SCOTTISH INDUSTRIAL HISTORY

Volume 4 1981

Cover Illustrations

Front The Moray Park Maltings, Edinburgh, of William Younger & Co. Ltd., recently demolished.

Back The Clock Mill, Tillicoultry, which has been acquired by Central Regional Council for conversion to an interpretation centre and craft workshops.

Scottish Industrial History is published jointly by the Scottish Society for Industrial Archaeology, the Scottish Society for the Preservation of Historical Machinery and the Business Archives Council of Scotland. Details of membership of these organisations may be had from the respective secretaries (see end page for names and addresses). The journal is edited by Dr. Charles W. Munn, Department of Economic History, University of Glasgow, G1 and Miss Sylvia Clark, 16 Low Road, Castlehead, Paisley. It is published annually. Contributions will be welcomed, and should be sent to any of the editors.

SCOTTISH INDUSTRIAL HISTORY

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THE FORMATION OF THE GREENOCK STOCK EXCHANGE 1888-1900.

BY - RANALD C. MICHIE.

Between 1870 and 1912 the number of provincial stock exchanges in Britain nearly doubled. This growth has been seen as part of a general trend with stock exchanges being formed in ever smaller towns in response to the changing investment needs of the British population. Stocks and shares rather than property were becoming of increasing importance as outlets for savings. The funds available for investment also grew. This necessitated the spread of stock exchanges.(1) The establishment of a stock exchange in Dundee in 1888 appears, at first sight, to fit into this national pattern. In the 1880's Greenock was the fifth largest town in Scotland by population. Dundee, at various times the third or fourth largest city, had established a stock exchange in 1879 while Edinburgh, Glasgow and Aberdeen had formed theirs in 1844-5. However, unlike these other towns Greenock was not a regional centre, being in the proximity of Glasgow. Its prosperity was closely linked with that of Glasgow for which it acted as a port, along with Port Glasgow and Glasgow itself. Greenock investors, and the financial community as a whole, looked to Glasgow and its stock exchange as the natural market for dealings.(2)

With the development of the telephone in the late 1870's the ability to transact business through Glasgow stockbrokers, by those in the area, was continually being enhanced. The telephone network in central Scotland was probably the most dense in Britain and the system made a point of catering for the stockbroking profession. As early as November 1882 Glasgow and Greenock were connected by telephone.(3) Other substantial towns around Glasgow were quite happy to utilize the central facilities provided by the Glasgow Stock Exchange, and made no attempt to form exchanges of their own. Paisley, for example, had overtaken Greenock in terms of population by 1891 but did not possess a stock exchange. Other regional centres, such as Inverness, Perth or Stirling, despite having an active share dealing fraternity catered for by a number of brokers, never established stock exchanges. The Perth stockbrokers considered the possibility in 1898 but nothing came of the move.(4) Greenock was not an especially large town having a population of 67,000 in 1881 and 63,000 in 1891, with a peak of 72,000 in 1888. In comparison, Aberdeen had a population of 125,000 and Dundee one of 154,000 in 1891.(5) Consequently, the rationale behind the formation of a formal share market in Greenock in the late 1880's is not immediately clear. Certainly, it is not fully explicable in terms of national trends.

Stockbrokers had first practised in Greenock during the 'Railway Mania' but had disappeared with its collapse.(6) It was not until the mid-1860's that they re-appeared. From that date they gradually became more numerous. By 1888 there were four individuals and one partnership operating as stockbrokers compared to only one individual in 1866.(7) This was hardly an unmanageable number of brokers requiring a formal organisation, especially as all their offices were close to each other making regular contact easy.(8) There was insufficient full-time employment for these brokers as all combined it with a variety of other occupations. James Nicoll, for example, who

became a stockbroker in 1887, was also an accountant, house-factor and insurance agent.(9) These additional pursuits were common to most Greenock stockbrokers. In fact, it was stockbroking that was the ancillary occupation and not the other activities. Most of the individuals or firms who became involved in stockbroking were already established as accountants before undertaking broking as a complementary occupation. Dugal Campbell, Greenock's longest established stockbroker, had been an accountant and land agent before adding the profession of stockbroking in 1866. During the mid-1880's he actually dropped stockbroking for a time in order to concentrate fully upon these other activities. (10)

There was little demand in Greenock for the local settling of share transactions that a stock exchange provided. Greenock had very few companies of its own, dominated by local shareholders, for which a local share market was required. All that did exist were four small concerns, namely the Greenock Heritable Co., the Greenock Stevedore Co., the Greenock Steamship Co., and the West End Baths. (11) The railways, banks, and other joint-stock concerns had long since been absorbed by either the municipal authorities or other Scottish joint-stock companies, based mainly in Glasgow. Though Greenock investors still held shares in these and other Scottish joint-stock companies they were only one small group of shareholders. The market for the securities was now located where the majority of investors resided and that was unlikely to be Greenock. For concerns such as the Clydesdale Bank or the Glasgow and South Western Railway this was in Glasgow. It was far easier to match bargains in the larger market in these companies than among a restricted number of shareholders in the vicinity of Greenock. (12) When the municipal authorities in Greenock acquired the gas and water companies they did not issue negotiable stocks, debentures or annuities in exchange. Instead, they created a debt upon which they paid interest and redeemed gradually. Thus, while Greenock investors were owed around £0.75m by the town in 1888, that debt was not in a form that required local settling facilities.(13) As a result there existed only a limited need for an institution whose main business would be to facilitate the matching of bargains between local investors.

The main function of the Greenock stockbrokers was not to settle share transactions for clients between themselves, but to channel buying and selling orders to the nearest or most appropriate market. Greenock brokers had long felt aggrieved that this meant having to share commission with other brokers.

> "Those of them who had occasionally to invest in stocks for clients had hitherto to go to Glasgow, Edinburgh, or London, and that certainly was disadvantageous to themselves, in fact, they were obliged to give the greater part of the commission to the gentlemen in these towns with whom they did business."

was the view of Dugal Campbell.(14) With the formation of the stock exchage the Greenock brokers expected to obtain better terms in their transactions

with stockbrokers in other towns as they would be acting as a body and not as individuals. The result would have little consequence for the Greenock investor but much for the Greenock stockbroker. However, the stockbrokers in Greenock had been in this position for at least twenty years before 1888, and there was nothing to indicate that the relationship had become intolerable or that informal joint-action would not stand the same chance of success. This did not present a strong enough reason to form a local stock exchange. If it had, similar action would have been taken by the numerous other medium sized towns in Scotland during that decade or before.

The single event that led to the formation of the Greenock Stock Exchange was the town's ambitious harbour building programme and the difficulties it encountered in the late 1880's. There was a continuous improvement of Greenock's harbour facilities in the nineteenth century in response to the growing trade requirements of West-Central Scotland. Despite the construction of a new harbour in 1805 and a new dock in 1818 the port was considered inadequate as early as the 1830's. The growing size of ships and the expanding volume of traffic forced the provision of more commodious facilities. A completely new harbour and pier was commenced in 1846, and completed in 1850 at a cost of around £120,000. Even that had to be supplemented by a further new harbour in 1867 and another new pier in 1870.(15)

> "One after another, previous harbours, always built in anticipation of greater and fast increasing trade, have been ere long found amply to fulfil the prognostications of these projectors, being entirely insufficient to meet the requirements of the port"

wrote a local author in 1886.(16) It was against such a background that Greenock started upon its most ambitious phase of harbour construction in 1878. Through the building of a large wet-dock, a graving dock, and an entirely new harbour - the Great Harbour - Greenock hoped to become the premier port of the West of Scotland, surpassing even Glasgow itself. This time, however, Greenock over-reached itself and was never able to finish the project. Traffic was not lured away from Glasgow as sea-going ships continued to be able to reach the upper reaches of the Clyde. Consequently, there was only a limited need for an intermediate trans-shipment point at Greenock. At the same time the hoped-for coal export trade failed to materialise while the major bulk import, raw sugar, declined in the face of competition from European sugar-beet producers.(17)

To finance harbour construction, the Greenock Harbour Trust borrowed heavily. By May 1887 it had accumulated a debt of £1,533,361 in the form of short-term bonds upon which interest was paid annually. When these bonds matured they had to be repaid but as they were considered to be safe investments they were either regularly renewed or replacement finance easily obtained.(18) The revenue of the Harbour Trust tended to fluctuate from year to year depending on the state of trade. However,even before the new programme of construction was begun, there was a slight tendency for this revenue to decline. With the new expenditure the size of the debt was almost doubled but the income,out of which the interest on this debt was paid, continued to fall. (19)

The inevitable result was reached in May 1887 when the Greenock Harbour Trust had to announce that they could not pay the interest due to bond holders, let alone redeem maturing bonds.(20) A panic ensued amongst those who had lent money to the Trust ensuring that no further funds could be raised, without the greatest of difficulty, in order to maintain interest payments until construction was finished and trade and revenue grew.(21)

The only solution was to reform the Trust's borrowings into long-term debt upon which interest would be paid, when possible, with the prospect of eventual redemption. The Trust's assets could hardly be sold to pay off its debts, as they consisted of harbours, piers, and docks. A parliamentary bill was lodged in December 1887 with the object of consolidating the whole debt into ordinary and preference debenture stock, and this bill received the Royal Assent in July,1888(22). Under this legislation the holders of bonds regarded as having priority, amounting to £430,673, had the option of exchanging them for Debenture Stock 'A' paying 3.5 per cent per annum, or otherwise to wait until their bonds could be paid-off in full. Creditors holding £359,956 worth of bonds (84 per cent) accepted the offer of conversion. The other bondholders, amounting to £1,103,838 were given no option but to exchange their holdings for Deventure Stock 'B' paying 4 per cent per annum. Stock 'A' had first call upon the Trust's revenue, while Stock 'B' could only share what remained, though its claim was cumulative.(23)

As a consequence of this conversion the Greenock Harbour Trust's essentially short-term but renewable debt of around £1.5m became a long-term transferable debt in the form of debenture stocks.(24) Many holders of the bonds had no wish to hold debenture stock indefinitely. Their initial investment may have been short-term deliberately, or they were unable to forego lost income, or they needed to realise assets, or they no longer had confidence in the Harbour Trust. For reasons such as those a market was now required for dealings in these new transferable securities. The natural market would have been the Glasgow Stock Exchange for the largest proportion of the Trust's debt was held in the West of Scotland. Of the borrowings of £1,578,000 extant in May,1887, 45 per cent originated from Glasgow and the West of Scotland, 32 per cent from Edinburgh and the rest of Scotland, and 23 per cent from England.(25) However, there was an extreme unwillingness on the Glasgow Stock Exchange to become involved with the debenture stock of the Greenock Harbour Trust. Not only had they legitimate fears concerning the soundness of the stock, in the light of the Trust's continuing difficulties, but they were understandably unwilling to aid an institution whose very purpose was to finance the development of a rival port to Glasgow and so undermine that city's prosperity.(26)

Greenock Harbour Trust Debenture Stock remained unquoted on the Glasgow Stock Exchange throughout 1888, leaving the stock without a recognised and convenient market for its holders.(27) In order to remedy this difficulty the stockbrokers in Greenock decided to form a stock exchange in the town. By its establishment they expected to monopolise the substantial turnover in Harbour Trust Stock and so enhance their own business. On the 24th September,1888 the Greenock Stock Exchange was opened largely to deal in Harbour Trust Stock, though transfers of other securities would also be handled.(28) The Greenock firm of accountants and stockbrokers, Hardie and Allan, announced to their clients

"As you are doubtless aware, a Stock Exchange has been formed here with the object of conducting business in Harbour Trust Stocks and other Investments".(29)

Without the funding of the Harbour Trust debt and the lack of co-operation from the Glasgow Stock Exchange, the Greenock Stock Exchange would never have been formed. Apart from the Harbour Trust there were hardly any other local concerns whose shares required a market centered on Greenock, and other transactions could be carried out through Glasgow.

Membership of the Greenock Stock Exchange was open to all recognised stockbrokers with an office in Greenock. It was expected that they would have additional occupations.(30) Nevertheless, not all of the growing number of stockbrokers in Greenock bothered to join the stock exchange. By 1900 eight firms were undertaking stockbroking in Greenock, all being part-time, but the Stock Exchange had only six members.(31) Despite the creation of the local stock exchange, it was Glasgow that continued to provide the market for the securities in which Greenock investors were interested. This included the stock of the Harbour Trust as early as 1890.(32) The Greenock Telegraph continued to list the official prices of the Glasgow Stock Exchange as a regular feature.(33) Greenock stockbrokers were more than willing to issue the Glasgow Stock Exchange monthly investment list under their own names, if they had been allowed.(34) Even the workings of the Greenock Stock Exchange were governed by the practices and procedures of the Glasgow Stock Exchange.(35) Glasgow stockbrokers regarded the Greenock institution as an unwelcome and unnecessary intrusion and refused to recognise its existence. The Glasgow Stock Exchange treated all Greenock stockbrokers alike, whether they were members of the Stock Exchange Association or not. In the cases of the other Scottish stock exchanges, those who were members were given preferential treatment, in such matters as shared commission compared with those in the same city who were not members of the stock exchange. Edinburgh and Aberdeen Stock Exchanges had extended these privileges to Greenock but Glasgow had refused to do so.(36).

Though the actual use of the Greenock Stock Exchange was very limited, once formed it continued in existence. It served as an association of established local brokers and provided a market for those limited transactions that could be settled locally. During the 1890's a few local private concerns were converted into joint-stock companies, such as R. Thorne & Sons, a distillery; Brown Stewart & Co., paper manufacturers; and Fleming Reid & Co., a textile firm. A tramway company and a shipping association were also formed. (37) Despite these additions to the range of locally held investments, the overall level of business remained very low right up to 1900. That business that was undertaken was dominated by dealings in Harbour Trust stock, to the exclusion of almost all else.(38) While the establishment of a stock exchange in Greenock can be seen as part of the general extension of the share market in the late nineteenth century, this view would not be accurate. Without the peculiar circumstances of the Greenock Harbour Trust, it is most unlikely that a stock exchange would ever have been formed in Greenock. The town was too near Glasgow and lacked the established local joint-stock companies with large numbers of local shareholders, which were essential prerequisites for the formation of a local stock exchange.

UNIVERSITY OF DURHAM

Footnotes

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22. N.B.E., March,1889; Smith,op.cit.,173.

23. S.E.O.I. (1890), 90-1; S.E.O.I.(1891), 98-9

24. S.E.O.I. (1891), 98-9

25. Smith, op.cit.,172

26. Smith, op.cit.,173; Bird, op.cit., 89. The Clyde Navigation Trust never faced any difficulty in obtaining capital.McLean, op.cit., 287

27. See Glasgow Daily Share List, 3 Jan,1888, 31 Dec,1888

28. G.T., 25 Sept.,1888

29. General Circular issued by Hardie and Allan, Chartered Accountants and Stockbrokers, Greenock, 21 Sept., 1888.

30. Constitution and Rules of the Greenock Stock Exchange Association (Greenock, 1888) Rules 2, 3.

31 Gr.D., 1900; Thomas, op.cit., 287

32. S.E.O.I. (1890), 91; Glasgow Daily Share List, 2 Jan,1900 31, Dec, 1900.

33. For example, G.T., 1889, 1895, 1900

34. Glasgow Stock Exchange Association: Minutes,(G.S.E.) 10 July, 1894.

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37. S.E.O.I. (1900).

38. G.T., 1889-1900. The Greenock Stock Exchange List inserted in the newspaper contained a 'business done' column. This allowed a visual assessment to be made of the volume of transactions and their composition.

SOCIETY NEWS

Scottish Society for Industrial Archaeology.

