furnace." - (my italics)

That the workmen's objection was not to the new technology per se is confirmed by Siemens:

"The aversion of the Glass Workers to night-work appears to me not to affect the use of the Continuous Melting Furnace, which I am glad to learn is, in itself, not found to be objectionable" (my italics).

Nevertheless, Siemens confirmation that "....it would not pay to work the Continuous Melting Furnace less than two shifts per day...." meant its being opposed by the G.B.Ms. who regarded as retrogressive any change to "past and present customs and practices of the trade" and considered that "...the only sound and proper principle was to work between the hours of 6 a.m. and 5 p.m. which is the time set apart for labour throughout the country generally."

The abuses which arose following the enforced acceptance of 'double-shift' working during the following decade showed the conservatism of the G.B.Ms. to be justified as far as fear of the effect of the continuous furnace in the aspects of health, social security and craft status were concerned. However, it begs the question as to their likely welfare had the Union succeeded in prohibiting its use while Continental manufacturers had increasing recourse to its
application on a double-shift basis at lower labour costs than those of British employers. 102

The precision and complexity involved in manual production fostered a sense of inviolability amongst the glass makers to whom the threat of replacement by machines was as inconceivable as the idea was impractical. The lack of hostility to the constant attempts by manufacturers to introduce machine bottle making may be ascribed to the sense of artisan invincibility, which was reinforced following the failure of the Ashley (Machine Made) Bottle Company in 1894 (cf Chapter 9 (b) supra). The Ashley Company was, however, only the ill-fated precursor of other such ventures, 103 and by the turn of the twentieth century the proliferation of semi-automatic machines throughout the United States and Europe was beginning to affect the British industry as an increasing number of manufacturers became aware of the technical capability of the machine and regarded machine production as an economic necessity in the obviation of constritive and high-cost labour. The lessons were clearly to be learned by the American experience where the introduction of bottle machines had resulted in more than 73% of manual workers being displaced within the space of two years and caused a significant reduction in the wages of the remaining workforce. 104 The purchase by Bagley & Co. of the patent rights to the Ashley Bottle Making Machine in 1896, led to the proposal by members of the Ferrybridge Branch of the G.B.M. Society that members be allowed to work at the machines, but the D.M., indifferent to the likely effect of the machine’s reintroduction following its earlier failure at Castleford, shelved discussion of the subject and thus forfeited an early opportunity to capture the machine for exclusive use by Society members. 105 The sharp decline in trade and a phase of industrial disruption in 1903 resulted in a significant increase in the number of operational machine shops and by December 1904 eight were in existence. 106 By 1909 machines were installed at 9 factories within the administrative area of the G.B.M. Society, with similar proliferation in the other areas forming the National Districts of the trade. 107 The depression of wages and attempts by Yorkshire manufacturers to extend the working hours from 1903, brought an awareness of the threat of the machine to the Executive of the G.B.M. Society. In June 1904, a D.M. recommendation that

"...The members take over the machines provided satisfactory terms be agreed upon"
was rejected by a majority of 275 votes. The fact that only 677 members of the 1643 eligible to vote on the issue did so, suggests that the majority of the membership was unaware of the importance of the machine question on the trade. The subject was resubmitted for members' consideration following the National Districts Conference in August 1904, and again rejected. The narrower majority from a significantly larger ballot may, however, be indicative of an awareness within the Society of the need to come to terms with the machine. The point is reinforced by the narrow acceptance of the National Conference resolution of April 1905, "That members be allowed to accept situations at machines without forfeiting their membership" although a supplementary recommendation that respective districts be left to decide whether or not machines be worked in the same bottle houses in which the bottle hands themselves worked, was defeated by 1276 - 169. Clearly the bottle hands saw national unanimity as essential on the machine question in order to prevent a situation in which concessions to the employers in a particular bottle making district would be claimed by those in the remaining districts, to the detriment of the manual workers in general. The importance of the issue to both sides of the trade is evident by the attempt of the manufacturers to seek deletion of the clause prohibiting the introduction of machines into shops worked by hand craftsmen from the List of Numbers and Overwork as part of the Terms and Conditions of Trade, 1907, and the emphatic rejection of the proposal by the G.B.M. The bottle hands were encouraged in their attitude of 'exclusivity' by the fact that despite the technical improvements which had resulted in the wider dissemination of machines, machine production was still largely confined to larger wares of simple design, making essential the skill of the artisan worker in a wide range of containers of more complex design. The knowledge encouraged perpetuation of the belief that the manual craftsman would never be entirely superseded by the machine. More obvious, however, was the fact that wages paid to machine hands were lower and hours worked, longer, than those applicable to skilled artisan bottle makers. It is clear that from the point of view of the skilled glassmaker, the introduction of machines into the shops worked by hand craftsmen carried the danger of erosion of wage differentials, craft status, and adverse working conditions arising from noise, heat
and overcrowding. Seen in this light it is obvious that the G.B.M.s. were not hostile to the machine itself, but to the threat posed to artisan living standards and job security as a result of its direct application to the traditional domain of artisan activity. The same reasons help to explain why the G.B.M., despite a considerable and growing degree of displacement and attendant social disadvantages retained a pride in their craft and social status which caused them to hold aloof from the machine even before the advent of the Owens Automatic spelled out the future obsolescence of the hand trade. A clear example of the nature of the artisan pride is seen in the case in March 1906, when four unemployed glasshands were denied parish relief by Pontefract Poor Law Guardians because it was alleged, they refused to accept work at machines in defence of Union policy. The case became something of a local cause celebre, and was taken up by regional newspapers of whom it was stated, "scarcely any one of which has sympathy with the working man" because of political outlook. In its social context, the case was notable for the caustic comments of J. W. Bentley, Chairman of the Local Board, and the retaliatory remarks by Alfred Greenwood which provide a singular insight into artisan self esteem and social pride. Following the abortive attempt by the Clerk to the Board to obtain from Greenwood details concerning Society policy regarding bottle making machines, Bentley publically denounced Greenwood as being 'no better than the rest', a remark which drew the reply from Greenwood

"...I am as good, truthful and honest a man as yourself, though you happen to be a "J.P." & Co. I do not inquire into your business and decidedly object to your enquiring into mine. When I do enquire into your professional and private business it will be quite soon enough for you to enquire into mine. But surely my position admits of a man being as truthful as an Auctioneer though from your high and elevated position you impute me to be lying. I have yet to learn who appointed you an inquisitor into trade union rules and regulations. Should you, however, be so fortunate as to occupy that enviable position there may soon be an auto de fe.....I object to answer your queries
Despite the fact that the adoption of new technology invariably meant an increase in workspace and a corresponding decline in workshop conditions with all the implications this carried for health and welfare, it is demonstrably clear that the G.B.M. were always willing to adopt new trade practices if these carried no threat to the craft status and the economic and social advantage such status conferred. It was because the regenerative furnace and its corollary, the bottle making machine, threatened artisan status absolutely that they were denied the co-operation of the G.B.M. Society in their establishment and trade utilisation and from the initial disregard the myth of worker hostility arose. The soundness of artisan judgement concerning the potential threat to status and livelihood posed by the machine was all too obviously illustrated in the immediate aftermath of the Great War (cf Chapter 16(a) infra).
CHAPTER FOURTEEN: Union Policies

1. G.B.M. Reports, Volume IX, p 430.

2. G.B.M. Reports, Volume XV, pp 312 - 313.

3. The writer's father entered the trade in 1908, following in the footsteps of his father and four elder brothers, while the youngest boy in the family also entered the trade a few years later. The traditional connection with the trade was still an identifiable feature at Knottingley a quarter of a century after manual glassmaking had ceased within the industry.

4. The extent of youth employment at Castleford Glass works alone is shown by the evidence submitted by the Employers Association to the Secretary of State in response to the enquiry concerning the employment of boy labour in the glass trade, 1894. The data reveals no less than 40 boys of 13 years of age employed during the years 1890 - 1895 inclusive. It was contended that abolition of boy labour would mean that "The trade will be crippled to a most alarming extent, double plant will be needed, 2,000 men and 1,500 boys would be affected, exclusive of yardmen and others."

Eldridge Papers, Goodchild Loan Collection, W.M.D.C. Archives Department, Wakefield.


7. The Table does not include data concerning the Rylands factory at Stairfoot, Barnsley, which was withdrawn from the Society at that time and working upwards of 70 holes.

8. The seeming discrepancy in the grand totals of each column of the Table is due to the fact that some apprentices were employed
in a dual capacity (e.g. gatherer/blowers) and several holes working the German system, and also some journeymen were working alternate weeks.


11. The application of the 1892 ratio resulted in the replacement of a bottle house by a flint house at the Swinton factory of Barron and Sons in 1897, cf G.B.M. Reports, Volume XVI, pp 61 - 62.

12. The system of chairs of bottle hands and flint hands working in the same bottle house had been introduced by William Bagley at his Knottingley works. As a result, manufacturers at Castleford and Hunslet sought to adopt the system. The G.B.Ms. objected on the grounds of insufficiency of space but a more probable explanation was the fear that the system would facilitate the widening of the productive range of the F.G.M. at the expense of the G.B.M. cf ibid, pp 63 - 64 and pp 457 - 458.


15. Ibid, p 321.


17. The reduction proposed was in fact a reversion to the original ratio which had been modified about 20 years previously in order to meet the demand for more flint hands in the Yorkshire District, F.G.M.M. Volume 5 (Third New Series), pp 86 - 87.

18. Ibid, p 87 For the employers proposals, cf ibid p 410.


21. F.G.M.M. Volume 7 (Third New Series), pp 471 - 472. By 1906, the employers were demanding total control of promotions within their factories, ibid, p 9.


23. Ibid. The acceptance of the increased ratio was bartered for an increase in wage rates, ibid, p 74.


25. Ibid, p 73.

26. Returns for the final quarter of 1906 show that one quarter of working members of the N.G.B.M. Society were apprentices. Although incomplete, the Return is sufficiently detailed to indicate the adverse position of the Society by that time. Ibid, p 179.

27. Ibid, p 75.


29. In December 1910, apprentice members of the N.G.B.M. Society represented 10.2% of working members and only 7.6% of the total Society membership, ibid, p 316. By contrast, apprentices constituted 9.5% of the G.B.Ms. total, being 19.7% of the working members, cf. G.B.M. Reports, Volume XXII, p 682.

The F.G.M. Co-operative Works: a case study.


31. The desire to recreate the conditions of the past by the application of socialist principles is clearly evident in the Address to the Trade, February, 1876.

"The labour of the glass worker has now become slavery. That is not all, the continual worry in his working time and the great harass is making life a burden. I shall not be surprised if in a few
years men combine and become their own masters and work for themselves, and so reduce the large manufacturies that the districts in the Midlands will be studded with scores of small houses."


32. F.G.M.M. Volume 10, New Series, p 244.

33. Ibid, p 269.

34. Ibid, p 349.

35. Ibid, pp 337 - 41.


37. Ibid, p 338.

38. Ibid, p 337.


40. Ibid.

41. Ibid.

42. Ibid, pp 351 - 352.

43. Ibid.

44. Ibid, pp 347 - 348. Charges of personal jealousy and opposition to the co-operative scheme were levelled at Stourbridge District. The District refuted such charges stating that the unanimous vote in favour of the proposed scheme was proof of their enthusiasm for the concept.

45. Ibid, p 352.
46. The Executive proposition was accepted by 1049 votes to 37, while that submitted by the District was defeated by 587 votes to 514. *F.G.M.M.* Volume XI, New Series, pp 88 - 90.

47. Ibid, p 80.

48. Ibid, p 84.

49. While Stourbridge was generally in favour of the co-operative ideal, Bathgate, Bristol and Dudley had shown little or no enthusiasm and had declined to vote on the original proposal to establish a co-operative works. A further explanation of the low number of votes cast may be the reluctance of members to cast votes for candidates of whom they had no knowledge or acquaintance, resulting in forfeiture of votes rather than being cast for unknown quantities! *F.G.M.M.* Volume II, New Series, pp 176 - 177.


51. Ibid, pp 291 - 293. As both the Ferybridge Works and the Flagg Works were formerly operated by Edgar Breffit & Co. it is probable that both were available to the F.G.M. Society for the establishment of the co-operative works as a result of re-organisation by the Breffit Company following the death of Edgar Breffit some years earlier.


53. *F.G.M.M.* Volume II, New Series, pp 41, 293 and pp 414 - 415, and *op cit*, Volume 1, Second New Series, pp 9 and 234, for examples of appeals to the Society members to purchase shares. The previous indications of potential support for the co-operative ideal suggests that financial constraint rather than lack of enthusiasm was the reason for the tardy individual response.

54. Ibid, p 332.
55. Total income from all sources up to and including March 17th

<table>
<thead>
<tr>
<th></th>
<th>£</th>
<th>s</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total income</td>
<td>907</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Total expenditure</td>
<td>903</td>
<td>2</td>
<td>7½</td>
</tr>
<tr>
<td>Balance</td>
<td>4</td>
<td>6</td>
<td>0¼</td>
</tr>
<tr>
<td>Unpaid shares, about</td>
<td>130</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Owing to works for goods supplied</td>
<td>56</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>190</td>
<td>16</td>
<td>0¼</td>
</tr>
<tr>
<td>Total amount owed by works for goods, etc., purchased about</td>
<td>160</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>16</td>
<td>0¼</td>
</tr>
<tr>
<td>Total amount saved to trade in 16 weeks</td>
<td>74</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Total amount of wages paid</td>
<td>448</td>
<td>18</td>
<td>6½</td>
</tr>
</tbody>
</table>

Ibid, pp 232 - 236

56. In a 91.0% ballot 1089 voted in favour and 536 against further investment of Society funds. The Yorkshire branches which comprised 20.8% of the total Society membership of 1989, were massively in favour, only Barnsley recording a majority against. Ibid, p 231.

57. Ibid, pp 245 - 247.

58. Ibid, p 414.


60. Ibid, pp 417 - 420.

61. Mawson, Secretary of the York District of the F.G.M. Society also proposed that all members of the Board should reside at Castleford, as the parlous state of Company finance would not bear the expense of frequent visits by directors living further afield. With this fact in mind it was agreed by the Executive and the Board that John Wood of Castleford, the highest individual shareholder, replace Mawson as a Company director, F.G.M.M. Volume 2, Second New Series, p 113 and p 225.


64. Ibid.

65. Ibid.


68. Ibid.


70. The proposition to wind up the Company was carried by 1229 votes to 62. Of the 1964 members representing 14 of the 23 Districts of the Society which participated in the ballot 65.7% voted. Castleford District abstained and Barnsley and Rotherham were two of the three districts of the trade which recorded a dissentient vote. Ibid, p 226 and p 336.


73. Ibid, p 283.

74. Ibid, p 343.

75. Ibid, pp 400 - 401.

76. Ibid, p 463 and p 469.

77. Pontefract and Castleford Express, 6th September, 1890.


79. Ibid, p 337.

81. Swann was probably the writer of the letter advocating the establishment of a workers' co-operative featured in F.G.M.M. Volume V, p 555 (1865). Nominated as a director of the Black Flagg Co-operative Works, Swann failed to obtain election to the Board, securing 958 votes only, F.G.M.M. Volume 2, Second New Series, pp 176 – 177. Following the establishment of the N.G.B.M. Society in 1903, Swann became a leading official serving as General Financial Secretary (1904 – 1911), and General Secretary from 1911 – 1918, N.F.G.M. Magazine, 1903 – 1918, passim.

82. N.G.B.M.M. Volume 5, p 85. For correspondence cf ibid, pp 88- 90.

83. Ibid, p 44.

84. N.G.B.M.M., Volume 6, p 569.

85. Ibid, p 570.

86. Ibid, p 571.


89. Presidential Address to Institute of Electrical Engineers, 10th November 1904, reprinted in Engineering, 18th November 1904, p 685.

90. This belief was being expounded long after the process of manual production had become obsolete, cf Hodkin F. W., loc cit, J.S.G.T., XXXVII, 1953, p 27N.

91. The system of German Blocking introduced at the Breffit Works in 1887, involved the engagement of a group of German bottle-makers under Theo Volke, to teach the method of producing seamless bottles to the indigenous artisans. In their 'Report on Glass Bottle in the Paris Exhibition of 1878' (Printed as Appendix to G.B.M. Reports, Volume VI,) Alfred Greenwood and
William Lindsay, while noting the pre-eminent quality of English bottles, (Report p 7), had noted that Continental wine merchants were critical of the seams left by the mould joints (Report p 12). The agreement between Breffits and the G.B.M. Society whereby the latter was allowed to engage foreign workmen to teach the new system to Society members was of short duration, being broken by Breffits when results proved to be unsatisfactory, cf G.B.M. Reports, Volume XI, p 14.

92. In the operation of the 'German Blocking' system the traditional work pattern of the wetter-off was revised to include the placement of wooden 'spell' into the mould to 'lubricate' the mould case and facilitate the rotation of the parison in order to eliminate the seam made by the mould joints. The functions of the gatherer and blower were combined in the German system, a fact which necessitated a new wage category and therefore alteration of Society Rules. The Society subsidised the new methodology by agreeing to pay 50% of the wages of the German workers, ibid.

93. Between 1880 - 1889, at least six patents were granted to Castleford manufacturers Breffit, and Macvay, three (Nos. 5161; 1730 and 11049) concerning bottle making tools and the remainder concerning bottle design. Other patents were taken out by Rylands and Kilners during the period.

94. Although specious statements concerning Union opposition to technical change originate with the manufacturers and associates, they were disseminated by the press, including religious weeklies etc., the nature and eminence of which assured textual acceptance by the public, a fact which led Alfred Greenwood to complain "... seldom the question is asked - "Is it true?". They do not stop at trifles - it is 'copy', and into the press it goes, without passing through any 'refiners fire'." G.B.M. Reports, Volume XX, p 23.

95. Ibid.
96. "Dante's Inferno is the most appropriate appellation that we have yet met with to describe some factories. Some of them might well be compared to 'slaughter houses', with the difference that the hands are semi-roasted instead of being stuck". Ibid.

97. Referring to the adverse effect of dual shift working on artisan employment, Greenwood stated

"Previous to its introduction when there was a depression in the trade, it was customary to restrict the production by putting on a Tantum in preference to stopping furnaces. It was seldom a winter was got over without restriction of production which often commenced in September or October .... When furnaces were stopped in the autumn they were generally started again in February or March, and the men were re-engaged."

G.B.M. Reports, Volume XXII, p 89.


100. Ibid, p 99.

101. Ibid, p 100.

102. Siemens had stated in his letter of 13th May 1875,

"... the new furnace is being rapidly adopted abroad, with continuous work per twenty-four hours, and unless it be adopted here for double shifts an active foreign competition may be expected."

103. In 1890, 24 manufacturers had formed 'The Glass Bottle Industries Ltd.', with a capital of £1,400,000, with Isaac Kaberry, the Secretary of the Yorkshire G.B. Manufacturers Association, as their legal advisor, and with the aim of attaining machine produced bottles. Thompson J. 'A Brief History of the Glass Industry showing the various stages in its development in Great Britain and weekly suspension of work for 24 hours in the glass manufacturing process where tank furnaces are used.' Wilson, Castleford, (1924), p 8.


105. G.B.M. Reports, Volume XV, p 452.


109. The proposal was rejected by 495 votes to 357, a majority of 138. Ibid. Entries August 3rd - 24th, 1904.

110. Ibid, Entries 9th - 20th, 1905.

111. The proposal of the Masters that the words "But be it understood that the Bottle Hands shall not work in the same shop as Machine Hands" be deleted from Clause 3 of the existing List of Numbers and Overwork. The proposal was rejected by 1036 votes to nil. Ibid, Entries 19th - 24th November, 1906.
112. cf range of machine wares in G.B.M. Reports, Volume XXII, pp 178 - 181.

113. While acknowledging the role of the bottle making machine in displacing hand blowers, Alfred Greenwood wrote in 1909, "We have never said they will altogether supersede the hand blowers, but they will to a larger extent than they have already done ...."

Ibid, p 90.

114. Not only were the rates of wages and overwork paid to machine hands below those paid to artisans but variable rates existed between bottle making regions and even between factories within the Yorkshire region, cf ibid, pp 178 - 185. The degree of variability was an important consideration governing artisan attitude to the machines for the uniform list of wages and overwork was a central element governing socio-economic status and was jealously guarded, hence Siemen's remark concerning the "fettish", that all workers be treated alike, p 631 supra.

115. cf Reports in Pontefract and Castleford Express, 24th and 31st March; 12th and 28th April and 12th May 1906.


117. G.B.M. Reports, Volume XX, p 318. Remark by Alfred Greenwood concerning newspaper reports of the case. Greenwood who clearly regarded the case as having an underlying political motive concluded his remarks by stating "...seldom has anyone a good word to say in their (i.e. the artisans) favour - except at an election time, when they can flatter them in order to influence their votes. Many of them can then pose as democrats of the deepest dye."

Ibid.

