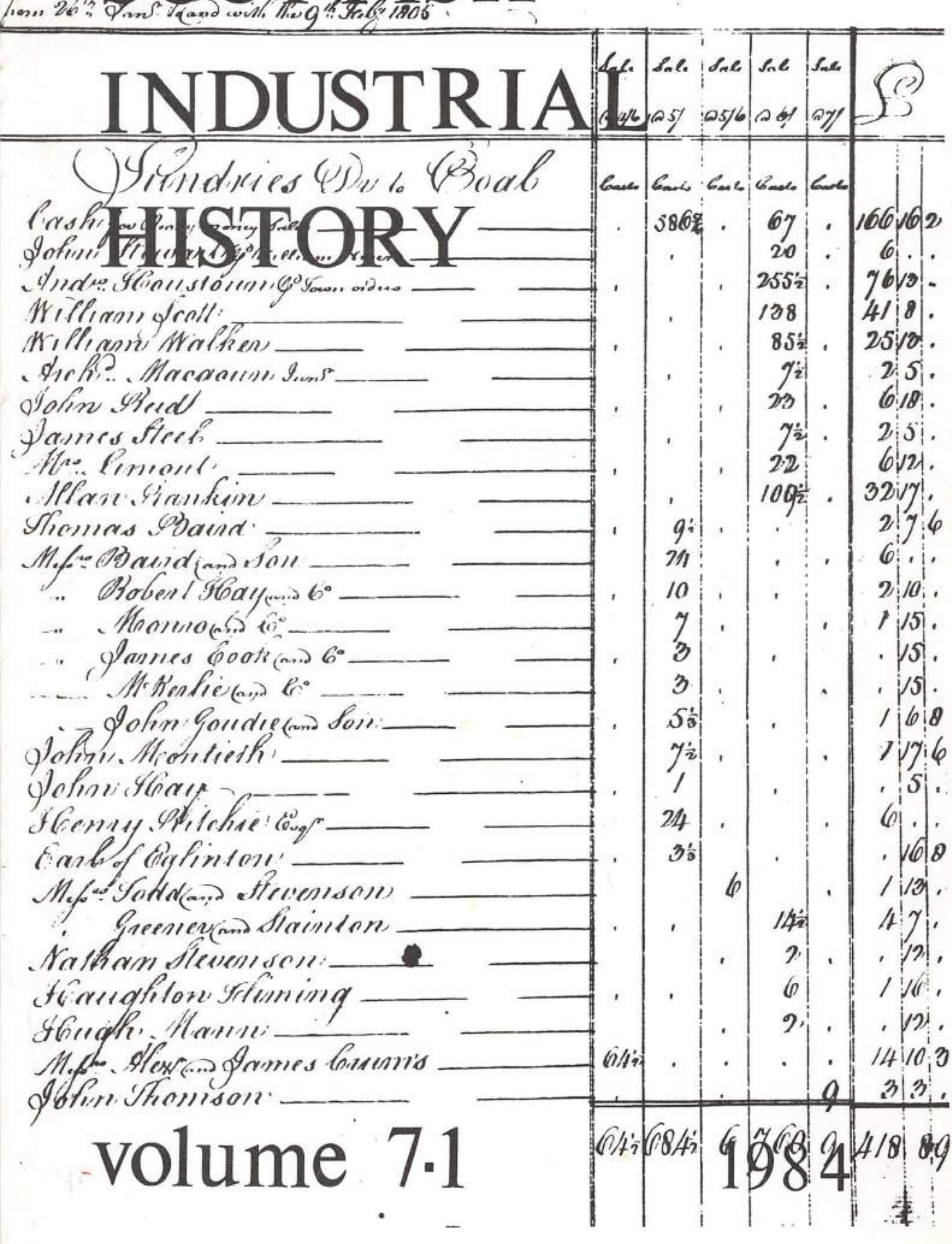
SCOTTISH INDUSTRIAL HISTORY



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William Scott		.		138		41	8	.
William Walker	.		.	85½	.	25	13	.
Archd Macaunn Junr		.		7½		2	5	.
John Reid	.		.	23	.	6	18	.
James Steel		.		7½	.	2	5	.
Mrs Lamont	.		.	22		6	12	.
Allan Rankin		.		109½	.	32	17	.
Thomas Baird	.	9½	.			2	7	6
Messrs Baird and Son		24		.	.	6	.	.
" Robert Hay and Co	.	10		.		2	10	.
" Monro and Co		7	.		.	1	15	.
" James Cook and Co	.	3		.		.	15	.
" McKenzie and Co		3			.	.	15	.
" John Goudie and Son	.	5⅓		.		1	6	8
John Monteith		7½	.		.	1	17	6
John Hay	.	1		.		.	5	.
Henry Ritchie Esqr		24	.			6	.	.
Earl of Eglinton	.	3⅓		.		.	16	8
Messrs Todd and Stevenson			6		.	1	13	.
" Greener and Stainton	.	.		14½		4	7	.
Nathan Stevenson			.	2	.	.	12	.
Haughton Fleming	.	.		6		1	16	.
Hugh Mann			.	2	.	.	12	.
Messrs Alexr and James Cunn's	64½	.	.	.	.	14	10	3
John Thomson	.		.		9	3	3	.
	64½	684½	6	768	9	418	8	9

volume 7·1

1984

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S C O T T I S H
I N D U S T R I A L
H I S T O R Y

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The cover illustration is an extract from GUA UGD 1/55/14, Sundry Charges for Govan Colliery, Wm. Dixon & Sons, 1803-05. This collection was located by Professor P.L. Payne, then Colquhoun Lecturer in Business History, University of Glasgow, in 1959, and subsequently gifted to the University by Colvilles Ltd. An article by Anthony Slaven, Professor of Business History at the University of Glasgow, 'Earnings and productivity in the Scottish coal-mining industry during the nineteenth century: the Dixon enterprises'. published in P.L. Payne (ed.), Studies in Scottish Business History (London, 1967), draws heavily on material included in this collection.

S C O T T I S H I N D U S T R I A L H I S T O R Y

Volume 7.1 1984

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THE GENESIS AND INFANCY OF THE BUSINESS ARCHIVES COUNCIL OF SCOTLAND

by

Peter L. Payne

Today, those working in the field of business history, be their objective the creation of a detailed scholarly and analytical monograph or a glossy brochure, are able to ease their creative paths by consulting a formidable body of works which includes meticulously compiled bibliographies, lists of archived material, individual case studies representing almost every type of economic activity, innumerable biographies of business men, and a small but growing number of general or industrial economic histories characterized by a micro economic approach in which business institutions and the entrepreneur are accorded a central role. Moreover, as Professor Barry Supple has observed, "There is perhaps no longer any serious need to defend the autonomy of business history as a field of study in Britain".

It was not always so. Although those who pioneered the subject in Britain in the years immediately before and after the second world war never seriously doubted the significance of their endeavours to the future development of economic and social history (and some, like T S Ashton, entertained hopes of influencing economics), few were unconscious of the over-riding necessity of gaining the co-operation of the business man. Without the support of the business community, business history was in danger of being smothered or, at best, stunted; its future uncertain, growth retarded and sickly.

Professor S G Checkland, having successfully launched the appeal for the Colquhoun Lectureship in Business History in the University of Glasgow, was deeply conscious that the Lectureship could only fully attain its objectives by maintaining the interest and support of those who had responded to the original call for funds sponsored by the Glasgow Chamber and Junior Chamber of Commerce. Furthermore, he entertained ambitions for business history in Scotland that could be achieved only be widening its geographical compass beyond Glasgow and the West.

Initially, something could be and was done by encouraging the London-based Business Archives Council, established in 1934, to increase its activities north of the Border, but this strategy soon proved painfully inadequate. The human and financial resources of the Business Archives Council were too severely stretched to mount a Scottish campaign at this time. Furthermore, initiatives originating in London were regarded with acute apprehension by Scottish business men.

The problem was discussed at great length by Sydney Checkland, David Wilson Reid of Robertland, the archivist of the University of Glasgow, and myself. There was, we believed, no alternative to establishing a Business Archives Council of Scotland. This would not be simply a "regional" branch of the Business Archives Council, but an

autonomous body having its own constitution, its own offices, and its own resources. The Business Archives Council accepted the rationale of this move, albeit reluctantly, and promised its support which, it should be recorded, has never ceased to be other than wholehearted.

These necessary negotiations completed, the Business Archives Council of Scotland was formed in 1960 by a group of business men, lawyers, chartered accountants, librarians and university personnel. Outstanding among this group of enthusiasts were Ralph Hillis, sometime President of the Glasgow Junior Chamber of Commerce, Col. A.R. Cross, of Mackenzie, Roberton & Co., and W.R. Ballantyne, General Manager of the Bank of Scotland. The National Register of Archives (Scotland) was represented by A.M. Broom and the Scottish Record Office by John Imrie, Curator of Historical Records, and A. Anderson, Assistant Keeper of Historical Records. His Grace the Duke of Buccleuch and Queensberry agreed to accept the Presidency of the new body. David Wilson Reid, without whose professional expertise and intimate knowledge of the Scottish business and commercial world the scheme might have proved abortive, was elected Chairman.

Although the initial membership was small, the Council was an enthusiastic group with connections throughout Scotland. Its aims and objectives - principally the encouragement of "the preservation and study of archives which bear on the history of commercial and industrial enterprise" - were given useful publicity by the Press and by the Scottish Home Service of the BBC. A major exhibition of business records was mounted at the Mitchell Library, Glasgow. All this meant that the importance of business archives and the study of business history was brought before a larger audience of Scotland than ever before, and that the Council played a major role in establishing the "respectability" of this branch of historical enquiry. Suspicions of muck-raking were undoubtedly reduced if not entirely quelled by the eminence of some of the Council's members.

Meanwhile the work of the Colquhoun Lecturer - now the Council's honorary secretary - continued, his task made easier by new contacts and a growing awareness of the significance of business history. From the viewpoint of 1984, it is patently clear that much more could and should have been done by the Council in its early days. The major constraint was and perhaps still is sheer manpower. The study of business records can be incredibly time-consuming; even the history of a single large collection of records (especially when the surveyor is tempted into looking at the archives more closely than a simple catalogue necessitates) can take several weeks. Moreover, in those early days access to many collections was not gained without much patient diplomacy. There were occasions when the existence of records - now known to have survived - was denied; in other cases, it was necessary to arrange for their preservation only hours before they were due for destruction. The basements and ground floor rooms of houses in University Gardens, Bute Gardens and Ashton Road threatened to become choked with piles of ledgers, letter books and rusting deed boxes, the nucleus of Glasgow University's unique collection of business records in the Adam Smith Building.

Perhaps the first tangible report of this activity was the appearance of the Studies in Scottish Business History in 1967, but sometime before this the criticism was voiced that although the Council had set out to be a national body its activities had been largely confined to Glasgow and the West, that the recruitment of new members

had been unimpressive, and that irreplaceable records were still being destroyed by those ignorant of the Council's very existence. Attempts to meet these grievances resulted in the agreement by the Abertay Historical Society to act as a local committee of the Council in Dundee and the publication of what was intended to be a biannual Newsletter, the first issue of which appeared in October 1966.

In its original form, eight issues of the Newsletter appeared in the next seven years; not until 1973, by which time the editorship had passed into the hands of Tony Slaven, was the intention fulfilled of producing two in one calendar year. In the second of these two issues it was possible to announce the success of the prolonged efforts to secure the preservation of the records of the constituent companies of the Upper Clyde Shipbuilders, the liquidator of which was Mr R.C. Smith, Chairman of the Council since the premature death of David Wilson Reid. It was an outstanding achievement and perhaps the most important justification for all the effort and enthusiasm of the previous decade.

In 1976, the Council's Newsletter was incorporated, with the Newsletter of the Scottish Society for Industrial Archaeology, into a new journal, Scottish Industrial History, under the editorship of C.W. Munn and John Hume. This event may be said to mark the end of the formative period of the Business Archives Council of Scotland.

For those who had participated in the affairs of the Council these were frequently exciting and sometimes intensely frustrating years. We were all aware that so much more might have been done, that whole areas of economic activity had been neglected, that records continued to be lost to the historians at an alarming rate, and that although the Council had gained the general sympathy of the business community, the active support of businessmen was disappointingly illusive. Nevertheless, when comparisons are made between what is accessible and available now to the business historian with the situation in the late 'fifties, the transformation that has taken place over the last quarter of a century is remarkable, and some part of the credit for this metamorphosis may be justly claimed by the Business Archives Council of Scotland, the genesis and infancy of which is sketched in this brief note.

University of Aberdeen

SURVEYS SURVEYED

by

Malcolm Livingstone

The task of locating and preserving business records in Scotland over the past twenty-five years falls into three distinct stages:

The Colquhoun Surveys,	1959-1969;
The three Regional Surveys of the National Register of Archives (Scotland)	1969/1970-1978;
The Business Archives Council of Scotland Survey	1978 to date.

The Colquhoun surveys began with the view that the task could be completed within a predetermined period. Each successive survey has carried somewhere a similar but more weakly held notion. Yet as each project has progressed economic crises have defeated the idea of a finite project. The Colquhoun era arrived in time to contend with the nationalisation of the iron and steel industries, and to catch the tail end of the coal companies resulting in the formation of the nucleus of the British Steel Corporation's former Scottish archive at Tollcross and the preservation of the Dixon records at Glasgow University. It also faced the depression of the early sixties resulting in the deposit of such collections as Denny Brothers, United Turkey Red and the North British Locomotive Company.

The activities of the Regional Surveys were overshadowed by the collapse of the Upper Clyde Shipbuilders, which has tended to obscure their other problem, the regional contraction of the old staple industries such as heavy engineering, textiles and iron-founding. The present Survey has attempted to meet the demands put upon it by the current recession and the change in the patterns of ownership which has taken the control of companies and plants outwith Scotland. This produced the frightening situation in December 1982 of five large deposits being made by the Council in one week as companies closed, rationalised or moved to smaller less costly premises. The whole tenor of the Council's operations over the past few years changed from locating collections to preserving them. Such a task would not have been possible but for the general development of archive provision within Scotland, much of which is staffed by individuals who were involved with the Regional Surveys.

The emphasis of the Regional Surveys was on locating records. Based on the Universities of Aberdeen, Dundee and Glasgow they contributed some five hundred surveys to the National Register of Archives (Scotland) between 1969 and 1977. The appointment of Regional Registrars brought a new approach to the task. They were able to devote most of their time towards locating records where their predecessors had only been able to devote their free time. The task could also be approached on a more systematic basis. The Western Survey tried two tacks. One method was to concentrate on companies in

a particular area, initially Greenock and Paisley. The second focused efforts on one particular trade, to begin with iron-founding. The Eastern Survey's emphasis went towards the textile industry and estate records. Their success can be judged by the wealth of material held on the jute and linen industries in Dundee University Archives. Similarly the Regional and University Archives in Glasgow share between them the custody of a collection of shipbuilding and engineering records that provides each with a constant stream of international readers. Strathclyde Regional Archive also has a valuable collection of papers obtained from solicitors' offices through the results of the Survey and its own efforts. There was also another result which must not be forgotten. In the past many technical records generated in Scotland had passed to English institutions. The expanded activities of the NRA(S) and the Business Archives Council of Scotland to which the Surveys also reported, ensured that these records now stayed in Scotland and the collections remained as an integrated whole.

In 1978 the Scottish Record Office made a grant-in-aid available to the BACS. Along with funds gifted by the Scottish Clearing Banks and industry this enabled the Council to employ its own surveying officer based at Glasgow University Archives. The remit was to concentrate activity on those areas that had little or no archive provision. Companies in the Borders, Lothians, and Highlands were approached in the first year with some success. The surveying officers were also able to contact trade associations, agricultural organisations, and firms involved in distilling, printing, chemicals and food and confectionary based industries which had not previously merited a trade based survey from the Regional Surveys. But although this policy has continued and other areas have also been covered the greater part of the work has always taken place within the Edinburgh and Glasgow areas reflecting the economic predominance of the central belt. This unintentional concentration has been further compounded by the current recession as the region has suffered an endless tally of well-known companies being forced into receivership or liquidation. It may well be that this era has created an unbalanced record of industrial endeavour. The records of some companies (usually the better known, or those whose collapse has been well publicised) have been rescued, while others (often the smaller, younger companies) have slipped away unnoticed. These crises, as well as the past record of the surveys, have brought receivers and liquidators into accepting the Council and the Scottish Record Office as willing recipients of company records. The long and tedious negotiations with accountants that were once common are now rare, although it is only occasionally that a receiver contacts the Council offering a collection. For the most part all that is required is a letter announcing our interest in a company for a deposit to be made.