Activity is on the increase. Five outings have taken place since October,1980. On 21st September,1980 there was a day which started at Camperdown Works in Dundee(just in time, as it turned out), went on to inspect the Newtyle Railway tunnel and incline within Dundee, and then developed into a cross-country rally taking in cornmills, limekilns and an icehouse almost as far north as Montrose. Mr. Boyd of the Dundee Museums and Art Galleries aroused so much interest in the Newtyle Railway (celebrating its 150th anniversary in 1981), that it was decided to devote a full day to it during the celebration year, and accordingly on September 5th 1981, which luckily turned out a splendid day for the purpose, a group of members again enjoyed the hospitality of Dundee, with a lecture by Mr. Boyd, lunch in the spectacular viewing-point provided by the Dundee Leisure Centre, and another cross-country car tour.

The A.G.M. on 28th March was made the occasion for a day in Kirkcaldy, this time with a tour in the morning and a symposium in the afternoon. On the 25th October,1980 members were invited by the Royal Scottish Museum to a day at Biggar Gasworks. This was not so well attended as the other days, perhaps because many members have seen Biggar before and there was a rival gasworks outing in another place at a near-by date. This, and freezing weather, and a mishap involving the electricity supply,caused the day to be intimate rather than impressive; we band of brothers clustered round a screen swopping slides and absorbing a continuous supply of coffee and biscuits. On 24th October,1981 the Society held a One-day Conference on Food Production and Preservation, possibly the first of several on Rural Industries of Scotland. This was a most successful occasion - attendance (in the Royal Scottish Museum) about fifty, speakers all first-rate, discussion constructive and lively, technical hitches nil. It is hoped to publish in this Journal the papers given by the three guest speakers; John Shaw on Water-powered Grain-Milling, Christopher Whatley on the Salt Industry of Scotland and Bruce Walker on Ice Houses and Fish Curing.

It is not clear how much of the increased activity is a cause and how much an effect of the lively Newsletter which has been published throughout the year, but this is certainly much appreciated, even though the workload has almost broken up the marriages and professional careers of two successive members of the Society.

Scottish Society for the Preservation of Historical Machinery

One side-effect of the present national situation is that prospects for the placing of the Society's collection still oscillate. Most of it is still where it was two years ago, a situation which at one point it seemed could not continue, and the officers concerned are still carrying burdens of anxiety which at one time they thought they had collapsed under. Two outings were successfully held, although a postal contretemps prevented another from taking place and shortage of technical manpower prevented some films from being ready in time for a show the Committee had planned.

The two visits were to Parsons, Peebles of Granton, an electrical engineering firm interesting from several points of view, and to Millport Gasworks. The latter was occasioned by interes in some specific apparatus whose destiny was uncertain, and was therefore undertaken in spite of its possibly competing with the Other Society's Biggar outing. In turned out to be one of the best events of the kind the SSPHM has ever had, in the view of those who were on it, mainly because of the enthusiasm and expository talentof the Manager, Mr. McGregor.

S.S.P.H.M.

LETTERS TO THE NEWSPAPERS

The S.S.P.H.M. have a member, Robert Millar, who has made it his particular task for more than four years to ply the Glasgow Herald with correspondence about the industrial history of Western Scotland and the scandal of its non-preservation. Almost all his letters get printed, and sometimes illustrated with photographs which the editor is inspired to add from the archives. Further correspondence may be drawn out,and sometimes from people who have not been previously known to the Industrial Archaeology scene. Members, of course, also follow up themselves on occasion.

He takes his cue from some news item, article or TV feature which seems likely to get a reaction from the readership, whether it concerns a closure, a demolition, urban decay or the energy crisis. He does not try to impart a great deal of information at once and his tone is predominantly nostalgic pride. He seems to have cemented a relationship with the paper which has survived editorial changes. These are only some of the subjects he has found the occasion to bring forward:

Shieldhall Jam Factory, 26.5.78.
Water-power at Catrine, 24.8.78, and Greenock, 17.9.78.
Lilybank Boiler Works, 22.11.78.
Singer 9.1.79, 13.10.79.
Changes in steelmaking, 24.6.79.
A call for extra-mural courses in I.A., 10.9.79.
Mavisbank Ore Terminal, 1.12.79 and further correspondence.
The preservation, or rather its lack, of Glasgow marine engines, 28.4.80, mill engines, 7.5.80, and locomotives, 9.1.81.
Fleming, Reid and Co, 21.4.80.

The example is commended to imitation. Meanwhile, a slightly longer piece of Mr. Millar's is printed here, about the now vanished factory where he worked for a quarter of a century.

LOOK BACK AT SINGER

B Y

ROBERT N. MILLAR.

The ending of sewing machine production at Clydebank was not merely another factory closure. It was also the end of an era, and the passing of an institution which, for a century, had seemed to be as permanent as the City Chambers in George Square or Glasgow University. Singer, the Chambers and some conspicuous parts of the University are, in fact, much about the same age, all built in the 1880's. The brick buildings at Kilbowie had of course no resemblance, inside or outside, to the other two establishments.

One American executive arriving at Clydebank for a three-year term as Managing Director was heard to remark that it "was the largest factory which he had ever managed - and was also the dirtiest". My own opinion on my first day (nearly 35 years ago) was even less flattering. I had fully intended to leave after the first week. In fact, I remained there until I retired some years ago. It was really quite a happy place to work - once you got used to it. But even its fondest admirer could only admit it was a scrap heap by then.

To understand the Rise and Fall of the Singer Empire we should look at the early development of the sewing machine. The invention of a machine to replace hand-sewing was a necessity arising from the Industrial Revolution itself. The spinning-frame and the power-loom had displaced the spinning-wheel and the hand-loom. In so doing, the world's textile output had been increased enormously. The bottleneck was that garments still had to be slowly put together by the hand sewers.

So we find that a patent for a sewing machine was filed in 1790 in London by a cabinetmaker, Thomas Saint, but unfortunately his patent and drawings were mislaid and forgotten in the Patent Office for 84 years before coming to light again. There is no record of Thomas Saint ever having actually constructed a machine or model.

In 1830 a Frenchman, Thimmonier, an army clothing contractor, designed and built a machine for his own use. In all he built about 80 machines for use in his workshop in Paris. The sequel was that his workshop was wrecked and the machines smashed by a mob concerned about what would now be called redundancies. Thimmonier did not start up again and died in poverty in 1857.

Between 1832 and 1834 Walter Hunt of New York invented a lock-stitch machine but did not patent or develop it. His daughter had persuaded him to drop the idea, in case it put seamstresses out of work. Elias Howe, also of New York, took out a patent in 1846 for a machine closely resembling Hunt's, and went into production as the Howe Machine Co. The Howe machine fell just short of a "break-through". This came later, in 1851, from Isaac Singer (1811-1875).

Isaac Merritt Singer was of German descent and a self-taught inventive genius. In 1850 he first saw some early sewing machines in a Boston workshop, where a friend suggested that if he could produce a reliable machine he could make a lot of money. Singer wanted money, and took up the challenge, borrowing forty dollars from one Ziegler to set up in business. By working almost without sleep or food for the next eleven days, he produced the world's first really reliable and workable sewing machine.

I.M. Singer and Co. later moved from Boston to New York, to larger premises. Business flourished, but trouble soon followed. In developing his new machine Singer had "borrowed" freely from other men's ideas and he was soon embroiled in lawsuite over patent rights. He turned to a New Yorker, Edward M. Clark, for help in his troubles. Clark soon sized up the situation and its possibilities.

The patent war was settled by persuading the four contestants (Singer, Howe, Wheeler and Wilson, Grover and Baker) to form a Patents Pool, which ran smoothly for the next 30 years. In place of a fee for his services, Clark asked for a partnership of one-third with Singer and Ziegler. This was soon increased to one-half, as Ziegler was unwise enough to sell his interest for 6,000 dollars to the other two partners. The business was later floated as The Singer Manufacturing Company, a name retained till a few years ago. Clark gave up his law practice in order to give his whole time to the Singer Company. In 1856 he established the first Hire Purchase Scheme, to couple mass production with mass selling. Whether H.P. has been a blessing or a curse to society is debatable, but it certainly sold the sewing machine. As the money rolled in, Singer increasingly handed over the responsibility to Clark, and proceeded to "live the life of Riley" in America and the capitals of Europe, where he achieved a colourful and scandalous reputation until his death in 1875. A Stately Home in Devon (Oldway House, Paignton) was one of Isaac's many addresses.

The Singer Company first arrived in Scotland in 1856, when a retail shop was opened in Buchanan Street in Glasgow. Eleven years later, in 1867, Glasgow became the location of the first Singer factory outside the United States. The site in Love Loan, off John Street, is now occupied by part of Strathclyde University. About 100 machines per month were assembled from parts imported from the USA. The labour force consisted of 31 boys and men plus one woman "tester". The weekly wage bill for the lot was £31. The tiny factory soon proved inadequate, causing a move to James Street, Bridgeton, 12 years later in 1869. The new factory was planned for 600 machines per week - soon considerably increased - and also for the manufacture of parts previously imported from the U.S.A. Castings for the arms and beds were obtained from a foundry in Bonnybridge.

Further expansion led to the building of the Kilbowie factory, which became operational in 1884, nearly a century ago. Production was originally set for 8,000 machines per week, later raised by fifty per cent. During this era of growth, additional Singer factories were opened in the U.S.A., Canada, Germany, Russia, France and Italy. In 1914 no less than 3 million Singer machines were made and sold world-wide, an all-time record. In 1979, by contrast, the figure was 1 million.

World War I meant a transfer to war work. The Russian factory was lost to Singer following the October Revolution in 1917. Podolsk still produces about 7,000 machines per week, but the name Singer is not on them. The Depression of the Thirties gave a set-back to sales, and then 1939 saw Singer back on war work. World War II led to the wrecking of the German Factory during the Russian advance into Germany. After the war a new machine factory was built at Karlsruhe and a needle factory at Aachen.

With a pent-up demand in 1945, post-war prospects seemed good, and in fact were very good until the mid-fifties, when Japan entered the world market for sewing machines as a dangerous rival. Japanese competition was accurately summed up by one Singer chief when he reufully remarked, "The Japanese machines are better than ours and cheaper".

The directors of the parent company in the U.S.A. reacted to the Asian challenge in three ways.

(1) They belatedly poured millions of dollars into their aging plants in an attempt to modernise. With hindsight we can only add,"too little and too late".

(2) They tried to diversify into other products, to lessen their undue dependence on sewing machines. Some of the new ventures were successful, others were not.

(3) On the principle "if you can't beat them, join them" Singer next built factories in Third World countries, including Taiwan,Java, Philippines, Pakistan, Turkey, Brazil, Peru, and Mexico.

These new ventures were altogether too successful for the Clydebank complex. The final insult was delivered after the Clydebank closure. A "moth-balled" factory in Anderson, South Carolina,has been re-opened to make sewing machines for the American market.

Not to end on a gloomy note, let me quote what may be the best spitaph on the Clydebank sewing machine. Mahatma Gandhi learned to sew on one, and wrote, "It was one of the few useful things ever invented".

The sources of this article are almost all to be found in the writer's scrapbook of cuttings from the monthly Singer Works Magazine over the years 1945-1969, and personal communications made to him by Singer employees, backed up by Glasgow Museums Department material on the earlier history of the sewing machine.

OLD PAISLEY SOCIETY COLLECTIONS

BY

MARGARET JAMIESON

The Old Paisley Society are also collecting reminiscences not necessarily oral. The following highly literate description of the impact of employment fluctuations is an extract from a contribution by a secretary at Paisley College of Technology.

I was born during the General Strike in 1926, and my mother always told the tale of how my father had to get up at 5 a.m. and sneak through the streets to the Sneddon to go to his work. Fortunately it was a small firm-of coachbuilders and painters - and he was not to my knowledge caught by the pickets. In those days you had to pay for hospital treatment,and my mother knew that there would be a bill for having me at Barshaw which would have to be paid. So all the Unions and pickets were not as strong as my mother's word, and poor old Dad (who wouldn't argue with a fly)had to keep on working.

My childhood was very happy, and I was always proud of the fact that my father was a tradesman (and a foreman at that). We considered ourselves to be a little better than our neighbours - we went for holidays which was unheard of by my playmates. Men weren't paid any Holiday Pay in those days, and most of the wives had a very lean time during the holidays.

The first time I became aware that everything was not "all right" must have been when I was about 8 or 9. I overheard long discussions,my father looking very worried and my mother distressed. Daddy didn't seem to be at his work, and he wasn't ill. Then the piano was sold! Great tragedy. Mind you, I hated it, and wouldn't practice, but I didn't like the degradation of it being carted out of the house and the whole neighbourhood watching. The next traumatic experience in my young life was the day Mother went out to work. This was unheard of, even in our poor neighbourhood. Mother was a trained weaver, and she went back to her old job in a weaving mill in Underwood Road. I had to go to my Aunty's for dinner (which was nice because her mince was even better than my mother's)but the house was strange when I came home from school in the afternoon. My big sister was there, but she "bossed" you. The best thing to do was to go along Caledonia Street and meet mother coming from her work! One night she took so long, I edged further and further along Underwood Road until I came to the factory. Much to my delight, I was allowed to come in and see it. It was ghastly - a large shed, dimly lit by gas, and full of great weaving machines with little space between each. Mother told me that the gas was lit at the mains, and the foreman came down the shed lighting all the mantles, and by the time he came to her loom which was at the bottom of the shed, she was nearly overcome by gas. I enjoyed watching the looms in motion, but I was not impressed by the cloth being woven-it seemed to be in such dull colours.

Mother was on "piece" work and if she had had a good week, on pay night she bought me a toffee apple at the fruit shop at the corner, and this was a great treat. I think we both enjoyed the novelty of her working, but very soon Father got a job, and she immediately stopped working. I suppose we could have enjoyed a higher degree of prosperity if she had continued to work, but this didn't seem to occur to her - it wasn't done - and Father was very ashamed that she had to go out to work - even for a few weeks.

I don't ever remember being "poor" again. Dad was always employed, and indeed worked until he was 70. His trade as a coachpainter declined with the advent of spray-painting, but he always had a job, and in his latter years when working at Linwood (not at his trade) his reputation spread around and the directors got him to "touch up" their cars etc., by the old coachpainter method - and this in a car factory. My mother never went out to work again.

DEMOLITION IN PAISLEY

The dissapearance of Paisley's Industrial Archaeology has been noticeable for at least the last ten years; of the 17 sites which John Butt thought worth specific mention in the Gazetteer of The Industrial Archaeology of Scotland in 1967, only the bridges and one railway station remain. During the last two years, however, there has been not only a razing of particular sites but the cutting of a broad swath across the town's early engineering quarter along both sides of the River Cart north of the town centre. On the West bank, Carlile Quay, the memorial of the Burgh's optimism about river commerce in the 1830's, has long been allowed to decay but the outlines of a shipbuilding quarter could be seen at Abbotsinch for some years after the closure of the last yard in 1968. A walk down New Sneddon was an excursion in history only five years ago. The early cottonmills and threadworks had left the run-down splendours of the former manufacturers' houses. The later engineering works, Abbey, Atlas, the Paisley Foundry - still stood though getting nearer and nearer to derelict. Nearer the town end some of the small houses held small, respected old businesses - a slater, a coachbuilder - and of course a stately pawnshop. The side alleys, once horrific fever-ridden slums, now had few inhabitants, but there were rows of later (and more tolerable) workers' tenements, in one of which William Gallacher was born on Christmas Day 1881, as nobody in Paisley can be unaware this year.

On the east bank was Laighpark House, looking surprisingly like a farmstead, and the two well-known firms of White's (woodworking machinery) and McCallum's (dyers). A minute's walk away, just off the riverside, was the Fullerton, Hodgart and Barclay complex (see article by W. Lind in S.I.H. vol 2.1) which to some Paisley people seemed as enternal as the foundations of the world.