Greenwood appears to have suspected William Breffitt as one of the principal anti-union influences, f/n 4, p 304 ibid, and
underlined the political influence of Breffit by reprinting a political circular issued by Breffit to his workmen some years earlier (1885) in the pages of the Quarterly Report, close to reports of the Guardians Test Case, ibid, p 320. Other instances of political bias are also discernable f/n 16, p 317, ibid.

118. Ibid, pp 309 - 310. The emphasis on Bentley's profession as an Auctioneer was particularly barbed as the Bentley family were in addition Solicitors with high social standing within the township of Knottingley and had similar business connections at Pontefract. Clearly an artisan glass bottle maker regarded himself as the moral and even social equal of the professional business man.
CHAPTER FIFTEEN:

INDUSTRIAL RELATIONS 1880 - 1909

The great Lock-Out of 1893, marked the watershed in the course of industrial relations in the trade between 1880 - 1909. By 1882, trade resurgence resulted in a recovery of Union bargaining power. The simultaneous increase in the volume of imported wares resulted in the intensification of domestic competition causing some disarray within the ranks of the Yorkshire manufacturers and endangering the new-found strength conferred by the unity of the Employers' Association during the previous decade. The manufacturers sought to eliminate cut-throat competition and the sporadic disruption of trade engendered by the deregulation of wages and prices as each undercut the formal List prices in order to secure a share of the domestic market. With the restoration of the balance of industrial power a system of collective bargaining developed by which wages and overtime rates were formulated on the basis of annual trade agreements. To the employers, collective bargaining was ostensibly a mechanism by which jointly negotiated wage rates ensured price control. The workmen, however, anxious to recover the conditions of status conferment which had prevailed pre 1876, regarded the system as a forum for negotiations concerning much wider issues such as sanitation and health, regulation of entry and progression through the trade, compensatory payment for financial loss arising from delays and stoppages due to factors beyond artisan control, and also formal recognition of a system of work-sharing to obviate the distress arising in consequence of the unprecedentedly high level of artisan unemployment. The benefits conferred by the system of collective bargaining are evident from the statement of the Secretary of the Employers' Association in 1890, "...that whilst many trades have been convulsed and paralysed by strikes and contentions....the Glass Bottle Trade has through our joint foresight, been saved from that evil." The self congratulatory nature of the passage obscures the underlying divisions within the trade which had begun to develop as a consequence of a cyclical downturn in trade from 1886. Mutual mistrust and hostility was focused in the action of Dan Rylands who to combat slack trade, sought to extend the regenerative furnace to its ultimate
economic utility by introduction of 3 x 6 hour shifts in place of the previously observed 9 hour dual-shift system. The men alleged that the measure

"would prevent them making their standard wage, and cut off altogether their 'plus' or overtime"

and refused to work the new system. At the subsequent trial at Barnsley Magistrates Court, the principal manufacturers gave open support to Ryland's cause, and although the case went against Rylands his case was upheld upon appeal. The outcome intensified artisan suspicion and hostility by resurrecting the spectre of the imposition which had originally led to the dual-shift working of regenerative furnaces (cf Chapter 9(a) supra). Ryland's victory was accompanied by the establishment of 'The Ryland's Benefit Fund', or 'Workmens' Insurance', a system of proposed welfare-benefits designed by Rylands and introduced at his Stairfoot works with the aim of undermining and destroying Union power. Simultaneous developments which aimed to erode Union power were seen in the establishment of the Ashley (Machine-Made) Bottle Company (cf Chapter 9(b)) and the attempts by leading manufacturers such as Breffit, Bagley and Kilner to modify observed working practices by the introduction of methods which blurred the previously observed distinction between work done by flint hands and bottle hands, or replaced both by alien systems imported from Germany and Sweden. The generally successful resistance of the G.B.M. Society to the assaults and incursions by the manufacturers was accompanied by the attainment of several beneficial concessions culminating in the 1891 Agreement which, following protracted negotiation, resulted in an advance in wages of 3s per week, together with compensatory payments, including half wages when furnaces were stopped, and formal recognition of working hours based on a two-shift basis. The return of the favourable trade cycle assisted Union procurement of concessionary aims, as the manufacturers beset by foreign competition and inhibited by the effect of the financial crisis following the collapse of Baring Bros. Bank, 1890, experienced profit restriction which accentuated the sustained harassment by the G.B.M. Society.

In January 1893, the Yorkshire manufacturers through the aegis of their trade association locked out their men in an effort to enforce a basic reduction in artisan wages of 3 shillings per week and eliminate three economic clauses contained in the 1892 Agreement. The most objectionable clause to the employers was that which stated
"In the event of a furnace being out for repairs or stopped for any other cause, the workmen shall as far as practicable, work alternate weeks...."  

The sharing of work had always been regarded as a discretionary favour on the part of the employers until 1891 when the Union secured its formal acceptance. The measure was described by Greenwood as

"... one of, if not the most communistic, democratic, and restrictive measures for adult workmen in the whole history of trade unionism"

and was considered by the trade as "one of the greatest, if not the greatest, achievements in the history of the trade."  

The significance of the clause was its effectual guarantee of continued employment at 'half wages' for the artisans many of whom but for its existence, would have been forced out of the trade through unemployment, "the greater portion of whom could not possibly have got back to the trade again."  

In addition, the application of the work-sharing principle ensured guaranteed income to artisans who since 1891, had lost "tens of thousands of pounds in wages" through the success of the manufacturers in abolishing the traditional payment of half-wages.  

The establishment of the work-sharing clause was therefore fundamental to the maintenance of the socio-economic status of G.B.M. and their families.

For their part the employers regarded the imposition of the clause as a temporary measure which was in effect more than equivalent to half wages and constantly sought its abolition. Beyond this, the manufacturers sought to remove the ratio of 3 apprentices to five bottle holes, specified in Clause 6 of the 1892 Agreement. The measure would have increased the number of surplus and unemployed bottle hands while lowering the employers' wages bill. Payment for all bottles defective by reason of flown marbles" (Clause 9) which had specific reference to the manufacture of Codd Patented bottles, which had recently become the subject of County-wide manufacture, the production of which was beset by technical difficulties, formed the trio of clauses to which the manufacturers found objectionable.

The economic motivation which predetermined the action of the manufacturers in initiating the Lock-Out is well illustrated by the events preceding the dispute. As early as September 1891, William Bagley,
President of the Yorkshire Glass Bottle Manufacturers' Association, sought to promote a national strategy by inviting leading manufacturers from other bottle producing regions to meet with his Association at Leeds to consider

"... the advisability of the manufacturers adopting a scheme of amalgamation .......

whereby combined action may be taken upon

matters affecting the trade generally." \(^{21}\)

The same year Bagley was instrumental in the creation of the Yorkshire Flint Glass Manufacturers' Association. \(^{22}\) From the outset the two kindred Associations shared common ground. Many firms were members of both bodies, \(^{23}\) and formed a common front designed to erode lines of craft demarkation and use differentials in wages and work methodology as a means of regulating wage levels, output and working conditions within the County trade, to the employers' advantage. \(^{24}\) The response of the workmen in forming the National Federation of the regional G.B.M. trade Societies and the alliance with the F.G.M. Society, not only nullified the masters' strategic aims but was, in conjunction with the role of the I.U. and the socio-political alliance between various local trades, \((\text{cf Chapter 13 supra})\) the key element ensuring the ultimate success of the G.B.M. in the ensuing and protracted trade dispute. The battle lines were therefore drawn with the masters seeking to obtain

"relief from those chains .... forged round them during the last six years." \(^{25}\)

In January 1893, the employers, having built up their stocks, chose the winter season with its maximum level of unemployment to lock out their workmen. The dispute lasted some four months, affecting workers in the Lancashire and Dublin regions in addition to five thousand Yorkshire-men. \(^{26}\) The dispute described as

"... the greatest and most important conflict in the history of the Glass Bottle Trade in the United Kingdom," \(^{27}\)

not for its duration alone, nor the numbers involved, but more particularly "with regard to the manufacturers' purpose in locking out the men." \(^{28}\) Labour historians, while placing different emphasis on the source of the conflict, nevertheless agree that the objective of the manufacturers was to use unemployment as a means of destroying Union power, thereby ensuring "complete managerial freedom." \(^{29}\) Brundage has shown how the principle of work-sharing constituted the adhesive element which ensured union power \(^{30}\) and how, despite the deliberate and intensive attempts by the employers to utilise the press as a propaganda
medium for misrepresentation of the Union, the strategy of socio-political and trade alliances formulated by Greenwood in the years preceding the dispute, provided the essential moral and financial support to ensure victory for the workmen.\textsuperscript{31} As a result, the workers were successful in compelling the manufacturers to allow resumption of work on the basis of the 1892 Agreement. It was immediately apparent that "the result had been bought a great cost" not only in terms of "sacrifice of domestic comfort" but "also for any disastrous consequences which may befall the English Glass Bottle Trade."\textsuperscript{32} Possibly the dispute centred on the assertion of the employers that foreign competition was running them, a claim discounted by the workmen's leaders who with some justification\textsuperscript{33} contended that

\begin{quote}
".... it is not foreign competition but home competition that is doing the mischief; it is the Lancashire manufacturers and the Yorkshire manufacturers who are bidding against each other for the trade till they bring the prices to the lowest level and the poor workman has to take less for his labour."
\end{quote}

The validity of the workmen's judgement is borne out by the fact that the manufacturers, fully aware of the permanent loss of trade occasioned by protracted trade disputes in Scotland (1872) and the North of England (1882 - 1883), nevertheless closed down their furnaces, knowing that the trade vacuum would be filled by their Continental rivals.\textsuperscript{35} Indeed, foreign competition was actively assisted by some Yorkshire manufacturers who attempted to fulfil existing orders by sending abroad moulds for bottles which had hitherto been the exclusive preserve of the Englishmen, thereby providing a foothold in the domestic market for European manufacturers.\textsuperscript{36} Consequently, the worsened situation was apparent in the immediate aftermath of the Lock-Out, engendering the feeling that ".... the best thing to do now is to repair the damage done", a feeling underlined by further disruption within the Scottish trade directly attributable to foreign influence.\textsuperscript{37} By what steps was the new phase in industrial relations within the Yorkshire bottle industry made manifest and to what effect? One of the more immediate results is to be seen in the combined attempt to influence government officials to exempt the employment of boys within the trade from the provisions of the 1896 Factory Bill. Such co-operation stood in sharp contrast to the situation in 1890 when the employers had unsuccessfully sought
the support of the G.B.M. Society in order to obtain modifications in the Factory Acts. 38 The circumstance was made the more poignant in 1895 by the fact that the support was necessarily given to facilitate British manufacturers to compete economically with their European counterparts, even though the Union support seemed to disregard previous assertions by Greenwood concerning health and conditions within the trade. 39 (cf Chapter 11 supra).

Following the success of their joint campaign in 1895, an attempt was made by Greenwood on behalf of the G.B.M. Society to involve the Employers' Association in a trade alliance whereby wages were to be regulated in accordance with the movement in prices. The scheme was based on a series of alliances formed amongst minor trades in the Midlands industries by E.J. Smith, a Birmingham businessman. 40 The Yorkshire G.B. manufacturers were generally in favour, viewing the scheme as a system to enable them to become cost competitive with European manufacturers by the formal regulation of capital intensive labour. 41 The refusal of the Lancashire manufacturers to participate in the alliance engendered the fear amongst the Yorkshire manufacturers, many of whom had reservations concerning profit declaration which was the nub of the system, to fear that unilateral participation would be economically disadvantageous, and decline to finalise negotiations and the proposed scheme collapsed in 1901. 42 The necessity for some form of price control system in order to combat foreign trade continued as trade doctrine, however, and resulted in the establishment late in 1904, of the Association of Glass Bottle Manufacturers of Great Britain and Ireland. The aim of the national organisation in which the Yorkshire manufacturers predominated was price regulation. The Association had the support of the G.B.M. Society whose members had been severely hit by the recent decline in trade and who additionally, regarded the newly founded organisation as a prospective system for the re-introduction of the abortive trade alliance of 1896. Although limited initially to an experimental five year period, the Association was not embraced by all Yorkshire manufacturers. Smaller manufacturers with limited capacity and financial resources were fearful of undertaking formalised agreements which specified minimum price levels. In addition, by the terms of Association, the premium to be paid by each member firm was based on the number of bottle holes regardless of the number of shifts per week undertaken at a particular factory. Thus, the capital levy on more prosperous firms at which continuous furnaces were utilised on a dual or continuous shift system was disproportionate to that of the lowliest manufacturer who relied on intermittent furnaces. 43
The widening gap between the more progressive and prosperous companies was accentuated by the advent of the Owens Automatic bottlemaking machine. The demonstration of the machine at the specially constructed Belle Vue factory in 1907 alarmed both bottle hands and manufacturers alike by its productive potential. The Union, fearful of rapid displacement of manual skill with its attendant status debasement was drawn to even closer co-operation with the manufacturers who realised their dependence upon hand methods and semi-automatic machine production would rapidly place them in an economically disadvantageous position. Consequently, a limited company, the British Association of Glass Bottle Manufacturers was formed in 1907, with Bagleys and Kilners from the Yorkshire trade prominent amongst those who subscribed £120,000 towards the £600,000 paid to the Owens Company by the Europaisher Verband der Flaschenfabriken G.M.B. for the European patent rights to the Owens' machine. The aim of the Cartel was to maintain price levels by the gradual introduction of the Owens' machine and restriction of its productive capacity. The commonly named Associations were thus unified by the objective of price regulation, with membership of the 'unlimited' group being a pre-requisite for entry to the Cartel group. The threat of destabilisation by those companies holding aloof from the 1904 price regulation Association ultimately resulted in the formulation of a joint strategy between those Yorkshire manufacturers belonging to the Association and the G.B.M. Society whereby the latter would use its power to persuade or coerce recalcitrant manufacturers into membership. Suggestions of this nature had been proposed to the Union early in 1908 when Greenwood had noted that,

"To say the least, the 'Manufacturers Combine' is consistent with the workmen's trade union. If it is right for workmen to combine for their protection and benefit it should be equally right for manufacturers to combine for similar objects...... But when it is proposed that the workmen shall assist in trying to get manufacturers who are not members of the Manufacturers' Association to join, then on the face of such a suggestion it seems to many not only inconsistent but outrageous."  

The Union, faced with the dilemma of sacrificing ethical considerations to socio-economic expediency had little practical option but to choose..."
the latter since failure to enforce price regulation would result in the dumping of surplus foreign stock on the domestic market at some two to three shillings per gross below the price of British bottles bringing obvious adversity to the Society's members. The workmen, however, while endorsing the establishment of the Selling Prices Combine, refused by a small majority to apply pressure by withdrawal of labour from firms refusing to join the Manufacturers' Association. By 1910, the activities of the unrestricted manufacturers resulted in the National Conference of G.B.M. appointing a deputation to visit firms holding aloof from the Association and urge membership upon them. Two subsequent conferences held at Leeds, met with partial but qualified success, but a hard core of smaller manufacturers, fearing their best interests would not be served, refused to join the Combine. Following a recommendation by the National Conference the Yorkshire hands voted to assist the Association by the withdrawal of labour from non-member firms. Consequently, the Selling Prices Combine was accomplished with few exceptions and a Minimum Price List formulated by which the workmen's wages increased or decreased according to the rise and fall in prices.

Despite the victory of 1893, the G.B.M. Society was undoubtedly weakened by the dual threat of foreign competition and technical advance and forced to pursue a policy of industrial co-operation in order to safeguard the socio-economic and craft status of the membership. To that extent Union policy may be regarded as a success, culminating in the establishment of a Joint Wages and Concilliatory Board in 1911. Conversely, 'formal institutionalism' in the form of annual wage agreements may be open to interpretation as a method by which the glass bottle manufacturers successfully contained and disarmed union power. With the passage of time the combination of technical change, inter-union rivalry and high unemployment ensured the numerical and financial decline of the Union and ensured the fulfilment of the aim of the manufacturers - to destroy artisan power.
1. For elaboration of this attitude cf Crowley, *op cit*, p 14.


4. For details of the Barnsley Trial on the three shift system cf *Barnsley Chronicle*, 2nd October 1886.

5. For details of the Appeal Court decision cf Supplement to the *Barnsley Chronicle*, 2nd April 1887. For details of the role of the leading manufacturers cf Greenwoods' comments *G.B.M. Reports*, Volume XII, p 592.

6. For details of the 'Rylands Benefit Fund' cf *G.B.M. Reports*, Volume XI, pp 13 - 14. As a result of the dispute the Stairfoot Branch of the G.B.M. Society was closed until 1890 when as a consequence of Ryland's failure to operate his scheme in accordance with the expectations of his workers, the latter sought reinstatement as Society members and the Rylands Scheme became defunct, cf *G.B.M. Reports*, Volume XII, pp 369 - 375.

7. In November 1889, Dan Rylands sought to establish a machine made bottle company using his own company patents (Glass Bottle Industries Ltd.) based on an amalgamation of Yorkshire manufacturers. The Amalgamation was not established however, largely due to the failure of the Ashley Company cf *Miscellaneous Articles & Statistics 1905 - 1910*, pp 749 - 750. Also cf *G.B.M. Reports*, Volume XIV, pp 301 - 305.


10. For data re exports of glass bottles 1876 - 1890 cf G.B.M. Reports, Volume XII, pp 155 - 156. This shows a gradual decline of 10.9% during the period 1876 - 1885, followed by an increase of 24.6% during the four following years and then a decrease of 6.7% in 1890. Part of the explanation for the decline is to be found in the inroads made by foreign competitors into traditional British overseas markets and part in the development of colonial glass manufacturing, cf reference to Australian industry as future competitors, ibid, pp 3 - 4. Also G.B.M. Reports, Volume XXI, pp 451 - 453 for non-colonial industry. For data re imports of glassware 1883 - 1885 cf G.B.M. Reports, Volume X, pp 289 - 294. Unfortunately no separate categorisation of glass bottles is given but of the unenumerated class (including bottles) an overall increase of 4% is recorded with a 3.6% increase between 1884 and 1885, ibid, p 292.


14. Ibid.


16. Greenwood stated retrospectively

"... it was never dreamt when the clause was agreed to that the workmen would continue sharing work for five years consecutively as some of them have done and still continue to do, with not the remotest prospect of getting into full employment."

Miscellaneous articles & statistics 1905 - 1910, p 636. The manufacturers' claim concerning the advantages of work sharing over half wages was endorsed by the workmen themselves who resolved to retain the work-sharing clause in preference to the restoration of half wages. G.B.M. Reports, Volume XVII, p 330.
17. G.B.M. Reports, Volume XIII, p 162.


20. The evidence showing that the Lock-Out was the deliberate strategy of the Yorkshire manufacturers is very strong. At a meeting at Leeds, 14th September 1891, the employers considered

"The restriction of output during the months by stopping holes, thereby throwing men on Union pay, and preventing the making of bottles and thus keeping up prices."

5th Conference of G.B. Hands, St. Helens, 21st January 1893, p 41, in National Conference Reports 1893 - 1895. The Quarterly Report of the G.B.M. Society, March 1893, contains parallel columns of statements by the Yorkshire manufacturers of contrasting nature, one of which made only five weeks prior to the commencement of the Lock-Out, declared that the employers were content with existing prices and profits. If a true statement of the general attitude of the manufacturers, the ensuing Lock-Out was unjustified. On the other hand, the statement being an incorrect one, its utterance was an obvious ploy to conceal the impending action of the employers, G.B.M. Reports, Volume XIV, pp 6 – 7.


23. The two County Associations maintained a separate existence until 1934 when the advent of mechanisation and the replacement of manual systems of production rendered the distinction between the two modes of hand crafted work obsolete. Consequently, the two trade organisations merged to form the Yorkshire Glass Manufacturers' Association, loc cit.
24. Crowley _op cit_, p 154, noting the re-emergence of manufacturers' Associations in many industries during the closing decade of the nineteenth century, has emphasised the price-fixing role of such organisations and the negative effect such bodies had on the industrial environment. In the context of craft debasement Crowley's conclusion is questionable with regard to the Yorkshire G.B. industry.


26. The dispute affected about two thousand Yorkshire artisans and some three thousand ancilliary workers who were deliberately thrown out of work by the employers to bring pressure to bear on the G.B.M. Society through public obliquy of Brundage, _op cit_, p 70. The Lock-Out commenced 2nd January, and ended 22nd April 1893. In Dublin the dispute was of shorter duration beginning 21st January and ending 27th March 1893. The Lancashire artisans, prompted by the Yorkshire Society, struck work 3rd February to recover the 3 shilling all-round reduction conceded at the beginning of the year, and resumed work at the end of April 1893. _G.B.M. Reports_, Volume XIV, p 4.

27. _Ibid_.


29. Clegg Fox & Thompson describing the dispute as "the most important among minor crafts" regard the abolition of the apprenticeship restrictions as the significant issue in the dispute, _op cit_, pp 168 - 170. Brundage, while acknowledging the importance of apprenticeship restriction, regards the practice of work-sharing as the more fundamental aspect influencing the manufacturers, _op cit_, pp 60 - 61.

29. _Ibid_, p 63.


32. *Ibid*, p 44.


34. *Pontefract & Castleford Express*, 14th January, 1893.