Throughout the Council's activities have been totally dependent upon the goodwill of the business world. They have also depended upon the unstinted assistance and support of John Imrie, Keeper of the Records of Scotland, John Bates, Deputy Keeper (Records Liaison Division), Jack Sime, Industrial Liaison Officer, and their colleagues on the National Register of Archives (Scotland) as well as the local, regional and university archive offices.

The last fifteen years have seen a shift in Scotland's economic base, and a new challenge to the business archivist. The new industries are yet to be surveyed. There are reasons for this. New companies have come with the developments in electronics and

exploitation of the oilfields. Some belong to large corporations and are only production units which traditionally generate few records adaptable for historical research. By their very nature all are highly competitive or involve technical operations where confidentiality or indeed total secrecy are vital. They will have to mature before explorations of their records can be made and time renders current commercial secrets obsolete. For our own part surveying records generated by these companies or other companies whose records no longer bear any relation to the familiar compact ledger or the file of board papers will not be possible until provision is made for the assessment and retention of computerised data.

Business Archives Council of Scotland

THE IRON INDUSTRY OF THE MONKLANDS
(continued)

THE INDIVIDUAL IRONWORKS III

by

George Thomson

GARTNESS

Gartness Iron Works were on the North Calder Water on the site of the ancient corn mill of Gartness (or Gimmerscroft) which is mentioned as early as 1540. (1) To it all the lands of the Barony of Bothwellmuir were astricted. The estate of Gartness passed through several hands until ultimately, from a branch of the Cleland family it passed to the Mores and came to form a part of the Cairnhill estate of the More-Nisbets. In 1819 Dr William Clark of Wester Moffat bought Gartness mill and lands. From him in 1825 David Donald 'smith in Carmyle' feued Gartness Mill for conversion to a forge. He was seised in it by the handing over of earth and stone of the land and the clap and hoppe of the mill, (2) a traditional ceremonial that continued until 1845.

The Donald family in Carmyle had a reputation as workers in iron that went back to the early 17th century. A David Donald, smith in Carmyle, is mentioned in 1610; and in 1672 there is recorded the will of another David Donald 'hammerman in Carmyle'. (3) On 29 September 1632 the Dean of Guild was authorised by the provost, bailies and council of Glasgow to admit David Donald in Carmyle as a burgess

> 'quhenever he his wyff bairns and familie cum to the burgh and dwell within the samyn for four locks he has given to the use of the duress of the tolbuithe frielie and for the bountethe of the rest of the locks and work wrocht be him thereto.' (4)

His grandson, David Donald, Hammerman, was admitted burgess on 12 April 1694

> 'by right of his grandfather David Donald, Burgess and Guild Brother, who made the locks of the tolbooth above eighty years since; gratis because of his great skilfulness in his art and trade, conform to Act of Council dated 7th April.' (5)

Presumably it was this same David Donald who was admitted in 1695 a member of the Incorporation of Hammermen in Glasgow, presenting as his essay 'ane hors shoe and eight nails and ane wright's broad axe.' (6) His tombstone bearing the date 1731 still stands in Old Monkland churchyard carrying on one side the traditional symbol of hammermen, crossed hammers surmounted by a crown. Yet another David Donald, who died at Carmyle in December 1793, was a smith and edge tool maker of

more than local fame: he earned the rare tribute for these days of an obituary notice in the Glasgow Courier which described him as

> 'a man of great natural genius, supposed to be the best temperer of iron in Scotland, perhaps in Britain, as no spades, shovels, axes, etc. would sell in America from any part of England when put in competiton with his.' (7)

This David Donald's eldest son was the David Donald who came to Gartness in 1825.

He proceeded to adapt the corn mill for iron forging and in 1826 the Gartness Forge Co. was formed in which the other partners were James Cook, the well-known Glasgow engineer*, Ralston Caldwell, one of his partners, and David Cook, his works manager. (8) In 1825 David Donald, 'spade manufacturer at Carmyle' was declared bankrupt. (9) There followed an intimation that he was no longer a partner in the Gartness Forge Co. (10) and on 17 March 1828 Cook and Caldwell got a warrant for Donald's ejection from lands and houses at Gartness 'in consequence of his bankruptcy and removal from his office as operative manager'. Donald pursued his case in the Court of Session, contending that the partnership agreement contained no stipulation regarding bankruptcy of a partner in the concern; that he was not a tenant of the company but a partner; and that the lands, mill etc. had not in fact been transferred to the partnership. The 'house with two cows' grass' which he occupied and which the company claimed they required for their manager was not, he maintained, the house built for the manager but a totally separate one which he, David Donald, had built for his own residence before he assumed Cook and Caldwell as partners; their manager was in fact, he said, in possession of the house that had been built for the manager of the works. However the Court decided against Donald and he had to go. (11) He then took a lease of Holm Mill on the South Calder between Bellshill and Motherwell and set up a spade and shovel works in what had been the foundry of the Orbiston Community.

Following Donald's departure Archibald Mylne and Andrew Cunningham were assumed as partners in the Gartness Forge Co. They were already partners in the Tradeston works. Between 1828 and 1832 considerable expansion took place at Gartness. The forge was extended; worker's houses were erected - the beginning of the village of Gartness - Gartness House was built and Ralston Caldwell went into residence there; a lease was taken of the Easter Lint Mill of Monkland - on the opposite side of the Calder from Gartness Mill and a little downstream - and on its site an additional forge was built, later to be known as Low Moffat Forge, a building 46 feet square within its walls and equipped with two waterwheels and a hammer. Gartness Forge had two waterwheels to drive its machinery which included a large forge hammer

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* Cook's works in Tradeston had been christened 'the College' because they were regarded as the training place par excellence for young engineers. His name is commemorated by Cook Street on Glasgow's south side (R. Harvey, Trans. Old Glasgow Society, 1918-19, p.38).

and a smaller plating hammer, shears, and lathes for shovel handle making. It was designed for all sorts of general forging work as well as manufacture of spades, shovels and edge tools. On the two forges and their machinery more than £5,000 had been spent; the company got into financial difficulties and in March 1832 their properties were offered for sale without success. (12)

In June 1834 the works were taken over by Carrick, Brown and company, the Glasgow banking firm, who in the same month leased them to Brown, Paterson and Co. (alias the Ballochney Coal Co.) whose partners were John Brown, (coalmaster at Ballochney), James Paterson (merchant in Glasgow) and Dr. John Robertson (owner of ironstone pits at Ballochney). (13)

Conversion into a malleable iron works appears to have been made by the Gartness Iron Co., a partnership of James Paterson, William Robb and John Henry Stewart. It is by no means certain when this company was formed or when Gartness forge was converted for malleable iron manufacture. The first entries in all the books of the Gartness Iron Co., their Day Book, Ledger, Minute Book, Sale book, were dated 11 November 1839. (14) On 15 January 1841 the partners petitioned the Court of Session for sequestration of the effects of the Company and of its individual partners. (15) Their principal creditors, Alison, Merry and Cunninghame, acquiesced in the application. Paterson, Robb and Stewart had apparently entered into possession of the works as from 17 October 1840 (16) and on 1 December 1840 they had executed a bond and disposition in security of a credit of £5,000 by the National Bank of Scotland. (17) On 8 July James Paterson offered a composition: he was discharged on 8 August 1841. J.H. Stewart got his discharge on 1 March 1842 and William Robb on 5 August 1842.

No further information is available until 1844 when the works were put up for sale at an upset price of £6,000. The sale was several times adjourned the upset price being reduced each time. Ultimately in 1845, when the asking price had come down to £3,500, the works were purchased at that figure by the Monkland Iron and Steel Co. of Chapelhall and Calderbank who already had a small forge a short way upstream from the Gartness works. Gartness works were described as capable of an output of about 100 tons of malleable iron a week. They had 13 puddling and heating furnaces, a large forge hammer and a plating hammer driven by separate waterwheels, and a rolling mill driven by steam engine of 80 horse power. (18)

The new owners extended the works to have 18 puddling furnaces and four heating furnaces; they added a second rolling mill and a Nasmyth 30 cwt steam hammer. Capacity was now 180 tons of finished iron a week. The forge rolls were 18 inches in diameter and the new merchant rolls 15 inches. Both were driven by the steam engine. There were now three associated forges. Upstream was Moffat High Forge with two heating furnces and a helve hammer. Near it was the new Moffat Steam Forge with six furances of various types and a 3 ton Nasmyth hammer: it could turn out forgings up to 12 tons. Downstream was Moffat Low Forge with two heating furnaces and a water-driven helve hammer. (19)

But the Monkland Iron and Steel Co. was hard hit by the great depression in the iron trade which began in 1857 when within a few

months the price of pig iron fell from 80s. a ton to 48s. So in 1858 the Gartness works were once again put up for sale, the owners being desirous of concentrating malleable iron production in their Calderbank works. No purchaser could be found and so they carried on Gartness for another three years until in July 1861 they were in financial difficulties and had to suspend payments. Their works at Gartness were closed down and put up for sale; (19) trustees became responsible for the running of Calderbank and Chapelhall works. No purchaser could be found for Gartness and the works lay empty till 1864 when the whole works, houses, etc. were sold to a new London-registered company the Gartness Iron and Steel Co. Ltd. for the miserably low sum of £2,000. (20) One of the principals in this firm was William Hawksworth, believed to have come originally from the Newcastle area, who had for some years been operating Avon Steel Works on the river Avon in Stirlingshire. Near Moffat Steam Forge the new firm installed a 12-hole steel melting furnace for making crucible steel. But in 1867 they in turn were bankrupt and the works were again on the market. (21) This time no one showed any interest and the whole works were scrapped. The feu duties fell into arrears and all the lands reverted to the superiors. The building of Moffat Low Forge was converted to a wool flock mill which continued in operation until 1909 after which it too was allowed to go to ruin.

By the later 1850s the village of Gartness had been expanded by the Monkland Iron and Steel Co. to have 65 houses. A further nine houses were associated with separate forges. There was a village store (a two-storey building with cellarage below and a storekeeper's dwelling above), a school and a public library. (22) The houses and the store building continued well into living memory but of Gartness works by 1881 only a few roofless buildings remained on that site that had been the scene of so much fruitless endeavour. Now all traces of buildings have disappeared and looking over the grassy haugh with patches of ash and cinder here and there it is difficult to visualise the appearance it must have presented just over a century ago when some two dozen chimneys belched out smoke and flame and the hollow resounded to the beat of steam hammers. Remains of dams and lades can still be seen but are rapidly deteriorating. One relic, however, is likely to remain for succeeding generations. When building their malleable iron works the Gartness Iron Co. straightened the course of the Calder at that point, diverting it a little to the north, so that now for perhaps 200 yards it runs wholly in New Monkland parish whereas formerly the boundary between the parishes of New Monkland and Shotts ran along the centre of the river bed. This diversion is mentioned in 1845 in the disposition to the Monkland Iron and Steel Co. by the trustees on the sequestrated estates of the Gartness Iron Co. (23) and it is clearly shown on the large-scale Ordnance Survey maps.

MERRYSTON (COATBRIDGE I)

After Dundyvan these were the first malleable iron works to be laid down in the Coatbridge area. Their site was west of Coatbridge Central Station. The spelling of the name is puzzling: it may possibly derive from an Irish pronunciation of Maryston for in the feu disposition the name of the lands is so spelt and further west along the Monkland Canal there was a Wester Maryston. The Ordnance Survey map calls the square of workers' houses Merryston Square but names the

works Coatbridge Works and this was the name that was transferred to a new works in the 1880s.

These works were founded by Martin, Dimmack & Co. Their feu disposition was signed in June 1850 and sasine was recorded on 7 September 1850. (24) The works appear to have started operations in 1851. It has already been mentioned (SIH 6.1) that Hugh Martin and Richard Dimmack had come from the Calderbank works of the Monkland Iron and Steel Co. where Martin was a heater and Dimmack a roller. (24) Martin seems to have been born locally but Dimmack was a native of Dudley in Worcestershire where he served his apprenticeship. Subsequently he worked for almost 25 years in the iron trade in France and he married a Frenchwoman Pacifique Laute. (25) The third partner in Martin Dimmack & Co. was James McGilchrist, ironfounder and engineer in Coatbridge. From being a journeyman moulder he had worked his way up until in 1845 he was able to open his own Atlas Works on the corner of East Canal Street and Water Street. (26) (In this century his main workshop building became the B.B. picture house; from East Canal Street one could see on the west wall of the picture house the outlines of the large arched doorways that had been built up). These works built the steam engines for Merryston Iron Works. (27)

Over the years there were many changes in the partnership. In August 1856 James McGilchrist retired, (28) apparently to form with James Walker the Port Dundas Iron Co., manufacturers of malleable iron. Two years later Richard Dimmack left (29) to join with Robert Henderson to build Drumpellier Iron Works. This marked the end of Martin, Dimmack and Co. and the formation of Hugh Martin and Son when Hugh Martin assumed his eldest son John as a partner. By 1869 the firm had become Hugh Martin and Sons in which the partners were Hugh Martin and his five sons, John, Hugh, William, Andrew and James. (30) John died and Andrew left the firm on 29 August 1874. (31) Although Hugh Martin Sr. retired on 30 December 1882 leaving Hugh Jr., William and James as the remaining partners, (32) he did not leave the iron industry: in 1883 in association with William Logan he began erection of the present Dundyvan Iron Works - now operated by Martins (Dundyvan) Ltd.- on part of the site of John Wilson's famous Dundyvan works. (33) Hugh Martin Sr. died on 5 January 1884 before his new works were operational and they were taken over by his son William who then retired from the firm of Hugh Martin and Sons. (34) His brothers Hugh Jr. and James continued to trade as Hugh Martin and Sons in Merryston works until in 1889 they built a new Coatbridge works near Langloan railway station on a site now occupied by Coatbridge Outdoor Sports Stadium.

A description of Merryston works in 1871 (35) says they consisted of four sheds, each 300 feet by 30 feet, with semi-circular roofs. There were seven puddling, one scrap and two heating furnaces arranged round a 2-ton Condie steam hammer. Two of the three rolling mills, a 16 inch forge train and a 10 inch finishing mill, were driven by a 60 horse power engine that had been built by McGilchrist and Co. of Atlas foundry. The third mill, another 16 inch one, also had a McGilchrist engine, of 70 horse power. Its flywheel was said to weigh over 11 tons.

By 1880 Hugh Martin and Sons had introduced to the district the making of horse shoes by machinery (36) by the process patented by Robert Robertson, for which they held exclusive rights for Scotland. This horse shoe machinery was transferred to their new Coatbridge works and, after closure of these works by the Combine, to Coats Iron works

where manufacture of horse shoes was continued by the Scottish Iron and Steel Co. Ltd.

COATS

Thomas Jackson of Coats erected these works in 1854. They had then 12 puddling and 2 re-heating furnaces. (37) It was here that he made the first trials in Scotland of Bessemer's steel making process. Having read Bessemer's account of his process, Jackson hastily put together a crude apparatus to try it out for himself. In his own words

> 'An old locomotive cylinder attached to the engine of the turning lathe acted as a blowing engine. The foundry cupola and Bessemer furnace were lengths of old boiler tube 18 inches in diameter lined with brick and erected close together. Six tuyeres each $^{3}/_{8}$ inch in diameter entered almost on a level with the bottom of the furnace' (38)

The product was so brittle that it was quite unfit for commercial use. The trouble lay with the type of pig iron used. Bessemer had been successful with a specimen of Swedish iron practically free from phosphorus; Scottish pig had a considerable phosphorus content.

Jackson was succeeded by his son Captain Thomas Jackson and in 1872 the works were extended by the addition of six single and eight double puddling furnaces, one 18 inch forge train, one 18 inch merchant train and two steam hammers. (39) The British Association Handbook for their 1876 meeting in Glasgow credits the works with 34 furnaces and three rolling mills. When Jackson retired from the trade the works were leased for a short time by William Dixon, then in May 1883 they were purchased by the Coats Iron and Steel Co. in which the partners were William Jardine (who had come from Gartsherrie), Matthew and David Goodwin, and John Smith.