There is now very little industrial history to be seen on a walk down the Cart. Unhappily, the closures and demolitions have not been in aid of anything very positive. There is indeed a new road bridge to relieve Old Sneddon, which may help to keep life in the yet-surviving engineering quarter beyond Caledonia St. There is also an expanse of flat emptiness, rapidly filling with garbage and junk, and presumably awaiting the economic possibility of erecting new housing. An article on the history of the area is promised for next issue.

NEWS FROM OTHER ORGANISATIONS

New Lanark. Restoration of New Lanark continues apace. The first part of New Buildings to be tenanted has been taken over by Scotland Direct, and re-roofing of the north end is nearing completion (see photo). The roof repairs to the school have been completed by contractors working for the Ancient Monuments Branch of the Scottish Development Department. With restoration for owner-occupation of Braxfield and Long rows, schemes are being worked out for Double Row and Wee Row involving a mix of tenancies and owner-occupation, excluding, of course, the museum stair being conserved by the Ancient Monuments Branch. Plans are also being drawn up for Dale's and Owen's houses, involving a mixture of residential, museum and possible catering accommodation.

In May 1981, Archie Sommerville retired as supervisor of the job creation schemes which have made such a difference to the pace of restoration at New Lanark. Archie's good-humoured but firm and constructive approach to the difficult task of organising unskilled youngsters to tackle skilled work have earned him the respect and affection of all who have known him during his time at New Lanark, and it is with sadness that they saw him go.

Scottish Railway Preservation Society.

The weekend of 27th and 28th June,1981 was a notable one for the SRPS. Not only did the society hold a most successful Festival of Transport at Bo'ness, and send its magnificently restored North British Railway 0-6-0 Maude to the 125th Anniversary celebrations at Springburn (St. Rollox) Railway Workshops, it also ran the first official trains on the Bo'ness harbour line. This was the realisation of a dream for many society members, who have for nearly twenty years worked towards the goal of a 'permanent home'. The line was formally opened by the Convener of Central Regional Council, who also drove the first train, which consisted of the North British Saloon and the Thompson brake third, propelled by ex-Waterside National Coal Board Barclay 0-6-0T No.24, with Giesl ejector. With local authority and Scottish Tourist Board assistance, the society has also acquired part of the branch from Manuel Junction to Kinneil Colliery,and hopes by next summer to have made a link between the existing line along the foreshore and the present terminus of the branch. Volunteers are of course welcome at Bo'ness any weekend.

Linlithgow Union Canal Society.

This vigorous organisation continues to make canal history,not least by restoring a Glasgow Underground Car to the last Glasgow Corporation livery. This vehicle was originally acquired by Ronnie Rusack of the Bridge Inn at Ratho with the idea of using it as a reception centre for the'Pride of the Union' restaurant boat. When this project foundered, the car was given to LUCS, who have spent much time and effort on its restoration, with help from the ICI Dulux Community Paint Project. The refurbishing won LUCS one of twelve awards. The car may be viewed by visitors to the Society's Canal Museum at Linlithgow basin. The society continues to press for the restoration of a navigable opening at Preston Road, at the West end of Linlithgow, and is preparing a report on a suitable method of re-opening the route to the West.

Forth and Clyde Canal Society

As mentioned in Site News, the Society has acquired two of the three ferryboats from the Kelvinhaugh ferry. It moved them to Bowling on 21st May, and is at the time of writing, training crews to operate a weekend public service. The ultimate intention is to move one of the vessels on to the summit level, to operate from Glasgow Road Bridge, and plans are being drawn up for the construction of a secure mooring opposite the stables which have been restored by Caledonian Estates. The Society wants volunteers to assist with the restoration and running of the boats - contact, Bruce Smith at Duntocher 72863 for details. Membership of the Society costs £3 for individuals, £5 for families and £1 for students and old age pensioners. Subscriptions should be sent to:Patricia Davies, 59 Newton Road, Lenzie, G66 5LS.

The Institution of Civil Engineers

The Edinburgh and East of Scotland Association of the ICE has published a sequel to their booklet "Our Engineering Heritage - Dean Bridge, Leith Docks, Forth Rail Bridge, published in 1979. Entitled A Heritage of Bridge between Edinburgh, Kelso and Berwick and written by Roland Paxton and Ted Ruddock, it deals with 36 bridges and two other sites, and has 44 illustrations. The descriptions, though necessarily brief, are excellent, and the historical information is drawn from original sources wherever possible. Copies of this model publication may be obtained (price£1.50, post free) from D. Haldane, Department of Civil Engineering, Heriot-Watt University, Riccarton, Currie, EH14 4AS.

Cumnock and Doon Valley District Council

This enterprising local authority published in 1978, an attractive booklet Drongan : The Story of a Mining Village, which deserves wider recognition. Based on research by a Job Creation team, it has been written by Janet Retter, a member of the team. It deals with the early history of the area first, then with Drongan Pottery, with mining life below and above ground, with the out-villages of Sinclairston, Drumsmudden and Trabboch, and with the present. Useful appendixes list places of interest, and coal owners in the area, and there is a valuable bibliography. The illustrations are well chosen and on the whole well reproduced. Copies may be obtained at the bargain price of 75 pence post free from Miss I.C. Crawford, A.L.A., District Librarian, Cumnock and Doon Valley District Library, Bank Glen, Cumnock, KA18 1PQ.

Scottish Industrial Archaeology Survey

The survey, now in its fourth year, continues to survey Scotlands rapidly disappearing industrial heritage. The in depth survey of brick and tile works is nearing completion, and a detailed study of windmill remains has just been completed. Reports on both of these should be in print by the end of 1981. In addition to the systematic survey work 'rescue' recording of individual sites has been undertaken, and records of harbour installations and bridges have also been made following recommendations made by the Survey Panel. The longer-term future of the survey is under consideration, but the Ancient Monuments Branch of the Scottish Development has made finance available until March,1982. The survey officer, Graham Douglas, would welcome information about brick and tile works. This should be sent to him at the Department of History, University of Strathclyde, Glasgow G1.

Saltpan Survey

Dr. Chris Whatley, Department of Modern Social and Economic History, University of Dundee, is investigating the physical remains of the once-important Scottish salt industry. The would welcome information on this subject.

The Johnstone Bicentenary

As part of the celebration of the bicentenary of the Renfrewshire town of Johnstone, the W.E.A. and the Community Council are sponsoring a booklet of "People's History" - largely oral reminiscences from the older citizens, and there seem to be fair grounds for hoping that a permanent Local History Society (even if not under that name) may be fostered into life. A full-time research worker is now being employed and a series of lecture meetings, held as bait to bring interested parties together, has been well attended. This will not, of course, be concerned primarily with Industrial History, but the past of Johnstone is so essentially an industrial past - the town was founded to give an outlet to the Quarrelton coal production and grew as a cotton-mill colony and survived the 1860's as a machine-tool centre - that this side is likely to be prominent.

SITE NEWS

Avonbank Bleachworks, Larkhall, Lanarkshire (NS725508)

The number of bleachworks in Scotland continues to decline. One of the most interesting latterly was Avonbank, at Millheugh, Larkhall, the last place in Scotland where the process of beetling was carried out. Avonbank closed in June, 1980, and with it the traditional Scottish Hollands beetled window-blind fabric ceased to be marketed. Until the early 1970's wood-framed beetling engines made in 1839 were in use, housed in the splendid shed seen on the cover of this issue, but the machines latterly used were made during the Second World War for the preparation of black-out cloth. Before the works closed, the Centre for Educational Practice at the University of Strathclyde made a film of the process, which consisted of pounding the rolled up cloth with wooden hammers lifted by a cam (wiper) shaft and allowed to fall under their own weight. The cloth roll was both rotated and reciprocated, giving a watered-silk effect to the finished product. Attempts to have a beetling engine preserved failed, but it is hoped that the old beetling shed will be retained when the work's site is developed for housing.

Kelvinhaugh Ferry, Glasgow (NS 562656)

The last of the free passenger ferries on the Clyde, linking Kelvinhaugh to Stag Lane, Govan, ceased working in 1980. In the Mid 1950's there were five crossings operating, at Whiteinch, Govan, Kelvinhaugh, Finnieston and Clyde Street, but the construction of the Kingston Bridge and the Clyde Tunnel, coupled with the decline of riverside industry and housing reduced the need for these services to a very low level. The life of the Kelvinhaugh crossing was prolonged by the reconstruction of the Glasgow Underground, but after its re-opening the decision was taken to eliminate it. The three vessels retained for the service have been acquired for re-use on the Forth and Clyde Canal. Two have been purchased by the Forth and Clyde Canal Society for services from Bowling and Kirkintilloch. The third is to be re-built as a restaurant boat by Caledonian Estates to operate in connection with their restaurant/bar at Glasgow Road Bridge, Kirkintilloch (see below).

Millport Gas Works, Great Cumbrae (NS 168553)

The last coal-carbonising gas works in Britain was due to stop working in the spring of 1981. Little changed since major reconstruction in the 1930's by Millport Town Council, the works retained horizontal retorts and a standby steam exhauster (by Bryan Dolkin of Chesterfield). The boiler, of the Cornish Type, was an attractive feature. It is indeed strange to know that the last horizontal gas retorts of the traditional type, will be drawn in 1981, nearly a hundred and eighty years after William Murdoch worked out a satisfactory system of producing gas for lighting.

Riveted Stills

Another tradition, that of the use of riveted construction in whisky pot-still manufacture, is rapidly dying out. The technique has not been used for new construction for more than 20 years, and the remaining riveted stills decline in number yearly, though replacement of sections of stills has prolonged the life of some riveted seams. During the silent season of 1980, two historic stills were replaced. At Tamdhu, the last of the stills installed during the great distillery boom of the 1890's was taken out. This owed its longevity to the closure of the distillery between 1927 and 1947. The last of the elegant riveted stills at the Glenlivet Distillery also disappeared at the same time.

Clyde Ironworks and Clydebridge Steelworks, Tollcross, Glasgow (NS 6462)

The demolition of the ironworks and associated coke ovens, and of the open-hearth melting shop at the steelworks was completed early in 1981, drastically altering the landscape of eastern Glasgow, which for more than forty years had been dominated by the blast furnaces and hot blast stoves of the ironworks, and the tall chimneys of the open-hearth furnaces. Some of the smaller buildings at the ironworks have, however, been retained and re-used as workshops for small industries. The rolling mills at Clydebridge are still very much with us.

Singer Sewing Machine Works, Clydebank, Dunbartonshire (NS 494707)

The closure of this massive factory in 1980 was followed by its acquisition by the Scottish Development Agency, who as forecast in SIH 3.1 have demolished the older buildings with a view to encouraging industrial development on the site. Among the casualties was the industrial sewing machine block, which retained lineshaft drive for many machine tools after the domestic machine production had been extensively modernised.

Moray Park Maltings, Marionville Road, Edinburgh (NT 274745)

The decline of floor malting for brewery malt has resulted in the demolition of most of the larger maltings which used to be such a feature of the Edinburgh landscape. One of the recent casualties has been William Younger & Co.Ltd's. Moray Park Maltings, whose castellated storage range facing London Road were probably the most elaborate of all.

Vulcan Works, Paisley, Renfrewshire, (NS 486644)

The demolition of the main part of Fullerton Hodgart & Barclay's works in Renfrew Road, reported in SIH 3.1, has been followed by the destruction of the buildings on the other side of the road, including the superb light foundry, illustrated on p.222 of The Industrial Archaeology of Scotland Vol 1 The Lowlands and Borders, Batsford, 1976.

Pennyvenie 2/7 Colleiry, Dalmellington, Ayrshire (NS 488068)

This colliery, whose closure was reported in SIH 3.1, has been completely demolished. Such precipitate demolition is particularly unfortunate in the light of other developments in the area.

Glenruthven Mill, Auchterarder, Perthshire (NN 955129)

The last steam-worked factory of any kind, in Scotland, Glenruthven ceased full-scale operation last summer. The owners, Robert White and Sons (1929) Ltd. are continuing to produce their fine cloths on a more restricted scale, initially in the mill. The engine and its Cornish boiler, are to be retained in the meantime. Strathclyde University's Centre for Educational Practice made a film of the mill during its last weeks of operation.

Butters Brothers, Crane Manufacturers, 195 McLellan Street, Glasgow (NS 564641).

This old-established company ceased manufacturing in 1980. The works produced a wide range of cranes, and were particularly noted for their lattice-jib derrick cranes, examples of which may be found all over Scotland.

George Russell & Co., Crane Manufacturers, Park Street, Motherwell (NS 753570).

Russells, like Butters a firm of wide reputation, finally gave up business in 1980. Founded in the 1860's by George Russell, a former employee of Alexander Chaplin, the company made a wide range of cranes, including harbour and gantry cranes of the heaviest types. Latterly the company had withdrawn from crane making concentrating on jobbing engineering work.

Bridges at Ballingluig, Perthshire (NN 977521 and NN 077522)

The 1891 bowed truss road bridge and lattice girder railway bridge at Ballingluig (SIH 2.1, pp 67-8) were demolished during the winter of 1979-80 after completion of a replacement concrete girder bridge.

St. Ronan's Mill, Innerleithen, Peebles-shire (NT 335379)

A particularly sad loss has been this fine wool-spinning mill, built in 1846 by George Roberts and Son of Selkirk to designs by Robert Hall and Co. Described as illustrated by drawings in the RCAHMS Inventory of Peebles-shire, Vol.2 pp 332-3, figs. 303-4, St. Ronan's had been disused at least since 1974, and its demolition was only agreed after a prolonged search for a purchaser.

Machine Tool Works, Johnstone, Renfrewshire (NS 433635)

The once-celebrated works of John Lang & Co., lathe manufacturers, has been demolished. Lang's were for long in the forefront of lathe design both from a technical and aesthetic point of view. Though their works were of no great architectural interest, its disappearance removes another link with the days when Johnstone was a leading centre of machine tool manufacture. Now only Clifton & Baird who specialise in metal saws, carry on the tradition.

Tile Works, Tipperty, Logie Buchan, Aberdeenshire (NJ 970268)

This most interesting works is a recent victim of competition from plastic field drains, and from English-made clay pipes. It was the last tile works to retain its rope-hauled narrow-gauge(2 foot) system, and was also unusual in being powered by a two-cylinder horizontal oil engine, and in having its four circular downdraught kilns enclosed in a brick building.

Gourock Ropeworks, Port Glasgow, Renfrewshire. (NS 326745)

Most of this complex, including the ropewalk, was demolished in 1980, leaving the seven storey and attic former sugar refinery block as the main survivor. Part of the ropemaking machinery is in Glasgow Museums' store.

Castle Shipyard, Port Glasgow, Renfrewshire (NS 331743)

Founded c 1870 by Blackwood and Gordon, and latterly occupied by James Lamont & Sons, this shipyard has recently been demolished to make way for a new road, though the remains of the two patent slips used for ship repairing could still be seen in May,1981. The Castle Yard was the last of the 'traditional style' shipyards on the Clyde, and had in the early 1970's a remarkable number of vintage machine tools, including a rack sawbench probably installed when the shipyard was opened.

Thistle Rubber Works, 110 Commerce Street, Glasgow (NS 585644)

Both the original mid 1880's brick block facing the street and the reinforced concrete additions of 1910 have been demolished during the last few months. Built for Campbell, Achnach & Co. an Aberdeen firm for the Manufacture of India Rubber goods and waterproofs, the factory had been disused for a number of years.

Lady Victoria Colliery, Newtongrange, Midlothian (NT 333636)

The long-forecast closure of this colliery occurred early in 1981 and underground salvage work was planned to finish at the beginning of July,1981, bringing the operation of the magnificent Grant Ritchie steam winding engine to an end. At the time of writing it is expected that the engine, together with the seven Lancashire boilers and part of the surface buildings will be acquired for preservation by Lothian Regional Council, with the intention of handing the complex over to a suitable body for operation as a working museum.