35. Each of the disputes lasted ten months and enabled the foreigner to make inroads into the black bottle trade which was never regained by the British manufacturers. The case with the Yorkshire manufacturers was the more suicidal in that the pale metal trade was put at risk by the employers' refusal to let the men work at existing rates, whereas the two earlier disputes were caused by men striking to obtain better terms, *G.B.M. Reports*, Volume XIV, p 44.


37. A cohesive influence within the Yorkshire industry was the fact that the dispute was closely followed by a further dispute in Scotland where the effect of foreign incursions had resulted in the importation of foreign workers at Alloa. The foreign labour resulted in undercutting of wages and prices, intensifying competition between the Alloa and Glasgow districts and threatening the debasement of the living standards of indigenous craftsmen. Despite the attempt of the Union to halt the decline by recruitment of foreign works, the employers adopted a policy of 'divide
and rule' and insisted on treating separately with the Swedish and German workers, thus precipitating the 1893 dispute and further endangering the decline of the Scottish Glass Bottle Industry, *ibid*, pp 139 - 140.

38. *Report on the Correspondence...1891*, p 38.


41. The scheme had been submitted to the E.C. and to the National Conference by Greenwood in August 1898 and a joint deputation from the Yorkshire and Lancashire Societies had waited upon Smith who had explained the principles of the scheme. The National Conference had then passed a resolution recommending adoption of the scheme by the glass bottle trade as a means of formulating a wages board for the trade. *G.B.M. Reports*, Volume XVI, p 460. The Yorkshire G.B. Hands subsequently voted in favour of adopting the scheme by 896 votes to 61 after which an approach was made to the Yorkshire Manufacturers via their Association Secretary, I. Kaberry, *ibid*, p 462.

42. During the protracted discussions culminating in the formulation of a Wages Board comprised of nine delegates from each side of the trade, the employers had seemingly been less enthusiastic than the workmen, cf *G.B.M. Reports*, Volume XVII, p 191. Even amongst the workmen, however, a degree of apathy and indifference is evident cf *ibid*, p 287, and it would seem that the greatest enthusiasm came from Greenwood and his Executive who regarded an Alliance as a means "to do away with the old order of things... and enter upon a new era – a more social and democratic one... to supersede the Economic School founded by Adam Smith", *ibid*, p 292. Although Greenwood genuinely regarded the Alliance
as a beneficial system by which the wages and status of his members would be assured, his forthrightness and reputation caused him to be held in suspicion by some manufacturers, particularly those in Lancashire and these, fearing the power conferred upon Greenwood by the establishment of a trade alliance rejected the scheme. The situation was encapsulated by one manufacturer who upon the collapse of the proposed scheme stated

"Mr. Greenwood is king of the trade now but he would have been emperor if this combination had come off."

Yorkshire Post, 12th January 1901. For Greenwood's comments cf G.B.M. Reports, Volume XVIII, p 4.

43. G.B.M. Reports, Volume XXII, p 246.
44. Byram R.S., loc cit, J.S.C.T. Volume XLII, p 21N.
45. An increase of 4% overall in bottle production was agreed by the E.V., the British Association Ltd., restricting output to 10% of the agreed maximum production level, ibid, p 31N. The situation had been well anticipated by Alfred Greenwood who, referring to the Ashley machine at the time of the Belle Vue Demonstration, August 1889, had stated

"... if that machine performs one half of what has been represented.... the workmen will have to look out for something else to do but..... the employers must also look out for something else to do. the effect will not stop with the workmen." cf A Review relating to the introduction of the Owens Glass Bottle Making Machine, etc., etc., G.B.M. Reports, Volume XXI, p 494.

46. Ibid, p 459.
47. Ibid, p 499.
48. Proposition Book, Volume III, entries 7th February and 18th July, 1910 (n.p.). The G.B.M. ballot recorded a vote in favour of all firms being members of the Association by 703 votes to 213, but voted against withdrawal of labour to enforce membership by 695 votes to 619.
49. 12 Yorkshire manufacturers did not belong to the Association together with 2 from Glasgow and 1 from Lancashire, _Ibid_, pp 446 - 447.

50. _Ibid_, p 447.

51. A ballot vote recorded 923 votes in favour with 436 against, cf _Proposition Book, Volume III_, entry 7th February 1910, (n.p.) The Resolution was carefully phrased so that acceptance of the first part concerning Association membership made withdrawal of labour to enforce membership automatic.

52. Thompson J., _op cit_, p 12.

53. _Proposition Book_, entry 22nd April (n.p.).

54. Porter J., _loc cit_.

- 666 -
SECTION THREE:

DECLINE AND DISSOLUTION 1910 – 1940
INTRODUCTION:

The predominant aspect of the Yorkshire Glass Industry during the period 1910 - 1940, is the increased deployment of bottle-making machines. The purpose of this section is to consider the effect of machine utilisation on the dual aspects of Trade Union organisation and industrial development, and conclude by an examination of the position of the artisan glassworkers within the context of the concept of Labour Aristocracy and New Model Unionism.
CHAPTER SIXTEEN:

THE EFFECT OF MECHANISATION

(a) Industrial Development.

New policies of tariff reform from 1903, resulted in steady growth within the Yorkshire container trade which was further stimulated by the advent of the Great War in 1914.\(^1\) As a result, the period 1910 - 1921 saw an increase in the number of Glass factories as small manufacturers continued to employ manual craftsmen as well as increasing the number of semi-automatic machines.\(^2\) In 1910, some 26 firms were engaged in the manufacture of common bottles, 8 of whom had an additional element of flint glass production.\(^3\) In addition, several other firms within the County were solely engaged in the production of flint glass ware.\(^4\) At that time, Castleford was still the centre of the trade but was being challenged by rival districts in terms of the number of factories and had already been surpassed by some in potential capacity calculated in the number of actual furnaces and bottle houses.\(^5\)

| TABLE 16:1 NUMBER OF FURNACES AND BOTTLE HOUSES IN DISTRICTS OF G.B.M. SOCIETY, 1910 |
|---------------------------------|-----------------|-----------------|-----------------|
| DISTRICT                        | FURNACES        |                |                  | HOLES           |                |
|                                 | W   | S   | T   | W   | S   | T   |                  |                  |
| CASTLEFORD                      | 7   | 2   | 9   | 60  | 37  | 97  |                  |                  |
| SWINTON                         | 3   | 8   | 11  | 26  | 110 | 136 |                  |                  |
| HUNSLET                         | 6   | -   | 6   | 57  | 5   | 62  |                  |                  |
| THORNHILL LEES                  | 1   | 4   | 5   | 16  | 54  | 70  |                  |                  |
| KNOTTINGLEY                     | 8   | 1   | 9   | 74  | 16  | 90  |                  |                  |
| WAKEFIELD                       | 2   | -   | 2   | 26  | 6   | 32  |                  |                  |
| BARNSLEY                        | 3   | 3   | 6   | 46  | 56  | 102 |                  |                  |
| CONSIBRO                        | 2   | 1   | 3   | 22  | 18  | 40  |                  |                  |
| MASBRO                          | 1   | -   | 1   | 3   | -   | 3   |                  |                  |
| WOMBBWELL                       | 1   | -   | 1   | 12  | -   | 12  |                  |                  |
| BLAYDON                         | 2   | 1   | 3   | 24  | 4   | 28  |                  |                  |
| NEWPORT                         | 1   | 1   | 2   | 16  | 14  | 30  |                  |                  |
| LONDON                          | 1   | 2   | 3   | 6   | 24  | 30  |                  |                  |
| STAIRFOOT                       | 2   | 1   | 3   | 32  | 38  | 70  |                  |                  |
| **TOTALS**                      | **40** | **24** | **64** | **420** | **382** | **802** |                  |                  |

Source: G.B.M. Reports, Volume XXII, pp 684 - 685
The Table indicates that by the end of 1910, one third of the furnaces throughout the trade, comprising almost half the bottle houses, were disengaged. The situation may be explained in part by the number of machine shops which despite overall industrial growth caused increasing disuse of handicraft facilities. Of a total of 16 machine shops, 4, fully utilised, were located at Castleford, while 3 were also in use at Knotingley, with 4 others albeit unused, at Thornhill Lees. By the end of 1911, the decline of Castleford was further emphasised as both Thornhill Lees and Knottingley surpassed the seat of the trade in terms of manual and machine production, while manual production at Barnsley and Wakefield exceeded, and Swinton almost equalled, that of Castleford. Although the tide was turning in favour of machine production and the exigencies of War boosted technological application, it also created a demand for glass containers and allied wares, which could only be met by full deployment of manual systems, thus retarding the pace of displacement of handworkers. The impact of the War is evident in the Report compiled by W. E. S. Turner of Sheffield University in 1915. Turner's survey showed a total of 33 glass factories within Yorkshire. Common bottles were manufactured at 16 works, while 4 factories were engaged exclusively in the production of flint glass, and a further 13 undertook joint systems of production. Turner estimated a workforce in excess of 9,000 despite the extensive deployment of machinery. It is clear that wartime demand accounted for the continued utilisation of a large number of manual chairs with 13 firms solely engaged in manual production and a further 6 employing machine and hand labour. Nevertheless, the impact of mechanisation is evident by reference to Knottingley district where 4 firms with a total capital of about £300,000 and employing just over 13% of the County workforce produced 50 million bottles and a quantity of other blown and pressed glassware annually. The growing magnitude of machine production was reinforced in the case of J. W. Kilner & Sons, Wakefield, who produced about 9 million bottles per year with a workforce of only 400 hands. Indeed, the reason for Turner's Survey is testimony to the growing impact of the machine arising as it did from the necessary application of science to ensure the economic viability of mechanised production as the antithesis of high cost manual labour. Nevertheless the demands of the War and its immediate aftermath were sufficient to prolong active application of manual production techniques. One aspect of the situation was the growing public taste
for white flint glass containers which between 1915 - 1921, resulted in the construction of 27 new recuperative pot furnaces, 6 regenerative pot furnaces and 7 undefined types containing a total of nearly 200 pots.\textsuperscript{15} In addition, 38 new tank furnaces, many of large capacity, were built for common bottle manufacture, together with modifications to many existing ones, while 52 modern lehrs and 16 furnaces were constructed for specific use with the Owens machine. During the period more than 100 highly productive semi-automatic machines and feeding devices were installed at 18 factories to enable conversion of semi to fully automatic machine production in order to overcome problems of manpower shortage, reduce costs and increase output in an effort to compete with the Owens machine.\textsuperscript{16} As a result, companies whose limited size and financial resources imposed technological constraints nevertheless experienced considerable increase in output. Beatson Clark, Rotherham increased annual output in excess of 56\% between 1919 - 1929, and by a further 75\% over the following decade after installing its first machine in 1929.\textsuperscript{17} The number of Owens machines deployed nationally increased from 6 to 26 during the War and by July 1919, in addition to two operational machines at Knottingley, three others were in the process of installation at other sites in Yorkshire, with five more on order from America.\textsuperscript{18} The productive potential of the Owens machine was increased by the deployment of multiple arm models which added to the range and operational speed of the machine.\textsuperscript{19} By the mid 1920s a five-fold increase in machine production had occurred over the previous decade as machines outpaced manual production economy as well as output.\textsuperscript{20} Industrial disruption, particularly coal strikes, between 1921 - 1927, increased fuel costs which further emphasised the economic advantages of machine production and reduced the number of British glassworks by more than half during the period.\textsuperscript{21} By the middle of the decade a number of giant conglomerates had begun to form to raise required capital for mechanised production systems.\textsuperscript{22} As early as 1922 the capital of the British Glass Container Industry was estimated at £16,000,000 by one authority who concluded that

"Many old established firms have managed to rub along on capital which today would be deemed entirely insignificant, especially when new companies have to be floated."\textsuperscript{23}

Within Yorkshire the flint bottle trade centred on Hunslet was hardest
hit, a decline ascribed by one historian of the industry as directly attributable to the failure of a myriad small manufacturers to keep pace with automation. The common bottle trade while less severely hit suffered notable casualties. Temporary closure of Breffits in 1923 was followed by the final collapse of the Company following the General Strike of 1926. Burdin Bros., Knottingley, also experienced similar difficulties resulting in permanent closure in 1926. Two years earlier Peacock & Sons, Castleford, had been forced into voluntary liquidation consequent on large stocks of hand-made bottles which could find no market against superior machine-made wares. The contrast is drawn by the fact that John Lumb & Co., Castleford, producing 100 gross of bottles per day by continuous machine production and using unskilled labour, remained economically viable for a further half century. Recourse to machine production was not, however, a guaranteed industrial panacea as is seen in the case of Rylands Stairfoot factory which in 1927 was forced into liquidation by financial over extension arising from the operation of its two Owens automatic machines. Nevertheless, the introduction of automatic systems of bottle production post 1920, rendered manual systems uneconomic and uncommercial. The hand-made trade collapsed in 1925 and by the 1930s technical change had transformed the trade from a craft to a product based industry, resulting in a smaller number of glass works but employing a larger workforce. The emphasis, however, was on unskilled labour, including a larger element of female out-workers to supplement the machine minders, sorters, and warehouse labourers required for machine production. By 1945, of 23 factories situated in Yorkshire, 17 were engaged in container manufacture, comprising one third of the national total.

(b) Trade Unionism.

(i) Attitude to Mechanisation:

Protectionist policies together with the formulation of a Selling Price Agreement within the glass container trade enabled the system of manual production to pay its way despite the increased recourse of manufacturers to bottle making machines from 1907. The restriction on machine output safeguarded artisan wages and simultaneously reinforced artisan attitudes concerning the potential power of the machine and the threat this posed for traditional systems of production.
The attitude was encapsulated in 1912 by a Mexbro manufacturer who noted that while the Union did not oppose the introduction of the machine it gave no help to it. The necessity for attitudinal re-appraisal was, however, implicit in the prophecy of another manufacturer that within five years machine output would exceed manual production. The changed technological perspective was confirmed by an official of the N.G.B.M. Society who on the eve of the Great War asserted

"Here is our foe, not as we look (sic) at him twenty years ago, fighting with difficulties which have one by one been overcome, and now is a standing menace to our industry as carried on by hand labour."

The comments reveal the growing weakness of the craft unions whose strength had hitherto rested on their position as the principal suppliers of manpower and productive capacity, able to compete on economically equal terms with machines and provide financial subsidy to sustain technological deficiencies.

By subsidising technological experimentation the manual workers sowed the seeds of self destruction, their salvation being dependent upon the abandonment of entrenched attitudes based on craft exclusivity and elitism. The way had been shown by the American craft unions which had preserved their organisational status by recruitment of semi-skilled machine hands and unskilled outworkers to offset falling membership caused by artisan displacement. Likewise, the American attitude to the introduction of the three-shift system of continuous production stood in sharp contrast to that of the British Unions whose rigid adherence to the traditional dual-shift system was maintained until the 1930s, thus providing no scope for the absorption of unemployed members whose numbers were increasingly swelled by artisan displacement. In both countries the threat posed by the machine was accompanied by intense inter-union rivalry as each artisan group sought to obtain exclusive control of the new technology. The conflict in the U.S.A. was resolved in favour of the Glass Blowers Union which relatively early on adopted a flexibility which permitted the introduction of machines into bottle houses alongside manual workers. The measure ensured that most machines were installed in houses worked by the Blowers membership, thereby facilitating the 'capture' of the machine by the 'Blowers Society'. The move was assisted by Union
flexibility concerning the transference of artisans to machine work, obviating the degree of artisan displacement and facilitating an accommodation with the machine despite the inter-union rivalry which precluded a united policy. At the same time, the utilisation of the machine in conjunction with the tank furnace extended the range of productive output, blurring craft distinctions to the advantage of the bottlehands. In Britain the failure of the Yorkshire G.B.M. Society to eliminate regional differentials in wages and conditions through schemes of federation and amalgamation, prevented the adoption of a common policy by the National Districts regarding the machine question. In addition, a more rigidly elitist artisan outlook characterised the British trade societies. Consequently, diversity of attitude and action occurred within the various regions of the trade. Thus in Lancashire a greater degree of cooperation ensued between employers and workmen concerning machine deployment with obvious implications for the Yorkshire trade. As early as 1905, such considerations compelled moderation of the attitude of the Yorkshire artisans towards the machine. The change is apparent in the decision of the membership to accept a National Conference resolution allowing artisan transfer to machine operation without forfeiture of Society membership. From that time the recruitment of machine hands by the Yorkshire Society commenced, albeit unenthusiastically. The decision represented a grudging awareness of the necessity for an accommodation with the machine in order to safeguard artisan status. By acceptance of machine hands as members the Union enlarged the area of artisan employment, avoided displacement, and thereby reduced surplus labour. Similarly, the operation of machines at skilled rates safeguarded the socio-economic status of the manual worker by preventing the undercutting of artisan wage levels. The fact that the machine was capable of outstripping levels of manual production endangered the traditionally observed wage structure based on the move and overwork payments was a further consideration impelling a change of artisan attitude. The implications arising from unrestricted machine production for the economic basis of Union control of the productive process which ensured the maintenance of artisan earning power and its allied social status are obvious. Equally apparent is the likelihood of status debasement arising from loss of craft skill and increased workpace. The aim of the manufacturers in adopting the machine were the opposite
of that of the Union. Whereas Union policy was non-operation of any technical device which lessened craft skill unless the same remuneration was assured as that obtained for the exercise of manual skill, the purpose of the manufacturers was to increase production while cutting labour costs. The ultimate goal of machine economics was the system of continuous operation, seven days a week. Such a system involved a reduction in the hours worked under the manual system, which meant a reduction in artisan earnings. Continuous production decreed a radical break with traditionally observed work patterns, making its introduction anathema to artisan workers. The weekend shut-down and non-observance of night work were regarded by artisans as morally desirable and a socially essential element of status conferred by craftsmanship. Reconciliation of the apparent contradictions inherent in the 'machine question' would have required vision regarding future trade development which was constrained by custom and previous experience on the part of the Union. Consequently, the artisans were antipathetic to machine power until the degree of displacement was so advanced that the means to combat such power effectively was lost. The hubris of the artisans was to think that their craft status made them the arbiters of their own fate. An example of this is evident from the independent action of each Union concerning the issue of machine production.

Following the unsuccessful attempt by the N.G.B.M. Society to merge with the G.B.M. Society in 1906, a degree of antagonism marked inter-union relations as each strove to recruit machine hands to the exclusion of the other. The hostility was intensified in 1914 when the N.G.B.M. Society renewed its attempts to recruit machine hands in order to offset artisan displacement. The report of the Machine Committee indicates the growing awareness of the Union leaders of the threat posed by the machine to manual operations and the measures provoked by the growing awareness. Not only had the G.B.M. Society's recruitment of machine workers facilitated the enlistment of machine hands engaged in the production of flint and medical wares so that it had "... taken many hands previously in our Society and despised by the bottle hands at that time" but was so determined to gain exclusive control of the machine that it was accused of applying pressure to compel some manufacturers to resist recruitment of machine workers by the rival Society. The
hopelessness of the situation is evident in the observation of the G.S. of the N.G.B.M. Society in the autumn of 1915,
"The machine question is now before the members.....It must now be acceptance of the machine or its rejection, both too late after six years of recognition on a ballot vote of the members." 49

(my italics)
The dominant position of the G.B.M. Society vis a vis the machine while reflecting its American counterpart in relation to its union rival, did not secure for it a beneficial outcome. The protracted and gradualist nature of the compromise adopted by the G.B.M. Society concerning the machine fell emphatically short of allowing its deployment in bottle houses occupied by chairs of manual workers. 50 The degree of detachment retarded the volume and pace of artisan transfer to machine work and prevented full control by the Union. Wartime demand for labour resulted in the application of unskilled and apprentice labour. 51 In an effort to check the threat to artisan wages and craft status posed by the situation the Society was compelled to accede to the request of the manufacturers that machines be allowed to work alongside manual chairs, with the proviso that "The manufacturers be called upon not to employ any but Society men at making bottles by any process." 52

Against a background of demand for increased production, artisan enlistment, growing government control and vested interests of rival Unions, 53 the resolution was obviously impracticable. Despite endorsement by the National Conference in September 1915, 54 further dilution occurred. The situation was rendered more hopeless by the withdrawal of the Lancashire and Glasgow districts from the National Federation on the machine issue later the same year. 55

The amalgamation of the G.B.M. Society and the N.G.B.M. Society in 1920, must be seen in the context of an attempt to establish a united approach to the deterioration of the status of handicraft workers as a result of wartime conditions, and the impending threat to the manual trade posed by machines in the post-war era. Machine installation, combined with economic recession and labour disputes, resulted in the decline of the manual production system from 1921, with a degree of rapidity unparalleled in any other trade. In 1925, the hand bottle
trade collapsed with dramatic impact, causing a mass exodus of manual craftsmen from the industry and precipitating the eventual decline of the Union.

The collapse of the trade indicates the failure of the artisan Unions to appreciate the threat to livelihood posed by the machine and abandon their status conscious craft exclusivity sufficiently early to embrace and utilise machine technology for the future benefit of their members. The general effect of the machine on the hand trade is seen from the fact that only one of the 13 regional glassbottle makers' Societies in existence in 1914, still survived independently in 1940, the remainder having merged with large general labour Unions or being defunct. What factors explain the apparent tardiness of the artisan societies?