The new owners effected many improvements in the works and by 1885 each mill had its own engine. On the 'old' side of the works the 14 inch merchant mill had originally been driven by an intermediate shaft and gearing from the forge engine. Now it was given its own 200 horse power engine by Murray and Paterson of Coatbridge. Powerful shears for cutting up puddled bar for this mill had been supplied by Miller and Co., also of Coatbridge. This 'old' side had now a 16 inch forge train and two merchant mills, 14 inch and 8 inch. Each mill had two Siemens heating furnaces. Steam for the engines was provided by three hand-fired boilers and the waste heat boilers that were fitted to ten of the furnaces. Two multi-tubular waste heat boilers were under construction. On the 'new' side, with fifteen puddling and one ball furnace, eight furnaces were equipped for gas-firing and three of the puddling furnaces had waste heat boilers. There were three large Siemens heating furnaces and six stacks of Siemens gas producers. It had an 18 inch forge train and an 18 inch bar mill driven by a 380 horse power engine. Active preparations were being made for laying down a steel plant to have two melting furnaces and one heating furnace, capable of turning out 1,000 tons of finished steel a month. Its cogging mill was being equipped with a 750 horse power engine by Lamberton and Co. of Coatbridge. (40)

Goodwin, Jardine and Co. Ltd. was registered on 8 April 1889 to

acquire and amalgamate as from 31 March 1889 the Coats Iron and Steel Co. and James Goodwin and Co., engineers Motherwell and iron and steel founders Ardrossan. The nominal capital of the new concern was £210,000 in £10 shares (£100,000 of them cumulative preference shares) and £80,000 in first mortgage debentures. Barely a year later the new firm petitioned the Court of Session for sequestration of the Coats Iron and Steel Co. and its four individual partners as well as James Goodwin and Co. (41)

In July 1891 the works were offered for sale. According to the advertisements (42) the equipment was as follows:

In the iron works

25 puddling furnaces and 2 scrap furnaces
2 forge trains 16 inch and 18 inch
4 steam hammers 50, 50, 60 and 70 cwt
1 bar mill 18 inch
2 merchant mills 14 inch and 8 inch
3 Caze-Siemens gas heating furnaces
Capacity 1150 tons of finished iron a month

In the steel works

2 steel melting furnaces 20 ton capacity
2 steel melting furnaces 16 ton capacity
1 cogging and finishing mill 26 inch
2 large Siemens heating furnaces
Capacity 2000 tons of steel a month

Thus the steel capacity had been doubled since 1885.

At this stage the works were acquired by Paterson, Downs and Jardine. By 1905 the owners were William Downs and Adam Stuart Jardine. They were bought out in 1912 by the Scottish Iron and Steel Co. Ltd. for £21,319 in cash, 14,155 preference shares and 44,489 ordinary shares. (43) The works were closed down in 1967.

During the First World War a part of the works was given over to making horse shoes using the Robertson process that had been introduced to the district by Hugh Martin and Sons of Coatbridge Iron works. After making of horse shoes had been abandoned, the 'Horse Shoe' became the general engineering shop for the Coatbridge works of the Scottish Iron and Steel Co. Ltd.

On the south-west side of the works in 1861 Jackson built Coats Tube Works. (44) His own operation of the tube works appears not to have been completely successful for they were leased to various firms. They were, in fact, the first premises in Coatbridge of A. and J. Stewart, co-founders of Stewarts and Lloyds Ltd. Later lessees were successively Marshall and Wylie, James Allan, James McGhie and Co. and the Coats Tube Company. The last-named firm was one of those that united to form the Scottish Tube Co. Ltd. in 1912. Shortly afterwards Coats Tube Works were closed.

PHOENIX I - NORTH BRITISH I - GLOBE - SCOTIA

Between 1857 and 1897 the same works was operated under these four names in succession.

In 1840 Alexander Ronald established a forge for manufacture of small forgings such as cart axles. The site chosen was on East Canal Street adjacent to the Monkland Canal and the works was known as Ronald's Forge or as Coatbridge Forge. In 1857 the forge was leased by Thomas Ellis and his father-in-law James Leonard and converted into a small malleable iron works. The conversion could have been made at a very low cost for the forge was already equipped with a steam hammer. They named their works the Phoenix and traded as Leonard, Ellis and Co. Mention has already been made (SIH 5.2) of the backgrounds of these two men. James Leonard died about 1860 and was succeeded by his son Moses. In 1861 Thomas Ellis and Moses Leonard are described as the sole remaining partners in Leonard, Ellis and Co. Miller described the Phoenix as a 'very compact little work with two puddling and two heating furnaces along with machinery capable of turning out 150 tons of finished iron a month'. (45)

As from 22 April 1861 the firm of Leonard, Ellis and Co. was dissolved (46) to be succeeded by a new firm Spencer, Ellis and Leonard in which the partners were John Spencer (ironmonger and tube manufacturer in Glasgow), Thomas Ellis, and Moses Leonard; they proceeded to feu about three acres of the lands of Coats for the erection of another works, a second Phoenix. Their feu contract is dated 22 June 1861. (47) But on 11 September 1861 Thomas Ellis left that partnership. (48) He retained, however, the lease of the old works, assumed Alexander Mackenzie as a partner forming the firm of Ellis and Mackenzie, and renamed the works the North British Iron Works. Mackenzie retired on 1 March 1867 leaving Ellis as sole partner. (48) Ellis was a man of vision and ambition and in 1868 when the grounds owned by the old Dundyvan Iron Co. were being broken up he feued land for a new North British Iron works adjacent to the Dundyvan branch canal. He vacated his old works in June 1868.

They were taken over, improved and enlarged by A and T Miller who christened them the Globe. In October 1868 they were practically ready to go into production. They were said to have 5 puddling furnaces and one rolling mill and to employ about 60 men. (49) In 1884 the Millers moved to Motherwell where they took over the tin plate works that had been started there by Isaac Summerhill and started a new malleable iron works to which they transferred the name Globe.

The works in Coatbridge were then sold to Adam and Thomas Jardine who changed the name to the Scotia and traded there as Jardine Brothers. (50) In August 1893 the Jardines sold the works to Donald S. Brown who traded as D. Stevenson Brown and Co. Three years later he was bankrupt and in May 1897 the works were advertised for sale. (51) They were bought by the adjoining Caledonian Tube Co. and incorporated in their works. The site is now occupied by Coatbridge Public Baths.

ROCHSOLLOCH

These works were erected at Coatdyke in 1858 by Isaiah Clark and James Walker in association with their Rochsolloch Brickworks. They were joined by John McAra Sr. who had been a shingler at the recently closed Gartness Iron Works. Very early in the history of Rochsolloch Iron Co. Isaiah Clark left the partnership: in 1861 it was dissolved and Walker and McAra were left as sole partners (56) but before the end of that year Biby Leonard (brother of Moses Leonard) had come in as a partner for when James Walker left the firm on 5 December 1861 the remaining partners were John McAra Sr. and Biby Leonard and it was intimated that they were to be joined by Alexander Cowie, an Airdrie coalmaster. (53) On 3 September 1862 John McAra left the firm followed on 13 July 1863 by Biby Leonard. (54) Alexander Cowie was then joined by Archibald McGilchrist of the Atlas Foundry (whose brother had been one of the founders of Merryston works) but by 1866 McGilchrist had departed to be replaced by John Dick, ironfounder, Cliftonhill Foundry.

The story becomes more and more complicated, for Alexander Cowie intimated in the Edinburgh Gazette that from and after 12 August he had ceased to be a partner in or have any interest in the Rochsolloch Iron Co. and Bellsmuir Forge. (55) The Mining Journal announced on 22 August 1868 that the Rochsolloch Iron Co. was bankrupt and would pay its creditors about 8s. in the £1. Nevertheless two years later when intimation was made of the dissolution of the Rochsolloch Iron Co. on 8 August 1870 the partners were given as Richard Cowie, James Pettigrew and Alexander Cowie and it was Alexander Cowie who was to collect debts and pay liabilities. (56) By 1872, according to the Valuation Rolls, the sole partners were James Pettigrew and James Spencer, who were also the sole partners in the Cliftonhill Coal Co. In 1877 Pettigrew became sole proprietor of the iron works. (57) His financial position appears to have been insecure: in February 1881 he assigned the whole Rochsolloch works in security of a loan of £5,000; in 1887 the company was sequestrated and he paid ultimately a composition of 6s 6d in the £1. Rochsolloch Works were then purchased by the Waverley Iron and Steel Co. Surely never had any firm so many changes of partners in the short space of thirty years.

The works were closed in 1964.

DRUMPELLIER

These ironworks were erected in 1859 (58) on a site at the west end of Buchanan Street, Coatbridge, near to Langloan blast furnaces and adjacent to a small basin on the Langloan branch of the Monkland Canal. The founders were Richard Dimmack (late of Martin Dimmack and Co. of Merryston Iron Works) and Robert Henderson and they started with a joint capital of £2,4000. (58) In 1866 they founded the Drumpellier Coal Co. (58) In addition, together with Robert Lish Urquhart, they were the partners in Henderson and Dimmack, merchants, commission agents and shipping agents in Leith (58), a firm that was dissolved by mutual consent at 1 January 1878. (59) When Richard Dimmack died on 27 September 1878, leaving a widow and nine children (60), the firm was already in financial difficulties; it stopped payment on 12 October 1878 following the stoppage of the City of Glasgow Bank on 1 October

1878. Management of the affairs of both the Drumpellier Iron Co. and the Drumpellier Coal Co. was then entrusted to William Mackinnon C.A. But on 15 January the estates of Henderson and Dimmack, the Drumpellier Coal Co. and Robert Henderson were sequestrated. Sequestration of the estates of the deceased Richard Dimmack followed on 28 February 1881.

Down to 1876 their operations as ironmasters and coalmasters had been successful: their coal interests had brought a total profit of £101,000 and their iron works one of £44,000. But from 1868 they had indulged in speculation in stocks and shares in the name of the firm. The great bulk of these dealings proved unsuccessful and resulted in a loss of £75,500. After 1876 their coal and iron businesses had become unprofitable and by October 1878 their unsecured liabilities totalled £44,000. By 1882 Henderson owed Dimmack's Trustees some £36,000 and R. Addie and Sons, the ironmasters, £5,000. (61) In 1885 there was announced a first and final dividend to Dimmack's creditors of one penny in the pound. (62)

Following the sequestration of Henderson and Dimmack, Drumpellier works were acquired by John Spencer of Phoenix works who installed some steel melting furnaces. In the Valuation Roll for 1886-87 the works are returned as empty but by 1888 they had been rented to William Beardmore and Co. of Parkhead Forge. By 1893 they were again returned as empty. According to Hugh C. Waterston (private communication) the works closed in 1902 but they were still entered as empty in the 1908-09 Valuation Roll.

An account of the works in 1871 (63) describes them as consisting of four iron-roofed sheds, each 85 feet by 32 feet, containing 16 puddling furnaces arranged round a 30 cwt steam hammer. The two rolling mills, each with two sets of rolls, were driven by a beam engine by Dick and Stevenson of Airdrie. It had a 26 inch cylinder and a stroke of 4 feet 6 inches. The capacity of the works was put at 800 tons of finished iron a month.

The B.A. Handbook for the Glasgow visit in 1876 says there were 20 furnaces and three rolling mills whilst the 1901 Handbook claims 18 furnaces. No details of the steel furnaces have been encountered.

PHEONIX II

These works, the second to bear the name Phoenix, were sited between Coatbridge Main Street and the Monkland Canal. On 22 June 1861 land there, extending to about three acres, was feued to John Spencer, ironmonger, Glasgow and Thomas Ellis and Moses Leonard, both iron manufacturers, Coatbridge, the three partners of the firm of Spencer, Ellis and Leonard. (54) Ellis retired from that firm on 11 September 1861 (66) and a re-disposition of the feu to Spencer and Leonard was executed on 24 September 1861. (66) A bond and disposition in security of a cash credit of £3,000 was given on 30 September / 2 October 1861 by John Spencer and Moses Leonard as individuals, the firm of Eadie and Spencer, tube manufacturers, and James Eadie and William Spencer Jr. as individuals. (67) The two last-named were partners in Eadie and Spencer. Moses Leonard retired on 4 April 1863 (68) when John Spencer became sole proprietor. (69)

On 21 december 1900 John Spencer (Coatbridge) Ltd. was registered with a capital of £80,000 in £10 shares, half of them 5 per cent

cumulative preference shares, to acquire for £80,000 from John Spencer his Phoenix Ion Works, Drumpellier Iron and Steel Works and houses at 2-10 Spencer Street and 63-79 Coatbank Street. Of the amount to be paid £35,000 represented the value of the heritable property and effects and £45,000 the value of the moveable plant, stock, accounts and whole other effects. Payment was made by the issue of fully paid up shares. Only members of the Spencer family were shareholders.

In 1912 the firm decided to go into the merger that produced the Scottish Iron and Steel Co. Ltd. and voluntary winding up was agreed at meetings on 14 and 29 October 1912. (71) From the Scottish Iron and Steel Co. Ltd. they got £25,769 in cash, 15,499 preference shares in that company and 48,714 ordinary shares. (71)

These works appear to have had 20 - 22 puddling furnaces and three rolling mills. (72) They were closed down in August 1921. (73) Their site was taken over by J.N. Connell Ltd.

CLIFTON

Erection of these works, alongside Phoenix II, was started by Colville and Gray in 1861 and manufacture of iron began in February 1862. (74) David Colville, a native of Campbelltown, was in the grocery trade. His partner, Thomas Gray, was probably one of the Gray family, founders and engineers in Coatbridge, who were the originators of Gartcosh Iron Works.

In 1864 the works were reported to have ten puddling and three heating furnaces, capable of an output of about 600 tons of iron a month, and were said to have cost £7,000. (75) An account of the works in 1871 says they had at that time 18 puddling furnaces, 2 Condie steam hammers (each of 50 cwt), an 18 inch forge train and a 16 inch merchant mill driven by a steam engine of 28 inch diameter cylinder and 5 feet stroke with a flywheel weighing over 21 tons. There was also a guide mill (8 inch) whose driving engine had a 20 inch cylinder and a stroke of 2 feet 9 inches. (76) By 1901 the works had grown to have 28 puddling furnaces. (77) Bars, hoops and strips were produced.

Colville and Gray were also the sole partners in the Avonhead Coal Co. which in 1866 began distillation of oil shale at Avonhead.

The partnership was not altogether a happy one: rumour has it that the trouble lay with the wives who could not get on together. Whatever the reason, in 1870 Colville and Gray decided to part company. (78) Each wished to continue in the trade, so each lodged a sealed offer for the business. Gray's offer was the higher so he secured the works. He had secured the financial backing of John Wylie, a licensed grocer in Hamilton and an ex-provost of that burgh. Apparently David Colville could not find a suitable site in the Monklands so he removed to Motherwell to start Dalzell Iron Works and found the Colville empire. The Avonhead Coal Co. also passed to the new owners of Clifton Iron Works - Gray and Wylie - but the Avonhead Oil Works went to new owners. In 1878 Wylie bought out Gray's interest and formed John Wylie and Co. in which the partners were John Wylie, his sons William and John, and William's sons William Wylie Jr. and Joseph Wylie. William Wylie Sr. was a tube manufacturer in Glasgow. He died in December 1878; his sons' interest in Clifton works ended with his death and John Wylie became sole partner. (79) Some time between 1880 and 1885 an

open hearth steel furnace was installed. (80)

John Wylie, still trading as John Wylie and Co., joined the 'Combine' in 1912 and was paid by the Scottish Iron and Steel Co. Ltd. £12,999 in cash, 9,876 preference shares and 31,042 ordinary shares. (81) In 1912 according to the prospectus of Scottish Iron and Steel Co. Ltd. the partners were William Wylie and John Wylie.

The works were closed in May 1913. (82)

COATBRIDGE TIN PLATE

Coatbridge Tin Plate Works, founded in 1864, are interesting because for some thirteen or fourteen years they were the only works producing tin plate in Scotland. They were founded by Edward Mather Bell, an ironmonger in Coatbridge, and John Baillie of whom nothing has been learned. Baillie's connection with the works, however, was short: according to the Valuation Roll for 1865/66 Bell was then sole proprietor. On 2 Februay 1866 Coatbridge Tin Plate Works Co. Ltd. was registered, possibly the first limited liability company in the district. (83) In 1882 its name was changed to Coatbridge Tin Plate Co. Ltd. The original capital was £12,000 in £50 shares. Of the 240 shares Bell held 80 and 67 were held by Thomas B. Campbell, metal merchant, Glasgow. Smaller numbers of shares were held by seven other metal merchants. Five shares each were held by Isaac Summerhill, manager of the works, and James Harris Maskrey who was later to become manager of Woodside Steel and Iron Works.