The Clock Mill, Tillicoultry, Clackmannanshire (NS 914974)

This three storey and attic building (see cover) latterly operated by D.C. Sinclair and Co., as a weaving factory has been acquired by Central Regional Council for conversion to craft workshops, and an interpretive centre. Originally built as a water-powered spinning mill, clock mill is the uppermost of a series of woollen mills, all piped to the mill from a dam up the Glen, emerging through an unusual glazed earthenware funnel on to an overshot wheel, now removed. The building has in common with several other Hillfoots mills, a dwelling-house built on to the end, which was presumably occupied by the proprietor.

Paton's Mill, Tillicoultry, Clackmannanshire (NS 913970)

This mill has also recently closed. It consisted of quite a large complex of buildings, the main range being in the traditional style 3 storey and attic bays, 2 by 34. Central Regional Council plan to acquire the mill for conversion to small workshops.

Milnquarter Fireclay and Ganister Works, Bonnybridge, Stirlingshire (NS 829791)

Attempts to preserve this works by Falkirk District Museums have, alas, failed. Though fireclay products have not been made on this site since the associated mine operated until supplying fireclay to G.R. Stein's works at Castlecary. The complex illustrated well the main features of the refractory trade, a notable industry in the area, and it is most unfortunate that the preservation project has been aborted.

Linwood Motor Car Factory, Linwood, Renfrewshire, (NS 4564)

The decision to close the Linwood Car Plant by the end of May, 1981, with tragic consequences for the area, represents the end of a dream. The vision of a Linwood - led flowering of the automotive industries in the West of Scotland was a powerful one, but the failure of the components firms to move into the area meant that the full employment and profit making potential of the Government directed project was not realised. The history of Linwood goes back to the Second World War, when plant for light armour and gun barrel manufacture was laid down to 'shadow' Beardmore's main plant at Parkhead. Linwood came into operation in 194 , and made gun barrels on a large scale for a relatively short period. After

the war it was converted into a rolling-stock works by the Pressed Steel Co.Ltd., and produced large numbers of 16 ton steel mineral wagons for British Rail. It made the rolling stock for the Glasgow North suburban electrification in 19 , the works on the east side of the road, became the nucleus of the Rootes car plant built in 19 . Building on the west side of the road to form the main assemblyshops required extensive concrete piling. The continued existence of the car factory has been in doubt for many years, owing to persistent labour relations problems and generally low levels of productivity, but these have been factors reinforcing the geographically disadvantageous position of the plant, which seems certain to rule out yet again the possibility of large-scale automobile manufacture in Scotland.

General Terminus Iron Ore Terminal, Glasgow (NS 576647)

The closure of this transfer point consequent on the opening of Hunterston, noted in SIH 2.2 & 3, has, as anticipated been followed by the demolition of plant, which was almost complete by the end of May,1981. A notable Clyde landmark has thus disappeared.

SUMMARY LISTS OF RECENT ARCHIVES, SURVEYS AND DEPOSITS

1. NATIONAL REGISTER OF ARCHIVES (SCOTLAND)

Surveys completed by the Registrars since publication of Scottish Industrial History Vol.3 No.1. Full details are available from :

The Secretary, National Register of Archives (Scotland),
P.O. Box, 36. H.M. General Register House, Edinburgh,EH1 3YY.

AGRICULTURE, ESTATES, LAND AND PROPERTY

1861 Orkney Library. Papers of Ernest Walker Marwick. Articles, notes, press-cuttings and other secondary material mainly about Orkney and Shetland, but including some material relating to other parts of Scotland,Canada and Scandanavia. Subjects include agriculture, fishing and whaling; archaeology, including printed maps and guides to Orkney sites, 1947-76; architecture, including papers relating to St. Magnus Cathedral, 1923-74 Other subjects include; family history, folklore, communications, natural history and place names, 1700-1977.

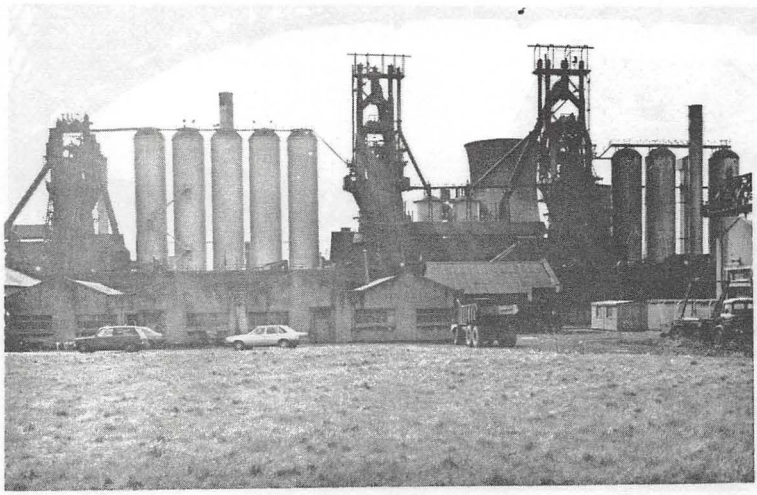
1869 Orkney Library. Miscellaneous papers. Titles and other papers relating to lands in Orkney, 1488-1897, including copy rental of Orkney, 1601; inventories of estate and house of Burray, 1710-47; rentals of Melsetter estate, 1800-97. Proposals for improvements to streets in Stromness, 1792. Plans and drawings, 1819-1925, including properties at Old Castle, Kirkwall, 1824; Scapa Distillery, 1885-1912; Grain Earthhouse, Kirkwall, 1901 and of miscellaneous historical monuments in Orkney, 1902, n.d.

1870 Orkney Library. Small gifts and deposits. Titles and other papers relating to lands in Orkney, 1509-1977, including copy valuations of Orkney, 1653-1820, n.d.; rentals of Rousay, 1742, bishopric of Orkney, 1794; Melsetter estate letter book, 1912-14. Plans, photographs and drawings, 1853-1978, including Kirkwall Gas Works and street plans of gas pipes, 1894-1969; drawings and photographs of Orkney life and people, late 1800s-c.1930.

1871 Orkney Library. Papers of Lieut,-General Sir F. Burroughs of Rousay and Wyre. Estate papers and correspondence, 1840-1921, including factors' accounts, 1840-92, and vouchers, 1840-1910;correspondence concerning evictions and crofting question, 1883-91; papers of and relating to Crofters' Commission, 1883-1901, Association of Landowners in Orkney, 1889-96, fisheries, 1870-1901, Rousay roads, 1859-93, papers and report on minerals of Rousay and Wyre, 1837-86.

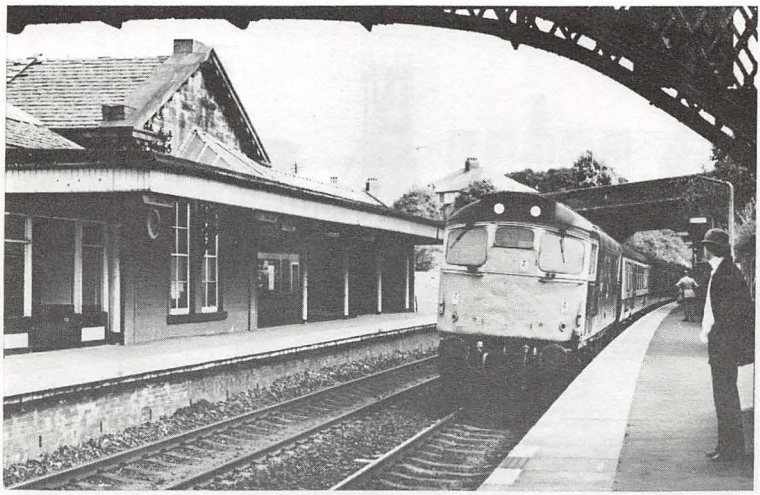
1872 Orkney Library. Papers of William Spence, Kirkwall. Titles and miscellaneous papers, 1591-20 cent. Correspondence on estate matters from Samuel Laing, travelling in Europe, 1828-31.

1873 Orkney Library. Papers of Mrs Hutchison, Doune. Miscellaneous titles, vouchers, bills of lading and legal papers, 1594-1869, including suit rolls of earldom and bishopric of Orkney, 1668, 1670. Letter book of (-) Baikie, collector and tacksman of excise of Orkney, 1779-85.



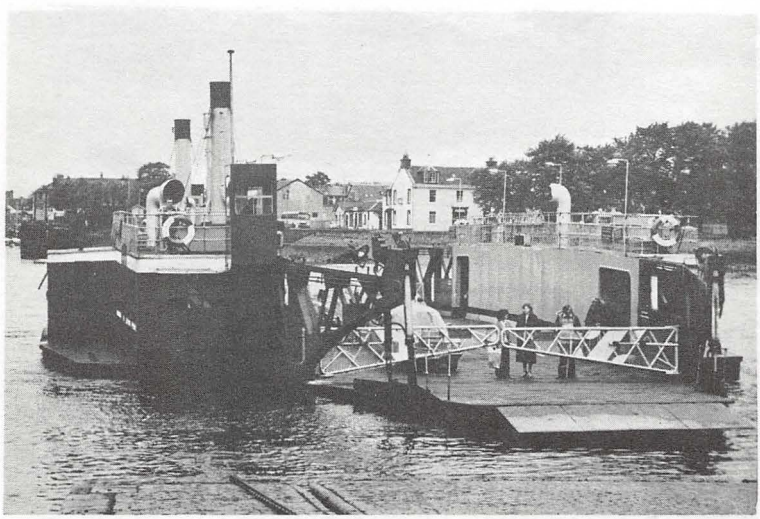
(Above) The blast furnaces at Clyde Ironworks in 1979. No.1 furnace is on the left, and Nos. 2 and 3 on the right, flanked by hot blast stoves.

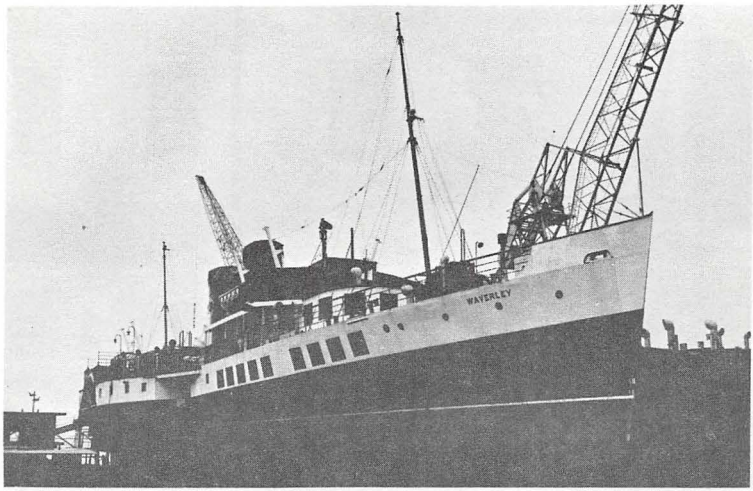
(Below) The seventeenth century blast furnace at Red Smiddy, Poolewe, during excavation in September 1980. The tap arch is on the right, and the blowing arch on the left.



(Above) The old Edinburgh & Glasgow station building at Falkirk High with one of the first-generation push-pull Edinburgh to Glasgow trains in 1977. A new station building has been completed on a site to the west of the old, which has been demolished.

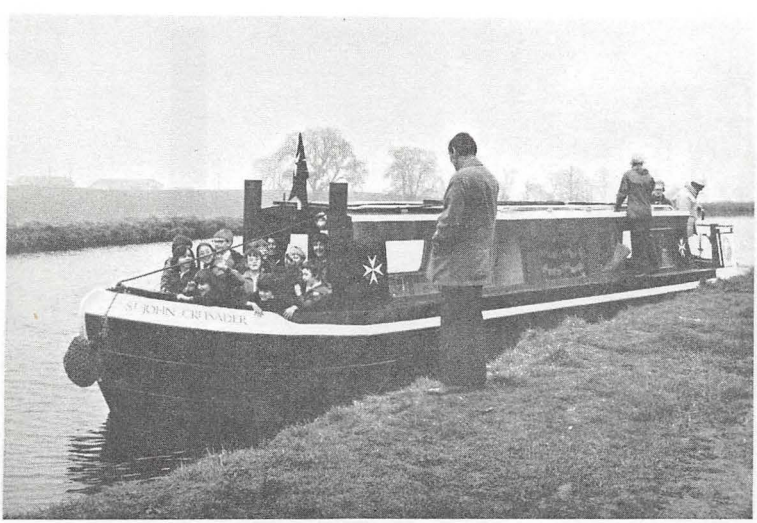
(Below) The spare Renfrew ferry, formerly Erskine, and still steam-propelled, approaching Yoker in the spring of 1981. With the demise of the Kelvinhaugh service this is the only ferry route operating on the river Clyde.

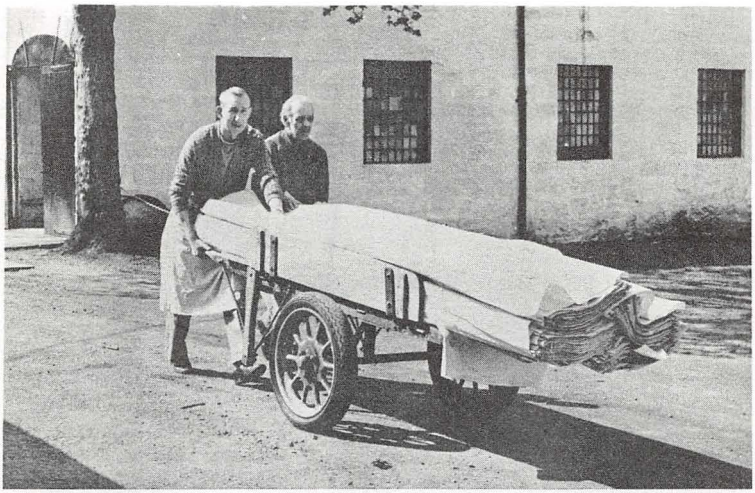




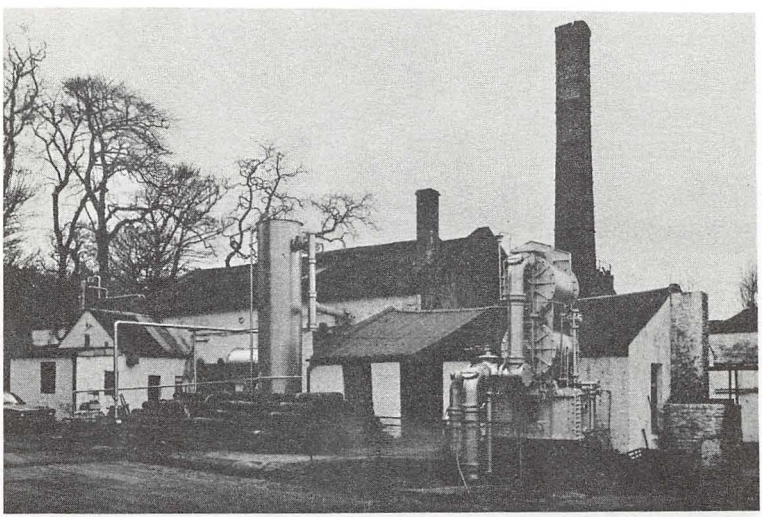
(Above) P.S. Waverley on one of the patent slipways at James Lamont & Sons' Castle Yard in 1975, with subassemblies for the small car ferries the company was building to left and right.

(Below) The St John Crusader of the Seagull Trust leaving Ratho on her first cruise of the 1980 season, with pupils from the Royal Blind School, Edinburgh.