Over and above the considerations of custom and experience, the G.B.M. were undoubtedly cushioned by the selling price policy with its restriction of machine output and wages geared to profitability through manipulation of the market forces. The situation was seen as a constraint on future machine deployment which minimised the effect of artisan displacement. In addition, the high capital cost of machine installation and the possibility of technical limitations in productive range and capacity created artisan antipathy. The refusal to sanction the use of machines within the workplace occupied by chairs of manual workers was seen as a further constraint as alternative methods of machine deployment involved the construction of machine shops, involving prohibitive capital expenditure. The craft-based Unions were cushioned by the prevailing circumstances of trade during the first decade of the century and failed to appreciate the full implications of the machine threat until overtaken by events.

(ii) Industrial Relations.

The pattern of industrial relations between 1910 - 1940 is one of general passivity on the part of the G.B.M. Union. The formulation of a Selling Price Agreement during the first decade of the century was the culmination of two decades of industrial co-operation. The pyrrhic victory of the Union in the trade dispute of 1893, allied to the natural abhorrence of industrial disruption by the Union leadership had neutralised the militant tendency within the rank and file.
of Society. The policy of industrial co-operation was furthered by the formal establishment of a Wages and Conciliation Board in 1911. The advent of war in 1914, evoked a patriotic response which ensured further co-operation with the employers including acceptance of machines in manually worked bottle shops. The productive demands of war while staying the pace of Union decline by vesting the craft-based Societies with numerical and economic power, which peace-time industrial development would have otherwise denied, also promoted greater recourse to machine production. The comparison of the cost by each method emphasised the economic superiority of the machine. The economic advantage of the machine was the crucial element in the decline of Union power. As the impetus of the post-war boom gave way to trade recession so craft dilution was succeeded by artisan displacement. By 1925 the Union was already a spent force. The extent of the decline in Union power may be judged by the passivity of the Union during the General Strike of 1926, and its approach to the T.U.C. for financial assistance at that time.

The decline of Union power stood in contrast to the burgeoning unity among the manufacturers. A meeting of Yorkshire manufacturers held at Leeds in 1896, had mooted the idea of a general trade federation, but although the succeeding years had witnessed the establishment of trade associations within the various elements of the industry, with firms frequently being members of several bodies, a degree of suspicion and ill-feeling had prevented complete federation. The public demonstration of such sentiment in May 1918, was directly responsible for the failure to establish a Whitley Council for the glass industry. However, a weakened and pliant Union left the manufacturers free to counter the legislative effect of government action on the industry. By 1926, the disparate elements, under the predominant influence of the Yorkshire container manufacturers, had established the Glass Manufacturers' Federation as an experimental organisation representing all elements of the British Glass Industry. The adoption of legislative rather than more sectionalised industrial policies produced a narrow focus which aided consensus and unity, resulting in the constitution of the G.M.F. as a limited concern in 1952. The flexibility of the manufacturers in accordance with the varying social, legal and technical developments of the post-war era stands in sharp contrast with the experience of the Union. The ability of the manufacturers to trim to suit ongoing conditions ensured the successful
development of their scratch federation while the more experienced, centrally organised, monolithic trade union was merely an industrial cypher by the mid 1920s and had declined to the point of insignificance a decade later.

(iii) Union Membership.

Data paucity for the period 1912 - 1916 makes an accurate survey of the membership pattern of the G.B.M. Society impossible.

TABLE 16:2 MEMBERSHIP OF G.B.M. SOCIETY IN VARIOUS YEARS 1910 – 1920

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MEMBERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910</td>
<td>2450</td>
</tr>
<tr>
<td>1911</td>
<td>2432 (a)</td>
</tr>
<tr>
<td>1912 – 1916</td>
<td>NO DATA AVAILABLE</td>
</tr>
<tr>
<td>1917</td>
<td>2164</td>
</tr>
<tr>
<td>1918</td>
<td>2701</td>
</tr>
<tr>
<td>1919</td>
<td>2864</td>
</tr>
<tr>
<td>1920</td>
<td>3011 (b)</td>
</tr>
</tbody>
</table>

Sources: (i) G.B.M. Reports, Volume XXII, p 682
(ii) G.B.M. Reports, Volume XXIII, p 186
(iii) G.B.M. Reports Membership Rolls 1917 – 1920, passim.

(a) figures for quarter ending 16th September, 1911
(b) figures for half year ending June 1920

The general trend shown in Table 16:2 is one of gradual decline in numbers between 1910 – 1917 as recourse to machine production caused artisan displacement, which was, however, modified by the existence of the Selling Price Agreement with its restriction on machine output. In addition, the restraint on machine utilisation by the Owens Cartel assisted in making manual production methods more viable economically and thus gradualising the rate of decline of the hand-made trade. A further element in the decline in Union membership was the high degree of enlistment which occurred between the outbreak of the Great War and the designation of the trade as a reserved occupation under the auspices of the Ministry of Munitions in 1916. The curb on members leaving the trade maximised output which was
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>311</td>
<td>2864</td>
<td>2710</td>
<td>2164</td>
<td>2432</td>
<td>2450</td>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>175</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>15</td>
<td>15</td>
<td>Matches</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>146</td>
<td>9</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>107</td>
<td>107</td>
<td>Wombwell</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>213</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>115</td>
<td>115</td>
<td>Wakefield</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>79</td>
<td>79</td>
<td>Thornhill Lees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>370</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>83</td>
<td>83</td>
<td>Swinton</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>83</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>67</td>
<td>67</td>
<td>Stretford</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>302</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>87</td>
<td>87</td>
<td>Newport</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>276</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>83</td>
<td>83</td>
<td>London</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>292</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>87</td>
<td>87</td>
<td>Knutsford</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>262</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>227</td>
<td>227</td>
<td>Hunter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>66</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>Hoytle Mill</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>Demorton</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>176</td>
<td>176</td>
<td>176</td>
<td>176</td>
<td>176</td>
<td>176</td>
<td>Bertha</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>383</td>
<td>383</td>
<td>Conseto</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>102</td>
<td>102</td>
<td>Castleton</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>320</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>320</td>
<td>320</td>
<td>Blaydon on Tyne</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>330</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>335</td>
<td>335</td>
<td>Barnesley</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>40</td>
<td>40</td>
<td>Alnwick</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

further stimulated by the brief post-war boom resulting in the ex-
pansion of the industry and the absorption of demobilised artisans
after the war. The effect was to increase Union membership as new
branches were established in areas of industrial expansion between
1918 - 1921. Society membership grew by 20% during 1917, standing
at its highest numerical level since 1905. A further 10% increase
during the two following years brought membership to the maximum level
by 1920, exceeding the previous highest membership in 1902, by more
than 100 men. The membership trend in the individual branches of the
G.B.M. Society is shown in Table 16:3.

The significant feature is the decline of Castleford as the largest
and most important trade district during the second decade of the
century. Conversely, the rise of branches such as Barnsley, Stair-
foot, Thornhill Lees and Knottingley are particularly significant
for these districts were expanding centres of industry, containing
firms which were members of the Owen's Cartel. The progressive out-
look of such firms as Bagley & Co., Redfern Bros., Kilner Bros. and
Rylands increased the productive capacity of their works during the
war and immediately afterwards to the extent that manual production
was a vital element of overall output. The fact explains the in-
crease in artisan membership of Society branches associated with the
above firms, while Castleford Branch declined from 1910 as a number
of small firms closed or, like Lumb & Co., switched to machine-manu-
facture using non-union labour. A further consideration in artisan
employment concerns the flint bottle hands belonging to the N.G.B.M.
Society. Social determinants such as the growing preference for
white flint glass bottles and jars by the start of the second decade
of the century engendered a growth in membership of the N.G.B.M.
Society from 1910.

TABLE 16:4 MEMBERSHIP OF NATIONAL GLASS BOTTLE MAKERS' SOCIETY,
1910 - 1918

<table>
<thead>
<tr>
<th>YEAR</th>
<th>MEMBERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910</td>
<td>959</td>
</tr>
<tr>
<td>1911</td>
<td>987</td>
</tr>
<tr>
<td>1912</td>
<td>1015</td>
</tr>
<tr>
<td>1913</td>
<td>1073</td>
</tr>
<tr>
<td>1914</td>
<td>1069</td>
</tr>
<tr>
<td>1915</td>
<td>1081</td>
</tr>
<tr>
<td>1916</td>
<td>1067</td>
</tr>
<tr>
<td>1917</td>
<td>--</td>
</tr>
<tr>
<td>1918</td>
<td>1066</td>
</tr>
</tbody>
</table>

Table 16:4 reveals an increase in the order of 10.0% between 1910 - 1918, with indiscriminate recruitment to the forces accounting for the slight reversal of 1914. From 1916, however, a downward trend is discernable as the spasmodic movement to retain artisan workers on the 'home front' gave way to a 'combing out' of reserved occupations. In this respect the flint bottle trade suffered as a result of growing machine installation. The capability of the machine was more obviously harnessed to the tank furnaces associated with bottle shops than to the pot furnaces still extensively utilised by the flint hands. Consequently, the latter workers were the first to feel the effect of displacement. The situation was exacerbated by the fact that the productive range of machine technology was initially geared to small articles manufactured by the flint glass makers. Nevertheless, government control of the industry in the latter stages of the war with its wage control, suspension of restrictive practices and dilution of skilled labour, had a debilitating effect on both artisan unions. The post war surge in machine installation with its attendant utilisation of semi-skilled and unskilled labour posed obvious problems for the economic basis of artisan status arising from debasement of wage levels. The threat prompted a need for greater unity between the two craft-based societies which was enhanced by the retirement of Alfred Greenwood in March 1919, after 50 years service as C.S. of the G.B.M. Society. By mid 1920 an amalgamation had been effected to establish the National Glass Workers' Trade Protection Association. Despite the abandonment of craft exclusivity and the widened administrative area served by the new organisation, a consistently declining pattern of membership occurred during the two decades which mark the independent existence of the N.G.W.T.P.A. as shown in Table 16:5.

The Table reveals an average decline of 210 members annually, resulting in a fall of 84% in Union membership between 1920 -1940. The decline was naturally greatest during the 1920s when economic recession rendered manual production uncompetitive, while simultaneously causing a reduction in the number of unskilled ancillary workers who were Union members at that time. Industrial rationalisation arising from machine production and aided by slow recovery of trade, slowed the rate of decline in Union membership during the 1930s. The collapse of the hand trade in 1925 had, however, resulted in the terminal decline in the financial position of the Union necessitating
<table>
<thead>
<tr>
<th>YEAR</th>
<th>MEMBERSHIP</th>
<th>INCREASE/DECREASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1921</td>
<td>4997</td>
<td>---</td>
</tr>
<tr>
<td>1922</td>
<td>4908</td>
<td>89</td>
</tr>
<tr>
<td>1923</td>
<td>4493</td>
<td>415</td>
</tr>
<tr>
<td>1924</td>
<td>3709</td>
<td>1199</td>
</tr>
<tr>
<td>1925</td>
<td>2464</td>
<td>1245</td>
</tr>
<tr>
<td>1926</td>
<td>2207</td>
<td>257</td>
</tr>
<tr>
<td>1927</td>
<td>1953</td>
<td>254</td>
</tr>
<tr>
<td>1928</td>
<td>1672</td>
<td>281</td>
</tr>
<tr>
<td>1929</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>1930</td>
<td>1494</td>
<td>178</td>
</tr>
<tr>
<td>1931</td>
<td>1358</td>
<td>136</td>
</tr>
<tr>
<td>1932</td>
<td>1222</td>
<td>136</td>
</tr>
<tr>
<td>1933</td>
<td>1298</td>
<td>76+</td>
</tr>
<tr>
<td>1934</td>
<td>1204</td>
<td>94</td>
</tr>
<tr>
<td>1935</td>
<td>1125</td>
<td>79</td>
</tr>
<tr>
<td>1936</td>
<td>1089</td>
<td>36</td>
</tr>
<tr>
<td>1937</td>
<td>1109</td>
<td>80</td>
</tr>
<tr>
<td>1938</td>
<td>1021</td>
<td>88</td>
</tr>
<tr>
<td>1939</td>
<td>876</td>
<td>145</td>
</tr>
<tr>
<td>1940</td>
<td>788</td>
<td>88</td>
</tr>
</tbody>
</table>

Source: N.G.W.T.P. Association
Membership Rolls
1921 - 1940.
absorption within one of the larger labour Unions. By the time this policy was successfully concluded in 1940, the total membership of the Union had regressed to a membership level comparable with that of the G.B.M. Society 70 years earlier.

(iv) **Union Government.**

The amalgamation of the G.B.M. Society and the N.G.B.M. Society in March 1920, although a fusion of two artisan groups, marked the end of the craft elitism which had hitherto characterised the exclusive membership of each Society. As early as 1920, the pace of change within the industry decreed that the future success of Union organisation lay in the ability to increase the size of the membership by embracing the growing number of semi-skilled and unskilled workers within the trade and enlarging the geographical catchment area representing Union organisation. As a result the National Glass Workers' Trade Protection Association represented an industrial rather than a craft-based membership although initially the artisan element dominated the membership. Likewise, the predominant position of the Yorkshire region within the container industry meant that the bulk of the branches within the New Society were still located within the County.

The governmental structure of the N.G.W.T.P.A. was strongly influenced by that of its exclusively artisan predecessors. In addition, the merger being undertaken between Societies of comparable status, had the disadvantage of necessitating the accommodation of a dual bureaucracy. The fact is reflected in the system of Union government which consisted of a General Secretary, two Assistant Secretaries and a President, elected by the membership, and a two tier system of membership representation comprising an Executive Council and a Delegate Meeting. The E.C. which consisted of 15 members, comprised 6 bottle hands, an equal number of flint hands and three members representing the machine hands and outworkers who formed the remaining element of the membership. The composition of the E.C. thus reflected the continued observance of the elite status afforded to craftsmen in the earlier forms of organisation and was an anachronism when viewed in the context of developing tendencies within the industry. Nevertheless, the composition of the E.C. indicated the predominant element of manual production despite recently increased recourse to machine utilisation. The powers of the E.C. of the
N.G.W.T.P.A. were generally those which had distinguished the E.C. of the G.B.M. Society but the new body was assisted in its function by an executive Sub-Committee nominated by the E.C., the Union officials being ex officio members. The membership of the 31 Union branches was represented by nominated delegates drawn from each district of the trade. The existence of the D.M. provided a theoretical safeguard against centralised bureaucracy and as such represented a concession to the principle of primitive democracy traditionally enshrined within the parental Societies. In effect considerations of distance and allied expenditure resulted in the D.M. exercising less real power than its earlier namesake and from the early stages of amalgamation the bulk of D.M. duties were undertaken by a 9 man Delegate Sub-Committee. The dual system of government was both cumbersome and expensive and by 1921 had already begun to necessitate a degree of financial adjustment within the N.G.W.T.P.A.\textsuperscript{72} By the mid 1920s the effect of unemployment consequent on trade recession combined with the collapse of the hand-made bottle trade necessitated the drastic restructure of Union organisation. Thereafter, branch representatives were directly elected to E.C. Membership, each branch being allotted one representative per 100 members, with a second representative for all branches having in excess of 100 members.\textsuperscript{73} The D.M. was thus rendered obsolete and although the restructured E.C. as a directly elective body presented a prima facie acknowledgement of primitive democratic sentiment in accordance with that sought by the radical members of the G.B.M. Society during the 1880s, the role of the E.C. as the sole arbiter on all issues, represented the ultimate triumph of centralism. The significance of the development is underlined when considered in the context of the oligarchical composition of the sub-committees established to provide a cost effective and efficient system of central administration. Thus, at a time when the decline of craft status and the abandonment of artisan domination promoted an ethos of democratisation amongst the membership, the Union, constrained by financial considerations and labour aristocratic convention, was undergoing reconstitutional reform which placed centralised power in the hands of a representative minority of E.C. members.

By 1929, however, the failure of financial reformism and the streamlining of the administrative apparatus, together with the limited nature of sparodic recruitment campaigns, compelled consideration of
drastic alternative measures in order to ensure retention of Union power and prestige. In its deliberations the E.C. was again thrown back on policies of amalgamation formerly promoted by the G.B.M. Society. In July 1929, following a long discussion, the E.C. resolved

"That we try all in our power to amalgamate with the National Union of Distributive and Allied Workers." \(^{74}\)

The intention was thwarted, however, by a T.U.C. convention which precluded absorption. \(^{75}\) By 1934, an obvious decline in Union power is evident in the request by Castleford Branch that the E.C.

"Consider the advisability of fusing with a bigger and stronger Society ...... in order that we may be able to force better conditions at various factories where improvements were needed." \(^{76}\)

The E.C. submitted without endorsement the Castleford resolution

"That this Association seek to merge with another Society, but at the same time retain our identity as Glassworkers." \(^{77}\)

The resolution was rejected by more than a two thirds majority with six of the thirteen branches voting entirely against. \(^{78}\) The extent to which lack of positive leadership on the issue by the E.C. was responsible for the outcome is problematical. Similarly the extent of the desire to retain an industrial identity expressed in the terms of the Castleford Branch resolution is an indication of a vestige of status consciousness formerly manifested by the artisan element, is equally conjectural. Most probably the phraseology indicates a qualification regarded as essential for the safeguard of trade interests, the unlikelihood of obtaining which may explain rank and file rejection of the resolution.

The weakening effect on Union power occasioned by the decline of the manual craftsman is clear from correspondence submitted to officials of the General & Municipal Workers' Union in May 1936

"....so far we have been able to retain our prestige with our employers and maintain a good standard of wages for our members, but with the passing of the hand workers
we naturally have become weaker and it was reasoned that if we had numerical strength behind us we could still hold our position."  

The G. & M.W.U. declined to accept the members of the N.G.W.T.P.A. into its ranks on the grounds that the scattered membership of the latter would prove too costly for effective administration. A more significant factor was the divergence in attitude concerning benefit provision. The G. & M.W.U. considered that all benefits should be self-supporting to be provided from a separate fund established by the amalgamating Society. The N.G.W.T.P.A. regarded unemployment donation, superannuation, and funeral benefit as an integral element of the Society's financial administration to be maintained by high contributions and additional levies if necessary. In this respect the inherited philosophy of the artisan Societies worked against its immediate interest since its now largely unskilled working members paying 2 shillings per week were overstretched to maintain ongoing expenditure, while the out-dated attitude of its membership precluded absorption into a larger labour union. The issue proved "an insurmountable barrier", the E.C. resolution ".... that we do not entertain the question further" revealing, perhaps, a vestige of fraternal pride as well as material desire. Negotiations with the G. & M.W.U. were not totally abandoned, however, but were paralleled by an approach to Ernest Bevin of the T. & G.W. Union which resulted in T. & G.W. officials meeting the E.C. 22nd December 1939. The draft proposals submitted by the T. & G.W. Union were able to "Watch the interests and preserve the benefits of the older members in particular, including the Super: ceased, Honorary, Retaining and Widows and the Working members." As a result, on the recommendation of the E.C., a ballot of the membership produced a large vote in favour of amalgamation and from the 1st of July 1940, the N.G.W.T.P.A. was absorbed by the T. & G.W. Union.

(v) Union Finances.
The fragmentary nature of the data concerning the 20 year existence of the N.G.W.T.P.A. precludes precise analysis of the financial position of the Union between 1920 - 1940. An assessment of available
data does, however, permit an overview from which general conclusions may be drawn. A summarised account of Society income and expenditure for the period 1920 - 1935, shows a considerable imbalance, with £129,112 in income offset by expenditure of £159,058. Benefit payments of £141,505 exceeded income from membership contributions by £18,967, and this deficit is widened to £45,397 if bank interest and widows and superannuation contributions are disregarded. Administrative costs incurred by Central Office show a similar imbalance with a total income of £98,737, against £158,997. Table 16:6, although statistically incomplete, provides an indication of the financial position of the Union during the period 1923 - 1935.