Dividends paid by the company were limited to 5 per cent to allow capital to accumulate. Such were the profits that in eight years £24,000 - twice the original capital - had accumulated and in 1874 the authorsied capital was increased to £60,000 in £50 shares, and the additional shares were allotted to shareholders in proportion to their holdings. Bell, for example, got 160 additional shares. Two years later, in 1876, a further £12,000 had accrued so that net profits must have been running at over 15 per cent. A second distribution of shares was made, Bell getting another 80 shares of £50. When in 1877 he purchased 168 shares they cost him £78 each. By then he owned 488 of the 960 shares that had been issued. In 1884 he was bankrupt and in 1887 his connection with the company ended. (84)

From 1888 onwards there were considerable changes both in the capital and in the value of shares. In 1888 the 324 shares then held by the company were written off to reduce the nominal capital from £60,000 to £31,000. In 1919 capital was increased by £28,200 to £60,000 again but the nominal value of each share became £1. Only 47,700 of these shares were issued.

By 1930 the firm's liquid assets amounted to £77,941 whilst the sums due to creditors were only £8,525. These assets were considered to be in excess of the firm's foreseeable requirements and it was decided to repay 15s on each £1 share. The unissued £1 shares (12,300) were subdivided into 49,200 five shilling shares and nominal capital was restored to £60,000 by the creation of 163,100 unissued shares each of five shillings. The works stopped production in June 1950 (85) and a general meeting on 31 August 1950 decided on voluntary liquidation. A sum of £57,240 became available for distribution to the shareholders.

On 24 October 1950 James N. Connell Ltd., scrap and machinery merchants in Coatbridge (who occupied the former Union Tube Works of the Scottish Tube Co. Ltd. as well as the former Clifton and Phoenix iron works) bought the ground and buildings, plant and machinery, and stocks of the Tin Plate Co. for £25,000 (86) and on 6 November 1950 they re-started no. 2 mill.

In 1864, shortly after their inception, the works were said to have two puddling and two 'lumping' furnaces, one 'hollow fire' and one 'softening fire'. (87) An account six years later credits the works with eight puddling furnaces, one 'cinder furnace', one refining furnace, six mill furnaces, two annealing furnaces and two 50 cwt team hammers. They were said to employ almost 400 men, women and boys. The women packed the tin plates into boxes. (88) The works continued to grow. In 1901 they had fourteen puddling furnaces (89) and in 1912 a large modern rolling mill was erected.

Manufacture of tin plate ended about 1889. It had become unprofitable because of the extent of competition from America and elsewhere. The firm then went into the business of making malleable iron strips for tube making and malleable iron plates. They also had the subsidiary activity of making malleable iron washers from the shearings of iron plates. About 1919 they went on to the rolling of steel sheets and steel strips for tube makers and steel washers took the place of malleable iron ones. (90)

An intriguing episode in the history of the firm was their tenancy from 1874 to 1878 of Avon Steel Works (sometimes called Hill Mill) on the Avon not far from Avonbridge in Stirlingshire - the works from which William Hawksworth had come in 1864 to take over Gartness Iron Works. For the six years preceding the Tin Plate company's tenancy Avon works had been given over to spade and shovel making. From 1855 (or earlier) they had been usued for making crucible steel and after 1878 there was a reversion to steel making and working. Possibly the Tin Plate Co. resumed steel making - it is difficult to imagine what else they could have done - but this is pure conjectue. At the time of their tenancy the Valuation Rolls record a 'Tin Plate Row' in Avonbridge.

It has been mentioned that James N. Connell Ltd. re-started the tin plate works in November 1950. In 1954 they revived the name Coatbridge Tin Plate Co. Ltd., registering it on 20 February 1954 as a private company with an authorised capital of £20,000 in ordinary shares of £1 each. Erection of a new Tin Plate Works began in 1956 on the site of Clifton Works. The new works which had cost £78,618 came into operation in June 1958. (91) The old works were dismantled and the site was sold in June 1959 to William Bain and Co. Ltd. It is now occupied by Lanarkshire Galvanizing Ltd., a subsidiary of Bain. The new 'tin plate' works had a brief life.

In this century the two men whose names were intimately associated with the management of the works were the Reids, William and David. William Reid became manager in 1903; he was appointed a director in 1911 and from 1919 until his retiral in 1949 was described as 'commercial manager'. David Reid who began as a clerk became cashier and in 1919 secretary of the firm. He succeeded William as commercial manager in 1949 but held that position for only about sixteen months, getting a payment of £3,000 for loss of office on the

liquidation of the company.

GARTCOSH

These works were originally called Woodneuk Iron Works. The original feu was given on 8 March 1865 to William Gray and Co. whose partners were William Gray, smith and founder, Archibald Gray, founder, and James Gray, founder, all of Coatbridge. (92) Despite this the firm carrying on the business seems to have been Grays and Watson in which the partners were William Gray (sometime smith and founder, Coatbridge, then at Gartcosh), Archibald Gray (founder Coatbridge and Boness), Thomas Gray (Gartcosh) and John Watson (Glasgow). The issue is confused by the fact that there was a firm A. and J. Gray in business in Coatbridge as engineers, ironfounders and waggon builders: they dissolved partnership on 11 November 1865 when James retired and Archibald carried on. (93)

In July 1866 there was a petition for the sequestration of Grays and Watson. Their examination was on 25 September. On 26 October 1866 John Watson offered a derisory composition of one farthing in the pound. Sequestration of Archibald Gray as a partner in Grays and Watson was announced in September 1866. The firm appears then to have become William Gray and Co. with the four Grays, William, Archibald, Thomas and James, as partners. In November 1866 the Edinburgh Gazette announced sequestration of the estates of William Gray and Co. and in February of the following year James Gray offered a composition of threepence in the pound.

The works at Gartcosh were exposed for sale in November 1866 at an upset price of £4,500 but attracted no bids. Re-exposed in April 1867 they were purchased for £4,250, the upset price, by A. and W. Smith, engineers, South Side, Glasgow. The works had then 10 puddling and 2 heating furnaces, one two-ton Condie hammer and two horizontal steam engines to drive the rolling mills. Smith Brothers intended to exploit at Gartcosh a new process for making steel from pig iron that had been invented by Robert Miller. On this process he had been experimenting for the previous three months at Gartness Iron Works which had been rented by the Smiths for that purpose. (94)

They formed the Gartcosh Iron and Steel Co. in which the partners were Alexander and William Smith and James Morris. The Smiths retired in 1869 and Morris was then joined by James Young and Benjamin Joseph Blackhurst. (95) At 10 December 1870 Blackhurst left the firm. (96) On 19 January 1871 came sequestration of the Gartcosh Iron and Steel Co. and of its individual partners. (97) In 1872 dividends were announced as follows (98): on the Company's debts 11s in the pound; on the estate of James Morris $5^{1}/_{8}$d in the pound; and on the estate of James Young $1^{3}/_{8}$d in the pound. Smith and McLean took over the works in 1872 - forge, bar mill and sheet rolling mill. (99)

In 1864 there had been an amusing episode. It was announced that warrants had been issued for the arrest of a number of workmen at Gartcosh Iron Works for desertion of service. They had struck work because the owners had stopped the beer cart from delivering the usual supplies to the men and had sent instead two barrels of sour milk. (100)

Smith and McLean (in which the partners were Charles Cochran

Mowbray and Manfred Leslie Palmer Jardine) were in business as merchants, manufacturers, galvanizers and steel and iron plate and sheet rollers; they owned Clyde Galvanizing Works at Mavisbank and Port Glasgow, the iron and steel works at Milnwood and Gartcosh Rolling Mills and Iron and Steel Works. On 10 September 1895 Smith and McLean Ltd. was registered with an authorised capital of £130,000 in £10 shares of which 2,000 were 5 per cent cumulative preference. As vendors' shares 2,000 preference and 10,000 ordinary shares were issued as fully paid. The director's qualification was to be the holding of ordinary shares of the nominal value of £500. Mowbray and Jardine, so long as each held 5,000 shares in his own name, were to be entitled to draw £300 a month each in advance of dividends. If the holding was less than 5,000 shares proportionately less was to be drawn and if the dividend for a year on 5,000 shares fell below £3,600 the difference was to be repaid. Meetings on 27 October / 12 November 1900 resolved to wind up the company so that the undertaking could be transferred to a new company of the same name. (101)

By 1930 Colvilles Ltd. had acquired the majority of the ordinary shares of Smith and Mclean Ltd. and on de-nationalisation of the steel industry in 1953 they acquired the whole share capital. In conjunction with their strip mill at Ravenscraig, Colvilles planned a cold reduction steel strip mill at Gartcosh which came into production in January 1963.

NORTH BRITISH

These works, built by Thomas Ellis on part of the lands of the original Dundyvan Iron Co. by the side of the Dundyvan branch of the Monkland Canal, came into operation in 1868. (102) The name North British had been transferred from his first small works in East Canal Street.

As already mentioned (SIH 5.2) Thomas Ellis was a native of Whittington in Shropshire. At the age of 24 he had come to Scotland to be a roller at Govan Iron Works. His first association with the Monklands was when he became for a short time manager of John Wilson's malleable iron works at Dundyvan but he soon returned to Govan since Dundyvan was not then in a good way. In 1857, at the age of 39, he had been co-founder with his father-in-law James Leonard of the small iron works originally named Phoenix and later North British (see above). In 1861 he had, with his brother-in-law Moses Leonard and John Spencer, feued the ground for another iron works (which I have called Phoenix II) but for some reason undisclosed, and nowhere even hinted at, he left that partnership after only three months. After two years Moses Leonard, too, left that partnership to embark on an ill-fated venture with his brother Biby Leonard which ended in bankruptcy in 1864. (see above). (103) For the next four years nothing is heard of Moses Leonard till he re-appears in Coatbridge in 1868 as manager of Ellis's new North British Iron Works.

Thomas Ellis had vision and ability which soon made his works outstanding among the Scottish malleable iron works. In 1876 it was reported that the North British works were 'unequalled for completeness and design by any other malleable iron works in Scotland'. (104) He had realised that one of the weaknesses of the puddling process was the amount of manual work that had to be done, by far the heaviest work in any industry. Various attempts had been made to reduce or eliminate

this factor and Ellis in 1872 made a thorough test of Dormoy's mechanical puddling process but abandoned it because of the inability of the mechanical revolving rabble to reach into the corners of the hearth on the door side of the furnace. Alive to the need to reduce fuel costs, he patented a furnace that had a closed fire hearth blown by Rootes blowers in order to use cheap dross instead of expensive lump coal. This Ellis furnaces was soon the only one used in Scottish malleable iron works.

His own works became one of the biggest of its kind in the district. Production started in March 1868. The Valuation Roll entry suggests that there were then six puddling furnaces. By 1872 their number had risen to twelve and by 1876 to eighteen. The account of the works in the British Association handbook in 1876 says:

> 'There are eighteen puddling, one scrap and eight mill furnaces, the latter and some of the puddling furnaces are constructed in accordance with Mr Ellis's patent - these are worked with dross, having blast supplied by two large Rootes blowers. The machinery of the forge consists of three steam hammers and a forge train. There are four rolling mills in the finishing department; these are all in line with the forge train. The forge and large mill engine work separately side by side of one another; next in line is an 8 inch guide mill; further on stands the wire-rolling mill, driven by a pair of coupled direct-acting engines. The last of the rolling mills has 8 inch rolls which Mr Ellis has found necessary to add to his works to meet the increasing demand for tyre iron. Contiguous to the wire-rolling mill there is the wire drawing department.... In the wire works there are eighteen drawing blocks driven by a pair of coupled horizontal engines. The applicances here include annealing pots, pickling vats, etc., and are capable of producing 15 tons of drawn wire per day.... The entire production is about 15,000 tons per annum at present but as the works stand they are capable of turning out 1,500 tons per month or 18,000 tons annually.' (105)

Ellis did not subscribe to the widespread practice of having one large steam engine to drive numerous machines. Instead he provided each machine with its own engine and in 1876 his works employed 22 separate engines. (105)

Thomas Ellis died on 26 July 1884 at the age of 68 and was buried in Old Monkland kirkyard. S. Morris in his curious book of memorials described him as '5ft 11 inches in height, stout with ruddy features'. (106) He was a pillar of Methodism in the Monklands. At his own expense he built a church in Coatbridge for that connection and provided also its pipe organ and a house for the church officer.

In February 1871 the North British Co-operative Society was formed in connection with the works and in 1872 the North British Works Yearly Society was started - one of the very few Yearly Societies to be registered. In 1882 it appointed as its trustees Thomas Ellis, William Leonard and Robert Waterston. Such societies could not have been formed without the backing of a certain degree of paternalism on the part of the owners. Symptomatic of this attitude, too, was the 'welfare' clause in the articles of association of Thomas Ellis Ltd. (1895) which gave power:

'To establish and support or aid Association or Funds for the benefit or welfare of the employees or former employees of the company or their dependants or connections and to grant pensions or allowances, to make payments towards insurance and to subscribe money for charitable or benevolent objects'.

Only in the case of John Spencer Ltd. (registered in 1900) has a similar clause been noted.

After the death of Thomas Ellis the business was carried on under trustees until on 27 December 1895 Thomas Ellis Ltd. was registered (107) with an authorised capital of £49,000 in £1,000 shares to acquire the North British Iron Works. Only 42 shares were issued and were originally held equally by:

Robert Sharp, iron merchant
James Wilson, portioner
John Lindsay, portioner
James Thomson, merchant
Thomas Leonard Ellis, ironmaster
Jane Lindsay Ellis, widow (of J W Ellis d. 28/11/1891)
Robert Waterston, manager

The company secretary was Hugh Waterston.

The firm was acquired in 1912 by the Scottish Iron and Steel Co. Ltd. for a cash payment of £15,433, 13,761 preference shares and 43,253 ordinary shares. The works were closed in May 1927.

CROWN

These works were alongside Stewarts and Lloyds Clyde Tube Works on a site now occupied by St. Andrew's R.C. School. The works were started in 1874 by William Tudhope. He was a grocer and spirit merchant in Coatbridge but he had been interested in the Sunnyside Bolt and Rivet Work which he owned and where he had been in partnership with John Gray. This partnership was dissolved on 2 August 1866 (108) and Tudhope carried on the business, but in the Valuation Roll for 1868/69 he appears as owner of these works with Wiliam Cross as his tenant. His Crown Iron Works is reported as having twelve puddling furnaces.

Tudhope took his son James into partnership forming William Tudhope and Son. After the death of William Tudhope the sole partners were James Tudhope and James Hamilton.

On 29 January 1907 the private company William Tudhope and Son Ltd. was registered. (109) Its capital was £20,000 in £10 shares, its object to acquire the business of William Tudhope and Son. The consideration for the sale of the subjects was £7,000; goodwill and contracts were each put at £50 and the value of moveable plant at £3,135 14s. The vendors received £235 14s in cash and 1,000 fully paid up shares. As the price of stock-in-trade and stores £7,882 16s 9d was paid. The remaining 1,000 shares were alloted for cash. The principal shareholders were James Tudhope with 1,200 shares, his wife Elizabeth with 600 and James Hamilton with 200. In 1911 James Tudhope transferred 100 shares to his son William. In the following year the concern was taken over by the Scottish Iron and Steel Co. Ltd. for

£11,325 in cash, 6,843 preference shares and 21,508 ordinary shares. The works closed in February 1913.

WAVERLEY

Waverley Iron and Steel Works were founded in August 1881 by Thomas Davie, commercial manager for Ellis's North British works, George Garrett, a roller at Wylie's Clifton works, and Joseph Reid, a wealthy Glasgow merchant. In 1893 they were joined by John Watson Ormiston. (110) Ormiston had been appointed manager of Shotts Iron Works in March 1859. (111) While still manager there, he was concerned with Joseph Reid and others in founding in May 1884 the Mount Vernon Steel Co. Ltd. which was wound up eleven years later. (112)

Originally Waverley works had nine single and six double puddling furnaces, one scrap furnace, 4 re-heating furnaces, three steam hammers, one 24 inch forge train, two finishing mills, two hot saws and eight pairs of shears. By 1901 they had twenty-three puddling furnaces, two scrap furnaces and four re-heating furnaces. (113) It is said that in their first year they put out 750 tons of iron, whereas in 1901 their output was nearly 4,000 tons a month. The stated output in 1901, however, includes the output of Rochsolloch works which they had bought in 1886. A special line was production of iron for golf clubs. They also made 'railway wheel spokes with varying tapers in length and breadth' as well as many sections.