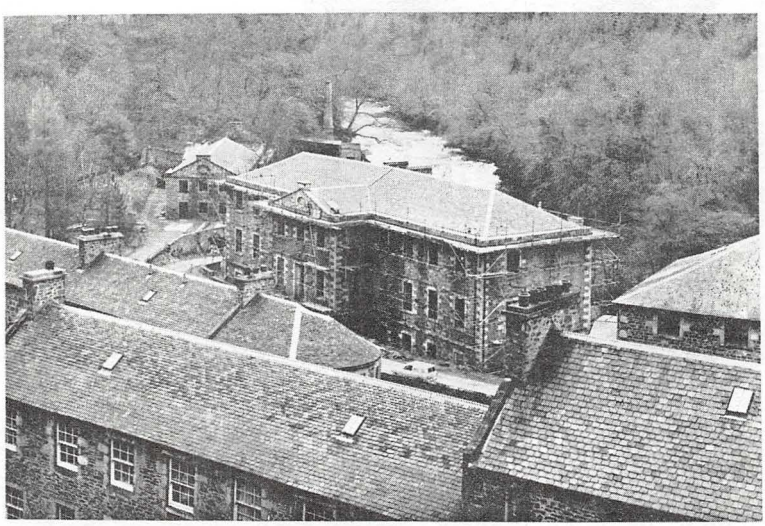


(Above) The last two beetlers at Avonbank Bleachworks transferring cloth to the beetling shed in June 1980.
(Below) Millport Gas Works, with the retort house at the rear and the condenser (left) and scrubber (right) in the foreground



(Above) Councillor Harry Gray, Chairman of the New Lanark Conservation and Civic Trust, Jim Arnold, Manager of New Lanark, and Archie Sommerville, Supervisor of Manpower Services schemes in the village at New Lanark in the spring of 1981.

(Below) The School, New Lanark with roof repairs almost complete, Spring 1981.



General view of the main blocks of Singer's Kilbowie Works in 1978, with the offices in the foreground. The multi-storey buildings on the right date from before the First World War, and were advanced for their period.

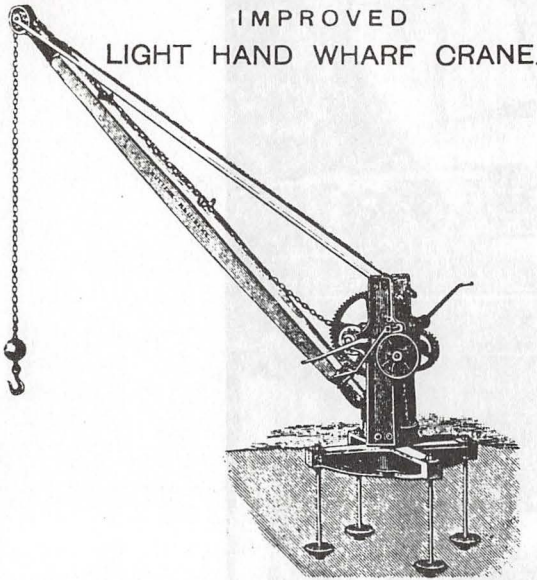
One of the machine shops in the industrial sewing machine section at Singer's Kilbowie Works, Clydebank in 1978. Some of these belt-driven machines were over a hundred years old.

BUILDERS' & CONTRACTORS' ENGINEERS.

BUTTERS · BROTHERS

OFFICES 93 HOPE STREET GLASGOW.

IMPROVED LIGHT HAND WHARF CRANE.



THE above shows a light, cheap Wharf Crane, where constant working is not required. We supply them complete, ready to erect as shown, with foundation Plates, holding down Bolts, Washer Plates, Chain and Hook.

PRICES.

To Lift One Ton, Single Purchase, 12 feet Radius, £28 10 0
" Two " Single & Double " 13 " " 36 0 0

BUILDERS' & CONTRACTORS' ENGINEERS.

BUTTERS · BROTHERS

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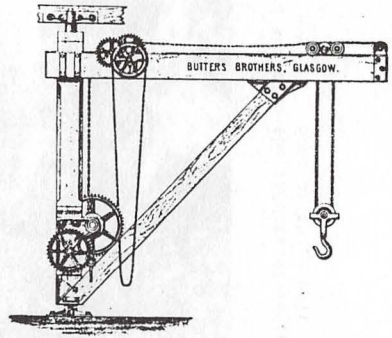
HAND FOUNDRY CRANE.



FOUNDRY CRANES of this class are made of American Oak, with endless chain traversing motion, worked by Spocket Wheel and Gearing, double purchase lifting Gear, and complete with top and bottom footsteps, Chains, Snatch Blocks, &c. Specifications on Application.

PRICES.

To Lift.	Radius.	Price, Complete.	Ironwork only.
3 Tons.	18 feet.	£65 0 0	£36 0 0
4 "	18 "	68 10 0	40 0 0
5 "	18 "	79 0 0	44 0 0
6 "	20 "	95 0 0	53 10 0
8 "	20 "	110 0 0	65 0 0
10 "	20 "	132 10 0	77 10 0

1879 Mrs D. Bruton, Wellington, Somerset. Oswald of Dunnikier papers. Titles relating to Dunnikier estate, Fife, 1499-c.1900. Estate, household and family papers, c.1700-2- cent., including Dunnikier courtbooks, 1722-1852; household account books, 1841-65; miscellaneous family correspondence, 1681-20 cent., including letters from George Oswald of the East India Company, and correspondence concerning personal and financial affairs of 7th and 8th Earls of Elgin, 1804-63. Papers of James Oswald (1715-69). Legal and financial papers and papers relating to his position as commissioner of trade, 1698-1770, including register of imports and exports, 1698-1751; account of ships cleared from England, 1709-17; notes on coal trade, 1753, silk trade, n.d.; and the advantages of opening East India trade to all British subjects, 1764. Papers of James TownsendOswald (1748-1814). Estate and personal accounts and legal and business papers, 1768-1814, including rentals of Bogie estate, 1798; accounts for building coal-road and bridges, 1768 and contract for building Dunnikier House, 1791. Papers of General Sir John Oswald (1771-1840) including estate and business accounts and papers, 1803-39. Papers of James Townsend Oswald (1820-93) including family, estate and business papers, 1841-89.

1881 Lieutenant-Colonel M.P. Stormonth Darling of Lednathie. Titles, relating to family lands in Angus, Perthshire and Roxburghshire, 1671-1919. Estate papers, 1768-1957, including accounts, receipts and cash books, 1858-1908; leases, agreements and legal papers, 1788-1875; game registers, 1904-14. Plans and sketches of lands, buildings and improvements on estates in Angus and Roxburghshire, 18 cent.-1957. Business letter book of Peter Darling, Bank of Scotland, Kelso, 1837-8. Household and personal papers, 1745-1954. Miscellaneous papers including customs regulations for Kelso, n.d. Photographs, mainly of members of the Stormonth Darling family, c.1850-1938 but include some of harvesting, c.1890.

217 (addit) Earl of Moray. Plans of Barnhill Farm, Aberdour, 1758; parks of Darnaway and Donibristle, 1760-1835; barony of Auchertool, 1822; feuing plan of Aberdour village, 1832.

312 (addit) Mrs L. Smiley, Castle Fraser. Miscellaneous volumes, including household, estate and personal account and memorandum books, mainly of members of Fraser family, 1802-76.

776 (addit) Earl of Mansfield, Scone Palace. Some Scone estate ledgers, including Balvaird, Logiealmond and Lynedoch estate, 1909-65.

821 (addit) Alyth Folk Museum, Perthshire. Miscellaneous manuscripts including inventory of furniture and fixtures at Royal Bank of Scotland, Alyth, 1880.

832 (addit) Captain the Hon. G.E.I. Maitland-Carew, Thirlestane Castle. Lauderdale muniments. Titles to estates and earldom of Lauderdale, 1682-1706. Legal papers, 1633-1789, including papers relating to claims on the Lauderdale estate by Mary, Marchioness of Tweedale and her children, 1633-1752. Accounts and other papers relating to mint, 1668-83, including accounts for copper coined in 1677-9.

859 (addit) Baron Home of the Hirsel, Coldstream. Douglas Castle game book, 1862-6.

995 (addit) K.G. Young, W.S., Auchterarder. 20 cent. copy plan of barony of Auchterarder, with descriptive notes on town, c.1763.

1318 (addit) Earl of Kintore. Keith family correspondence, including letters from George, 10th Earl Marischal, to John, 3rd Earl of Kintore, Lord Halkerton, and Bailie Robert Bruce, his business agent, 1727-74, on subjects including his financial position and management of household and estates.

CONSTRUCTION AND ARCHITECTURE.

1861 Orkney Library. Papers of Ernest Walker Marwick. Includes papers relating to St. Magnus Cathedral, 1923-74, and to the preservation of buildings of historical interest and architectural merit, 1959-77.

1875 Orkney Library. Papers of Alfred W. Johnston, London. Plans and drawings of Orkney churches, including St. Magnus Cathedral, 1866-96. Also includes notebooks and correspondence concerning antiquarian and genealogical matters, 1662-20 cent.

1888 Kinnear and Gordon, chartered civil engineers, Edinburgh. Job lists, c.1946-current; schedules, specifications and files, recent photographs and drawings of projects, 1923-current, including Portobello power station, n.d.

MANUFACTURING: ENGINEERING

1863 Abbot Engineering Company Ltd., Paisley. Accounting records, 1933-69; wage and salary records, 1945-70, n.d.; order books, 1964-9; sales and purchase records, 1943-61. Plans of machinery made by the firm, 1959-77.

1866 Wills, Lang and Company Ltd., chartered surveyors, Glasgow. Correspondence concerning St. Rollox Iron Works, n.d.

MANUFACTURING: SHIPBUILDING

1889 British Shipbuilders: Barclay Curle Division. Contracts and tenders, 1954-68, n.d., including contracts for reconstruction of Clydeholm Shipyard. Specification books for machinery by Wallsend Slipway and Engineering Co., Swan Hunter shipbuilders, William Daxford Ltd., Babcock and Wilcox, Barclay Curle-Sulzer and Barclay Curle, 1912-16, n.d. Correspondence and papers relating to Scottish Engineers and Employers Association, 1959-72, shipbuilding regulations, 1960, and Clydeholm reconstruction, 1968, n.d. Stock books and papers relating to miscellaneous stores, 1960-6, n.d. Cost book, n.d. Plans of Clydeholm and other projects, n.d. Engine drawings, 1861-99, n.d.

MANUFACTURING: TEXTILES (INCLUDING TEXTILE MERCHANTS)

1220 (addit) Dundee University Library. Miscellaneous Mss. Including papers and notes compiled by Department of Modern History, University of Dundee, mainly on Dundee jute firms, including Boase Spinning Company; Caird (Dundee) Ltd.; Don Bros.; Buist & Co. Ltd.; William Halley & Sons Ltd.; J. & J. Smart, Brechin; and Watson & Philip Ltd.

MANUFACTURING: MISCELLANEOUS

1885 Robert Simpson and Son, Golf equipment makers, Carnoustie. Accounting records, 1919-58. Miscellaneous correspondence, some relating to golf club patents, c.1910-1930. Photographs of firm's premises and golfing activities at Carnoustie, c.1885-1910.

TRANSPORT: ROADS (INCLUDING TRAMWAYS)

1184 (addit) Stewarty Museum, Kirkcudbright. Papers concerning roads and bridges in Kirkcudbrightshire, 1623-1924, including legal and other papers relating to dispute over customs levied at Dumfries bridge by town council; report of collapse of bridge on south side of Creetown, and account for its rebuilding, 1812; correspondence and specifications for proposed bridge over river Ken at New Galloway, 1813-20, including letters from John Rennie with specifications for grantie bridge, but suggesting chaeper alternative suspension structure, 1819-20; letter from Thomas Telford regarding proposed bridge at or near Lamb Isle, 1818; specifications for suspension design and stone design for bridge over river Cairn at Grubtonford, 1824. Plans of proposed new roads, bridges and toll houses, and of alterations to existing ones in Kirkcudbrightshire, c.1786-c.1967.

TRANSPORT: RAILWAYS

1135 (addit) Dundee Museum. Miscellaneous accessions. Plans of Dundee West passenger station, Caledonian Railway Company, 1888.

TRANSPORT : SHIPPING (INCLUDING HARBOURS AND PORTS)

1869 Orkney Library. Miscellaneous papers. Includes papers relating to commerce and shipping, 1576-1847, including licence by Robert Stewart to William Garrioch, Kirkwall, to trade in South Ronaldsay, 1576; letter book of John Urquhart, merchant in Kirkwall, 1783-1801; legal papers relating to spuilzie of barque Juliana Catharina, wrecked off Rousay, 1811-12.

1874 Orkney Library. Papers of George W. Reid, Kirkwall. Includes articles of co-partnery of Kirkwall & Leith Shipping Co., 1877.

TRADE: MERCHANTS

1870 Orkney Library. Small gifts and deposits. Include accounting records, correspondence and other papers of various local firms and traders, 1851-1974, including George Coghill, merchant, Harray, 1871, n.d.; Eday Peat Co., 1926-65; D.M. Kirkness, joiner, Kirkwall, 1909-14; Orkney Oyster Fishery Ltd., 1912-19; N.B. Peace and Son, wood merchants, Kirkwall, 1851-1955; John Sclater, tweed manufacturer, Kirkwall, 1968-74.

TRADE: RETAIL

1864 Kirkintilloch Co-operative Society Ltd. Minutes, 1881-current; accounting records, 1887-1977; staff records, 1912-73, including wages books, 1912-59; shareholders records, 1886-1976, including members' registers, 1886-1951. Miscellaneous legal papers, mainly relating to society's properties, 1793-1977. Correspondence, 1893-1965, including letters relating to boundaries dispute with Kilsyth Co-operative Society, 1946. Prinited material including various co-operative periodicals, 1903-63; histories of co-operative societies, c.1919-31, and miscellaneous rule books, 1910-54. Plans of society's premises, 1896-1940. Photographs of director, staff and premises, 1890-1952. Lennoxtown Friendly Victualling Society: minutes, 1826-1965, including minute of meeting on merger with Kirkintilloch Co-operative Society Ltd., 1965; accounting records, 1826-1963; membership records, 1910-70, n.d.; staff reports, 1911-50; wages records, 1925-44; correspondence concerning society's trading activities, 1920-47; legal letters and papers, 1919-61.

1865 Clydebank Co-operative Society Ltd. Minutes of various local co-operative societies, 1881-1976, including Clydebank Co-operative Society, 1881-1976, and Dalmuir Co-operative Society, 1919-24; committee minutes, 1899-1972, including education committee, 1899-1972; accounting records, 1880-1942; miscellaneous staff records, 1936-61, and records of society's shares in other co-operative societies, 1880-1942. Legal papers, 1892-1950, including papers relating to society's trading activities. Correspondence, 1929-40, including trading area dispute with Duntocher and Hardgate Co-operative Society, 1944-5. Funeral service records, 1937-72. Printed material including various co-operative periodicals, 1902-59, and history of United Co-operative Biscuit Society, 1919. Plans of society's properties, 1922-44.

1877 Major D. Carleton, Wigtown. Includes photographs of shops and employees of Carrie and Co., grocers, Wigtown, 1912-20, n.d.

1880 D. & W. Scott, tobacconists, Montrose. Letter book, 1882-1908; accounting records, 1867-76. Photographs of shop exterior, c.1900-20.

SERVICE INDUSTRIES: ENTERTAINMENT

1867 Rangers Football Club Ltd., Glasgow. Minute books, 1899-1967. Printed material, including yearbooks, 1889-1978, club prospectus, and club histories, 1924-73. Plans, 1920-77, mainly of Ibrox Stadium; photographs of players, 1896-1977 and stadium, 1929-48.