The Table shows a clear division occurring about 1924 - 1925 when a combination of high unemployment consequent on the gathering momentum of economic recession coincided with a mass exodus of artisan workers from the Society following the sudden collapse and dissolution of the hand-made bottle trade. As a result of these developments the Society experienced a reduction of some 53% in its income between 1923 - 1925, followed by a further reduction of 75% during the following decade as the effect of artisan displacement and trade recession was exacerbated by a decline in trade union support following the General Strike of 1926. Throughout the 1930s a precarious financial balance was maintained although the differential between income and expenditure was always a narrow one and the Society was only kept solvent by utilisation of surplus funds which deprived it of much needed bank interest while promoting the general impoverishment of the Union. Between 1923 - 1935 the assets of the Society fell from a per capita sum of £5-9-61d to £3-9-4½d. Deterioration in the administrative efficiency of Central Office following the retirement of Alfred Greenwood, is evident from the wide range of thefts and fraud which are featured in the pages of the E.C. Minute Books of the N.G.W.T.P.A. during the 1920s. The defalcations frequently involved Union branch officials, the most noticable incident being that concerning the misappropriation of £500 by G.S. John Thompson in 1924. The financial crisis which the incident precipitated resulted in the demand by the Society's bankers for clearance of an overdraft of £13,637, which was met by liquidisation of Society investments. The simultaneous collapse of the hand bottle trade resulted in the closure of several branches, some with outstanding

- 687 -
**TABLE 16:6**

ANNUAL INCOME AND EXPENDITURE OF THE N.G.W.T.P.A.,
1923 - 1935.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>SOCIETY INCOME</th>
<th>SOCIETY EXPENDITURE</th>
<th>SOCIETY FUNDS</th>
<th>FUNDS PER MEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£ s d</td>
<td>£ s d</td>
<td>£ s d</td>
<td>£ s d</td>
</tr>
<tr>
<td>1923</td>
<td>38206 4 10</td>
<td>27226 19 10½</td>
<td>24611 6 4½</td>
<td>5 9 6½</td>
</tr>
<tr>
<td>1924</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>1925</td>
<td>17798 16 10</td>
<td>14634 2 1½</td>
<td>16940 8 5½</td>
<td>6 17 6</td>
</tr>
<tr>
<td>1926</td>
<td>10003 12 3½</td>
<td>5393 9 9½</td>
<td>4610 2 6</td>
<td>2 1 9½</td>
</tr>
<tr>
<td>1927</td>
<td>8749 18 7</td>
<td>1676 9 1</td>
<td>5650 16 11</td>
<td>2 17 10½</td>
</tr>
<tr>
<td>1928</td>
<td>9577 2 9½</td>
<td>4936 0 4</td>
<td>4936 0 4</td>
<td>2 19 0</td>
</tr>
<tr>
<td>1929</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>1930</td>
<td>6837 11 5</td>
<td>.6108 3 8</td>
<td>4872 1 6½</td>
<td>3 5 2½</td>
</tr>
<tr>
<td>1931</td>
<td>6693 16 11</td>
<td>6169 12 7</td>
<td>4643 11 9½</td>
<td>3 8 4½</td>
</tr>
<tr>
<td>1932</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>1933</td>
<td>5164 10 7½</td>
<td>2674 2 9½</td>
<td>3505 3 10½</td>
<td>2 17 4½</td>
</tr>
<tr>
<td>1934</td>
<td>4754 13 3½</td>
<td>4317 10 8</td>
<td>3731 19 3½</td>
<td>3 1 11½</td>
</tr>
<tr>
<td>1935</td>
<td>4421 16 11½</td>
<td>4013 17 3</td>
<td>3904 9 3½</td>
<td>3 9 4½</td>
</tr>
</tbody>
</table>

arrears and debts. The parlous financial state of the Union en-
gendered the reconstitution of the system of Society government to-
gether with administrative reorganisation in Central Office. The
post of Assistant Secretary was abolished in 1926 and replaced by
that of Financial Secretary with sole responsibility for Society
finances. More modest economies were achieved as a result of
voluntary cuts in the salaries and allowances of the permanent
officials. The purchase of a printing press it was claimed
'revolutionised the office' by reducing printing bills by £200 and
generating a modest income from external commissions. In fact
the measure was probably self-defeating because of the extra demand
made on the time of the office staff by the use of the press. The
major drain on the financial resources of the Union, and the area
which most clearly illustrates the declining prosperity of the Society
was that concerning welfare benefit provision. Table 16:7 shows the
annual amounts expended by the N.G.W.T.P.A. in welfare benefit prov-
ision.

The significance of the data lies less in the actual amounts expended
over the period than in the curtailment in the range of welfare bene-
fits administered by the Society. The growing provision of social
welfare by various governments during the first two decades of the
Century had made less necessary those of trade union organisations
but it is equally apparent that the mass withdrawal of artisan glass-
makers about 1924 - 1925 marked the end of an era in the Society's
administration. Henceforth the trade was transformed from a predom-
inently craft-based membership, characterised by the earning power
of the artisan workers which enabled high membership contributions
to be supplemented by equally high trade levies, ensuring the provi-
sion of a wide range of welfare benefits. After 1925, Society in-
come was restricted to contributions which could be afforded by mem-
bers whose unskilled status was reflected in more modest wages than
those formerly paid to craftsmen. As a result by 1927 the only
welfare provision undertaken by the Union concerned payment of
unemployment and death benefit. By 1934, the E.C. was driven to
the expedient of encouraging members to remit contributions direct
to Central Office in order to save administrative costs. At the
same time members were agitating for a reduction in membership con-
tributions and Entrance Fees, while simultaneously rejecting an Execu-
tive proposal to reduce donation benefit of 5 shillings per week for
7 weeks to one of five weeks duration only.
<table>
<thead>
<tr>
<th>YEAR</th>
<th>DONATION</th>
<th>STRIKE</th>
<th>SUPER</th>
<th>BENEVOLENT</th>
<th>DEATH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£s</td>
<td>d</td>
<td>£s</td>
<td>d</td>
<td>£s</td>
</tr>
<tr>
<td>1923</td>
<td>12067</td>
<td>5</td>
<td>5</td>
<td>1048</td>
<td>7</td>
</tr>
<tr>
<td>1924</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1925</td>
<td>4199</td>
<td>5</td>
<td>5</td>
<td>195</td>
<td>10</td>
</tr>
<tr>
<td>1926</td>
<td>81</td>
<td>7</td>
<td>6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1927</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>47</td>
<td>16</td>
</tr>
<tr>
<td>1928</td>
<td>1456</td>
<td>7</td>
<td>0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1929</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1930</td>
<td>1620</td>
<td>1</td>
<td>0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1931</td>
<td>1870</td>
<td>0</td>
<td>0</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1932</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1933</td>
<td>1119</td>
<td>7</td>
<td>6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1934</td>
<td>848</td>
<td>7</td>
<td>6</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1935</td>
<td>928</td>
<td>9</td>
<td>6</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Source: Untitled Volume of abstracts from N.G.W.T.P.A. Accounts & Minutes, etc., 1923 - 1935, (passim)
Further financial strain was caused by the longevity of Society members and the widows of deceased members. Over the 70 years from 1865 an average of £500 p.a. had been paid by the Society in Funeral Benefits. The average had greatly increased as a result of better social and industrial conditions during the twentieth century, particularly with regard to workshop conditions following the introduction of machines. In 1934, 22 members died whose total ages amounted to 1,467 years, giving an average of 66 years 8 months. The same year recorded the demise of 20 wives and widows with combined ages of 1,250 years at an average of 62 years 6 months. Clearly the increase in the average life-span compared with the previous periods of this study, had financial implications for the provision of superannuation and widows benefits which increased in adverse proportion to the Society's income. The extent may be judged by reference to the summary of N.G.W.T.P.A. accounts during the period 1920 - 1935, which shows contributions of £26,460-15-6d by members and widows in respect of benefit provision and donations by the Society of £36,977-11-0d to recipients of these benefits. Thus, within a decade of the transformation of the Union from a predominantly artisan based Society, declining membership and the inability of unskilled members to make sufficiently adequate contributions to maintain previous levels of administration and benefit provision resulted in the situation in which the Society was "living hand to mouth" and the only hope of financial salvation was by merging the identity of the Society within that of a larger, stronger, Union.
CHAPTER SIXTEEN: The Effect of Mechanisation

**Industrial Development.**

1. It has been calculated that an overall increase in container production of about 8% occurred during the first decade of this century, largely as a result of a reduction in imported bottles which fell from 1.8 million gross to 1.5 million gross between 1903 - 1930. Brown, *op cit*, p 102.


5. Swinton, Thornhill Lees, Hunslet and Knottingley had 3 factories each making common bottles, while Barnsley had 2 such firms, *G.B.M. Reports*, Volume XXII, pp 684 - 685.


7. In December 1911, Castleford District had only one machine shop, Thornhill Lees had two and Knottingley with 3, including an Owens Automatic machine, was the premier centre of glass production in Yorkshire, *G.B.M. Reports*, Volume XXIII, pp 188 - 189.

8. *Ibid*.


11. *Ibid*.

13. Ibid.

14. Turner stated that only three firms in the country exercised any scientific control over the process of glass manufacture, ibid, p 3. As a result of Turner's recommendations a Glass Delegacy was established at Sheffield University in 1916 under Turner's professorship. In 1955 the Delegacy was reconstituted as the Department of Glass Technology, cf Ernest Stephen Turner 1881 - 1863 in Biographical Memoirs of Fellows of The Royal Society, Volume 10, November 1964, pp 325 - 339.


16. Ibid.

17. Beatson Clarks total output of 25,000 gross in 1919 had increased to 57,000 gross by 1929, and to 230,000 a decade later, and by 1944, stood at 292,000 gross, an increase of more than 91% in quarter of a century, cf Clark A. 'Through A Glass Clearly', Golden Eagle Press (198) p 76.

18. Meigh E. 'Glass Technology', Volume 1, No. 1, February 1960, p 35. Rylands, Kilners and Redfers were the companies which had joined Bagley & Co. as Owens patentees.


20. By 1920 it was shown that ten chairs of artisans or an equal number of machines deployed on a daily dual shift system involved a standing charge of £20 per chair/machine. Engagement of an additional unit reduced costs to £16-13-4d, while the effect of ten gross per unit increase in production reduced the cost of bottles from 12s-4d per gross to 11s-7d per gross, ex factory. As machines offered the greatest prospect for increased output it was to mechanised production that manufacturers increasingly looked, cf Turner W.E.S. Lessons from the Journey to America, J.S.G.T. 4, 1920, p 370.

22. Meigh E. The Making of a Federation, G.M.F. (1976) pp 37 - 38 and p 129. The process of industrial consolidation commenced in 1913 when Cannington-Shaw, Nuttal, Alexander and Candlish merged to establish the United Glass Bottle Manufacturers' combine. This group was joined by Lumb & Co. and Breffitt & Co. of Castleford the following year, cf Brown, op cit, p 108.


24. Brown, op cit, p 244.


30. Brown, op cit, pp 104 - 133 passim, for details of size of national and regional workforce.

31. Ibid, p 129.

(b) Trade Unionism.

(i) Attitude to Mechanisation:


33. Ibid.

34. Ibid.


42. *G.B.M. Society Proposition Book Volume III*, entry 15th May 1905 (n.p.). The withholding of parish relief to members refusing to occupy position at machines (cf Chapter 14(c) supra) brought social pressure for change while the failure to effect a scheme of amalgamation among the Districts comprising the National Federation in 1907 stressed the potential rivalry between the various regional societies, as did the failure to effect a merger of the G.B.M. Society and the N.G.B.M. Society 1905.


44. Barnet, *op cit*, p 73, f/n 5.

45. For the argument against continuous production cf Thompson J. *op cit*, pp 24 - 34 passim.

46. The General Secretary of the N.G.B.M. Society stated

"The decision may bring strife as a good many machine workers have joined the Yorkshire Glass Bottle Makers' Society."


The G.B.M. Society's enlistment of flint ware machinists also drew the comment

"This is a question gradually drawing nearer the position of war. There is a Kaiser to
conquer and he has got into territory that is not his. The question of battle is one to be decided by the members."

Ibid, p 656.

47. It was stated that of 950 machine hands in 1915, 800 were unionised, the bulk being members of the G.B.M. Society, ibid, p 18.

48. Ibid.

49. N.G.B.M. Magazine, Volume VII, p 196. The membership was balloted on a resolution submitted by Hunslet District which opposed the pro machine policy of the E.C. Although the Hunslet resolution was rejected by 434 votes to 150, ibid, p 369, its formulation and the degree of support it received indicate the uncertainty of the rank and file concerning the machine question.


51. A high proportion of journeymen and apprentices enlisted before the industry was designated as a 'reserved occupation' in 1916. By mid 1915 over 50% of the skilled workers of the North of England district had enlisted, resulting in the introduction of surrogate workers within the trade, cf North of England G.B.M. Reports, Volume 6, p 299. For details of enlistment of Yorkshire artisans Note 60 infra.

52. Ibid, pp 266 - 267.

53. The impracticality of the situation is shown by the decision of the E.C. of the N.G.B.M. Society to inform the employers that

"we will work the machine and not allow any other machine workers to work the machine unless they are members of our Association."

Despite the decision of the National Conference, Sunderland District, meeting in March 1916, passed a motion deploiring the action of the Yorkshire Society, ibid, p 473.


Meigh E. op cit, pp 44 - 45. The National Flint Glass Makers' Society was contemplating a merger with the G. & M.W.U. at the time of the amalgamation of the G.B.M. Society with the T. & G.W.U. in 1940. As a result of the influence of R. Fenton, G.S. of the G.B.M. Society, the F.G.M. broke off negotiations with the G. & M.W.U. to consider proposals submitted by the T. & G.W.U. The negotiations were unsuccessful, however, and the N.F.G.M. Society continues as a separate organisation today. cf N.G.W.T.P.A. Minute Book, 1929 - 1940, p 157.


(ii) Industrial Relations.

For details cf G.B.M. Proposition Book, Volume III, 1902 - 1904, entry 22nd April 1911 (n.p.)

Some evidence of the degree of patriotism may be gathered by reference to the records of the various G.B.M. Societies between 1914 - 1920. Despite the fact that the industry was granted the status as a 'Reserved Occupation' many artisans enlisted viz:

<table>
<thead>
<tr>
<th>SOCIETY</th>
<th>YEAR</th>
<th>NUMBER O.H.M.S.</th>
<th>% OF MEMBERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>G.B.M.</td>
<td>1914</td>
<td>69</td>
<td>6.4</td>
</tr>
<tr>
<td></td>
<td>1915</td>
<td>187</td>
<td>17.2</td>
</tr>
<tr>
<td></td>
<td>1916</td>
<td>182</td>
<td>17.0</td>
</tr>
<tr>
<td></td>
<td>1918</td>
<td>210</td>
<td>19.6</td>
</tr>
<tr>
<td>SOCIETY</td>
<td>YEAR</td>
<td>NUMBER O.H.M.S.</td>
<td>% OF MEMBERSHIP</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td>----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>G.B.M.</td>
<td>1917</td>
<td>449</td>
<td>20.7</td>
</tr>
<tr>
<td></td>
<td>1918</td>
<td>700</td>
<td>25.8</td>
</tr>
<tr>
<td></td>
<td>1919</td>
<td>468</td>
<td>16.3</td>
</tr>
<tr>
<td></td>
<td>1920</td>
<td>49</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Following the amalgamation of the two Societies in 1920, 508 members are recorded as O.H.M.S.

Sources:  
(a) N.G.B.M. Magazine 1914 – 1918, passim.  
(b) G.B.M. Membership Rolls 1917 – 1920.  
(c) N.G.W.T.P. Association Membership Roll 1920.

61. Frank Swann, G.S. of the N.G.B.M. Society stated in his Address to the trade in

"There is no doubt about the ravages of the machine on hand labour and we should have felt the increase of their power, had not this war come about which has created for the time being a greater demand than can be met by the combined efforts of hand labour and the machine."


62. A costing of a 21b jam jar at a Yorkshire factory in which the article was produced by hand labour and on the Owens Automatic Machine, showed that the manual system cost almost 24 shillings per gross to produce, compared to about 14s-6d by machine. As the selling price of the article was 25s-10d per gross regardless of the method of production, the economic superiority of the machine is obvious.


64. The Yorkshire manufacturers considered such a move as a means of creating unity to the proposed Factory Act cf Yorkshire Post, 5th May 1896.


66. For motives impelling industrial federation cf Byram R. 'Is a Federation Wanted?' Glass, Volume 1, December 1923, pp 6 – 9.
67. The first 9 members of the G.M.F. were container manufacturing companies which placed the Yorkshire manufacturers in the dominant position. The G.M.F. was initially established for 3 years, extended for a further 3 years in 1929. cf Meigh, 'The Making.....', p 124.

68. Ibid.

(iii) Union Membership:


70. F.G.B.M.M. Volume 7, passim.

(iv) Union Government:


72. Ibid.


74. N.G.W.T.P.A. Minute Book 1929 - 1940, p 82.

75. Other Unions affiliated to the T.U.C. would have objected to the proposed amalgamation as they represented an element of glassworkers, ibid, pp 22 - 23.

76. Ibid, p 82.

77. An attempt to submit the resolution to the branches with a positive endorsement from the E.C. was defeated, ibid.

78. The Resolution was defeated by 331 votes to 143 cf ibid, p 84 for Branch Returns.

An approach was made to the organiser of the G. & M.W.U. at the suggestion of Captain Wood, of Wood Bros., Barnsley but seems to have been of an inconclusive nature, *ibid*, p 152.

For details concerning winding-up of N.G.W.T.P.A. affairs cf *ibid*, pp 161 - 162. For actual terms of transference to T. & G.W.Union cf *Articles of Transferrence of the Membership of the N.G.W.T.P.A. to the T. & G.W. Union*, May 1940.

Thompson's voluntary resignation and agreement to repay the money resulted in the avoidance of prosecution and minimised the financial crisis arising from loss of public confidence. The debt was only partly repaid. In June 1925, £330-9-10d was outstanding and this sum comprised the debt to Society in January 1935. cf *Abstracts from Reports*, p 28.


95. Printing expenses of £244-6-6d were reduced to £43-17-4d while an additional £33-11-11d was obtained from external sources. Abstracts from Reports, p 21.

96. Ibid.

97. Superannuation and unemployment benefits were suspended for two, six month periods in 1926. N.G.W.T.P.A. E.C. Minute Book 1925 - 1929, pp 193 - 194. The two benefits were suspended indefinitely in December 1926, ibid, p 216. All other benefits had been suspended in 1925, ibid., pp 155 - 156 and pp 191 - 194.

98. Abstracts of Reports, p 29.


100. Abstracts of Reports, p 17.

101. Ibid.


103. Ibid.
CHAPTER SEVENTEEN:

CONCLUSIONS:

This chapter is an attempt to summarise the principal areas of my thesis and consider the relevance of particular points to the twin concepts of 'labour aristocracy' and 'New Model' trade unionism.

In his study 'The Labour Aristocracy in Nineteen Century Britain' (1964), Eric Hobsbawm postulated a model for identification of the genre. Hobsbawm's model employed six criteria:

1. level and regularity of earnings,
2. prospects of Social Security,
3. conditions of work,
4. relationship with the social strata above and below,
5. general living conditions,
6. prospects of future advancement for themselves and their children.

Hobsbawm's definition has drawn considerable criticism for the economic determinism which informs his criteria. Nevertheless, Hobsbawm's study has provided stimulus for subsequent study of the concept of labour aristocracy which has resulted in an ongoing debate concerning the subject. Some historians have sought to refine and elaborate Hobsbawm's definition by application of the criteria to study of occupational groups at local as well as national level, placing varying emphasis on the social, economic and political aspects of the concept. Others have qualified the nature and chronology of Hobsbawm's Thesis and even questioned its usefulness. The interpretive nature of the subsequent research arising from Hobsbawm's pioneering study was encapsulated in Matsumura's study of the flint glass makers. An excellent summarisation by Robert Gray (1981) is particularly valuable for emphasising the investigative width of the concept of labour aristocracy in its chronological, ideological and cultural aspects. Gray also shows the semantic difficulties inherent in the process of identification of the labour aristocracy. What emerges from a consideration of the continuing debate is that analysis
of the concept embraces widely differing descriptions according to the methodology employed and this in turn influences the conclusions which are drawn. Consequently, much academic dissension and debate arises from want of common agreement concerning historical methodology or at least precise definition of the particular sphere of research.

My research is an occupational study which concentrates upon the work situation of two distinct types of artisan glassmakers and those aspects of trade and industrialisation allied to the workplace. My aim has been to utilise material from trade union sources to provide some indication of artisan perceptions of themselves and of situations and events touching their work and lifestyle. By use of empirical data drawn largely from the same sources I have attempted to show the validity or otherwise of worker attitudes and assumptions. The nature of my study is more in the tradition of labour history than cultural analysis. As an occupational study my work therefore stands in contrast to a sociologically based thesis in which the wider environmental factors would receive greater emphasis. Where my research embraces areas of social or political significance these are considered in the context of events arising from developments within the trade itself, being illustrative of artisan attitudes and actions with direct occupational origin. Conversely, considerable emphasis has been placed on developmental aspects of trade union organisation and governmental structure which are fundamental to our understanding of the glass making artisans in both an occupational and social context.