On 29 June 1901 the firm became a private limited company the Waverley Iron and Steel Co. Ltd. (116) with an authorised capital of £180,000 in £1 shares, half of them preference and half ordinary. The major shareholders were J. W. Ormiston with 20,000 preference and 20,000 ordinary and Joseph Reid with 13,500 preference and 20,500 ordinary. The firm was essentially a family one in which each of the four families involved (Ormiston, Reid, Garrett and Davie) held altogether 22,500 of each type of share. Thomas Davie's wife was a Symington and in 1903 her three brothers, James, Hugh, and Thomas, came into the Waverley firm, each taking 8,000 ordinary shares.

The firm was bought over in 1912 by the Scottish Iron and Steel Co. Ltd. for a payment of £144,000 in cash, 30,071 preference shares and 34,698 ordinary. T.R. Miller, one of the architects of the Scottish Iron and Steel Co. Ltd., says that the very high cash payment was made because the families concerned made no claim to representation on the board of the new company.

Two of the Ormiston family, John D. Ormiston and Archibald R. Ormiston, had been from 1882 the sole shareholders in the Gartness Coal Co. Ltd. When that company was wound up in 1904 Gartness Colliery was taken over and worked by the Waverley Iron and Steel Co. Ltd. In 1912 a second Gartness Coal Co. Ltd. was formed with a capital of £10,000 in which the principal shareholders were members of the Davie family. This Gartness Coal Co. Ltd. went into voluntary liquidation in April 1938.

Under the 'Combine' in the years following World War II considerable reconstruction of Waverley works was undertaken. In 1967 Bairds and Scottish Steel decided to shut down Gartsherrie Iron Works on 30 June of that year and to precede that by closing their Coats and Waverley works on 31 March and 7 April respectively. However on 16

March 1967 it was announced that Colvilles Ltd. had purchased Waverley, Coats and Victoria Works. It was only a temporary respite.

WOODSIDE

In 1883 John and James Allan, tube manufacturers, of Victoria Tube Works, Langloan, feued ground off Woodside Street, Coatbridge, for the erection of a works where they proposed to trade as the Woodside Steel and Iron Co. carrying on the business of rolling plates and steel strips. It appears that construction of the new works did not proceed immediately for they do not appear in a list of malleable iron mills and forges in 1885. Indeed the rolling mill was not started up until September 1886. The machinery was made by local engineering firms (116); the steam hammer was made by Murray and Paterson and the plate shears by Miller and Co. of Vulcan Foundry, Coatbridge; the contract for the engine to drive the rolling mills - a three-cylinder engine with Graham Stevenson's patent rolling mill reversing gear - was awarded in February 1883 to Dick and Stevenson of Airdrie.

Litigation over this engine gives some information about it. The contract price was £2,380 payable in three instalments, one-half when the principal parts of the engine were delivered at the works, one-quarter when the engine was started up and the final quarter three months after that. Maintenance for twelve months was guaranteed. Before December 1883 the principal parts had been delivered and on 3 December the Woodside company paid £1,000, followed on 16 May 1884 by a further £400 to account of the sum that had been due in December 1883, leaving £15 of that sum outstanding. When the engine and gearing were started up in September 1886 a further £707 10s. became payable but no payment was made until 25 January 1887 when an interim payment of £250 was made, leaving a total of £472 10s. due but unpaid. Dick and Stevenson raised a successful action in the Sheriff court for payment of this sum. They also won the appeals to the Sheriff Principal and to the Court of Session where judgement in their favour was given on 18 December 1888. (117) The Allans had contended that the engine was not to specification and was unsatisfactory.

In a list of malleable iron works compiled in 1888 the works are said to have ten puddling furnaces and two rollings mills. The British Association Handbook for their visit to Glasgow in 1901 attributes eleven furnaces and adds that the works were engaged in rolling tube strips and plates.

On 10 October 1892 John Allan and James Allan Jr., described as sole partners, transferred the works to James Mitchell and George Bowen Bennett (118). By 1907 the sole partners were Bennett and James Turnbull who floated the Woodside Steel and Iron Co. Ltd. registered on 16 April 1907 with a nominal capital of £45,000 in £10 shares of which 1,000 were preference shares (119). Purchase of the works was made by the allotment of 2,500 ordinary shares fully paid up. Bennett and Turnbull, who became managing directors at annual salaries of £500 and £300 respectively, continued to be the major shareholders.

In 1912 the works were sold to the Scottish Iron and Steel Co. Ltd. for £36,223 in cash and 38,114 ordinary shares. (120)

The output of the works was entirely 'skelps' for lap-welded tubes and when manufacture of these was abandoned at Stewarts and

Lloyd's British Tube Works, Woodside works were closed. (121) This was in June 1950. In October 1961 the works were bought by Barnes and Bell Ltd. who sold them to the burgh of Coatbridge in 1963. The site of the works is now occupied by high-rise flats.

DUNDYVAN II

The Martins, Hugh Martin and his for sons, Hugh, Andrew, William and James, had become identified with the Merryston (Maryston) or Coatbridge Iron Works. In 1883 Hugh Martin Sr. built a new works on part of the site of John Wilson's Dundyvan Iron Works that had been demolished in the late 1860s. For his new works he revived the name Dundyvan. He died before these works came into operation and they were taken over by his son William who traded as William Martin. Later the firm became William Martin, Sons and Co. In 1950 it became Martins (Dundyvan) Ltd.

In 1885 and 1888 the works had ten puddling furnaces and by 1901 it had fourteen so it was substantially larger than the works it replaced. Reference has already been made to the number of separate brands listed and the almost unbelievable range of sizes that were rolled. (SIH 5.2)

This firm remained independent of the Scottish Iron and Steel Co. Ltd.

COATBRIDGE

When William Martin left the Merryston or Coatbridge works in 1885 they were carried on for a few years longer by his brothers Hugh and James. Andrew Martin had retired from the family firm in August 1874. Hugh and James in 1887 built near Langloan railway station on 6 acres of the lands of Souterhouse an entirely new works to which they transferred the name Coatbridge Iron Works. According to the Valuation Rolls, James Martin was sole proprietor by 1892 and in 1912 the prospectus of the Scottish Iron and Steel Co. Ltd. named the partners as Hugh Martin and John Murray Martin. The only information about the size of the works is that in 1888 and 1901 they had ten puddling furnaces.

They produced only bar iron, especially horse shoe iron, and continued the making of horse shoes by machinery, that had been introduced in Merryston works.

Sale of the works to the Scottish Iron and Steel Co. Ltd. in 1912 brought £8,646 in cash, 6,289 preference and 19,768 ordinary shares in the 'Combine'.

The works were closed in May 1913. The site became a scrap yard for T. and W. Ward Ltd. and is now covered by the new Coatbridge Outboard Sports Centre.

VICTORIA

The Victoria Iron and Steel Co. Ltd. was registered on 14 January 1898. Their authorised capital was £30,000 in £10 shares. Their works

were adjacent to the recently erected Union Tube Works. The shares were held by James Henderson, iron merchant; Hugh Crichton, coalmaster; Hugh Waterston, ironmaster (who had been secretary of Thomas Ellis Ltd.); J.J. McMurdo, solicitor; G.H. Arnott, banker, each of whom held 280 shares and John Symington manager of the Union Tube Works, who had 70 shares. William Neville was works manager. (122)

In 1905 the company was reconstructed. The new company with capital £40,000 in £1 shares, half ordinary and half cumulative preference, was registered on 8 March 1905. (123) Shareholders were as follows:

	Preference	Ordinary	
Hugh Crichton	3200	3200	
James Henderson	3200	3200	
J.J. McMurdo	3200	3200	
G.H. Arnott	3200	3200	
Hugh Waterston	3200	3200	(managing director)
William Neville	800	800	(works manager)
Clydesdale Bank	3200	3200	(J. Symington's shares)

William E. Garbett was secretary. Hugh Waterston died in May 1906 and William Neville on 7 October 1911.

The works were acquired in 1912 by the Scottish Iron and Steel Co. Ltd. for a payment of £15,849 in cash, 11,182 preference and 35,147 ordinary shares. (124) The works closed on 1 December 1978.

NORTHBURN

These works, completed in 1920, were the last iron or steel works to be built in the Monklands. For some years the Scottish Iron and Steel Co. Ltd. had had to buy in steel billets for re-rolling in their Coatbridge works. During the first World War they decided to build their own steel works and they chose a site just east of their Waverley works where water for cooling could be drawn from the Virtuewell burn and waste steam could be available from Waverley works.

A complete illustrated description of the new works appeared in the Iron and Coal Trades Review on 20 April 1920. The melting shop was covered by a bay 425 feet long by 60 feet wide. At that time it contained three 40 ton open hearth furnaces but the plan provided for installation of four more. The waste gases from each furnace passed through a waste heat boiler generating steam at 160 pounds working pressure and with 100 superheat. These three boilers were also fitted for firing with gas or by hand with solid fuel.

Gas for the melting furnaces was provided from a producer house with twenty producers each of 10 cwts an hour capacity.

The mill building, 315 feet by 55 feet, housed the first electrically driven reversing mill to be erected in Scotland, a 28 inch mill with one stand for cogging and one for finishing. Normally only the cogging mill would be needed. The driving motor was designed to give 6,380 brake horse power at any speed between 60 and 170 revolutions a minute. This mill motor was supplied with its electricity from a DC generator coupled to a 930 horse power induction motor with a 38 ton equalising fly wheel.

The power house had a BTH 1800 kw mixed pressure turbo-generator which used steam from Waverley works plus steam from the waste heat boilers. Steam from Waverley works, collected from one forge engine, two mill engines and three steam hammers, was fed into a steam accumulator.

REFERENCES

1. Reg. Mag. Sig. (record edition), vol. 3, no.2202
2. Lanarkshire Sasines, PR 72 97
3. Register of Testaments, Commissariot of Hamilton and Campsie
4. MSS Council Record
5. Scottish Record Society, Burgesses and Guild Brethren of Glasgow 1571-1756
6. Lumsden and Aitken, History of the Hammermen of Glasgow (1912), p.290
7. Glasgow Courier, 26 December 1793
8. Lanarkshire Sasines, PR 89 222
9. Edinburgh Gazette, 7 October 1825
10. Ibid. 12 November 1827
11. Scottish Record Office (SRO), CS, 271/6875, 74237, 34415, 34414
12. Advertisement, Glasgow Herald, 28 March 1832
13. Lanarkshire Sasines, PR 121 6
14. SRO, CS 274/812
15. Edinburgh Gazette, 15 January 1841
16. Sasine Register, GR 2058 132
17. Ibid. GR 2058 139
18. Advertisements, Glasgow Courier, 15 February, 15 March 1844, 13 February, 13 March 1845

19. Advertisement, Glasgow Herald, 31 March 1858

20. Airdrie Advertiser, 5 November 1864

21. Glasgow Herald, 19 August 1867

22. Glasgow Herald, 19 April 1858 carried a notice of the winding up of the library

23. Lanarkshire Sasines, PR 175 203

24. Sasine Register, GR 2699 274

25. Airdrie Advertiser, 28 September 1878, Obituary Notice

26. Andrew Miller, The rise and progress of Coatbridge (1862), p.60

27. Airdrie Advertiser, 10 June 1871

28. Edinburgh Gazette, 12 August 1856

29. Ibid. 21 December 1858

30. Valuation Rolls

31. Edinburgh Gazette, 18 December 1874

32. Ibid. 17 April 1883

33. Airdrie Advertiser, 3 March 1883

34. Edinburgh Gazette, 16 October 1885

35. Airdrie Advertiser, 10 June 1871

36. Ibid. 26 June 1880, Report of Coatbridge visit by the Institute of Engineers and Shipbuilders

37. A. Miller, op. cit. p.60

38. J. Riley, 'On the rise and progress of the Scottish Steel Industry', Journal of the Iron and Steel Institute, ii (1885), p. 394

39. Airdrie Advertiser, 6 April 1872

40. Ibid. 27 June 1885

41. Edinburgh Gazette, various dates April to December 1890

42. Glasgow Herald, July 1891

43. T.R. Miller, Monkland Tradition (1958), p. 58

44. A. Miller, op. cit. p.61

45. Ibid. p.62

46. Edinburgh Gazette, 30 April 1861

47. Sasine Register, GR 3153 142

48. Edinburgh Gazette, 18 September 1861

49. Airdrie Advertiser, 16 October 1868

50. Private communication from the late T.R. Miller

51. Airdrie Advertiser, 15 May 1897

52. Edinburgh Gazette, 30 August 1861

53. Ibid. 6 December 1861

54. Ibid. Earlier in 1863 Moses Leonard had severed his connection with John Spencer in the Phoenix works and the two brothers appear to have formed a new company, Leonard Bros & Co., ironmasters, Croy. They were the sole partners. They were sequestrated on 15 August 1864. At the examination in the Sheriff Court, Dumbarton, on 9 September 1864 a composition of 3s 6d. in the £1 was offered.

55. Ibid. 2 April 1869

56. Ibid. 9 August 1870

57. Ibid. 14 September 1877

58. Airdrie Advertiser, 5 March 1881. Report of the examination in bankruptcy of Henderson and Dimmack.

59. Edinburgh Gazette

60. Airdrie Advertiser, 28 September 1878. Obituary notice of Richard Dimmack

61. Ibid. 26 October 1882. Petition for discharge of Robert Henderson

62. Edinburgh Gazette, 14 August 1885

63. Airdrie Advertiser, 12 April 1871

64. Sasine Register, GR 3153 142

65. Edinburgh Gazette, 13 September 1861

66. Sasine Register, GR 3169 182

67. Ibid. GR 3171 41

68. Ibid. GR 3273 168

69. Edinburgh Gazette, 7 April 1863

70. SRO, BT2/4722

71. T.R. Miller, op. cit.

72. British Association Handbook, 1876

73. Private communication from the late H.C. Waterston

74. Airdrie Advertiser

75. A. Miller, op. cit. p.61

76. Airdrie Advertiser, 13 May 1871

77. British Association Handbook, 1901

78. Edinburgh Gazette, 20 September 1870

79. Ibid. 24 June 1879

80. Riley, op. cit. p. 401

81. T.R. Miller op. cit. p. 58

82. Private communication from the late H.C. Waterston

83. SRO, BT2/226/1,2. Isaac Summerhill was a native of Fransloed, Gloucestershire. Four of his sons, James, Isaac Jnr., William Henry and John (a Wesleyan local preacher) were also associated with the works as were three other Summerhills, Jonathan, Henry and Thomas. Isaac Summerhill Snr. left in 1877 to found Milton Tin Plate Works in Motherwell, the works to which A. and T. Miller in 1884 transferred their operations from their Globe Iron Works in Coatbridge.

84. Airdrie Advertiser, 21 June 1884, Report of Bell's examination in bankruptcy

85. Private communication from Mr J. Hardie, Secretary of Coatbridge Tin Plate Co. Ltd.

86. SRO, BT2/226/2

87. A. Miller, op. cit. p. 62

88. Airdrie Advertiser, 22 January 1870

89. British Association Handbook, 1901

90. SRO, BT2/226/2. Petition to Court of Session 24 October 1930 for authorisation of reduction of share values

91. Prospectus of James W. Connell (Holdings) Ltd.

92. Sasines Register

93. Edinburgh Gazette, 24 July, 17 August, 25 September 1866

94. Airdrie Advertiser, 13 April 1867

95. Edinburgh Gazette, 23 April 1869

96. Ibid. 13 December 1870

97. Ibid. 20 January 1871

98. Ibid. 4 June 1872

99. Colvilles Magazine, Summer 1961

100. Glasgow Weekly Herald, 22 April 1864

101. SRO, BT2/2995

102. Airdrie Advertiser, 28 March 1868

103. Edinburgh Gazette

104. British Association Handbook, 1876 p. 55

105. Ibid. loc. cit.

106. S. Morris, Memorials

107. SRO, BT2/3076

108. Edinburgh Gazette, 3 August 1866

109. SRO, BT2/6399

110. William Hamilton, Work and Prayer (1937), p. 124

111. Angus Muir, The Story of Shotts, p. 17

112. SRO, BT2/1357

113. Journal of Iron and Steel Institute, ii (1901), p. 318

114. SRO, BT2/4881

115. T.R. Miller, op. cit. p. 58

116. Airdrie Advertiser, 8 March 1883

117. Session Cases, 16R p. 242, 25 October 1888

118. Edinburgh Gazette, 25 October 1892

119. SRO, BT2/6484

120. T.R. Miller, op. cit. p. 58

121. Airdrie Advertiser, June 1950

122. SRO, BT2/3728

123. SRO, BT2/5816

124. T.R. Miller, op. cit. p. 58

THE SCOTTISH MINING MUSEUM

by

Mike Cotterill

The Scottish Mining Museum comprises two main sites at the former collieries of Prestongrange in East Lothian and Newtongrange in Midlothian, linked by the '800 Years of Coal Heritage Trail'. There will also be two miners' Hearth cottages to visit in Newtongrange village. Along the thirteen mile motorists' Trail, through the Lothian Coal Basin, information boards and a pamphlet describe the significance of locations connected with the coal industry.