1886 Dalhousie Golf Club, Carnoustie. Minute books, 1867-1967.

234 (addit) Duke of Atholl, Blair Castle: Records of Dunkeld Curling Club, 1853-1920, including accounting records, 1875-1920; correspondence, 1864-1912; score books, 1853-1912.

821 (addit) Alyth Folk Museum, Perthshire. Miscellaneous manuscripts including, photographs of Forfarshire Cricket Club, 1896, and Alyth Thistle F.C., 1902-10.

FRIENDLY AND BENEVOLENT SOCIETIES ETC.

1870 Orkney Library. Small gifts and deposit Including papers relating to health, education and poor relief, 1829-1952, including account book of the Destitute Sick Society of Kirkwall, with details of meals to paupers, 1829-33; printed poor law and public health reports, 1868-84. Minutes, accounting records and other papers of various social organisations, 1878-1975, including Birsay Literary Guild, 1924-6; Kirkwall Young Men's Literary and Scientific Association, 1887-99; Sandwick Mutual Improvement Society, 1878-1907.

2. STRATHCLYDE REGIONAL ARCHIVES

The following business, industrial and commercial records have been received since the appearance of the last number.

Applications for access should be made to: The Principal Archivist, Strathclyde Regional Archives, P.O. Box, 27, City Chambers, Glasgow, G2 1DU.

or if calling at: 30 John Street, Basement.

Manufacturing:Textiles

James Scott, stocking frame manufacturer, Greenock:correspondence 1783-1790.

Manufacturing:Engineering

Colin Ferguson, employee of Babcock and Wilcox,Renfrew:diaries and letter-books, 1916-1968.

Robert Napier, engineer, Govan: correspondence, 1843-1863.

Construction and building

Speirs and Co., makers of Composite buildings, Glasgow:catalogues.n.d.

Guthrie and Wells, interior decorators, Glasgow:drawings and designs for churches, public buildings, theatres and cinemas,boardrooms,hotels and domestic furniture, stained glass. 1918-1960.

Trade

James Dunlop, merchant, Montreal:correspondence, 1788-1811.

W.C. Faulds, house factor, Glasgow:rent books, etc., 1911-1965.

Forrester & Co., general warehousemen, Glasgow:Stocklist, 1847.

William Thomson(Glasgow)Ltd., grain merchants: records, 20th century.

Transport

Civil Airport Authority: Aircraft movement logbooks, 1974-1975.

Solicitors

T.J. and W.A. Dykes, solicitors, Hamilton, records of firm and clients, c.1600-1900.

Patten & Prentice, solicitors, Greenock: chartularies, 1766-1972; Greenock Faculty of Procurators, 1865-1940; Greenock Heritable Co., 1902-1941; Greenock Film Society, 1949-1974; private diaries, 1915-1970.

Trade Unions

Amalgamated Union of Building Trade Workers, Glasgow No.1 Branch:records 1927-1952.

SHORT REVIEWS

Vauxhall Motors Ltd. You See Them Everywhere-Bedford Commercial Vehicles Since 1931. Luton, 1978. Pp. 48.
Vauxhall Motors Ltd. Bedford Buses and Coaches Since 1931. Luton, 1979. Pp. 36.

These two booklets were issued by the Public Relations Department of Vauxhall Motors Limited. The former marked the appearance of the 3 millionth Bedford commercial vehicle to be produced since 1931, and the latter celebrates the forthcoming fiftieth anniversary of the production of Bedford buses and coaches.

The first volume describes in detail the developments of each new model of commercial vehicle to roll off the production line at Luton and later at Dunstable - from the first vehicle to be named 'Bedford' (a 2 ton light weight truck), to heavy goods vehicles used in World War II, cab-ahead-of-engine designs built in the 1960's to the present TM and CF ranges.

The second booklet follows the development of early small buses and coaches constructed on modified truck chassis right up to the modern Y range of coaches. Some note is made of the coachwork which was added by independent coachbuilding companies, especially Duple and their 'Vista' range.

The booklets are extensively illustrated including photographs of almost every type of model of truck or bus. The text includes specifications of most models and the last seven pages of each volume are devoted exclusively to photographs of unusual models selected from the Bedford photographic archive.

Patrick Beaver. I.N.I.T.I.A.L. 1928-1978 - The Story of the Initial Group Publications for Companies, 1978. Pp. 65.

There are few histories of companies in the service industries. For many the products of these firms often go unnoticed. This booklet, although serving as promotional literature, has succeeded in telling an interesting story of the company's past. It was issued to mark the 50th anniversary of the initial group of companies which are engaged in the supply and laundering of office and industrial linens and protective clothing, the provision of industrial cleaning services and the manufacture of all types of cleaning products and overalls.

This company was established in 1903 by an American, Arthur Perkins Bigelow, a New York soap salesman who came to Britain especially to begin an office linen supply business - a service which until this date was virtually unheard of on this side of the Atlantic. His novel approach of supplying initialed linen impressed office managers who were particularly concerned about the spread of disease among their staff. As a consequence of his dealings with commercial establishments, Bigelow saw other services which he could develop on an outside contracting basis such as the provision of refreshments, shoe cleaning facilities and the supply of vending machines for the sale of snacks and cigarettes. He also hired out his own delivery carts to companies who needed occasional transport for short hauls.

At the outset the company sub-contracted to laundries for the cleaning

of its linens. As the company grew and took over other businesses in the provinces the control over the supply of linen became more complex. Bigelow started to purchase his own laundries the first being the Globe Laundry in Birmingham in 1931. In 1949 he took over the large London based Times (Laundry) Group. In 1935 Bigelow instituted the manufacture of his own towels, aprons and overalls in Manchester and later in Belfast.

Bigelow died in 1941 the same year that the Factories Act brought regulations to bear on employers to provide adequate washing facilities for their employees and, in some cases, to supply protective clothing. This led to a boom in Initial's trade.

The booklet goes on to describe the take over of 22% of the shares in 1954 by the British Electric Traction Company under the leadership of its founders grandson Mr. Kenneth Garcke. Garcke was appointed to the Board of Initial and became its Chairman in 1959. He decentralized the company on a regional basis and instituted massive investment in new plant and products.

In 1968 the company merged with Allied Industrial Services Limited of Bradford, the oldest industrial garment and cleaning cloth launderers in the country. The authors have included a brief history of this company in the text. The third section of the booklet is devoted to Initial's overseas developments since 1956.

Francis Collinson, The Life and Times of William Grant, William Grant & Sons Ltd. Dufftown, Banffshire, 1979. Pp.102.

This booklet is concerned with the life and times of the founder of William Grant and Sons Limited, whisky distillers of Dufftown. In essence it is not a company history although an account is given of the business until Grant's death in 1923. The author (a family member himself) has relied heavily on the testimony of two of Grant's daughters and friends and employees of the Grant family, hence, some parts of the booklet tend to be anecdotal.

William Grant lived all his life in Dufftown where he was born in 1839. The book recounts his early working life which began as a cattle herder when he was seven years old. He was apprenticed as a shoemaker, a position he abandoned in 1863 when he became a clerk of the Tinninver Lime Works at Crachie. Grant worked there until 1866 when a dispute between the owners of the company made working conditions less than tolerable. Grant found employment as a book-keeper at the Mortlach Distillery in Dufftown and was soon promoted to manager there.

For many years Grant and his sons had saved money towards the purchase of their own lime works. However, their efforts to secure a concession to quarry lime from lands on the Drummuir estate were thwarted when, at the last minute, the laird considered the venture a threat to his forests. Grant then used this money to purchase the old distilling plant being replaced at the Cardow Distillery in 1886. The booklet tells how Grant and his family built the Glenfiddich Distillery on lands feud from the Duke of Fife at Balvenie which opened the same year and how they opened a second distillery in 1892 using the premises of the New Balvenie Castle.

The story of the company's growth, its struggle during the period of

the Patterson crash of 1898, the subsequent diversification of the company into blending and wholesaling and the expansion of the company into the exporting business are told in brief. Little is mentioned about the company after Grant's death in 1923.

The volume is well presented and illustrated throughout with pictures of members of the Grant family and the distilleries. The last eleven pages of the booklet are given to photographs of the Dufftown area during the life and times of William Grant.

David P.H. Watson, The Captains Watson and the Empire Line. Privately Printed, 1977. Pp. 84.

This is an account of the lives of the author's grandfather and great-grandfather aboard the vessels of the 'Empire Line', a group of ships owned by George Duncan of London. The booklet does not profess to be a history of sailing ships but it does draw on some of the more important events influencing maritime history during the late 19th and early 20th centuries.

The book opens with a brief account of the Watson family of Largo, Fife and leads on to the early apprenticeship of John Thompson Watson(B.1828) in 1843 on board a small wooden sailing barque the Elizabeth owned by William Ovenstone of Leith. Watson obtained his master's ticket in 1854 and the author recounts his ventures until 1860 when he met George Duncan with whom he was to have a long association. He was appointed mate of a wooden ship named Onward of which he became captain in 1863. In 1868 he was appointed master of the Persian Empire (a 1500 ton iron vessel built for Duncan by John Pile of Hartlepool), a position he held until his retirement in 1886. The author claims that there is little record of the voyage of this vessel. Watson died in Lower Largo in 1892.

The Watson family's ties with George Duncan did not end with John Watson's retirement. His son David Watson worked all his life aboard vessels of the Empire Line, first as an apprentice under his father on the Persian Empire and later as first mate. In 1874 he gained his master's ticket and the same year received his first command when he relieved the captain of a sister ship, the Indian Empire, who had been taken ill. The author goes on to tell of David Watson's career as master of the Celestial Empire an iron ship built in 1877 by Osbourne Graham of Sunderland, also of the new Indian Empire from 1896-1901 built by John Reid of Port Glasgow and his last command the Colonial Empire. He retired as a sea captain in 1904 but remained as Marine Superintendent for Duncan's Empire Line for a number of years. David Watson died in Lower Largo in 1939.

The booklet includes photographs of the vessels of the Empire Line and describes details of the accommodation for passengers and crew and costs of labour and cargo. There is some discussion of the viability of the British iron ships of the late 19th century as opposed to the American pine wood clippers which had their heyday in the 1850's and 1860's. The author ends by describing the fate of each of the vessels of the Empire Line - the last of which was the Colonial Empire which was wrecked at sea in 1917.

J.F. Clarke, Power on Land and Sea - 160 years of Industrial Enterprise on Tyneside. A. History of Hawthorne Leslie. Hawthorn Leslie,1977.Pp.117

In the conclusion to this account of the engineers and shipbuilders, Hawthorn Leslie, the author states that "...new inventions are critical to technological progress, they are, however, a long way from being the whole story." The enormous amount of technical detail which is incorporated into this very readable history along with discussions of the economics of shipbuilding on the Tyne and in Britain as a whole and the sociological factors arising from and affecting the industry verify the authors views on this point. He has succeeded in his aim of using a wealth of original archival sources to put forward his views. He not only provides the reader with evidence of his extensive research in the form of graphs, tables, pictures and plans but also analyses in some detail the figures abstracted from such sources as wages books, apprentice registers, and production records.

The story begins in 1817 when Robert Hawthorn started his own millwrighting business in a rented shed in a brewery yard close to the River Tyne. He was joined a year later by his brother and they employed a further ten men. Clarke mentions how the Hawthorn family had been associated with mechanical engineering from the 1700's as many of the menfolk had worked with steam engines in the local collieries. Early contracts were for making and repairing colliery machinery and parts for saw, corn, lead and paper mills. In 1831 Hawthorn was approached by Joseph Pease who asked the firm to build a light pressure steam engine to work with levers on the Brusselton Inclined Plane, a section of the Stockton and Darlington Railway. That same year the first order for a group of locomotives was secured. Of the first 16 locomotives to be built by Hawthorn's one was the famous Comet. This was the start of the locomotive engineering trade at Forth Banks which was to continue until 1937 when it was taken over by Alexander Stephenson and Co.

Robert Hawthorn died in 1867 and in 1870 the company was taken over by Benjamin Browne a fully trained civil and marine engineer. He was aided in the venture by Francis Carr Marshall, a former apprentice at Hawthorn's and partnerships were offered to William Hawthorn, Jr. and Joseph Scott. It was partly financed by Joseph Straker whose son Charles Edward joined the company in 1876 and became responsible for the continuation of the Forth Bridge Works. Browne wanted to confine the business to making marine engines and to completely renovate the works. This decision coincided with an upturn in shipbuilding on the Tyne and the increase in orders led them to purchase premises at St. Peter's where the marine engineering business continued to flourish under Marshall. In 1884 the two plants were completely separated. Straker got his way to keep the Forth Banks works open.

In 1885 Arthur Cooke a director of Leslie's shipbuilders at Hebburn approached Hawthorn's about a possible merger of the two companies. Leslie's had begun in 1883 at the Hebburn Quay building iron ships. The first order that Leslie's had placed with Hawthorn's was for a set of oscillating engines for the paddle steamer Kern built for the Archangel Moorman Steam Navigation Company. After the amalgamation significant changes were made in the boardroom, Browne was appointed General Manager in 1891.

Throughout the book changes in management and the style of leadership in each of the three establishments are discussed with insight into the effect of these changes on the technological advances of the company and on the workforce.

The book leads on to narrate the work undertaken by each of the three yards, from the declining profitability of the Forth Banks shop at the close of the century to the upturn in business for the marine engineering works at St. Peter's in the same period and the fluctuation of the ship-building trade through two World Wars. In the early years of the twentieth century much money was invested in fixed plant and machinery. The inter-war years proved to be financially disastrous for many ship-building firms but the author attributes Hawthorn Leslie's survival to them not over expanding themselves using fat profits made during the First World War from building naval warships, and from investing profits in gilt edged securities from 1919-21. In 1937 Alexander Stephenson & Co.Ltd.,took over the Forth Banks locomotive works and in 1943 all Hawthorn Leslie's shares in this company were purchased by the North British Locomotive & Vulcan Foundry effectively ending the company's association with railway engineering. The steeply rising costs of both labour and materials during the 1960's made tendering for shipbuilding contracts a difficult business, especially when much of the work was sub-contracted and costs were not directly under the company's control. In 1967 the Hebburn yard was merged with Swan Hunter Shipbuilders which from 1968 merged with Vickers and John Readhead and Sons Ltd., to become Swan Hunter and Tyne Shipbuilders. This became part of British Shipbuilders in 1977. The company was then effectively returned to an engineering concern as it had begun in 1817, but concerned with marine engineering.

Throughout the book the author has singular concern for the workforce employed by the company, which in the early years not only trained and paid the men but laid the foundations of a community as a whole by supplying housing and financing education. It is the detail of the social function of the company as well as its financial and entrepreneurial capacities which makes this history of Hawthorn Leslie important as a general reference to the development of engineering and shipbuilding in the North East and in Britain as a whole.

MARGARET MILLER

BOOK REVIEWS

ALAN B. CAMPBELL. The Lanarkshire Miners. A Social History of their Trade Unions 1775-1874. (Edinburgh: John Donald. 1979. pp.354. £18).

It is commonplace that it is notoriously difficult to make meaningful generalisations about the Scottish coalfields. The contrasts in geology, structure, markets and history between the coalfields of Fife, Lanarkshire and Ayrshire are as great, if not greater, than the similarities. Now Dr. Campbell duly warns of the difficulties in generalising about only one of these coalfields, Lanarkshire.