The economic determinism which underlines Hobsbawm's criteria for identification of the labour aristocracy is particularly appropriate to the study of an occupational group such as the glassmakers, whose status was largely governed by high earnings deriving from traditional craft skills. The nature of the industrial wage structure and allied considerations such as working hours and customary observations within the trade, were the subject of Chapter 2 of this thesis. The material revealed that in general terms the wages of Yorkshire artisans rose throughout the period as a result of the growth factors considered in the first three sections of Chapter 1 of the thesis. Allied to physical growth factors was the development of a high degree of County-wide artisan trade unionism, the evolution of which was
examined in Chapter 3. A conjunction of the above considerations and the advent of a period of unparalleled trade prosperity enabled the establishment of a uniform list which reduced the minimum level of output and guaranteed basic wages while simultaneously enhancing the opportunity for piecework earnings by improving and equalising scales of payment throughout the County. The trade boom of 1871 - 1876 also assisted the level and regularity of earnings promoting unrestricted production and eliminating the seasonal unemployment which traditionally characterised the trade. The growing economic supremacy of Yorkshire G.B.M. over their contemporaries in other bottle manufacturing regions was revealed by comparison of overall chair earnings and the wage differentials which signified inter-chair status. A similar comparison with the flint bottle makers practising within the Yorkshire region was made (Chapter 6 (c)). The data revealed that the minority position of the flint hands both within their own Union and within the County, denied them the necessary collective power to attain the trade objectives of the bottle hands. As a result although, like the G.B.Ms. in other regions, the exclusive skill and organisational strength of the flint hands ensured economic status as labour aristocrats, their position was inferior to that of the Yorkshire bottle hands whose level and regularity of earnings pre 1880, qualified them as 'super aristocracy'. The examination of wages and overwork rates which formed the basis of Chapter 10 revealed some erosion in the economic status of both artisan groups in the closing decades of the nineteenth century. The advent of trade depression accentuated by growing foreign competition and intensification of trade rivalry in the domestic arena, resulted in levels of artisan unemployment, which in the case of the Yorkshire G.B.Ms, far exceeded those of other artisan occupational groups. Recourse to a policy of work-sharing while maintaining a degree of regularity in artisan earnings was only achieved at the cost of a general reduction in the scope for individual earnings. Frequent fluctuations in the wage and overwork rates, together with claims by Union representatives that glassmakers' wages were declining in comparison to those of skilled workers in other trades, underline diminishment of the economic status of glassmakers. Nevertheless, in both actual and real terms, glassmaking artisans in general still constituted an element of the labour aristocracy. The downturn of trade following a brief period of revival in the years spanning the old and new centuries, was cushioned by growing trade protectionism and, more directly, the formation of a joint selling price combine which safe-
guarded artisan earnings by the conjunction of wages and profits. It was only the culmination of technical development and craft dilution arising from the Great War and fused by the economic recession of the mid 1920s, examined in Chapter 16, which eliminated the craft basis of artisan power. In so doing it virtually eliminated the hand-made trade altogether so that despite the vicissitudes of trade, in terms of earning power the glassmakers may clearly be regarded as labour aristocrats throughout the entire course of their craft existence.

The economic potential which underlay the prospects of social security were examined by reference to the range of welfare benefits provided by the artisan societies. Chapter 17 (f) showed how the creation and extension of such provision mirrored artisan pride, while the extent to which a combination of adverse conditions and actuarial inexperience and miscalculation necessitated readjustment of benefit provision was considered in Chapter 12 (d). The data indicated an identifiable attitude of labour aristocratic consciousness which was manifested in both the expectancy of the continuation of the range of welfare provision and the artisan willingness and ability to finance such provision by membership contributions and levies, despite constraints imposed by growing levels of unemployment. Indeed, as Chapter 16 (b) indicated, provision of benefits in accordance with artisan expectation, continued as a feature of Union administration even after financial expediency and the exigencies of industrial development had begun to transform the Union from a craft to an industrial based organisation. Even long after the demise of the craft-based system of manual production, the N.G.W.T.P.A. was clearly distinguishable from general labour Unions by an attitude towards benefit provision directly attributable to the influence of the labour aristocracy which had once provided its exclusive membership.

The diminution of earning power and the financial strain experienced by the trade societies, post 1880, considered in Chapter 12 (c), produced financial constraints on the level of welfare benefits which had a retrograde effect on social security provision. This is particularly true with regard to superannuation and death benefits. Nevertheless, although the position of the artisan glassmakers was one of depreciation over time, viewed in the context of industrial society it is obvious that the glassmakers were assured of a degree
of Social Security provision denied to the lower strata of unskilled, lower paid, unorganised workers.

A more obvious decline is evident from the examination of working conditions which formed the basis of Chapter 11 of the thesis. A summary of the effect of technological development on workshop conditions complemented the material in the previous chapter of the thesis which examined aspects of technical change. Considered in conjunction with the physical effect of technical change outlined in Chapter 10 (c), obvious deterioration in working conditions took place in glass houses throughout the greater part of the second half of the nineteenth century. The general decline in workshop conditions had obvious implications for standards of health and levels of mortality. The diseases of occupation discussed in Chapter 11 (b) reveal the dangerous nature of the glassmakers' trade, a point reinforced by particular reference to cataract of the eyes which formed the case study, Chapter 11 (c). Nor was the application of new technology to glass production only detrimental to artisan health in a direct sense. As my study shows it exerted an indirect and insidiously harmful effect by increasing the pace of production. Contemporaneous with the decline in workshop conditions was a general improvement in social conditions. The development explains the increase in artisan life expectancy revealed in my study data and had obvious implications for social security and welfare provision. Not only was technological development an important feature of general improvement, but ironically, the technological innovation which was so obviously a detriment to the working environment of artisan glassmakers, was the catalyst which, following the demise of the hand-made trade, resulted in factory reconstruction with the emphasis on space, airiness and safety.

It is with regard to relationships with other groups of workers that the changing situation of the glassmakers in the century from 1840 is clearly significant. Chapter 1 indicated the high incidence of artisan proprietorship and examined the material and psychological basis of this tendency during the formative period of the modern Yorkshire glass industry. The study revealed that despite restraint caused by the increasingly high capital demand attendant on technological development, the scope for artisan transferrance to the status of employer continued to exist at periods of trade
A degree of common interest between employers and artisan workers underlined the pattern of industrial relations throughout the period covered by my study. Thus despite protracted and bitterly fought conflicts such as those of 1876 and 1893, the mutuality of trade interest is evident in the anti-strike rhetoric of the Union leaderships, arbitration and conciliation procedures and wage agreements which were featured in Chapter 4. The developing trend was described in Chapter 15 in aspects such as the annual trade agreements which culminated in the selling price policy between the G.B.M. and their employers. More significantly, it was seen in the common purpose of both parties to persuade the government that the continuance of boy labour was essential for the prosperity of the trade. That such an attitude drew questioning criticism is in itself an indication of suspicion by the militant rank and file element that identity of interest between the Union hierarchy and the manufacturers was purchased at the expense of a less privileged group of workers. Conversely, the 1880s witnessed a narrowing of the social gap between the glassmakers and the lower status of the working class. The fundamental reason was the threat to artisan power posed by technological development, particularly the introduction of bottle making machinery. Chapter 9 was an attempt to describe the nature of the threat and provide a contextual background to Chapter 13 in which the socio-political effect of technological advance was examined. The chapter emphasised the growing homogeneity between workers during the closing decades of last century which is indicative of an awareness of status debasement and the need to
marshal class cohesion in face of the threat posed by competitive capitalism. The assumption of leadership which characterised the action and policies of the Yorkshire G.B.M. in the alliances which form the subject of Chapter 13, while representing a clear break with the conservative orthodoxy of most other craft unions at that time, stressed the exclusivity which was the basis of labour aristocracy rather than its abandonment. Similarly, the adoption of radical political attitudes while marking the abandonment of political orthodoxy generally associated with artisan support for Liberalism and preparing the way for affiliation to the Labour Party, was, whether expressed at international or local level, a manifestation of aristocratic labour leadership. My study revealed that a greater and more practical degree of worker co-operation was obtained between the G.B.Ms. and the unskilled labour groups of the Castleford district, or the less industrially organised groups of Continental workers who comprised the bulk of the membership of the International Union, than between the exclusive labour aristocratic groups which formed simultaneous trade federations. The obvious conclusion is that labour aristocratic notions which informed the psychological assumptions of the Yorkshire G.B.M. were more acceptable to less socio-economically exalted workers than to those who regarded themselves as the equals, if not the betters, of the Yorkshire artisans.

The extent to which a decline in the standard of living of artisan glassworkers occurred post 1880 is problematical. The occupational nature of this study, allied to the wide chronological scale encompassed precludes precise analysis of material of a sociological nature. Indeed, insufficient material exists concerning the personal lifestyle of artisan glassworkers to admit precise analysis or comparison to be made with other social groups. Objects of an ephemeral nature of which we are aware, such as bowler hats, silk scarves, gold pocket watches and chains, funeral cards, suggest a standard of living in excess of that appertaining to unskilled workers who formed the bulk of the working class community. Likewise, superficial examination of the type and location of dwelling houses in which glassmakers are known to have resided, shows that while quite frequently changing their mainly rented accommodation, the glassmakers lived in houses situated in areas which were qualitatively better than those which unskilled workers could afford. Indications such as the degree of literacy and cultural values and
social and leisure activities in which glassmakers engaged, such as local politics or the quasi-religious work of various nonconformist bodies, suggest middle class mores but offer no precise detail of actual standard of living. My personal experience as the son of a redundant artisan glassmaker, is that not only did skilled glassworkers enjoy a higher standard of living than the bulk of their neighbours right up to the second decade of the present century, but that consciousness of this fact was a major element governing social attitude and behaviour.\(^5\) As such it is obvious that living standards both shaped and reflected labour aristocratic notions held by artisan glassmakers. Notwithstanding the above evidence, in the final analysis, it is how the glassmakers, rightly or wrongly, perceived their living standards which is essential to our understanding of them as a group. The study has shown an awareness among glassmakers of diminishment of actual wage levels comparative to those of other skilled groups. I have also indicated an obvious worsening in working conditions, some diminution in the prospect of social security and in the regularity of earnings. The increasingly capitalistic nature of the industry allied to the increasing recourse to machinery are further aspects, all of which engendered the feeling among the artisan glassmakers that their life-style was deteriorating. Viewed against a social background of general progress on the part of the unskilled worker, it is easy to see why the artisan felt his socio-economic advantages diminishing and formulated a view of reduced living standards which was disproportionate to the reality of the situation.

The above considerations also governed artisan attitudes concerning the final criterion in the concept of labour aristocracy – the prospects of future advancement for themselves and their children. Despite the evidence of periodic opportunity for artisan transition to proprietorship throughout the period encompassed by this study, few actually availed themselves of such opportunity. The conditions of trade between 1880 – 1894, precluded individual enterprise. The case study concerning the Flint Glass Makers' Co-operative, Chapter 14 (b), and that concerning the Ashley-Arnall Machine-Made Bottle Company, Chapter 9 (b), revealed the necessity for a wider capital base and experience of business management. No longer, as in preceding decades, was artisan expertise the key to business success. Though openings still occurred from time to time for artisans to obtain positions as managers, the changing nature of the industry
denied further advancement. In addition, the increase in unemployment caused constraint in the pace of inter-chair promotion, resulting in a growing tail of lower-paid artisans. At the same time while agreed apprentice ratios continued to admit entry to the trade the increased prospect of unemployment and limited advancement made trade entry a less attractive prospect. Although both sides of industry might publicly agree on the necessity of boy-labour for the essential well-being of the trade and minimise the adverse nature of the work undertaken by youth, the indications are that the work had become more arduous. Not only had the pace of work increased and the range of wares extended, with corresponding changes in size and weight, but as I have shown, this was accompanied by a general deterioration in workshop conditions and health. Despite emollient public utterances to the contrary, the Union leaders admitted to their membership that trade entry was not only unworthy of consideration but an avoidance a parental duty. A cursory glance at the branch membership recorded in the Quarterly Reports of the G.B.M. Society reveals not merely the theoretical nature of this belief, but a more fundamental practicality. The trade which was characterised by its familial connections was noticeably less so by the closing decade of the last century. The point should not be over-emphasised, however, family connections are discernable into the present century, as may own family bears testimony. Also, as I have again stated from my own family experience, the socio-economic advantages of artisan status were evident up to the point when the dramatic collapse of the hand-made bottle trade in the mid 1920s occurred. It is a fact, however, that despite the continuance of the socio-economic advantages, the trade presented a diminishing prospect for future advancement post 1880.

The overall view leads to the conclusion that in terms of Hobsbawm's criteria the artisan workers engaged in the Yorkshire container industry, whether glass bottle hands or flint hands, were labour aristocrats. However, while this assertion has validity throughout the entire period encompassed by my study, it is obvious that the 'golden age', in so far as this group of artisans was concerned, was confined to the period 1860 - 1880, at which point a gradual process of status diminishment becomes apparent. Commencing at the workshop which was the source of the socio-economic basis of artisan power, the tendency towards decline precipitated radical trends which were to an extent in contradistinction to those which one might expect to find when considering the subject which forms the second element of the study.
The second area of consideration is the extent to which trade societies of artisan glassmakers conform to the Webbian theory of 'New Model' trade unionism. The Webbs expostulated the theory that a new phase of trade union organisation was discernible during the third quarter of the nineteenth century, following the reorganisation of the A.S.E. in 1851. The principal characteristics of the Amalgamated Societies which adopted the 'New Model' structure were a centralised system of government with Union policies and finances, including a wide range of welfare benefits, administered by a centralised bureaucracy of permanent, salaried officials. The centralised system of government claimed the Webbs, rendered obsolete the exercise of primitive democracy which exemplified direct rank and file participation in the administration of Society business in the early systems of trade organisation.

In addition, the Webbs asserted, the 'new Model' societies were imbued with a 'New Spirit' which through renunciation of industrial militancy, particularly strike action, organisational stability and financial strength was assured. The philosophy, according to the Webbs, clearly distinguished the new Amalgamated Societies from the small, regionalised Trade Unions whose 'revolutionary' ethos was based on local autonomy and an industrially militant outlook. The purpose of Chapter 3 of my study was to examine the historical development of both societies of artisan glassmakers in the light of Webbian theory. The evidence indicated a process of gradual transition towards 'New Model' centralisation. In the case of the Flint Glass Makers, the conscious attempt at national organisation in 1849, while bearing the superficial hallmark of 'New Modelism', was in fact merely a refinement of earlier systems. Though less formally structured these were certainly inter-regional in function and in the case of the 1844 system was national in character. The case-study furnished by the town-based Castleford G.B.M. Society was an example of the application of the primitive democratic sentiment which the Webbs regarded as the antithesis of 'New Model' government. The case study revealed in its social and administrative aspects an evolutionary tendency which accords superficially with the adoption of a 'New Model' system. However, the study reveals that the pattern of evolutionary development within the Yorkshire trade was dictated by local considerations. Thus limitations on educational attainment and individual ability resulted in the crystalisation of Society administration at branch level, while the
extension of the trade to outlying areas resulted in a widening of Society administration, with Castleford as the governing branch and seat of the trade. Such developments were, however, natural responses to changed local conditions rather than a conscious manifestation of 'New Model' principles. The examination of the transitional influences in Chapter 7 does reveal an attempt within both Societies to impose greater central control within a short time following basic reorganisation. While, again, such a tendency accords with the 'New Model' pattern and particularly in the case of the Yorkshire G.B.Ms, was undertaken by a leadership consciously inspired by the influence of the A.S.E. and other Amalgamated Societies, the transition was decreed by trade determinants. The financial crisis within the F.G.M. Society in 1852, while dependent for its solution and the future stability of the Society on the deliberate adoption of a centralised system of book-keeping, was the application of 'New Model' principles but as an effective means rather than an end in itself.

Likewise, the later adoption of a centrally administered 'employment register' and the uniform application of the apprenticeship rota, while reinforcement of central control in accordance with 'New Model' principles, nevertheless represented a necessary response to ensure the retention of artisan status rather than the theoretical adoption of such principles. As stated above, a more deliberate attempt at reorganisation on 'New Model' principles is evident in the case of the G.B.Ms. The tendency is particularly noticeable from the late 1860s as Alfred Greenwood's ability and influence was brought to bear on Society government, first as a Delegate of the Hunselt Branch, then as a member of the Executive Council, and ultimately as C.S. of the Society. Here again, however, Greenwood's advocacy of 'New Model' reformism should be considered in the context of the pattern of industrial relations which formed Chapter 4 of this study. For Greenwood, the adoption of 'New Model' principles meant the most efficient system of Union government and therefore the most effective means of securing power to resist the manufacturers' assault on trade custom and its corollary; the erosion of artisan status. My study shows that the triumph of centralism within both artisan Societies was only achieved by a process of gradualism promoted by the exigencies of trade and undertaken against a background of immeasurable but substantial rank and file opposition.
Chapter 7 examines the financial structure of each Society and considers the establishment of a wide range of Welfare Benefits as a manifestation of 'New Model' unionism, affecting and arising from artisan recruitment and the maintenance of the socio-economic status of Society members and their families. At the same time the nature of the conflict arising from growing centralism is also examined. The facts which inform my study support the view advanced by the Webbs that the adoption of centralised government systems represents the erosion of primitive democracy as expressed in direct membership participation in Society administration through local branch autonomy or less directly, through the exercise of delegated representation. The thesis, indicates, however, that although the material advantages obtained through the effectiveness of Union power and membership benefits, outweighed opposition to 'New Model' reformism, there remained a significant degree of opposition to the growing concentration of centralised authority. Such opposition ensured the retention within the G.B.Ms' Society of delegate representation and government by resolution. Within the F.G.Ms' Society it is marked by the reluctance to designate a specific district as the permanent seat of government and to make financial provision for a permanent, salaried Secretary. The pattern of industrial relations which I examined in Chapter 4 reveals an underlying militancy on the part of the rank and file which indicates non-acceptance of the pacific outlook by which the Webbs identify 'New Union' philosophy. Furthermore, however much the leaders of both Unions might deplore strikes, the attitudes and actions of the Executives of each artisan Society, both with regard to the F.G.M. dispute of 1858 -1859 and the G.B.M. dispute of 1876, show that neither Society renounced use of the strike weapon as the Webbs claim. Indeed, attempted formulation of trade and socio-political alliances by the G.B.M. which is examined in Chapter 13 is evidence of the growing militancy of Society leaders, post 1880, and should be considered in the context of the advent of the 1893 dispute discussed in Chapter 15. While it is true that industrial relations were characterised by an increasing degree of co-operation, post 1895, the tendency was determined more by expediency than the acceptance of the principle of industrial pacifism. Chapter 11 which examined the effect of working conditions on artisan health revealed an undercurrent of militancy. Likewise, consideration of the effect of technological development, particularly with reference to the case-study concerning the introduction of the Ashley-Arnall machine, but also with regard to Union policy in general towards mechanisation, in Chapter
reveals an underlying antagonism. That hostility was confined to fear and suspicion and expressed in terms of cynical indifference and sullen non-co-operation does not render the underlying militancy less real. It is also of passing interest to note that the continued support of both Unions for the tenets of Owenite co-operative idealism while not at variance with 'New Model' principles, was indicative of an adherence to the concept of primitive democratisation. It is the role of the glassmakers within the context of the wider Labour Movement, however, which most clearly exposes the short-comings in Webbian theory.

The Webbs presented the conflict between 'old' and 'new' trade unionism in terms of a struggle for ideological supremacy within the Labour Movement between George Potter and the Junta in the 1860s. Potter represented the myriad, small regional trade societies, epitomised by outmoded trade policies informed by an attitude of industrial militancy. The ascendant influence, according to the Webbs, was that of the Junta, which comprised the leaders of the large 'New Model' Amalgamated Societies. 8

The view presented by the Webbs has become a focus of academic debate in recent decades which has resulted in some modification of the claims made by the Webbs. Matsumura, in his study of the Flint Glass Makers, 1850 - 1880, summarised the nature of the debate revealing the attempts by both critics and supporters of Webbian theology to provide a structural dimension to the analysis of 'New Model' unionism. 9 However, Matsumura also indicated the shortcomings of either type of framework in terms of applicability to the Flint Glass Makers' Society, stating that,

"Not only in terms of its subscription rate but in many other important aspects the F.G.M.F.S. was a 'New Model' Union ....

.. it resembled the A.S.E. or the A.S.C.J. organisationally in that it was a national Union with a Central Committee and Central Secretary; actuarially in that it stood for high contributions and high benefits.... all of which were secured by the mightly accumulated funds of the Society." 10

And yet, as Matsumura stated, far from endorsing the expectations of the Webbs, the Society
"... did not support the Junta, but Potter!"\textsuperscript{11}

My study reveals the same inherent contradiction with regard to the Yorkshire G.B. Makers' Society. The Society was characterised by high subscriptions, in excess of one shilling per week, supplemented by additional levies the number and extent of which appear to extend beyond any imposed by the F.G.Ms. or even the mass-membership A.S.E. or other Amalgamated Societies. Equally high and extensive were the benefit provisions of the Society, while the accumulated funds of the Society were, per capita, well in excess of rival Societies during the 1870s. The governance of the G.B.M. Society by a Central Executive Committee and a Central Secretary, also resembles the 'New Model' format. The general policies of the Society which aimed to maintain the socio-economic status of the artisan members by means of apprenticeship and promotional control, emigration, restricted production, and joint industrial consultation and trade Agreements, all indicate the move from custom to calculation which marks the transition from 'Old' to 'New' unionism. While it is true, the G.B.M. Society retained a largely regional system of administration, this is explained by the predominant position of the Yorkshire container industry with its specialist trade. Even so, the membership of the G.B.M. Society compared very favourably numerically, with that of the nationally organised F.G.M. Society between 1870 - 1880 (and even exceeded the latter in membership terms from 1891 onward).