The monks of Newbattle Cistercian Abbey, founders of adjacent Newton 'Grange' or medieval 'farm', worked coal near the Firth of Forth by Prestongrange from about 1200 A.D. at probably the first coal mine in Scotland. They also had salt-evaporation pans, to make sea-salt, at nearby Prestonpans from which the Salter's Road led inland to Newbattle. This became a coal road too, and is partly followed by the Trail.

From Prestonpans the Trail leads past Meadowmill (a grassy bing or spoil-heap overlooking the route of the 1722 Tranent - Cockenzie coal-tramway) and through the ancient former mining town of Tranent, to Birsley Brae medieval coal-heugh. Onwards it follows a ridge of high ground down the centre of the Coal Basin, with excellent views beside Fa'side Castle, home of early coal magnates and close to the burnt coal-heugh believed to have been fired in malice by John Henry, for which act of 'treason' against the State he lost his head in 1614. The Trail, prepared with help from the Countryside Commission for Scotland, descends to the Salters Road, through Dalkeith, the market town and nineteenth century meeting place of the East and Mid Lothian Miners Union, past Newbattle Abbey College, former home of leading coalmasters the Marquis of Lothain's family, and concludes at Lady Victoria Colliery beside Newtongrange, the largest surviving early coal company village in Scotland.

Prestongrange Colliery (NT 375738), between Musselburgh and Prestonpans, is just east of Edinburgh. Take the A1 from Edinburgh about 8 miles to the roundabout at Musselburgh race-course (Levenhall), then the B1348 (Prestonpans) road for one mile to the prominent museum signpost. The site is open daily, Monday to Friday, with free parking and admission. A bus service runs from Edinburgh to Prestonpans. Special 'steam days' are held on the first Sunday of each month April to October. Parties wishing to make special arrangements should contact the Honorary Curator, David Spence, 24 Woodlands Grove, Edinburgh, 031-661-2718.

Prestongrange Collieries worked intermittently from the Middle Ages through the seventeenth century. The principal pit near the present site was closed by flooding in 1745. A new pit in 1830 was sunk by Matthias Dunn, a famous mining engineer, who here pioneered cast-iron "tubbing" in Scotland, the shaft-cladding used to exclude water.

The present colliery was developed in 1870, and worked an extensive area, mainly beneath the Firth of Forth. It closed in 1962 and the NCB began demolition of surface buildings. In 1968 an appeal against the destruction of the original pumping beam-engine house was launched by former manager David Spence. It was scheduled as an Ancient Monument by the Scottish Development Department and is now the symbolic centrepiece of the museum. Attempts to protect the beehive kilns of the adjoining Prestongrange Brick Works failed, and these were lost, but its large horizontal ovens and chimney were saved.

During the following decade, assisted by East Lothian County (later District) Council who gradually purchased the museum site aided by the Scottish Development Agency, Mr Spence assembled a fine collection of mining artifacts and documents. He was designated Honorary Curator of Relics by the National Coal Board, and authorised to identify items of interest for preservation throughout the Scottish Coal Fields. In 1980 the NCB designated Prestongrange as Scotland's National Mining Museum, to avoid excessive dispersal of mining artifacts to local museums.

Prestongrange is an attractive ocean-side site, and its former adjoining shipping port of Morison Haven (1526) has been partly re-excavated. A large collection of mining equipment and mechanical coal-cutters is housed within the former electrical power-station. The beam-engine house, with its tall steam engine (1874, Harvey & Co., Cornwall) and nodding-beam are open to view and a Cornish steam boiler (1893, Glenfield & Co.) recently acquired from Croyden is to be used in an attempt to re-power the engine. Outdoor collections include a large colliery ventilation-fan, a shaft 'cage', 'hutches' from underground railways, and a number of waggons and steam 'pug' locomotives from Scottish collieries, together with a steam crane (1890) used to lay sidings rails. The latter are maintained by an enthusiastic group of volunteers, the Prestongrange Society.

With assistance from the Scottish Tourist Board, Prestongrange Colliery Canteen is being rehabilitated as a Visitor Information Centre, with toilet facilities, where the story of coal, its origin and formation, will be shown later in 1984 through a tape-slide show. There will also be a display illustrating the history of Scottish coal mining.

Lady Victoria Colliery (NT 337 637), two miles south of Dalkeith, is twelve miles south of central Edinburgh along the A7 (T). The shaft was sunk to 1650 feet in 1890-4 as the principal pit of Lothians Coal Company which amalgamated the Marquis of Lothian's Newbattle Pits at nearby Lingerwood and Easthouses, with those of Archibald Hood to the west at Rosewell and Polton. It achieved an outstanding reputation for technological progress under the management of Mungo MacKay and chairmanship of James A. Hood, founder of the chair of Mining at Edinburgh University (1924). In 1914 MacKay replaced wooden props or 'trees' by the weldless-steel tubes with timber cores which he had devised, and greatly reduced roof falls. Electricity was used underground from the beginning, and in the early 1920s electric lighting extended to the workface, and electric motors replaced pit ponies for haulage. Intensive use of coal cutters and conveyors, steel arches and props, and trials with American mechanical-loaders, brought international engineers as visitors. This tradition was maintained beyond nationalisation, and the extensive engineering shops became Central Workshops.

When the Lady Victoria approached closure in 1981, it was regarded by Lothian Regional Council as an ideal example for illustrating the Victorian heyday of coal mining, once a leading industry, because unlike Prestongrange most of the surface buildings of this large complex were still intact. In April 1981 the Scottish Development Agency listed the Manager's office block and the engine house wih its massive Grant-Ritchie steam winding engine (1890), as being of special historical interest. Proposals for preserving the site were favourably viewed by Midlothian District Council. During 1981 a debate was conducted between East and Mid Lothian District Councils, and Lothian Regional Council, on the possibility of combining both collieries into a Scottish Mining Museum which would make the best use of the potential of both sites, linked by a Heritage Trail. During this time the NCB postponed demolition of the Lady Victoria buildings which, despite considerable canibalisation for plant, retain a large proprotion of their original equipment. In August 1982 an Outline Development Programme for the twin site project was approved by all three councils.

Refurbishment of the Lady Victoria began in 1982 with financial assistance from the Manpower Services Commission, Scottish Tourist Board, Midlothian District Council, Scottish Development Department (Ancient Monuments) and Lothian Region Heritage Fund. The entire site was fenced with steel palisading to protect against theft and vandalism. An outdoor compound was established to hold the large collection of underground railway 'hutches', machinery, and cages. A steam 'pug' locomotive has been brought from Prestongrange, and other equipment has been donated by local people including the kibble used to sink nearby Vogrie Colliery.

The winding engine has been fully restored with funds from the Ancient Monument Board, and was re-steamed in April, 1983. In a separate building, its bank of eight Lancashire boilers have been repainted, and the best cleaned and repaired for use. Their tall (155, once 170, foot) chimney and heat-economisers have also been repaired. The large site has been tidied, new electrical wiring fitted, large areas of decayed roofing over the pithead renewed, and extensive cleaning and repairs made to the winding engine house wall and roof. Remaining plans and artifacts have been collated, and historical research undertaken to locate technological information and photographs about the colliery and the mining community. To portray the changing living conditions of miners, two cottages in Newtongrange village were acquired. With assistance from local schools, these are being restored to demonstrate typical furnishings and fittings of the early twentieth century, c. 1900 and 1930. Interviews have also been conducted with former employees and their families to learn more about the colliery and village.

The extensive renovations at the Lady Victoria are expected to continue for several years. In the meantime it is hoped to provide an information kiosk, but visitor access is restricted for safety reasons to groups who make prior arrangements through the History Unit. Several schools have already made visits, and are given a guided tour through whichever parts of the complex are safely accessible.

The Scottish Mining Museum aims to provide a fascinating day's outing for families and parties in the Edinburgh area; an exciting open-air experience full of movement, noise and steam. At the same

time it will be a focus for serious research and conservation work. It looks forward to the possibility of 200,000 visitors a year, with Prestongrange site demonstrating the early phases of the Scottish Coal Industry from medieval times up to the Industrial Revolution, and the Lady Victoria showing nineteenth and twentieth century developments.

Future plans for Prestongrange, include the re-creation of early techniques of coal-mining, restoration of the beam engine, and the presentation of exhibitions on related industries, such as salt processing, Roebuck's sulphuric acid and other chemicals, bricks, pottery and brewing. Booklets and displays will introduce the geology and economic minerals of Scotland, methods of winning and working minerals, ventilation and hazards underground, coal-screening and preparation, and transportation above and below ground. At the Lady Victoria future plans include the provision of toilets, refreshment facilities and gift shop, the renovation of the tub-circuit, tipplers, belt conveyors and cages at the pit-head, visitor access to the coal washery and preparation plant, and the development of a simulated 'underground experience' demonstrating working conditions underground. Workshops are planned for conservation and machine maintenance, the two miners' cottages in Fifth Street will be converted to illustrate domestic conditions c. 1900 and 1930, and part of the adjacent Waverly (Edinburgh/Carlisle) railway line may be re-opened for steam trains.

A Scottish Mining Museum Trust will assume direction of the venture as the means of mobilising public, private and commercial resources for a project which will create employment in a coalfield where only two collieries remain active. The project is a vivid reminder of the former greatness of this vital industry.

The Scottish Mining Museum

SUMMARY LISTS OF ARCHIVE SURVEYS AND DEPOSITS

1. National Register of Archives (Scotland)

Full details of the surveys are available from the National Register of Archives (Scotland); all enquiries and requests for access should be addressed to the Secretary, The National Register of Archives (Scotland), Scottish Record Office, H.M. General Register House, Edinburgh, EH1 3YY.

Agriculture Estates, Land and Property

2009 Aberdeen University Library. Leslie of Balquhain MSS. Titles of lands in Aberdeenshire with related legal papers concerning Leslie family, 1391-1724.

2244 Earl of Rosebery, Dalmeny. Titles and related papers, 1723-93, including inventory of lands acquired post 1723; papers on fishings at Cramond, 1793. Legal papers, 1662-1867; includes, fishings at Cramond, 1707-9; acts of regality court of Primrose on setting of Cot-houses to vagabonds, 1720; purchase of estates in Norfolk, 1814-67.

Estate papers, 1695-1898, including valuation of lands in Linlithgowshire, 1695-1846; rentals of estates of Berkin, 1703, and Leuchold, 1769; Lord Dalmeny's journal of factory affairs, 1739-58; farm account book of Primrose and Ochiltree estates, 1759-1803; farm valuations, 1815; account book of Rosebery estates, 1860-7; papers on improvements to lands and buildings, 1865-8; factor's accounts, 1893; settlement of marches between lands of Hopetoun and Rosebery at Ochiltree, n.d.

2250 Royal Scottish Forestry Society, Edinburgh. Council minutes, 1854-1966; branch minutes, 1906-48,comprising Aberdeen, 1906-47, Northern, 1907-48, Angus and East Fife, 1934-46; accounting records, 1894-1976; membership records, 1895-1967; correspondence, especially about foresters' education, 1942-75; newscuttings and photographs, 1881-c.1956.

2251 Scottish Agricultural Organisation Ltd., Edinburgh. Minutes, 1905 - current; accounting records, 1906-30; notes on history and activities of organisation, 1928-68. Minutes of United Scottish Farmers Ltd., 1970 - current, Co-operative Potato Exporters Ltd., 1971 - current, Scottish Federation of Fishermen's Co-operatives Ltd., 1972 - current.

2258 Mrs E. Mackenzie, Warwick. Accounts for corn and straw furnished to Claverhouse's troops by Ayrshire heritors, 1681.

2260 Mitchells, Johnston, Hill & Hoggan, solicitors, Glasgow. Glenfalloch estate correspondence, 1950-6.

2264 Central Regional Archives. Petition about alleged sheep stealing, 1826. Roup roll of stock and crop of Orchard Farm, St. Ninians, c. 1884.

2280 National Farmers Union of Scotland. Minutes, 1919-79; correspondence, 1951 - current.

2282 Mitchell J. M. Adam Esq., Edinburgh. Titles to lands in Edinburgh and Haddington, 1542-1699, with related papers; rentals of Dalserf, 1825-30.

2287 Mrs Jane Durham, Kildray. Plans for farms of Ord and Easter Ord, Ross and Cromarty, c. 1875.

2299 Central Regional Archives. Minutes of Denny and Dunipace Agricultural Association, 1892-1945.

2316 United Scottish Farmers Ltd., co-operative agents, Edinburgh. Minutes, 1970 - current, rule book, 1971.

2317 National Farmers' Union of Scotland, Wigtown (Machars and Rhins) area, Stranraer. Minutes, 1918-80; accounting records, 1918-76; membership lists, correspondence, anual reports, 1961-76; draft resolutions for wages committee, 1937-61.

2319 W.C. Faulds Ltd, factors, property and insurance agents, Glasgow. Accounting records, 1957-79; rent books for properties in Glasgow, Kirkcaldy, Dunfermline, Falkirk and Coatbridge, 1955-78; property valuations, 1915-31; insurance policies, c. 1930-66.

2340 National Farmers' Union of Scotland, Stewartry of Kirkcudbright branch, Castle Douglas. Minutes, 1917-68; financial records and membership lists, 1937-74; fox destruction scheme papers, 1952-66. Kirkcudbrightshire Farmers' Club: minutes, 1870-1919.

2323 Edinburgh Model Lodging House Co. Ltd., Castle Trades Hotel Ltd. Edinburgh Model Lodging House Co. Ltd; minutes, 1961-80; agenda book, 1964-80; accounting records, 1890-1980; shareholdings register, 1888-1979; directors' reports, 1890-1979; letter books, 1978-80; Castle Trades Hotel Ltd: accounting records, wage records and letter book, 1979 - 80.

Banking and Finance

2249 Edinburgh and Paisley Building Society, Paisley. Minutes, 1853-1976; accounting records, 1904-64; printed advertisements, 1861-82. Dumfries and Galloway Benefit Building Society: minutes, 1903-38; accounting records, 1932-63. Clydesdale Building Society: accounting records, 1955-70.

2253 Bute Savings Bank. Minute and declaration books, 1842-1974; accounting records, 1820-1952.

2255 Life Association of Scotland Ltd., Edinbugh. Minutes and accounting records, 1838 - current; correspondence, 1844-7; legal records, 1782-1973; policy registers, 1839-1967; printed

prospectuses, 1849-1973; plans of Dumbartonshire, 1804-89.

2274 Central Regional Archives. Craigs Penny Savings Bank, Stirling. Accounting records, 1871-1914. Baker Street Mission: minutes, 1879-1910.

2275 Richard Hobson Esq. Old Sodbury. Letterbooks of J.F. Hobson on investments and management of Sir James Falshaw's trust, 1870-1911.

2318 Great Northern Investment Trust Ltd., Glasgow. Minutes, 1924-60; investment ledgers, 1957-74; register of seals, 1925-46. Clyde and Mersey Investment Trust: minutes, 1954-70. House and Foreign Investment Trust: minutes, 1937-69; secretary's reports, 1961-9. Deposited Glasgow University Archives.

Distillers and Brewing

2248 Macdonald & Muir Ltd., distillers, Leith. Minutes, 1936-45; accounting records, 1893-1978, includes sales, 1904-75, stock, 1910-77, and wages, 1915-69; correspondence, 1893-1931; advertising material and whiskey labels, c. 1900-70; plans of premises in Leith, 1938, 1976. James Martin & Company: minutes, 1912-36; accounting records, 1912-72, including stock, 1931-42, and sales, 1936-72. Queen's Dock Bonding Co. Ltd., accounting records, 1918-75. Bonding & Transport Company Ltd.: minutes, 1917-71; accounting records, 1917-78. Photographs of Glenmorangie and Glenmoray distilleries, n.d.

2254 William Grant & Sons Ltd., whisky distillers, Glasgow. Minutes, 1903-79; accounting records, 1892-1980, including stock records, 1893-1957; correspondence, 1888-1931; advertising material, including film, 1908-74.

2307 Mrs N.J. Stewart-Meiklejohn, St. Andrews. Estate papers, including building work at Cluny Mill and distillery, 1781-1838.