The central part of the book is a comparison of the two communities of Coatbridge and Larkhall. The former, at the heart of an expanding iron industry, grew from under 2,000 of a population in 1831 to over 11,000 in 1841 and over 22,000 in 1871 and such growth inevitably brought overcrowded housing, bad sanitation, disease, crime, drunkenness and prostitution, producing a justified reputation for being a place of violent disorder and near barbarism, a 'frontier society' as the author has it. Larkhall, in contrast, with a much more gradual rate of expansion, managed to retain a more arcadian character until the 1860's and 1870's. A fair number of the inhabitants bought their own cottages through local building societies. At least a few of these cottages sat amid gardens and, maybe, some even had a cowshed (as more than one nostalgic account testified) by a little burn that flowed between 'daisy spangled banks'. The differences between the two communities were reflected in the unionism, with a tradition of organisation in Larkhall and a marked lack of it in Coatbridge; with 'honourable men' in Larkhall, clinging as they could to pride, self-respect and independence, and 'degraded and willing slaves' in Coatbridge, unable to do much more than seek to drown their servility in the public house. Dr. Campbell has much of interest to say about the contrasting social structures, about the mobile and heterogeneous labour force in Coatbridge and the more homogenous and occupationally and geographically less mobile one in Larkhall.

It is no surprise to learn that a crucial factor in producing differences is the Irish element and a very useful chapter making use of census enumerators returns is devoted to the Irish immigrants. In Coatbridge 44 per cent of the mineworkers were of Irish origin in 1861, compared with 17 per cent in Larkhall. The result was, in Coatbridge, a community that was bitterly divided by nationality and religion and which rarely succeeded in surmounting those barriers to unite in effective unions. There was an inability to resist the exploitation of a particularly hard group of employers centred on the Bairds at Gartsherrie. They and their associates appreciated the value from their point of view of maintaining a divided labour force, by doing all they could to encourage the sectarianism of the Orange Order, and, confronted by no effective unionism, were able to impose a harsh industrial discipline on their workers. In Larkhall there was much more of the respectability, self-help and class harmony that one associates with mid-Victorian craft unionism, characteristics that stemmed not from servility, but from a sense of dignity, pride and independence.

It was the Larkhall tradition that shaped the unionism of Alexander MacDonald and in what it has to say about the fluctuating fortunes of unionism from the 1850's onwards the book complements and extends Gordon Wilson's work on the same topic. There was an attempt to curb sectarian conflict. But, as Dr. Campbell shows in one of his most original chapters on the Free Colliers' Lodges of the 1860's even in areas where the Irish element was not particularly large, a sectarian, xenophobic hostility to immigrants was never far below the surface. Such attitudes could only result in a weak and fractured trade-union movement that had very little to offer a workforce, most of whom had no past traditions to cling to, many of whom were neither Scots nor presbyterians. An increasing dissatisfaction with the traditional approach was evident in the rank-and-file revolts against MacDonald's policies that came to a head in the strikes of 1874, with which Dr. Campbell ends his account. He points forward to the new spirit of militancy that was to bring a revival and a restructuring of Lanarkshire unionism from the 1880's.

This book is a careful account of miners' unionism in Lanarkshire, set against social, economic and cultural developments. It might well have gained from some comparisons, even tentative ones, with what was happening in other coalfields and among groups of workers outside the coalfields. It does, however, touch on many issues and paradoxes which have to be grappled with in order to get an understanding of the Scottish working class and its trade-union movement. There was an openness and an adventurousness that made Scots ready to travel across half the world and many Lanarkshire miners migrated to the United States but this was matched with an intense parochialism that made Glasgow unionists unwilling to surrender any local control over their funds for some common Lanarkshire(never mind Scottish) good. There was a readiness to pay lip service to the ideals of a co-operative commonwealth, propagated by visionairies like Alexander Campbell, while, at the same time, pursuing those narrow, sectarian and racist policies that were a major barrier to change. Dr. Campbell rightly sees as a central factor in shaping attitudes a particular perception of a mythical past (though the extent to which this was imposed from outside is something which he does not examine) in which existed the 'freeborn collier', who in some confused way was linked with 'heroic' figures like Bruce and Wallace, who symbolised some past independence. As long as there was a hankering for the restoration of this mythical past and as long as its destruction could be blamed on scapegoats from outside, the Irish, Catholicism or even the English, trade unionism was likely to be of limited effect and the working class too divided to offer much of a challenge to the rapacity of Scottish Capitalism.

The publishers, John Donald Ltd., deserve our thanks for their policy of getting into print an increasing number of recent theses on Scottish History. They have given us much of value in the field of social and economic history. One wonders, however, whether a wider market would be gained by asking their authors to revise and trim their theses. The detail and the documentation of a Ph.D. is not always necessary for a book. In this particular case, nearly fifty pages of appendices and bibliography in addition to copious footnotes only add to the cost and not to the value of the work. However, those who do buy this book will find it a worthwhile investment.

UNIVERSITY OF STRATHCLYDE W. HAMISH FRASER

N.K. Buxton, The Economic Development of the British Coal Industry (London: Batsford Academic, 1979. pp. 297. £15).

Surprisingly, the British coalmining industry, so central to the progress of the economy in the eighteenth, nineteenth and twentieth centuries, has not recently been the subject of comprehensive studies such as those which have been produced for the iron and steel or brewing industries, to name but two. The appearance of a single volume "incorporating the findings of recent research" scattered throughout the journals and monographs, was to be welcomed.

Neil Buxton has set out to fill this gap and indeed for much of this book (Parts Two, Three and Four) which covers the post-1850 period and includes a useful descriptive survey of the industry under nationalisation, he largely satisfies expectations. Not unexpectedly much of the excellent analytic material by the same author on the inter-war years which was published in the Economic History Review in 1970 and 1972 is incorporated in the volume. Perhaps it would have been asking too much that the earlier periods should be treated to the same high quality of interpretation.

The reader would be wise to take noteof Buxton's early remark that he intends to "emphasise only the important issues" and to take "as dispassionate a view as possible of the industry's performance and problems". Without this word of caution the book would appear unjustifiably unbalanced. While it must remain a matter for the author's own judgement it could be argued that there is some over-compression in that the period from the early eighteenth century to 1850 is squeezed into 42 pages (from a total of 297) and half of these are concerned with the Northern coalfield and its trade with London. While one would not wish to deny the importance and early advances of this area (the Northern coalfield was the largest single producing area for much of the eighteenth century) the combined output of the rest of the British coalfields was always well over 50 per cent of the total. Scotland and the Midlands were both impressive performers, yet the former is hardly mentioned. It seems a little peculiar that a writer whose work on the inter-war period underlines the importance of regional comparison, should largely ignore this when dealing with the earlier period when regional differences were, if anything, more noticeable.

However, even in his brief survey of earlier developments Buxton has managed to incorporate much of the newer material from the journals not so readily available to the interested general reader or less interested undergraduate. It now seems to be widely accepted that the spread of the Newcomen engine was far wider than previously thought and,however appealing the theory, it now appears that the charcoal using iron industry did not create a shortage of timber to the subsequent benefit of the coalmasters.

Occasionally there appear errors of a substantive rather than of an interpretative nature. The most serious of these is to be found on p.145 where it is stated that "the industry failed to attract new recruits in significant numbers before the 1850's. In the UK between 1801 and 1851 there was a marked increase in the size of the coalmining workforce, and in Scotland at least, in spite of a levelling off of wage rates labour continued to move into the coalmines and ironworks - many (particularly Irish immigrants) via the handloom weaving industry. It appears to be the case in Scotland that this movement was a partial cause of the apparent relative decline in wages.

While the student of British coalmining prior to 1850 will still require to rely heavily on Nef, Ashton and Sykes, and Galloway, Buxton's book, for the period from the 1880's until the 1950's, when output per man-shift showed little increase, will become an invaluable tool. The "debate" about the British industry's apparent loss of dynamism prior to World War One is well summarised, although one feels that a more conclusive approach would have been justified. When comparing the US and UK performance in this period he paraphrases McCloskey, "the quantity and quality of resources, rather than the differences in capital inputs wholly (my emphasis) explain the differential between American and British productivity". Does Buxton agree? We suspect he does, but we are uncertain.

On the inter-war period itself Buxton demonstrates a great deal of enthusiasm - so much so that a footnote attack on M.W. Kirby's "obsession" with the issue of undertakings (p.286) has caused the author to make his only noticeable proof-reading error (p.215)!

To return briefly to content and balance, I think it is to be regretted that in an important study of this nature a bibliography as such has not been provided. For example, on page 143 there is mention of Scottish wage rates, a footnote reference to Ashton and Sykes (who include nothing relevant here) while there is no reference to the worthwhile articles by W.R. Scott and B.F. Duckham, on this subject. Perhaps publishing economics have precluded this as well as restricting the length of the index. A random search for 'Whitehaven', 'Scotland', and 'Ireland' all drew blanks.

Nonetheless this was an ambitious project, which in many ways succeeds. Whether Duckham's plea for the "balanced general history" has been completely satisfied is open to question, but certainly for the meantime, this book goes a long way in that direction.

UNIVERSITY OF DUNDEE CHRISTOPHER A. WHATLEY

T.M. Devine(ed), Lairds and Improvement in the Scotland of the Enlightenment. Dundee. 1979. pp. iv + 70. £3.00. Copies available from Dr. Ian B. Cowan, Department of Scottish History, University of Glasgow, £3.00 post free.

In the last twenty years the biennial Scottish Historical Conference has become established in the Scottish historical calendar as a successful means of bringing together professional historians and others. It has maintained a standard of excellence of papers not enjoyed by many conferences. Publication has not always followed, but the papers delivered in 1978 thoroughly deserved the wider readership made possible in this economical, though attractively produced publication. Scotland and the Enlightenment provides the chronological setting, though only if the dating of the enlightenment is allowed a latitude which will be unacceptable to some, but only incidentally the intellectual setting for the proferred explanations of the causes of improvement. Mrs. Wills' stress on the biographical detail of the commissioners of the annexed estates enables her to deal with any connections most directly. She contends that the many improvements chronicled show how the Highlands were changed more effectively by the actions and ideas of men of the enlightenment than by direct consequences of the '45 and Culloden, but even she does not expand on the nature of the contribution of the enlightenment to these actions and ideas. It may be purely a case of chronological coincidence. Other papers may even be interpreted as suggesting that the enlightenment might not have been a major determinant of improvement at all. Mr. di Folco provides a case of improving lairds in his study of the movement of commercial capital by the Hopes of Craighall into the improvement of land, but he also adds evidence of much improvement before the conventional dating of much enlightenment. By contrast, Mr. Brian Smith shows the perpetuation of an organisation based on debt/dependence in the Shetlands into the later nineteenth/twentieth centuries, one which was changed only when the Crofters' Act and new opportunities in the herring fisheries brought Shetland 'a century too late' into the Scottish Enlightenment.

The three papers of the seven which deal most directly with industrial history fall in the mid-eighteenth century. Dr. Durie's,the most explicitly concerned with industrial history, examines the varied sources of the capital-supply in the linen industry and its organisation, but carefully warns against placing too great stress on its contribution to industrial growth. In their complementary studies Mrs. Wills and Dr. Annette Smith assess the work of the commissioners of the annexed estates, with Dr. Smith, who concentrates on their industrial ventures, being the more critical of the two. Though all three papers fall squarely in the conventionally accepted age of enlightenment none devotes attention to an apparent paradox implicit in them. Each examines at least in part the work of a semi-official agency of growth (in Dr. Durie's case, the Board of Trustees), but such agencies seem more the fruit of a mercantilist past than of the laissez faire future, which is often assumed to have been inspired, even though not always correctly,from enlightened thought in Scotland. Two papers remain: Dr. Tait's on Robert Adam's changing

views of the picturesque and Dr. Devine on the social stability in the eastern lowlands during the agricultural revolution. Both are peripheral to industrial history but provide balance - the something for everyone which is the hallmark of a well-organised conference.

What then exactly was the contribution of the enlightenment to improvement? Each papers is a good example of the healthy state of Scottish historical scholarship, but the question is not answered and prompts a reservation on the collection as a whole. A clue is in Adam Smith's comment that 'Opulence and commerce commonly precede the improvement of arts and refinement of every sort'. The papers show the emergence of opulence and commerce, which may explain Robert Adam's large number of Scottish clients of the 1780's, but behind most is an implied assumption which reverses Smith's view and which suggests that intellectual change produced the opulence. It is a pity that the link between enlightenment and improvement, which in some circles is a matter of great though unresolved debate, is not discussed explicitly - whether in support of Smith's causation or the reverse. An opportunity to examine the link between intellectual and institutional history is missed, confirming the tendency for two camps of Scottish historical studies to remain apart, if not in opposition, at least still excessively wary or even unaware of each other. Perhaps another conference should be directed to these links. If so, the present collection of papers will be the starting point, and, until then, they should be used by all with any interest in any aspect of the history of Scotland in the eighteenth century.

UNIVERSITY OF STIRLING R.H. CAMPBELL

Malcolm Gray, The Fishing Industries of Scotland,1790-1914. (For the University of Aberdeen by Oxford University Press,1978. 230pp. Maps and Figures £7.50).

Based on extensive official sources, this beautifully written survey of one of Scotland's major industries is a welcome addition to the literature on fishing and to the debate on the exploitation of wasting resources. Its sub-title, 'A Study in Regional Adaptation', indicates both the way in which the industry developed and the way in which the book is organised. Mr. Gray outlines the moves by which the coastal crofting communities of the various regions, using fishing to supplement their diet or subsidise their rent, repsonded to the introduction of bounties in the eighteenth century and the activity of large scale curers (for export to Germany and Russia) in the nineteenth. He shows the more favoured harbours of the east coast devoting more energy to fishing and the more enterprising men extending their own brief season by searching out shoals elsewhere: on the north-west coast where few fishermen were to be found; in the northern isles; and along the coast of England. Only the Firth of Clyde, with its extensive market in Glasgow and the colonies, remained 'independent' of the influence of the east coast specialists.

The lure of market forces, offering cash incomes beyond the dreams of crofters, encouraged the rapid expansion of herring fishing, while the extension of the season and the expansion of the fishing area involved changes in the boats and gear, the techniques of fishing and the structure of ownership. Crofter-owned boats costing a few pounds were forced out by steam drifters costing several thousand and owned or subsidised by surers and other shore-based entrepreneurs;and part-time fishermen were displaced. The period from c.1884 to 1914 was one of rapid expansion made possible by a concentration of effort: concentration on the main ports, on larger and more productive ships, and on fewer but more professional fishermen. In the process a way of life became an industry, subject to economic strains beyond the control of the fishermen as initial prosperity gave way to uncertainty in communities now largely dependent upon fishing. The problems of over-fishing and falling prices heralded the stage of development where ever-increasing exploitation appeared necessary to justify and repay the heavy investment in highly technical fishing, and naturally enough neither the crofter-fishermen nor the fish could withstand the assaults of those eager to make a full-time living out of what was essentially a part-time fishery. The consequences,in terms of rising and falling communities,is clearly shown,and the Conclusion traces the development to its logical outcome:diminishing stocks,depression between the Wars,and a search for a less ambitious and more secure industry catering for home demand rather than for export trade, and based on white fish rather than the herring.

The white fishery - for ling, cod and haddock - was, of course, separate from the herring fishery, though both were originally crofting activities. Largely because of differences in season it was possible for both to be carried on by the same communities or fishermen, but incentives offered by the successful curing of haddock, and then the opportunities of a nation-wide market for fresh fish offered by the railways, encouraged the growth of a highly capitalised and highly organised trawler fleet, based on a few ports and principally on Aberdeen. Mr. Gray skilfully weaves the white fishery into the dominant pattern of the herring fishery, though some might think that he devotes relatively too much attention to the latter compared with the former.