Furthermore, the numerous initiatives launched by the Yorkshire G.B.M. Society to form national trade amalgamations are further evidence that the Society regarded itself as a 'New Model' Union. To all appearances, the Yorkshire G.B.M. Society ought to have supported the Junta, and yet as I have shown, the period of conflict between Potter and the Junta was the time when the Society was most strongly linked to Potter. Like the F.G.M. Society, the G.B.M. purchased shares in the Bee Hive. Greenwood featured in a front-page profile at this time\textsuperscript{12} and Potter undertook speaking engagements under the aegis of the principal branch of the Society and with the cognisance and support of the central Executive. How can the apparent dichotomy be explained? To my mind the simple explanation is that the time of the conflict between Potter and the Junta was one when the G.B.M. Society was passing through a transitional phase. Thus, traditions of localism and primitive democratic sentiment strengthened
the natural conservatism of the fraternity, affecting attitudes towards the Trade and trade unionism. The small, exclusive, regionally based group of skilled workers of the 1860s, while conscious of developments taking place within the wider Labour Movement, regarded such developments as peripheral to their trade. Society government was the epitome of primitive democracy, with branch resolution reinforced by the medium of the trade vote, permitting expedient change in accordance with events within the trade. The recent failure of the attempt to form a national amalgamation of the trade due to regional variations and jealousies, had convinced the G.B.M. of the need to cling to the tried and proven system of organisation. Likewise, the attempts by the manufacturers at industrial rationalisation while constituting a grave assault upon customary trade observance could be contained by recourse to traditional remedies based on industrial militancy. The outlook was compatible with that of Potter, and explains why the 'progressive' element, imbued with 'New Model' fervour, which formed the leadership element within the Society, were constrained both in terms of direct contact with the Junta and the pace and degree of Junta inspired reform. The rapid development of 'New Model' organisation within the G.B.M. Society took place against the background of trade prosperity of the early 1870s. This not only supports Musson's view that the "the booms and slumps of the trade cycle had much more effect on trade union development.....than ideological fluctuations propounded by 'the Webbs'," but emphasises the hybrid nature of the Society in the previous decade with its paradoxical elements of 'New Unionism' and primitive democracy.
CHAPTER SEVENTEEN: Conclusions


5. The writer's father, referring to previous economic status, stated with a vestige of labour aristocratic pride, that in the period 1889 - 1926, in which he worked as a glassmaker, "one glassmaker could 'buy' four miners" in terms of basic wages. A further manifestation of aristocratic self-awareness is the fact that a nod of the head was considered sufficient acknowledgement of a verbal greeting from a neighbour of 'inferior' occupational status. It is a sign of the inbred nature of this status consciousness that the practice was continued two decades or more after the dissolution of the hand-made bottle trade.

6. My father was the fifth of six brothers apprenticed to the trade between 1890 - 1902, sons of a glass bottle maker.


APPENDIX ONE:

GLASS BOTTLE MAKERS' SOCIETY - LEVIES.

All journeyman members of the Yorkshire G.B.M. Society holding regular situations were called upon to pay levies sanctioned by the E.C. in addition to the basic membership contributions.

Members declaring 32nd Rule (i.e. withdrawn from the trade), superannuated members and apprentices of 20 years of age and over, were subject to payment of Widow's Levy.

The membership contributions were merged into the existing levies in April 1884. In April 1887, levies for specific objectives were discontinued and variable contributions were paid according to general circumstances.

Between 1865 and 1887 a total of 14 levies were paid, several simultaneously. The individual levies are listed below and the first six provide a key to Table 7:10 featured on page 176 of the Thesis.

A. Widows Benefit:
Rule 24 of the Society Code of 1865 imposed a levy of 1 shilling per member upon the death of a fellow member. The contributions were to be paid by the District Secretary to the deceased member's wife, in addition to the funeral grant on condition that she remained a widow for a minimum of one year. The Rule was rescinded by the D.M. 18th August, 1886, when the administration of the levy was transferred from the District Secretary to the Central Secretary. Under the new system the C.S. instructed the requisite sum to be paid from District funds and reclaimed from Central Fund. Members failing to meet the required commitment were placed in arrear. G.B.M. Reports, Volume I, p 42. op cit, volume VIII, p 216 (cf Chapter 7(f) iii).

B. Donation Allowance:
In 1867, the E.C. decreed that a levy of not less than 6d per week, per member, or such sum as was required to keep a reserve fund of £5,000, the amount to be determined by the E.C., should be imposed. The fund was to safeguard Society finances, particularly with regard to unemployment benefit provision, G.B.M. Reports, Volume I, p 42, (cf Chapter 7(e)).
C. **Dispute in Scotland:**

A levy of 4 shillings per quarter placed on every employed journeyman until the amount granted to the Glasgow and Portobello Societies was made up. *G.B.M. Reports*, Volume VIII, p 240 and p 257 (cf Chapter 8(d)).

D. **Thornhill Lees & Conisbro Lock-Out:**

The sum of 2 shillings per week was levied to subsidise the donation to locked-out members at the above branches, *G.B.M. Reports*, Volume V, p 545.

As the dispute became more protracted the levy was increased in accordance with E.C. requirements in an attempt to prevent the decrease in Society funds, *E.C. Minute Book*, Volume 1, entry 2nd August 1876 (cf Chapter 7(e) supra).

E. **Dispute in Scotland:**

A levy to raise £200 granted by the E.C. to the Scottish G.B.Makers and a similar sum pledged during the following quarter, *G.B.M. Reports*, Volume VIII, p 275 (cf Chapter 8(D)).

F. **Decrease of Funds:**

An increase in journeyman payments from 1s-6d to 2 shillings per week from the end of the quarter, 21st February 1880. The purpose was to offset the decrease in Society funds occasioned by the disputes and adverse trade situation of 1876 – 1880. Journeyman members were paying contributions of 3 shillings per week at this time. *G.B.M. Reports*, Volume VIII, p 246 (cf Chapter 7(e)).

G. **Benevolent Fund:**

A fund for relief of distressed members in case of being disabled from working, from which grants were allotted by the E.C. or D.M. according to individual circumstance, was based on a levy of 6d per quarter. The fund was proposed by Barnsley Branch and approved by Trade Vote in Spring 1882. *G.B.M. Reports*, Volume VIII, p 348. The scheme also incorporated unbound youths holding regular situations who were levied at the same rate as journeyman members, *ibid*, p 350. (cf Chapter 7(f)vi).
H. Donations when Fires Out:
A levy of 3d per week on journeymen and youths to meet expenditure of unemployment donation when furnaces were stopped for repairs. The levy was effective from 21st April 1884. *G.B.M. Reports*, Volume IX, p 534.

J. Lock-Out, Scotland:
As a result of an E.C. decision to undertake a continuous financial subsidy of the Scottish G.B.Ms. locked-out early in 1885, a levy of 6d per working member was instituted for the duration of the dispute. *E.C. Minute Book*, Volume 1, Entry 19th March 1885, (cf Chapter 8(d)).

K. Financial Position:
Commencing 5th October 1885, combined membership contributions and levies of 18 shillings per quarter were made in order to sustain the Society's financial position. *E.C. Minute Book*, Volume III, Entry 8th August, 1885.

L. Dublin Lock-Out:
A levy of 2s-6d per journeyman and youth of a single quarter's duration to provide financial support for the Dublin G.B.Ms (cf Chapter 8(d)).

M. Schumann's Testimonial - Dublin:
The C.S. of the G.B.M. Society was instructed by the E.C. to send the sum of 6d for each journeyman member or youth working in the capacity of journeyman, to the Dublin Testimonial Committee. The sum was recouped by means of a 6d levy of working members. *E.C. Minute Book*, Volume III Entry 10th August 1886.

N. Financial Position:
Commencing 6th September 1886, the rate of payment by journeymen and unbound youths holding regular situations, was increased from 18 shillings to £1-4-0d per quarter due to the Society's financial position. The D.M. proposal of 21st August 1886 was approved by Trade Vote.
On the 4th October 1886, the contribution by working members was again increased by a further shilling per week, making a per capita payment of £1-16-0d per quarter. The measure was approved by the vote of the membership. E.C. Minute Book, Volume III, Entries 22nd and 30th August 1886.

For precise details of size and duration of contributions and levies cf G.B.M. Reports, Volume XXI, pp 553 - 556.
APPENDIX TWO:

CENTRAL SECRETARIES SALARIES.

1. **Glass Bottle Makers' Society:**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ANNUAL SALARY</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1862</td>
<td>No remuneration</td>
<td>Castleford Branch Secretary acted as C.S. and was awarded concessionary salary by D.M. June 1865.</td>
</tr>
<tr>
<td>1865</td>
<td>£1 - 0 - Od</td>
<td>C.S. part-time post.</td>
</tr>
<tr>
<td>1867</td>
<td>£5 - 0 - Od</td>
<td>Full-time post.</td>
</tr>
<tr>
<td>1868</td>
<td>£20 - 0 - Od</td>
<td>Full-time Assistant C.S. from July 1903 £120 p.a.)</td>
</tr>
<tr>
<td>1874</td>
<td>£40 - 0 - Od</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ANNUAL SALARY</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1891</td>
<td>£160 - 0 - Od</td>
<td></td>
</tr>
<tr>
<td>1910</td>
<td>£160 - 0 - Od</td>
<td></td>
</tr>
</tbody>
</table>

2. **Flint Glass Makers' Society:**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ANNUAL SALARY</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1852</td>
<td>£20 - 0 - Od</td>
<td>Part-time post.</td>
</tr>
<tr>
<td>1861</td>
<td>£30 - 0 - Od</td>
<td>Assisted by General Financial Secretary £20 p.a.).</td>
</tr>
<tr>
<td>1876</td>
<td>£50 - 0 - Od</td>
<td></td>
</tr>
<tr>
<td>1900</td>
<td>£40 - 0 - Od</td>
<td></td>
</tr>
</tbody>
</table>

2. **National Glass Bottle Makers' Society:**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ANNUAL SALARY</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1903</td>
<td>£20 - 0 - Od</td>
<td>Part-time post but assisted by part-time General Financial Secretary (£20 p.a.).</td>
</tr>
<tr>
<td>1912</td>
<td>£130 - 0 - Od</td>
<td>Full-time post - G.F.S. abolished.</td>
</tr>
<tr>
<td>1918</td>
<td>£208 - 0 - Od</td>
<td></td>
</tr>
</tbody>
</table>

Sources:

(i) G.B.M. Reports 1862 - 1910)

(ii) F.G.M. Magazine 1852 - 1902)

(iii) N.G.B.M. Magazine 1903 - 1918)
SELECT BIBLIOGRAPHY:

'A' PRIMARY SOURCES

(I) Trade Society Reports & Rules:
2. Flint Glass Makers' Magazine & Rules of the Flint Glass Makers' Friendly Society.
8. Glass Bottle Makers of Glasgow and District and Alloa Trade Society.

(II) Manuscript Sources.

(III) Official Reports.

(IV) Newspapers and Periodicals.

(V) Miscellaneous Sources.
'B' SECONDARY SOURCES

(I) Books and Pamphlets.

(II) Articles.

(III) Theses.
1. Glass Bottle Makers' Reports:

The Quarterly Reports of the Glass Bottle Makers' of Yorkshire United Trade Protection Society were published in biennial volumes between 1867 and 1919.

The complete set became fragmented upon the amalgamation of the N.G.W.T.P. Society and the T. & G.W. Union in 1940, although a substantial number for the period 1871 - 1908 were retained by the latter organisation and are now kept at its Doncaster office. The following volumes comprise the T. & G.W.U. holdings.

<table>
<thead>
<tr>
<th>Volume</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>1871 - 1872</td>
</tr>
<tr>
<td>IV</td>
<td>1873 - 1874 - (2 copies)</td>
</tr>
<tr>
<td>V</td>
<td>1875 - 1876</td>
</tr>
<tr>
<td>VI</td>
<td>1877 - 1878</td>
</tr>
<tr>
<td>VIII</td>
<td>1881 - 1882</td>
</tr>
<tr>
<td>IX</td>
<td>1883 - 1884 - (2 copies)</td>
</tr>
<tr>
<td>X</td>
<td>1885 - 1886</td>
</tr>
<tr>
<td>XIII</td>
<td>1891 - 1892</td>
</tr>
<tr>
<td>XIV</td>
<td>1893 - 1894</td>
</tr>
<tr>
<td>XV</td>
<td>1895 - 1896</td>
</tr>
<tr>
<td>XVI</td>
<td>1897 - 1898 - (2 copies)</td>
</tr>
<tr>
<td>XVII</td>
<td>1899 - 1900</td>
</tr>
<tr>
<td>XVIII</td>
<td>1901 - 1902 - (2 copies)</td>
</tr>
<tr>
<td>XX</td>
<td>1905 - 1906 - (2 copies)</td>
</tr>
<tr>
<td>XXI</td>
<td>1907 - 1908</td>
</tr>
</tbody>
</table>

Six volumes of Reports are housed in the Joint Library of Glass Technology, Sheffield; viz:-

<table>
<thead>
<tr>
<th>Volume</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>1869 - 1870</td>
</tr>
<tr>
<td>III</td>
<td>1871 - 1872</td>
</tr>
<tr>
<td>VI</td>
<td>1877 - 1878</td>
</tr>
<tr>
<td>XIV</td>
<td>1893 - 1894</td>
</tr>
<tr>
<td>XXI</td>
<td>1907 - 1908</td>
</tr>
<tr>
<td>XXII</td>
<td>1909 - 1910</td>
</tr>
</tbody>
</table>
Three further volumes are the private possession of an owner who wishes to remain anonymous:

<table>
<thead>
<tr>
<th>Volume</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
<td>1875 - 1876</td>
</tr>
<tr>
<td>VII</td>
<td>1879 - 1880</td>
</tr>
<tr>
<td>XI</td>
<td>1887 - 1888</td>
</tr>
</tbody>
</table>

The initial volume of the Series (Volume I, 1867 - 1868) is owned by Colonel J. D. Elliot of Fleet, Hants. Colonel Elliot is a descendant relative of William Bagley, former C.S. of the G.B.M. Society. The volume in question is one of those customarily presented to leading Union officials upon relinquishment of office. A further volume of Reports (Volume XII, 1911 - 1912), is to be found in the British Library of Political & Economic Science, (London School of Economics).

The fragmentary Sources furnish a set of G.B.M. Reports for the period 1867 - 1912, with the exception of two volumes (Vol. XI, 1888 - 1889 and Vol. XIX 1903 - 1904). All volumes after 1912 appear to have been lost.

2. Flint Glass Makers' Magazine:

A microfilmed set of 21 bound volumes of the F.G.M. Magazine, covering the years 1851 - 1897, is in the possession of the Modern Records Centre of the University of Warwick, Coventry.

Between its commencement and the year 1902, the Magazine was published in four separate series. Unfortunately, changes of editorship, suspended publication, and local branch discretion, resulted in divergence in the contents and dates of bound copies of early volumes. An apparent attempt to restore order was made with the designation of a 'New Series', Volume 1 of which covered the years 1871 - 1874. However, the simultaneous designation of the 'official' sequence as Volume VIII of the original series compounded the confusion. A 'Second New Series' commenced in 1887, followed by a 'Third New Series' in 1894, but evidence of mis-dating is apparent throughout the entire publication span of the Magazine.
The archives of the T. & G.W. Union contain 14 bound volumes of the F.G.M. Magazine viz:-

<table>
<thead>
<tr>
<th>1st Series</th>
<th>Volume</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>1</td>
<td>1850 - 1857</td>
</tr>
<tr>
<td>II</td>
<td>2</td>
<td>1857 - 1863</td>
</tr>
<tr>
<td>New Series</td>
<td>2</td>
<td>1874 - 1876 - (2 copies)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1876 - 1879</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1880 - 1881</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>1881 - 1883 - (2 copies)</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>1883 - 1885 - (2 copies)</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>1885 - 1887 - (2 copies)</td>
</tr>
<tr>
<td>Second New Series</td>
<td>1</td>
<td>1887 - 1889 - (2 copies)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>1889 - 1891</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1891 - 1892</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>1893 - 1894 - (2 copies)</td>
</tr>
<tr>
<td>Third New Series</td>
<td>6</td>
<td>1889 - 1900</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>1901 - 1902</td>
</tr>
</tbody>
</table>

In addition sixteen bound quarterly editions covering the period January 1895 to October 1898, are contained in the T. & G.W.U. archive, together with unbound duplicate copies of the Magazine for the quarters, January 1896 to July 1897. A further bound copy for the October quarter, 1901, completes the T. & G.W.U. collection of the F.G.M. Magazine. Two Volumes of the Magazine are contained in the Goodchild Loan Collection of the W.M.D.C. Archives & Local History Department, Wakefield, viz Volume I 1851 - 1853 and Volume VI 1868 - 1873. Individual copies of the Magazine for the quarters ending September 1869 and August and October 1874, are part of the Howell Collection, Bishopsgate Foundation, Bishopsgate Institute, London.

3. National Glass Bottle Makers' Magazine:

The Quarterly Magazines of the National Glass Bottle Makers' Society, covering the years 1903 to 1916, bound in seven volumes are also part of the T. & G.W. Union archive collection, Doncaster, viz:-

<table>
<thead>
<tr>
<th>Volume</th>
<th>Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1903 - 1904</td>
</tr>
<tr>
<td>2</td>
<td>1905 - 1906</td>
</tr>
<tr>
<td>3</td>
<td>1907 - 1908</td>
</tr>
</tbody>
</table>
### Volume Years

- **4** 1909 - 1910
- **5** 1911 - 1912
- **6** 1913 - 1914
- **7** 1915 - 1916

Two single copies of the *N.G.B.M. Magazine* for the quarters ending **December 1914** and **December 1918** are to be found in the **T.U.C. Library, London**.

### 4. The National Glass Workers Trade Protection Association:

The material concerning the *N.G.W.T.P.A. is very sparse, being confined to a single Half-Yearly Report (No. 1 Section 2, Volume 1) for the period ending December 1920*. The Report is held at the **Joint Library of Glass Technology, Sheffield**.

The **T.U.C. Library** houses a copy of the *Journal of the Association, January 1924 to April 1925*, and also three Special Financial Reports –

- **1916 - 1920**
- **1920 - 1924**
- **1923 - 1924**

### 5. National Glass Bottle Makers' United Trade Protection Society of Great Britain and Ireland:

The Quarterly Magazines of the Amalgamated Society for

- March 1859
- July 1859
- January 1860
- July 1860

are in the **T. & G.W. Union holdings**.

The Howell Collection has material concerning the **Second Amalgamation (1872)** which bore a similar title and is therefore included under the above heading. The items in the Howell Collection are Amalgamated Society of Glass Bottle Makers - **Amalgamation Report, 1872**, **Quarterly Report** - quarter ending March 1873, and **Half-Yearly Reports, July - December 1873**.

### 6. North of England Glass Bottle Makers' Society:

Two bound volumes of **Half-Yearly Reports** of the above Society
are known to me -

Volume IV, 1904 – 1906
Volume VI, 1913 – 1916

The earlier volume is in private ownership, while the latter volume belongs to the T. & G.W. Union collection.

7. Glass Bottle Makers of Lancashire Trade Society:

Half-Yearly Reports of the above organisation are in the possession of the T.U.C. Library.

The Reports cover the periods
July 1920 – December 1921
April 1922 – June 1922
July 1925 – December 1925
January 1932 – June 1932


Reports for the Half-Years
July – December 1914
July – December 1918
July – December 1920

concerning the Scottish G.B. Makers' Societies, are also in the T.U.C. Library, London.

9. National Societies of the Glass Bottle Makers of Great Britain and Ireland:

A bound volume of the Abstract Reports and Minutes of the National Conferences of the Glass Bottle Makers' Societies of Great Britain and Ireland, Volume I, 1893 – 1895, concerning the business of the Trade Federation in its initial period, is in the Joint Library of Glass Technology, Sheffield.

The National Conference Reports were published in August 1908, under the aegis of the Yorkshire G.B.M. Society. Another version of the above volume belongs to Mr. E. Frow, Working Class Library, Manchester. The book appears to have been the copy retained at the central Office of the Yorkshire G.B.M. Society and contains press cuttings and annotations inserted by Alfred Greenwood, Secretary of the Society and the National Federation, concerning the Lock-Out of 1893.
(b) **Rules and Regulations:**

*Articles of the Castleford Glass Bottle Makers' Society Corrected and Revised, February 27th 1843,* Reprinted in *G.B.M. Reports Volume IX* 1884, pp 451 - 453.

*Rules to be observed by the Members of the Yorkshire Glass Makers' Friendly Aid Society, Established 1853.* Reprinted *ibid*, pp 453 - 455.


*Agreement between the Glass Bottle Makers of Yorkshire United Trade Protection Society and the Glass Bottle Makers of Lancashire*
Trade Protection Society, relating to Travelling Benefit, Members changing from one County to the other, and Funeral Benefit & Co. 1868. Reprinted in G.B.M. Reports, Volume I, pp 43 - 45.