2244 Earl of Rosebery, Dalmeny. Dalmeny Park brewing accounts, 1823-58.

Engineering

2268 Central Regional Archives. Thomas Laurie & Co. Ltd., electrical engineers and automobile dealers, Falkirk. Accounting records, 1917-20; correspondence, 1906-7; car sales book, 1934-61; photographs of premises, n.d.

2326 Dick Institute, Kilmarnock. A. Strang & Co. Ltd., engineers, Hurlford. Minutes, 1898-1957; accounting records, 1866-1960; time and wage books, 1882-1903; order books, 1890-7; photographs and drawing relating to cost of replica propeller for SS Great Britain, 1969; catalogue of foundry plant by J.W. Jackson & Co. Ltd., London and Manchester, n.d.; pamphlet on history of firm, c. 1947.

2336 N.E.I. Cochran Ltd. boilermakers, Annan. Minutes of directors, 1898-1977; and works industrial council, 1918-69; accounting

records, 1897-1971, including wage records, 1955-71; boiler and ship drawings, 1878 - current; boiler registers and certificates books, 1880-1978; photographs of boilers, steam launches, and plant, c. 1880-1965; legal papers, 1898-1971; material order books, 1899-1918; letter books, 1900-23; engineering models, c. 1900-70; sales publications, 1906-64.

2341 Little & Rutherford Ltd., engineers and manufacturers' agents, Edinburgh. Minutes, balance sheets and register of members, 1948 - current; technical drawings, n.d.

Miscellaneous Manufacturers

2300 Central Regional Archives. Vale Paper Mills, Denny. Accounting records of Vale Paper Mill Co., 1892-1941, Denny Paper Works, 1896-1937, Anchor paper Works, 1908-27, C.S. & Co., 1916-28, Vale Board Mills, 1951-5.

2308 Alexander King (Wishaw) Ltd., manufacturing and wholesale confectioners, Wishaw. Minutes, 1942-77; accounting records, 1858-1951; letter books, 1875-93; paybooks, 1894-1945, 1953-63; agents' records, 1923-51; recipes, 1881-c.1963.

2309 William Briggs & Sons Ltd, bitumen and chemical refiners, Dundee. Directors minutes, 1950-61; accounting records, 1910-73; wage records, 1895-1962; property and contract agreements, 1915-65; photographs of plant at Downie and Camperdown, 1930-70; notebook of chemical experiments, 1862-83. Deeside Quarry, minutes, 1934-43; accounting records, 1934-53; wage records, 1946-69.

Merchant and Retailing

2244 Earl of Rosebery, Dalmeny. Business papers, 1745-1868, including Lord Dalmeny's business journal, 1745-59; papers on imports, exports, shipping and journeys involved, 1754-5; ledgers, journals, and letter books of Neil, Earl of Rosebery, concerning business and estate accounts, 1755-1814; cash books of accounts with Steel and Jones for purchase of stocks, 1790-1825.

2256 James Lumsden Esq. Glasgow. Glasgow haberdashery store accounts, 1703-6.

2291 Central Regional Archives. T. Ramsay, chemist, Alloa. Registers of Cocaine, 1918-54, opium and Indian hemp, 1929-38, morphine, 1939-51.

2305 Central Regional Archives. D & J McEwan & Co., grocers and Italian warehousemen, Stirling. Accounting records, 1799-1850; inventories of stock, 1869-80; wine bin book, 1849-1926; pamphlet on firm's centenary celebration.

2310 Aitken & Niven Ltd., tailors and outfitters, Edinburgh. Accounts, 1945-72; clubs colours order and styles book, 1923-58; plans and photographs of premises, c. 1957-78.

2321 Orkney Library, Kirkwall. A.M. Morgan & Son, jewellers and tabacconists, Kirkwall. Accounting records, 1871-1935; watch

warranty forms, 1920-8.

2325 Edinburgh Univesity Library. Records of Christian Salvesen Ltd. Turnbull, Salvesen & Co.: accounting records, 1859-78. Christian Salvesen & Co.: accounting records, 1872-1959; correspondence, 1857-1931. South Georgia Co.: accounting records, 1927-47; correspondence, 1911-25. Turnbuall & Salvesen (Glasgow): accounting records, 1909-29. Diaries, financial and personal correspondence of members and associates of Salvesen family, 1852-1969.

2335 Scottish Grocers' Federation, Leith. Inventory and valuation of a grocer's shop, Edinburgh, 1913.

2344 G.L. Wilson's Department Store, Dundee. Catalogues and promotional brochures, 1881-c.1960; newscuttings relating to education in Fife, 1818-19, and to Wilson family and store, 1897-1971; photographs of store, mannequin parades, and staff, c. 1900-60; The Life of a Dundee Draper containing various sketches of those connected with the trade in Dundee, William Kidd, 1878.

2337 George Waterston & Sons Ltd., printers, stationery manufacturers and retailers, Edinburgh. Minutes, 1914-65; accounting records, 1752-1949, including salaries, 1933-45; legal papers relating to co-partnery, property and trade mark patents, 1780-1967; family and business correspondence, 1827-1975; including papers on printing for banks, particularly bank-notes, 1925-75; letterbooks, 1870-90; 1939-42; notebooks on work, 1860-9, and stationary manufacture experiments, 1891-1967; sales catalogues, 1840-1953; books printed by Watestons 1874-1972; plans of Edinburgh properties, 1922-52. Diaries of George Waterston, 1831, 1842.

Shipbuilding

2257 Alexander Robertson & Sons (Yachtbuilders), Sandbank, Argyll. Minutes, 1967-75; reports and accounts, 1908-79; ledgers, 1922-65; contracts, specifications, and quotations books, 1933-68; contract files, 1938-79; trials books, 1926-48; apprentice registers, 1900-79; drawings, 1929-78; photographs, c. 1900-79; promotional and trade catalogues, c. 1938-81.

2336 N.E.I. Cochran Ltd., boilermakers, Annan. Boiler and ship drawings, 1878 - current; photographs, c. 1880-1964.

2342 Holmes Mackillop & Co., solicitors, Johnstone. Houston of Johnstone papers. Correspondence on design and construction of canal boats, 1815-51.

Textiles

2298 Central Regional Archives. Papers relating to Rochvale Mills, Stirling (James Templeton & Co.) Historical notes, with records of workers' wages and production figures, 1908-25; statistics of wool and worsted yarn deliveries and East India wool purchases, 1936-61; plans of Rochvale Mills, 1898-1952.

2301 Central Regional Archives. Hunter & Donaldson, woollen manufacturers, Alva. Cobblecrook Dyeing Co. and Hillfoot Hosiery Co.: accounting records, 1877-1950; order books, 1927-56; business correspondence, 1939-59.

Transport

2244 Earl of Rosebery, Dalmeny. Legal papers, 1662-1867; subjects include, petition of Court of Session regarding number of boats on Queensferry passage, 1722. Business papers, 1745-1868, including papers on imports, exports, shipping and journeys involved, 1754-5. Journals of tours in France, Belgium, Netherlands, Germany Switzerland, italy and Leghorn, and in England, 1803-40.

2257 Alexander Robertson & Sons (Yachtbuilders), Sandbank, Argyll. Minutes, 1967-75; reports and accounts, 1908-79; ledgers, 1922-65; contracts, specifications, and quotations books, 1933-68; contract files, 1938-79; trials books, 1926-48; apprentice registers, 1900-79; drawings, 1929-78; photographs, c. 1900-79; promotional and trade catalogues, c. 1938-81.

2258 Mrs E. Mackenzie, Warwick. Minutes of commissioners for roads and bridges, in Kyle, and Kylestewart, 1670-3.

2264 Central Regional Archives. Letter from Earl of Mar concerning Alloa coal and railway, 1835.

2265 Central Regional Archives. Papers presented by Sir Ronald Orr Ewing. Statute labour road records for Port of Monteith, Kippen and Aberfoyle, 1769-1864, including minutes, 1820-45, 1860-4; accounting records, 1814-64; reports, 1783-1800; local Highway Acts, 1769, 1789, 1827.

2275 Richard Hobson Esq. Old Sodbury. Letterbooks of James Falshaw, railway engineer, containing correspondcence with Joseph Mitchell and others on construction of Inverness and Perth, Inverness and Nairn, Portpatrick, Stranraer and Glenluce, and other Scottish lines, 1854-74; scrapbook of G.A. Hobson on family history railway construction and investments in Atchison, Topeka and Santa Fe railraod, 1873-1916.

2302 Central Regional Archives. Chart of River and Firth of Forth by Richard Cooper, Edinburgh, 1730.

2307 Mrs N.J. Stewart-Meiklejohn, St. Andrews. Plans of Forth and Clyde Canal, Grangemouth and Bo'ness docks, and Port Dundas, 1761-1837.

2313 Aberdeen Harbour Board. Printed Minutes and reports, 1885-1941; accounting records, 1810-1959; register of bonds, 1879-1981; rentals of properties, 1828-1980; registers of sailings, 1835-1957; arrivals, 1831-1957, inward boatage, 1954-71; outward boatage, 1953-71; salmon sales at Aberdeen Fish Market and elsewhere, 1881-1980; abstracts of produce of Raik Sea and Grey Hope salmon fishings, 1828-1904.

2324 Gairloch Heritage Museum. correspondence, reports and accounts concerning roads, 1808-1928.

2325 Edinburgh University Library. Christian Salvesen Ltd., Leith Harbour log-books, 1916-41. Ledgers, day and voyage books relating to various ships, 1886-1946.

2338 Leith & Granton boatmen's Association, Leith. Founding petition and agreement, 1912-13; wage book, 1916-18; list of shipping and charges levied, 1945-56.

2342 Holmes Mackillop & Co., solicitors, Johnstone. Houston of Johnstone papers. Correspondence on Glasgow, Paisley and Ardrossan Canal finances, and design and construction of canal boats, 1815-51.

Trade Associations

2247 Scottish Aassociation of Soft Drinks Manufacturers, Edinburgh. Minutes, 1898-1975; lists of members, 1898-1956; advertising material, 1950-72.

2260 Mitchells, Johnstone, Hill & Hoggan, solicitors, Glasgow. Minutes of Wholesale Clothing Manufacturers Federation of Great Britain, 1910-49, 1959; Shirt, Collar and Tie Manufacturers Association (Scottish District), 1913-34; Glasgow and District Muslin Manufacturers Association, 1917-37, Joint Wages Committee West of Scotland Textile Industry, 1919-40, Flannel Finishers Association, 1919-56, Scottish Madras Association, 1925-30, British Carton Association, 1937-51, Federation of British Carpet Manufacturers, 1947-64, Northern District Joint Council Carpet Manufacturers Federation, 1953-75, British Paper Box Federation, 1958-9, Wholesale Textile Association, 1959, Cotton Board, 1960-2. West of Scotland Textile Association: minutes and accounting rcords, 1918-60; correspondence, 1947-60; wage agreements with textile trade unions, 1946-56. Scottish Wholesale Clothing Manufacturers Federation: minutes, 1950-3; correspondence, 1951-8, Scottish Carpet Manufacturers Association: minutes 1958-80; list of members, 1928-61.

2262 Central Regional Archives. Loyal Order of Ancient Shepherds (Stirling). Minutes and accounting records, 1945-51.

2270 Central Regional Archives. Order of Rechabites (Alloa branch): minutes, 1911-22, 1936-7; accounts, 1911-24; printed matter, 1893-1947.

2295 Central Regional Archives. Stirlingshire Miner's Association (Bannockburn Branch): account book, 1905-64.

2335 Scottish Grocers' Federation, Leith. Minutes, 1923-67; cash book, 1965-73; annual reports, 1918-71; The Fingerpost, federation periodical, 1918-79. Licensed Grocers' and Wine Merchants' Association of Scotland: minutes, 1942-74.

2338 Leith & Granton Boatmen's Association, Leith. Founding petition and agreement, 1912-13; wage book, 1916-18; list of shipping and charges levied, 1945-56.

2339 Heating and Ventilating Contractors' Association, Edinburgh. Minutes, 1937-51, 1963-72; membership lists, 1945; photographs of summer excursions, 1914-70.

Whaling

2325 Edinburgh University Library. Records of Christian Salvesen Ltd. South Georgia Co.: accounting records, 1927-47; correspondence, 1911-25; Leith Harbour Whaling Station records, 1909-45; Leith Harbour Log Books, 1916-41. Alexandria Whaling Co.: accounting records, 1906-23. New Whaling Co.: accounting records, 1908-41. Newfoundland Whaling Co.: correspondence, 1936-41. Olna Whaling Co.: accounting records, 1904-41. Polar Whaling Co.: accounting records, 1930-47. Sevilla Whaling Co.: accounting records, 1929-40; register of members, 1929-35. correspondence with Ministry of Food, Whaling Branch, and Ministry of War Transport, 1940-7.

2. Strathclyde Regional Archives

The Mitchell Library, North Street, Glasgow G3 7DN. (Tel. (041) 227 2401).

Hours of public searchroom: Monday-Thursday, 9.30 am - 4.45 pm, Friday, 9.30 am - 4.00 pm.

Engineering

Murray & Paterson Ltd., engineers, Coatbridge: specifications, letter-books, plans, photographs, c. 1880-1960.

George Brown & Company Ltd., shipbuilders, Port Glasgow: administrative papers, accounts, ship plans and details, records of Cargospeed and Association Companies, 1900-1978.

Mining

Plan of mining at Leadhills, 1759 (ex. Wyndham MSS)

Iron and steel manufacturing

Etna Iron and Steel Company: Day books, Order books. (per B.S.C.)

Miscellaneous

Guthrie and Wells, interior decorators, Glasgow: Cash books, ledgers and plans (Addnl), late 19c - date.

Papers of E.C.C. Stanford and the British Chemical company (Seaweed)

Clydebank: records, 1862-1956.

3. Scottish Film Archive

Latest deposits to May 1984

Manufacturing Industries

1592 Singer Sewing Machine Company, Clydebank. "BIRTH OF A SEWING MACHINE" c.1934. Promotional documentary of production line.

1532 Lamberton & Company, Coatbridge. "RAIL STRAIGHTENER", 1954. Technical record of trial roller straightener of steel rolls.

1569 "COLD BILLET SHEAR", 1962. Demonstration of the cold billet shear.

1572 James Templeton & Company, Carpets, Glasgow. "CARPETS OF DISTINCTION", c.1951. Promotional film.

"WARTIME PRODUCTION", 1941. Promotional film.

"TEMPLETON'S CARPETS", 1940. Promotional film.

1590 Tullis of Clydebank, Laundry Equipment Manufacturers. "TULLIS OF CLYDEBANK", 1966. Technical demonstration of commercial equipment in use in 1966.

1599 Rootes Car Manufacturing Company Limited. "THE NORTH AMERICAN IMP", 1966. Promotional film for the American market.

Newspaper Production

1604 "DUNDEE COURIER", 1911. Production of a great daily newspaper. For D.C. Thomson & Co., Dundee.

1437 "OUR PAPERS", 1950. The production of the Glasgow Herald and sister papers. For the Outram Press.

Miscellaneous

1543 "LAUNCH OF PS GLEN GOWER, TROON", 1922. For P & A Campbell, Shipowners.

1544 "OIL BLASTING IN SCOTLAND", c.1938. First land based oil well in Scotland, near Dalkeith.

1596 "GRANITE", 1949. Educational film of quarrying and construction.

1071 "INSPECTION OF PAISLEY FIRE BRIGADE", 1933.

BOOK REVIEWS

James Kenworthy (ed.). Early Technology in North Britain. (Scottish Archaeological Forum 11. Edinburgh: University Press. 1981. Pp.85. £4.00.)

Historians of modern industrial societies tend to overlook the prominent role which technology has played in all previous eras. Of interest in itself, its systematic study provides an invaluable means of assessing and understanding former civilisations. This collection of nine papers, principally concerned with the location, manufacture, distribution and uses of stone, pottery and metal products, is an up-to-date guide to current thinking about the nature and extent of technological advance in prehistoric North Britain. This early, the region exhibited distinctive characteristics; lacking the extensive flint deposits of their southern neighbours methods were devised in some parts of the country of carefully heating alternative materials, such as chert, thereby facilitating the production of flint-substitute flakes. Iron working techniques used by the Roman army appear to have had little impact with native traditions following an independent course. Given the current debate about the status of the engineer, it is interesting to note that the Irish Celts accorded the smith (Gobban Saor) a divine place in their mythology, and, along with other craftsmen, he enjoyed a privileged position in society as a member of the 'nemed' or sacred class. This volume then has much to offer and incidentally serves to weaken the justification for divisions by period and 'skill' between those who seek to understand the past within the confines of ill-justified demarcation lines.