There are obvious advantages in looking at regional responses to changes in market opportunities, technical advances and entrepreneurial possibilities, but there are also drawbacks. A certain amount of repetition is inevitable (though it is certainly controlled), and local developments detract from an over-all assessment of fishing as part of the Scottish economy, and of Scottish fishing - especially white fishing - compared with English. Indeed, the chief defect of the book would appear to be the relatively slight attention paid to the rise of Aberdeen compared with the earlier fishing settlements. Certainly Aberdeen is discussed in a chapter relating to trawling, but one misses the detailed study of the evolution of a major fish market which has not so far been undertaken for any of the British fishing ports. A comparison with Hull and Grimsby would have been most valuable. More important, perhaps, is the absence of any sustained examination of the business history of fishing, looking at the expertise, capital and profits of curers, trawler-owners and fish salesmen. In fact the entrepreneurs who dominate modern fishing remain as elusive as the crofters. Surely they deserved a little more notice, and their records, and those of the Register of Shipping, might have filled out the rather clinical accounts of the official reports on the industry. It is a pity therefore that Mr. Gray was not able to continue his study into the more modern period, but a comprehensive history of the Scottish white fishery would require a volume at least as large as this.

These criticisms are marginal insofar as Mr. Gray set out to write a general history of Scottish fishing before 1914, and this he has done in an admirable fashion, adding to his already extensive contribution to our knowledge of Scottish economic history. While there are aspects of the later period which would repay further study, his survey of the evolution of Scottish fishing will remain the standard work from which other workers - or hopefully Mr. Gray himself - can advance to a study of the problems of the fishing industry in more modern times.

UNIVERSITY OF STRATHCLYDE GORDON JACKSON

Edwin Green, Debtors to their Profession: A History of the Institute of Bankers 1879-1979. London, The Institute of Bankers,1979. 245pp. N.P.)

The Institute of Bankers in England are to be congratulated on the handsome volume which they have produced in celebration of their centenary. The Institute was founded in March,1879 some four years after the establishment of the Scottish Institute. English bankers have been well served, for the author of this book, Edwin Green (Archivist of the Midland Bank), has shown clearly the process by which bankers have emerged as a responsible and respected profession.

It is indeed primarily as a contribution to the history of the professions that this book makes its mark. A false start was made by bankers in both England and Scotland who first organised themselves as a literary and philosophical society. But this type of initiative, although in the strong Victorian tradition of self-help, was not successful because it was not primarily based on the need to set professional standards within the banking fraternity. Much of Mr. Green's valuable work relates to the effective steps taken to establish the Institute of Bankers as an examining body capable of producing competent bankers. Not only had the Institute to build up its credibility but it had to find a way of ensuring that it became indispensable to the banks themselves. This was done by inviting senior bankers to take up positions at the head of the Institute which "gave the proposed institute a valuable measure of prestige and influence".(p.43)

Senior honorary officers could also be influential in persuading their own bank to acknowledge the value of the Institute's exams by awarding bonuses (originally £10) to successful candidates. Indeed one could ask when did senior bank officials recognise that in the Institute they held an important and influential organ of professional control? For men who did not jump the hurdles raised by the Institute could not hope to rise in the industry. It would have been of great interest to have Mr. Green's comments on such matters.

The Institute's examination programme has altered and developed over time. Indeed in the last twenty years, when the Institute's "total membership at home and overseas increased from about 42,000 in 1960 to over 110,000 in the late 1970's"(p.189)enormous changes in the exam structure have taken place. The Wilde committee (meeting between 1972-3) made a detailed review of educational training for bankers in England and elsewhere. They recommended a flexible examination structure, links with other business studies courses,and study leave. Indeed the wisdom of the founders of the Institute in pinning their faith on the need for a banking qualification has been clearly justified. Bankers are, as Edwin Green has so clearly discerned "Debtors to their profession".

UNIVERSITY OF GLASGOW OLIVE CHECKLAND

Roy Church, Herbert Austin: The British Motor Car Industry to 1941, (Europa Publications, London,1979, pp.lii + 233. £12.50)

Although almost double the price of the previous volume in the Europa Library of Business Biography, Professor Church's contribution on Herbert Austin is, nonetheless, excellent value. Austin the man, Austin the company and the British motor industry in the period 1905-41 are skilfully considered as subjects in their own right and in relation to one another. The outcome is a sensitive, though not uncritical, view of Herbert Austin and a perceptive commentary on his engineering and entrepreneurial strengths and shortcomings in relation to the other members of the 'Big Six' - Morris, Rootes, Vauxhall, Standard and Ford. Undoubtedly the analysis is the more authoritative for Church's capacity to incorporate the wider dimensions of the international economic climate - tariffs, exchange rate variations and American manufacturing rejuvenation under the New Deal - and as a result the focus is sharpened, the perspective more revealing.

Austin was clearly a remarkable man. An innovative apprentice mechanical engineer whilst in Australia concerned with the development of sheep shearing equipment, he was a driving force in the successful revitalisation and diversification of the Wolseley Sheep Shearing Machine Company, taking them into voiturette and low powered vehicle production in 1896. Wolseley's car production interests were hived off when Vickers expressed an interest in 1899 and eventually financed this aspect of Herbert Austin's work from 1901. Austin eventually set up on his own account at Longbridge, near Birmingham, in September 1905 financed by personal contacts and the Midland Bank, and by 1913, based largely on the successful 'Twenty', the company was producing an annual output of 1500 vehicles with a work force of 2300.

With commendable clarity Church demonstrates Austin's over-commitment in 1914 at the upper end of the market with his reliance on the Twenty. Herbert Austin's myopia in the face of a more difficult economic climate in the 1920's continued, whereas Morris perceived the prospects for a smaller vehicle, which were confirmed with the success of the Morris Eight. Coupled with imperfect market analysis Austin was shackled with a superstructure of debt created by a rapid wartime expansion of plant which was ill-suited to peacetime car production. Further capital issues did not relieve the financial pressure as the Austin models failed to generate sufficient revenue, and only under a reshaped tripartite management structure, with rigorous financial supervision by Ernest Payton and production management by Carl Engelbach, was the design flair of Austin brought to commercial fruition, principally with the smaller 'Seven'after 1922. Whereas the 'Twelve' had offered survival to Austin in the early 1920's, the Seven gave Austin supremacy in the British car market between 1928 and 1934 before the counterattack by Morris with the Minor and a new Eight and the genesis of small Ford cars challeneged

that position in the mid 1930's. Austins represented some 20-25% of British car production between 1927 and 1939 and also demonstrated considerable export success during the slump and in the 1930's, when under licence, large numbers of Sevens were produced in France, Germany and Japan and which ultimately provided significant profits for BMW and Datsun, thus levering them into the premier league of vehicle producers.

Perhaps the most illuminating aspects of the book are Church's comments on comparisons of the men, Morris and Austin. Their rural background, parental status, educational instruction, common attitudes to government intervention and politicians in general, their absence of religious beliefs, and, interestingly, their mutual failure to ensure the management succession to their business empires until they were both beyond their allotted three score and ten years. But significantly, their fortunes were constructed on differing bases. Morris, the components assembly firm whose success depended on perceived market demand, fashioning the product to suit this, cost-effectiveness and the solution of logistical problems associated with components assembly. Austin was an integrated vehicle production business with correspondingly more demanding capital requirements, less flexibility, and Herbert Austin's lifelong affair with engineering excellence.

The book is thus a fascinating weave of various strands - biographical, corporate, governmental and international business. Professor Church has separated the strands of this complicated fabric while retaining the overall pattern. The only reservation must be the editor's introduction of forty pages on changing attitudes towards Victorian businessmen and only fifty-seven lines on Church's subject principally concerned with the inter-war years. An alternative outlet for McKendrick's editorial piece would have reduced the book by some 15% in length. A corresponding reduction in price might be more acceptable, though presumably William Morris would have been more appreciative of the elasticity implications for the level of demand than would Herbert Austin.

UNIVERSITY OF LEICESTER RICHARD G. RODGER

G.C. PEDEN. British Rearmament and the Treasury, 1932-1939. (Scottish Academic Press, Edinburgh 1979. pp X+ 227 £6).

The purpose of this book is to re-assess the part played by the Treasury in the determination of Britain's defence policy during the 1930's. Particularly, it challenges the view that by maintaining tight financial control, the Treasury played a large part in the failure to bring the country up to a sufficient standard of 'war readiness' by 1939. After a short introduction setting the parameters of the debate, chapter 2 emphasises the importance of personalities, the inter-relationship between the Treasury and Defence Departments, and the mechanics of the policy-making processes in the 1930's. The key issues of the debate are examined in the following two chapters. The Treasury was concerned with two vital areas of policy: first it had to advise on what proportion of the nation's resources should be devoted to armaments and second, how these resources should be allocated between the Defence Departments. Its success up to mid-1938 in matching defence-spending to the priorities established by the Cabinet, largely by 'controlling' the creation of new industrial capacity, is discussed in chapter 5. The conclusions make clear that without the influence of the Treasury, the Cabinet might have avoided making critical choices. At a time of scarce resources, decisions had to be taken about areas of greatest need. It was largely the 'power of the purse' which ensured that priority was given to essential elements in the reconstruction of Britain's defences.

In eacharea of discussion this book is a success, not only because it provides a detailed, yet concise, account of how Treasury policies were devised and the extent to which they were conditioned by general economic development in the 1930's, but also because it serves to correct several misconceptions about the limits set by financial constraints. It is true that the Treasury undertook the 'rationing' of defence expenditure in 1937, but the alternative was the complete suspension of financial control, indecision over priorities and the real possibility that more incomplete forces would have resulted in 1939-40. Above all, it was the treasury which recognised that since 25-30% of the cost of armaments represented the price of imported raw materials, the continuation of trade and defence of trade-routes were essential. The Balance of Payments position, its effects on confidence in the financial community and on Britain's international purchasing power became prime concerns of the Treasury. These set the financial limits within which rearmament could take place: sound control over finance became, therefore, a vital "fourth arm of defence".

The analysis accepts that 'selective rearmament' was the main consequence of forcing the Cabinet to choose between competing demands. By controlling the creation of new industrial capacity, the Treasury severely limited Army spending up to mid-1938 while ensuring that the country's air defences received priority. After that date the

Treasury's influence notably declined due to the imminence of war, but by then the pattern had been set. In a text which is decidedly written from the Treasury 'standpoint' and which relies so heavily on 'official' documents and files, the analysis goes too far, perhaps, in exonerating the Department's policies. First, important divisions were often seriously held up in an administrative maze, part of which owed its existence to the determination of the Treasury to maintain its financial over-lordship. The Army suffered particularly, being denied the right to improve barracks, bring new firms into gun production, or bring its range of artillery and tanks up to adequate strength. While priority was rightly given to air-defence, the case for imposing such severe restraints on the Army programme appears questionable. Second, it is true that after 1935 industrial capacity could not be significantly increased in the short-run, so that allocating priorities in the light of existing capacity became essential. But the real issue is Treasury policy before 1935. Did the Treasury unduly restrict the creation of new capacity in the early 1930's, thus making invidious choices inevitable in later years? Justification of the Treasury's role would depend on a much closer scrutiny of policy in the early recovery years of the 1930's.

These caveats apart, this is a well-researched and significant book, presenting an important reinterpretation of rearmament policy. It does not pretend to evaluate the whole defence programme, concentrating solely on the role of the Treasury. In so doing, it largely ignores the wider evidence drawn from business associations and other sources that, for instance, Shay's recent British Rearmament in the 1930's utilises. Although not, then, the last word on the subject, this book will have an influential, perhaps decisive, part to play in any future debate on British rearmament in the 1930's.

HERIOT-WATT UNIVERSITY NEIL K. BUXTON

W.J. Reader. A House in the City: A Study of the City and of the Stock Exchange based on the Records of Foster and Braithwaite, 1825-1975. (B.T. Batsford, London 1979) pp. X + 198 £7.50)

This is the first scholarly account of any British stockbroking firm possessing sufficient records and importance to warrant a history, M.C. Reed's 'History of James Capel & Co.' was marred by the almost complete absence of any relevant primary material. As such the book is to be welcomed. Much of the detail concerning modern British investment is to be found in the histories of stockbroking firms.

In the narrow sense of a business history - an account of the firm and its partners - the book is a success. We learn much of the achievements and difficulties of the firm, while illuminating insights are provided into the personalities of the partners and their family background. Certainly, a number of questions remain unanswered, such as why Foster and Braithwaite survived the collapse of the 1825 mania when so many did not. Other questions could have been considerably amplified, especially the number and nature of the firm's clients. However, the book is a timely reminder that stockbroking was carried out by people and not by institutions.

This book seeks to do more than describe the evolution of a particular firm for in the foreword one of the present partners, David Braithwaite, expresses the hope that the work "... may be accepted as a serious contribution to the literature of the City." The author, W.J. Reader, makes a conscious effort to fulfil this aim but fails in the attempt. Only one chapter stands out as a contribution to the history of finance and investment. The chapter on 'Company Promotion', provides some valuable clues as to how the whole process of raising capital was carried out between 1880 and 1914. However, it whets the appetite for more investigation and analysis without providing answers.

The rest of the book is rather weak. Too many of the chapters are culled from established histories, such as Morgan and Thomas on the Stock Exchange, or well-known contemporary accounts, such as the Commissions into Foreign Loans and into the Stock Exchange. In these chapters the Foster and Braithwaite records provide no fresh evidence and the firm hardly gains a mention. It might have been better to have omitted these chapters as they contribute little to the history of either the firm or investment. Most disappointing of all is the author's failure to make full use of the material at his disposal. There exists no record of the value and nature of business done on the London Stock Exchange until the present, apart from the impressions of contemporaries. The Foster and Braithwaite ledgers provide a record of the business handled by that firm from 1825 which would provide a partial substitute. However, W.J. Reader has made no attempt at tabulation. He prefers to quote the views of contemporaries or historians concerning the behaviour of investors, rather than use the material at his disposal to find out what they were actually doing. Consequently, the book contributes nothing to the vexed problems of the causes and consequences of British overseas investment.

This is a well-written and well-produced book available at a reasonable price, but it is only half completed. The firm's records have been mined for their memoirs and letters but the most revealing material of all, the ledgers recording transactions, have been largely ignored.

UNIVERSITY OF DURHAM

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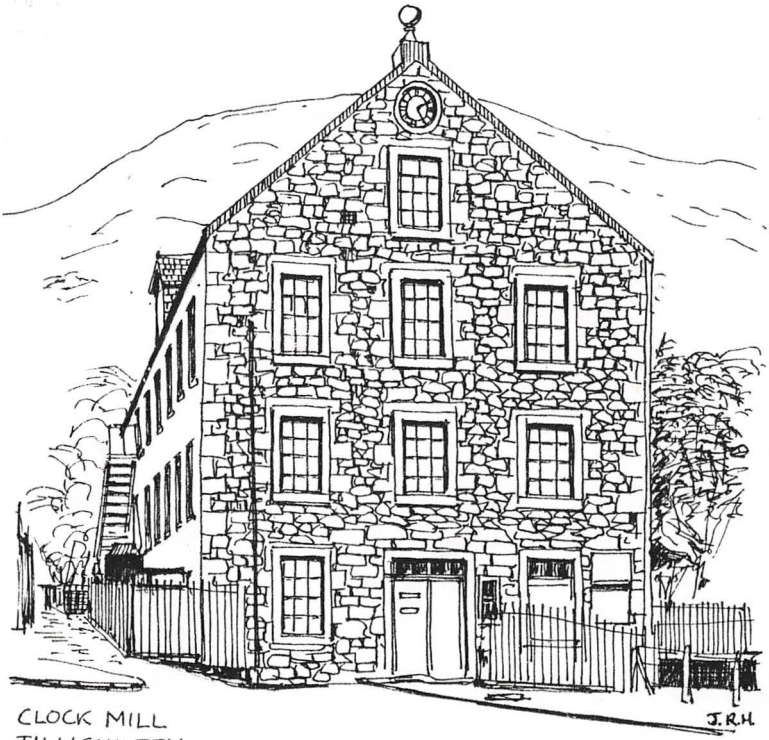

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