Rules and Regulations of the National Flint Glass Makers' Society. Revised and Corrected April 1859. (Birmingham Reference Library).


- 732 -
Rules of the National Glass Workers' Trade Protection Association Revised and Collated 1939. T. & G.W. Union Archive Collection, Doncaster.


(II) Manuscript Sources:

A. Transport & General Workers' Union Archives - Doncaster, Yorkshire.

1. G.B.M. Society, Executive Council Minute Books -
   (a) 1869 - 1875
   (b) 1875 - 1878
   (c) 1919 - 1920

2. N.G.W.T.P.A. Executive Council Minute Books -
   (a) 1923 - 1925
   (b) 1925 - 1929
   (c) 1929 - 1940


5. G.B.M. Society Propositions & Returns of Trade Votes -
   (a) 1869 - 1886
   (b) 1886 - 1902
   (c) 1902 - 1911

6. G.B.M. Society, Central Secretary's Notebook, 1892.

   School of Economics, London.
   1. Notebooks in the Webb Trade Union Collection, Section A,
      Volume XLIV, pp 1 - 332.

C. Rotherham Public Library.
   1. Beatson Clark (Rotherham) Archives.

D. Central Library - Sheffield.
   1. Wood Bros. (Barnsley) Archives.

E. Castleford Public Library.
   1. Glass Collection.

F. Wakefield M.D.C. Archives & Local History Department.

G. Trade Union Congress Library, London.

H. Rockware Glass Ltd. - Bagley Archives, Knottingley.
   1. Miscellaneous material.

(III) Official Reports:
   Childrens' Employment Commission. 4th Report, 1865.
   (cd 3548), Volume XX.

   Royal Commission on Trade Unions, 10th Report, 1867 - 1868.
   (cd 4123), Volume XXXI.

   Select Committee on Master Servant & Workmen, 1866.
   (449), Volume XIII.
Royal Commission on Factory & Workshops Act, 1867. (cd 1443), Volume XXIX.

Board of Trade: Annual Report by Chief Labour Correspondent on Trade Unions 1894 (cd 7436).

Royal Commission on Trade Disputes & Trade Combinations, 1906. (cd 2826).


Royal Commission on Compensation for Industrial Diseases. 1st Report 1907. (cd 3496).

Board of Trade: Annual Report on Factories & Workshops 1907. (cd 3586), Volume X.

Board of Trade: Labour Department Report 1908 (cd 23337).

Board of Trade: Report of the Cost of Living of the Working Classes. 1908. (cd 3864), Volume CVII.

Royal Commission on the Poor Law & Relief of Distress, 1909. (cd 4499), Volume IV.

Report of the Committee on Glass Bottles – Safeguarding of Industries Act. 1922. (cmd 1705), Volume VII.

Board of Trade: Committee on Industry and Trade: Survey of Industrial Relations (H.M.S.O. 1926).

(v) Newspapers & Periodicals:

1. Newspapers
   Barnsley Chronicle,
   Bee Hive,
   Brierley Hill Advertiser,
   Castleford Gazette,
   Dewsbury Reporter,
Factory Times,
Leeds Mercury,
Leeds Times,
Leeds Weekly Express,
Manchester Guardian,
Mexbrough & Swinton Times,
Pontefract Advertiser,
Pontefract Telegraph,
Pontefract & Castleford Express,
Rotherham & Masbro Advertiser,
Sheffield Daily Telegraph,
Sheffield Independent,
Sheffield & Rotherham Independent,
Wakefield Express,
Yorkshire Evening News,
Yorkshire Evening Post,
Yorkshire Factory Times,
Yorkshire Post.

2. Periodicals

Annals des Congres des Journees International du Verre,
Annals l'Association International Pour l'Histoire du Verre,
Antiquary,
Birmingham Review & Record,
British Medical Journal,
British Trade Journal,
Bulletin of the Society for the Study of Labour History,
Economica,
Economic History Review,
Engineering,
Glass,
Glass Container,
Glass Technology,
Hardware Trade Journal,
History Today,
History Workshop,
Journal of the Royal Statistical Society,
Journal of the Society of Glass Technology,
Justice,
Mineral Water Review,
New Left Review,
Ophthalmoscope,
Population Studies,
Post Medieval Archaeology,
Pottery Gazette,
Social History,
Sociology,
West Midlands Studies.

V. Miscellaneous Sources:


National Federation of Glass Workers - Report on Investigation into the Conditions of the Glassworkers in the Central European Countries - by John Thompson, National Secretary, Castleford, 1922 - Private ownership.


Ordnance Survey Maps - Yorkshire, West Riding, 1846 and 1888. CCXXXIV, 7 and 15. W.M.D.C. Archives and Local History Department, Wakefield.


Bagley Presentation Volume, consisting of correspondence and miscellaneous material concerning the establishment of the Yorkshire Glass Bottle Manufacturers' Association, 1876 and presented by William Bagley to the Association, 1901 - Lt. Colonel D. Elliot, Fleet, Hants.

A Series of diagrams and specifications concerning the Ashley-Arnall Semi-automatic bottle-making machine. Sheffield City Library.


Sykes Macvay & Co., Albion Glassworks, Castleford. List of Company Prices, 1st May 1876 and bill for wares supplied 11th June, 1877. Ibid.

'B' SECONDARY SOURCES

(a) Books and pamphlets (cited)

APPLETON, W.A.

ARLIDGE, J.T. (ed)
Hygiene, Diseases and Mortality of Occupations, 1892.

BABBAGE, B.H.
Report on the General Board of Health on a preliminary enquiry into the sewerage, drainage and water supply and sanitary conditions of the inhabitants of the township of Castleford in the County of York, 1850.

BAINES, E.
History, Directory and Gazetteer of the County of York, 1822.

BARKER, T.C. & HARRIS, J.R.

BARKER, T.C.
BARNETT, G.
Machinery and Labour, 1926.

BIGLAND, J.
A Topographical History of Yorkshire,

BLANCHARD, D. (ed)
Knottingley: its Origins and Industries, Volumes I and II,

CARRIER M.A. & JEFFERY, J.R.
External Migration: a study of the available statistics
1815 - 1950, in Studies on Medical & Population Subjects No. 6
Registrar General's Office, 1953.

CHECKLAND, S.G.

CLARK, A.
Through a Glass Clearly, 1980.

CLEGG, A.H., FOX, A. and THOMPSON, A.F.

CLEGG, A.H.
The System of Industrial Relations in Great Britain,

COLE, G.D.H.
A Century of Co-operation, 1944.


DEANE, P. & COLE, W.A.

DOUGLAS, R.W. & FRANK S.

- 741 -
ENGELS, F.

FOSTER, J.
Class Struggle and the Industrial Revolution, 1874.

FROW, R.E. & KATANKA, M. (eds)

GODFREY, E.S.

GRAY, R.Q.


GREGG & Co. (KNOTTINGLEY) LTD.

GREEN, D.

GUTTERY, D.R.
From Broad Glass to Cut Crystal – a history of Stourbridge glass industry, 1956.

HABAKKUK, H.J.
American and British Technology in the Nineteenth Century, 1967.

HADFIELD, C.

HARDCASTLE, J.
A Concise Historical Descriptive Account of Castleford, 1888.

HARTWELL, R.M.
The Industrial Revolution and Economic Growth, Methuen & Co. 1971.
HOBSBAWM, E.J.

HOUGHTON, J. (Ed).
A Collection, for Improvement of Husbandry and Trade, 1962.

HOWELL, G.


HUNT, E.H.

HUNTER, D.

HUNTER, J.
South Yorkshire, Volumes I and II, 1828 and 1831.

KENYON, G.H.

KIDDIER, W.
The Old Trade Unions, 2nd edition, 1931.

KILNER BROS. LTD.
Fifty Years of the Glass Bottle Trade: Kilner Brothers Jubilee, 1894.

LAWRENCE, H.

LEESON, R.A.
Travelling Brothers, 1979.

LOVELL, J.
British Trade Unions 1875 - 1933, 1977.

MACROSTY, H.W.
The Trust Movement in British Industry, 1907.

MANN, T.

MARX, K.

MEIGH, E.

MITCHELL, B.R. & DEANE, P.

MUSSON, A.E.
Trade Unions & Social History, 1974.
British Trade Unions 1800 - 1875, 1972.

OLIVER, T. (ed).
Dangerous Trades, 1902.
Diseases of Occupation, 1908.

PALLATT, A.
Curiosities of Glassmaking, 1848.

PELLING, H.
History of British Trade Unionism, 1963.
Popular Politics and Society in Late Victorian Britain, 1968.


POLLARD, S.
The History of Labour in Sheffield, Liverpool, 1959.

REDFORD, A.

SAVILLE, J.

SCOTT-WALLACH, J.
The Glass Workers of the Carmaux, 1974.


SCOVILLE, W.C.

TAYLOR, K. (ed).

THOLFSEN, T.R.

THOMPSON, E.P.

THOMPSON, J.
A Brief History of the Glass Industry, Castleford, 1924.

THORNE, W.
My Life's Battles, 1925.

TSUZUKI, C.
TURNER, A.H.

TURNER, B.
Universal British Directory, 1790.

WEARMOUTH, R.F.

WEBB, S. & B.
History of Trade Unionism, 1912 edition.

WILK, A.S.

WILSON, B.
The Struggles of an Old Chartist, 1887.

WYATT, V.
From Sand-Core to Automation – a history of glass containers, 1966.

(b) Books and pamphlets (uncited).

ADAMS, T. & PAYNE, A.
Bottle Collectors' Dictionary, edited by E.S. Thompson and M. Coffin, n.d.

Advances in Glass Technology – Technical papers read at the 6th International Congress on Glass, Washington D.C. 8th – 14th July 1962, and compiled by the American Ceramic Society, Columbus, Ohio, 1962.

ANSELL, C.
A Treatise on Friendly Societies, 1835.

ASPINALL, A.
The Early English Trade Unions, 1949.

BAGLEY & Co. LTD.

BAIN, G., COATES, D. & ELLIS, V.
Social Stratification & Trade Unionism, 1973.

BANKS, J.A.
Trade Unionism, 1974.

BEER, M.
Fifty Years of International Socialism, 1935.

BELLAMY, J.M. & SAVILLE, J. (eds).

BELLAMY, J.M.

BOWLEY, A.W.
Wages in the United Kingdom in the Nineteenth Century, 1900.

BRIGGS, A. & SAVILLE, J. (eds).

BROWN, B.H.
The Tariff Reform Movement in Great Britain 1881 – 1895, 1943.

BURGESS, K.
The Origins of British Industrial Relations – the Nineteenth Century Experience, 1975.

CHALLONER, W.H.
The Hungry Forties, reprint of Historical Association pamphlet, 1965.

CHARLES, R.C.

CHURCH, R.A.

COLE, G.D.H.
British Working Class Politics, 1832 - 1914, 1941.

COURT, W.M.B.
The Rise of the Midland Industries 1600 - 1838, 1938.

COX, H. (ed).

CROSSICK, G.

CROUZET, F. (translated by A.S. Forster).
The Victorian Economy, 1982.

DEANE, P. & COLE, W.A.

DRAKE, M. (ed).

DYOS, H.J. (ed).
ENSOR, R.C.K., (ed).
Modern Socialism - as set forth by Socialists in their speeches, writings and programmes, 1904.

ESTEY, J.A.
Revolutionary Syndicalism, 1913.

FOSTER, J.
Class Struggle in the Industrial Revolution, 1974.

FROW, R.E. & KATANKA, M.
History of British Trade Unionism: a select bibliography, 1969.

GOLDTHORPE, J., LOCKWOOD, D., BECHHOFER, F. & PLATT, J.
The Affluent Worker in the Class Structure, 1971.

GOSDEN, P.H.J.H.

GRAY, R.
The Aristocracy of Labour in Nineteenth Century Britain circa 1850 - 1914, 1981.

GUILLET, E.C.

HABER, L.F.
The Chemical Industry during the Nineteenth Century, 1958.

HARRISON, R.
Before the Socialists, 1965.

HARTWELL, R.M.
The Industrial Revolution and Economic Growth, 1971.

HAYEK, F.A. (ed)
Capitalism and the Historians, 1954.

HAYNES, E.B.
Glass Through the Ages, 1959.
HEINDEL, R.H.

HOWARD, A.L.

HOWELL, G.
The Conflicts of Capital & Labour, 2nd edition, 1890.

HUTCHINGS, B.L. & HARRISON, A.

JACKSON, H.J.
Jean Jaures - His Life and Work, 1943.

JOHNSON, S.C.
A History of Emigration from the United Kingdom to North America 1763 - 1912, 1913.

JEFFREY, J.B.
The Story of the Engineers 1800 - 1945, 1945.
Labour's Formative Years 1849 - 1879, 1948.

LEESON, R.A.
United we Stand: an illustrated account of Trade Union Emblems, 1971.

LEFEVRE, S.G.

LEVI, L.

LEWIS, G.D.
LICHTHEIM, G.
Marxism, a historical and critical study, 2nd edition, 1964.

LOVETT, W.

LUSHINGTON, G.
An Account of the Strike of the Flint Glass Makers 1858 - 1959, in Trades' Societies & Strikes, 1860, (British Library Microfilm).

MACHEN, F.

MARSH, C.D.

MATTHEWS, R.C.O.

MATHIAS, P.
The Brewing Industry in England 1700 - 1830, 1959.

MORRIS, J.R.

MUSSON, A.E.

NATIONAL UNION OF GENERAL & MUNICIPAL WORKERS.
Fifty Years of the N.U.G. & M. Workers, 1939.

NEF, J.U.
NEWTON, M.P. & JEFFERY, J.R.
International Migration, 1951. (British Library Microfilm).

O'DONNELL, M.
A Brief Treatise on the law of combination, on unlawful Societies and on the administration of unlawful oaths in which the present state of the common and statute law in Ireland affecting both master and workman is explained, Dublin, 1838. Reprinted in British Labour Struggles: Contemporary pamphlets 1729 - 1850, New York, 1972.

ORTON, W.A.
Labour in Transition, 1921.

POLAK, A.

POLLARD, S. (ed)
The Sheffield Outrages, 1971.

POSTGATE, R.W.
The Builders' History, 1923.

POWELL, H.J.

PRATT, E.A.
Trade Unionism and British Industry, 1904.

PRICE, R.
An Imperial War and the British Working Class, 1972.

Reports of Artisans selected by a committee appointed by the Council of the Society of Arts to visit the Paris Universal Exhibition 1867, 1867.

ROBERTS, B.C.
The Trades' Union Congress 1868 - 1921, 1958.
ROBSON, A. H.

ROSENBERG, N.
Perspectives on Technology, 1976.

ROTHSTEIN, T.
From Chartism to Labourism, 1929.

SAVILLE, J. (ed)

SAUL, S.B.

(ed)
Technological Change in the United States and Great Britain in the Nineteenth Century, 1970.

SCHLOSS, D.
Methods of Industrial Renumeration, 1892.

SMAILES.
The Geography of Towns, 1953.

THOMPSON, D. (ed)
The Early Chartists, 1971


THOLFSESEN, T.R.

THOMAS, M.W.
The Early Factory Legislation, 1948.

THOMPSON, P.
The Edwardians, 1975.
WAKEFIELD, H.

WARRAN, H.P.
Elements in Glassblowing, 1923.

WEARMOUTH, R.F.

Methodism and the Trade Unions, 1959.

WEISS, G.

WEST, J.

WEINSTEIN, H.R.

WILSON, C.

WORSHIPFUL COMPANY OF GLASS-SELLERS OF LONDON.

WRIGLEY, E.A. (ed).
An Introduction to English Historical Demography from the Sixteenth to the Nineteenth Centuries, 1966.

(II) Articles:
(a) Articles (cited)

ALLAN, V.L.

BARKER, W.R.

BEATTIE, G.

BUTTERWORTH, L.M.A.
*Yorkshire Glasshouses circa 1689 - 1800*, Typescript n.d.

BIRAM, R.S.

BIRAM, R.S.
Is a Federation Wanted?, in *Glass*, Volume 1, December 1923, pp 6 - 9.

BUCKLEY, F.

CLEMENTS, R.V.

COLE, G.D.H.
COLTHAM, S.

CROSSLEY, D.W. & ABERG, F.A.

DEARDEN-MILLS, J.

ENGLISH, S.

ERICSON, C.

FOSTER, J.

GOODCHILD, J.

HANSON, C.G.
HINTON, J.

HOBSBAWM, E.J.


The British Standard of Living, 1780 - 1850, *ibid*, pp 64 - 104.

The Tramping Artisan, *ibid*, pp 34 - 64.


HODKIN, F.W.


Industrial Celebrities, No. 3, Mr. Edgar Breffit, in *British Trade Journal*, June 1876, pp 324 - 325.

KENWORTY, J.

LEGGE, T.M.

LIPTON, W.
Men of Today - a profile of E.J. Smith, in Birmingham Review and record, October 1898, pp 80 - 82.

History and Review of New Trades Combination Movement, ibid, pp 83 - 88.

British Trades Combinations on the E.J. Smith Principle, in loc cit, September 1899, pp

MANN, T. & TILLET, B.
The New Trades Unionism in WARD, J.T. & FRASER, W.H. Workers and Employers: Documents on Trade Unions and Industrial Relations in Britain since the Eighteenth Century, 1980, pp 121 - 123.

MEIGH, E.

MINTON, J.

MOODY, B.E.
The Origin of the Reputed Quart and other measures, in Glass Technology, Volume 1, No. 2, April 1960, pp 55 - 68.

MOORHOUSE, H.F.

- 758 -
MUSSON, A.E.
Class Struggles and the Labour Aristocracy in Social History, Volume 1, October, 1976, pp 335 - 356.


MUSSON, A.E.
The Webbs and their phasing of trade-union development between the 1830s and the 1860s, in Bulletin of Society for the Study of Labour History, No. 4, Spring 1962, pp 6 - 8.

Class Struggle and the Labour Aristocracy, in Social History, Volume 1, 1976, pp 335 - 356.

NEF, J.U.

PORTER, J.H.

RAMSDEN, G.

RIED, D.A.

ROBINSON, W.
Glassmakers' Cataract, in Opthalmoscope, Volume 13, 1915, pp 538 - 554.

Bottle Makers' Cataract, *ibid.*, August 1907.

**SAMUEL, R.**


**SCOVILLE, W.C.**


**SHEPHERD, M.A.**


**SNELL, S.**


**STEDMAN-JONES, G.**


**SWEETING, F.**


**TURNER, W.E.S.**


URWIN, R.W.
The Aire and Calder Navigation.


WILSON, R.G.

(b) Articles (uncited)

ALFORD, B.W.E.

ALLEN, V.

BAGLEY, S.B.
Corporate Efforts in the Glass Industry in *J.S.G.T.* Volume XXV, 1941, pp 100 - 120.

BARKER, W.R.
BEALES, H.L.

BOWLES, W.H.

BRIDGEWATER, N.P.

BRIGGS, A.

BUCKLEY, F.

Old London Glasshouses, *ibid*, pp 137 – 149.


CHAPMAN, S.J.
The Tendency of Children to Enter their Fathers' Trades, in *Journal of the Royal Statistical Society*, 1912 - 1913, pp 599 - 614.

CHARLESTON, R.J.

English Glassmaking and its spread from the Seventeenth Century to the middle of the Nineteenth Century, in *ibid*, pp 155 - 172.

Some tools of the Glassmaker in Medieval and Renaissance Times with Special References to the Glassmakers' Chair, in *Glass Technology*, Volume 3, June 1962, pp 107 - 111.

CLEGG, H.

CLEMENTS, R.V.

COLLINS, H.

COLTHAM, S.
CROSSLEY, D.W.

DERRY, T.K.

DUFFY, A.E.P.

EVANS, W.

FIELD, J.
British Historians and the Concept of Labour Aristocracy, in *Radical History Review*, March 1979, pp 61 - 85.

HAMPSON, C.P.

HARRISON, R.
Professor Beesly and the Working Class Movement, in *Essays in Labour History*, pp 205 - 241.

HICKS, J.R.

HOPKINS, E.
HULME, E.W.
English Glassmaking in the Sixteenth and Seventeenth Centuries, in Antiquary, Volume 30, July - December 1894, pp 259 - 263.

NELSON, G.P.
Bottle Shapes, in Glass Container, Volume 1, Part 3, January 1922, pp 12 - 13 and pp 30 - 32.

PERROT, P.N.

POLLARD, S.


REID, D.A.

SANDILANDS, D.N.

SAVILLE, J.
Trade Unions and Free Labour: the Background to the Taff-Vale Decision, in Essays in Labour History, pp 317 - 351.

SIMON, D.

THANE, P.

- 765 -
THOMPSON, E. P.
Homage to Tom Maguire, in *Essays in Labour History*, pp 276 - 316.

TURNER, W. E. S.


WOOD, E. S.

WOODWARD, H. W.

(III) Theses:

BROWN, C.

BRUNDAGE, D.
CROWLEY, D.W.

DUFFY, A.E.P.

MATSUMURA, T.