UNIVERSITY OF DUNDEE CHRISTOPHER A. WHATLEY

John Shaw. Water Power in Scotland, 1550-1870. (Edinburgh: John Donald. 1984. Pp.xi + 606. Maps and diagrams. £25.)

The coming of steam power brought about such revolutionary changes in society that interest in it has tended to relegate water power to the back waters of romanticism. A generally held view is of water wheels turning picturesque grain mills in idyllic rural surroundings.

In fact, of course, not only did water provide the power for the first stirrings of industrial advancement but it continued to turn machinery for certain industries, such as bleaching, until after the Second World War not because these were industries in decline but because in some locations it provided the best and most economical answer to local industrial needs. This book clearly demonstrates the origins of the industrial revolution in water powered industry and points out that "whole towns and villages ... owe their origin or success" (p.337) to the availability of a plentiful water supply. It shows the variety of uses to which water power continued to be applied

long after steam had become usual in the major industries.

John Shaw is to be congratulated on providing what will undoubtedly prove an important source book for research historians, for industrial archaeologists and for every reader with an interest in Scotland's industrial past. It covers, in three sections, grain, paper textile and saw milling, bleaching, distilling and brewing, the mining of coal and metals and, very interestingly, a number of minor users of water power such as snuff mills, leather working and gun powder grinding. Shaw and his readers might like to hear about the shed I once visited at a bleachworks which was known to all the bleachers as 'the snuffies' without their having any idea how the name originated. It later turned out that this shed was the last remnant of the snuff mill which had occupied the site a hundred years earlier.

The first section of the book deals with the period 1550 to 1730. The second and much longer part, which Shaw calls "The Age of Water Power" with the century 1730 to 1830, and the third section, of only 40 pages, with the period 1830-1870. A very large part of this vast amount of material is drawn from primary sources, some of them seldom used and it plainly represents many years of diligent research. The prose is clear and readable and comfortably free of jargon. The information is well arranged, well indexed and easily accessible. Descriptions of processes and machinery are expressed simply and in a manner easy to understand. There are diagrams where diagrams are necessary and such maps and plans as have been included are useful and explanatory. If some subjects have been treated in greater depth than others that merely reflects the fact that they have not been adequately treated elsewhere. There are, for instance, 50 pages dealing with lint milling and only 14 with flax spinning but readers will find the chapter on lint milling of great interest and no one will wish it shorter.

Forty years ago, as a child playing on the banks of the River Dighty, I fell through a broken, ivy hidden window frame on to a stone flagged floor covered with old wooden clogs. That fall began for me a life-long interest in the industrial history of Scotland. I soon found out that the clogs belonged to bleachfield workers but it was only with great difficulty that I discovered anything about the history of the place, who worked there, what they produced, how they operated. The only book on the industries of Scotland then in existence, and I note that Shaw has found it still to be of some use, was David Bremner's written in 1869. Academics showed little interest in such things and the work of amateur local historians was, perhaps justifiably, not then well regarded. I had to seek out written records, without the kind of help now given by professional archivists, sometimes rescuing from the scrap heap documents which their owners thought of no value. I floundered among dust and nettles and made a lot of mistakes. This comprehensive new book of John Shaw's will ensure that no student of the subject need flounder unguided in the future. It is a good starting place for researchers, a useful teaching tool, and a generally absorbing piece of reading, covering a very wide range of interests.

DUNCAN OF JORDANSTONE COLLEGE OF ART
DUNDEE

ENID GAULDIE

D.T. Jenkins and K.G. Ponting. The British Wool Textile Industry 1770-1914. (London: Heinemann Educational Books/Pasold Research Fund. 1982. Pp. xxi + 388. 56 tables. £17.50.)

One of the more curious features of the historiography of British economic history is the lack of comprehensive studies of those industries which helped to give Britain her economic hegemony for much of the 19th century. This valuable study does something to redress this situation and goes far in establishing for the woollen industry, (the world's largest, and too often neglected in the glare of the cotton industry), its proper place in the history of British industry. Given that recent research has produced detailed studies of wool manufacture in peripheral regions, including Scotland, the authors rightly concentrate on Yorkshire and thereby greatly extend our knowledge and understanding of the development of the industry in that area - a process begun but not completed by Heaton. At the same time, by drawing freely upon the other regional studies they provide a balanced view of the industry as a whole. Although the volume concentrates on the period 1835-1914 there are useful opening chapters on the position of the industry in the late 18th century and the beginnings of factory organisation. Subsequent chapters deal with the growth of capacity, changes in organisation and technology and the development and state of trade in two broad time periods: 1835-1870, and 1870-1914. Two final chapters investigate competition in the industry and assess its modest contribution to the national economy.

In general the partnership of academic and businessman works well. The late Ken Ponting's chapters on the technical aspects of wool manufacture and finishing, together with his discussions of the complexities and varieties of wool itself, make pleasant and fascinating reading, successfully combining erudition with lucidity. Dr. Jenkins provides a wealth of painstaking detail, much of it quantitative, concerning investment in buildings and power, industrial organisation and the state of trade. Scottish readers interested in their own woollen industry will find little added to existing studies as the authors explicitly acknowledge their indebtedness to such. However, useful data is provided on mill and power investment for Scotland and an estimate for the value of fixed capital in the industry is offered (tables 3 & 4). Moreover an effort is made to explain the success of the Scottish tweed industry when other regions outside of Yorkshire were in decline. The answer is given in terms of careful wool selection and skillful designing with which it would be hard to quarrel, but it perhaps begs the question as to why Scottish designs were especially in vogue. Other sociological factors also played their part.

Important and well-researched though this book is, there are disappointments and minor weaknesses which an honest reviewer must draw attention to. Readers seeking for discussions of labour and trades unionism in wool manufacture, or sources of capital supply, will be largely frustrated. Furthermore the relentless description of growth and change is rarely punctuated or lightened by case histories of firms or entrepreneurs. People figure very little. This may be a reflection of the data available but the result is a rather austere read and a narrow focus.

A volume offering such detailed treatment suited more to the researcher than the bed-time reader, requires adequate sign-posting for

speedy and effective usage. The glossary is effective and non-technical but the absence of the term 'drafting', for example, leaves the reader to decide whether this was identical to 'drawing' which is included. The list of 56 tables does not indicate the pages on which they can be found. The index, though fairly comprehensive, poses difficulties for anyone wishing to trace, for example, the important subject of the decline of handloom weaving in the industry. The references, placed perhaps inevitably at the rear of the book, require greater ease of access. These strictures may well be as much a comment on the publishers as the authors. Certainly the latter will have had no say in the inflated price which places their work beyond the reach of students and staff alike and probably beyond that of many rate-capped councils, which leaves one wondering just who the volume is aimed at. Nonetheless the authors deserve great credit for successfully filling an important void in British industrial history and their study is a fitting memorial to Ken Ponting whose recent untimely death robbed us of a colourful character, scholar and friend.

PORTSMOUTH POLYTECHNIC CLIFF GULVIN

E.Simpson. Dalgety - the Story of a Parish. (Dalgety Bay Community Council. 1980. Pp. 66. £1.50.) [Available from the author at £1.84 incl. p. & p., 1 Pinewood Drive, Dalgety Bay, Dunfermline, Fife]; G.P. Bennett. The Past at Work Around the Lomonds. (Markinch: Markinch Printing Company. 1982. Pp. 72. £1.85.); G.P. Bennett. The Great Road Between Forth and Tay. (Markinch: Markinch Printing Company. 1983. Pp. 58. £1.65.); A.I. Bowman. Kirkintilloch Shipbuilding. (Strathkelvin District Libraries and Museums. 1983. Pp. 83. £2.50.)

Interest in local history in Scotland appears to be growing. One measure of the health of this activity is the number and quality of publications devoted to local studies. If output is rising, what of its quality? The four short and reasonably priced books reviewed here provide examples of very different types of local history. Eric Simpson, on behalf of Dalgety Bay Community Council, has drawn together material from a wide range of secondary sources to produce a useful, coherent and easily-read account of the parish's development from Mesolithic times until the present day. Rightly cautious, admitting for example both the non-existence or imperfections of evidence, Mr. Simpson's work, a model of its kind, should both inform and stimulate local interest. While the student of industrial history will find little in the text that is new, this cannot be said of the illustrations many of which serve as eloquent testimony to the area's former domination by the coal mining industry, few traces of which now survive. As might be expected in a work which covers 8,000 years in 66 pages, questions remain. Why, for example, were 'Lowdeners' (miners from Lothian) so detested by the inhabitants of nineteenth century Fordel? Had they formerly been used as strike breakers, or perhaps brought with them new and unwelcome working methods?

G.P. Bennett's two studies are also concerned with Fife's history, but over a shorter period, principally the eighteenth and

nineteenth centuries, although both cast a brief glance further back in time. The Past at Work Around the Lomonds is a rather patchy account of coal mining, iron making, textiles and paper making in and around Markinch. Its best chapters are those which deal with coal mining and the Leven (from 1805 Balgonie) Iron Company, the former based on the little-used Rothes Muniments and rather too liberal extracts from Robert Bald's General View of the Coal Trade of Scotland. Enthusiasm and a sharp sense of vivid local detail however, much in evidence here, by themselves do not make for the most effective local history. Description, no matter how interesting, must be blended with narrative and analysis and opportunities to relate material to the wider historical context seized. Local evidence must be treated seriously. For example the author has clearly been persuaded that the Scottish collier-serfs were the victims of harsh and oppressive conditions. If Professor Smout is to be believed the circumstances of the Fife miners were worse than most. Yet Mr. Bennett almost entirely ignores the implications of his own evidence that Rothes colliers commonly signed only annual agreements and were prepared to take collective action to resist any worsening of their conditions. The author's more recent offering, The Great Road Between Forth and Tay is far more successful. This is an account of the development of transport linkages between and across the two great rivers which separated Fife from Edinburgh and Dundee and the north respectively. A fascinating story is interwoven with well-chosen extracts from railway company and turnpike trust minute books. Again however publication may have been premature and would have been much improved by ruthless editing and reorganising. A plan of Fife's road and rail network would have assisted the many readers who will not have Mr. Bennett's detailed knowledge of Fife's geography. Its value would have been greatly increased with even a crude attempt to quantify the traffic carried by the various modes of transport over time; the threat to cross-county coaches in the 1820s from steam boats is mentioned, but what happened?

In the premier league of local publications is I.A. Bowman's Kirkintilloch Shipbuilding. This is a thoroughly researched account of two of Scotland's less well-known shipbuilding firms, J. & J. Hay, who built their first vessel in 1869, and the bigger but shorter-lived Peter McGregor & Sons, timber merchants who became shipbuilders at Kirkintilloch in 1902. The Hays, it is claimed, did more than any other group to develop the 'puffer'. Indeed it was this firm which built one of Scotland's best known vessels, the Vital Spark, launched in 1903 as Dane (2). This book describes the firm's rise and post World War II decline in detail, as well as throwing considerable light on shipping operations on the Forth and Clyde canal itself. The Hays were important shippers as well as shipbuilders. Well-illustrated and based heavily on primary material this volume should appeal not only to the interested citizen of Kirkintilloch and neighbourhood, but also to business, economic and industrial historians elsewhere. It sets a high standard, but not one beyond the reach of any local historian who wishes to do his subject - and readers - justice.

UNIVERSITY OF DUNDEE CHRISTOPHER A. WHATLEY

Iain McLean. The Legend of Red Clydeside. (Edinburgh: John Donald. 1983. Pp. 296. £18.)

The notion of 'Red Clydeside' continues to exert a powerful influence within the Scottish labour movement. It is also important to the left-wing of the modern nationalist movement. The events which took place on the Clyde during, and immediately after, the First World War are seen by nationalists as part of the heroic tradition of Scottish resistance to oppression which dates back to the Covenanters. To Labour they remain enduring symbols of optimism; of class struggle on an heroic scale.

These views are coloured by the writings of contemporaries, of whom John Maclean and Willie Gallacher are perhaps the most important literary sources. Both men saw the events on Clydeside - the rent strikes, the industrial struggles over dilution and the anti-war protest - pushing the Glasgow working-class towards the brink of revolution, particularly after the Bolshevik triumph of October 1917. Maclean, because of the militancy shown by the workers during the war years, thought it was possible to make Glasgow 'a Petrograd, a Revolutionary storm centre second to none'; Gallacher spoke of the workers as being 'in a mood to tear up Glasgow by the roots'. According to these interpretations, the potential for revolution was clearly evident. That it did not flourish was due to the oppressive action of the British state, which imprisoned the vanguard and held in check the revolutionary potential of the workers. It is this view which Iain McLean, in an important study, seeks to demolish.

Drawing on much of the material contained in his doctoral thesis of 1973, although enriching it with more recent work on electoral statistics, McLean argues that 'Red Clydeside' is a 'legend'; the product of myth-makers like Gallacher and Maclean, rather than concrete reality. If not, why, McLean asks, did the Glasgow workers vote overwhelmingly for non-socialist MPs in the general election of 1918?

McLean is not simply out to pose awkward rhetorical questions, he provides a detailed analysis, which is always interesting and, occasionally, fascinating, of the Glasgow economy, the class structure, the social situation of the skilled worker and the background and political culture of the leadership of the labour movement, before reaching his verdict. Among the many telling points he makes against the traditional historiography of the 'Red Clyde' is that the industrial conflict endemic in Clydeside engineering and shipbuilding establishments in these years was more the product of craft conservatism than revolutionary politics. What the skilled worker was protesting against was the threat to his privileged position posed by the introduction of unskilled labour onto work previously the preserve of the craftsmen. And although the discontent of the skilled worker allowed the revolutionay vanguard to exercise some influence on the form of the industrial struggle, it was more to do with their zeal and energy in tackling the issues raised by dilution than their politics. Moreover, in terms of leadership of the anti-war movement, McLean points out that the majority of leaders in the labour movement were reformist and that John Maclean, revolutionary marxist, was an isolated figure. Thus there was no revolutionary ideology, hence, no revolutionary practice. Even Gallacher and the other shop stewards did nothing to broaden the demands of the industrial struggle into a revolutionary challenge to the war and the social order.

Therefore, the 'Red Clyde' is a myth, there was no revolutionary movement capable of mobilising the masses. The anti-war movement and the industrial conflicts of the period were not enough to transform the political situation as they lacked a revolutionary ideology, were rooted in craft conservatism and parochialism. What gave the events a special prominence was the heavy-handed and hysterical reaction of the authorities to what were essentially mild and reformist demands. Contrast can be made with the years of the Second World War in which there were no industrial disturbances and anti-war movements to speak of. The state had learnt its lesson: equality of sacrifice and the total involvement of the labour movement in the running of the war were the keynotes of state policy.

McLean's book, then, serves as an important corrective to the exaggerated views of red revolution put forward by Gallacher and Maclean, but in seeking to destroy the 'legend' the former runs the risk of throwing the baby out with the bath water. Recent work has emphasised the shifts in balance of power and authority in the country as a result of the events on Clydeside. In particular, the destruction of the free market in private housing rents; the emergence of the shop steward as a key figure in industrial relations; the changed relationship of the state towards the unions; and the collapse of the Liberal hegemony in Scotland.

These changes, although not meeting the stringent conditions laid down by McLean for revolutionary transformation, do have a significance which cannot be summarily dismissed. Moreover, to believe, as McLean clearly does, that these tumultous events, the passions they aroused, the bitterness and hatreds they engendered, the movements and personalities they brought into prominence, had no imprint on the consciousness of the Glasgow working-class seems rather naive. By concentrating his attack on the idea of Bolshevik-style revolution breaking out in Glasgow, McLean obscures the real task: that is, to understand why a community previously divided on grounds of skill and religion could unite in such a way as to panic the authorities, bring to prominence, sometimes national, peripheral characters and turn them into charismatic leaders, and ultimately turn the traditional political culture of Glasgow upside down. Having destroyed the strawmen, perhaps the author will address himself to these questions.

HERIOT-WATT UNIVERSITY BILL KNOX

William Knox (ed.). Scottish Labour Leaders 1918-1939. (Edinburgh: Mainstream Publishing. 1984. Pp. 304. £20.00.)

Dr Knox and his team of contributors have compiled over seventy biographies. He himself was responsible - usually as sole author - for about half of those appearing for the first time. He also contributes a lengthy introduction, which examines aspects of the labour leadership between the wars - social background, temperance, religion, education, popular culture, nationalism, pacifism.

It is a pity that the choice of subjects is not wider. Space for more could have been found by reducing assessments both of those about whom biographies, though of varying merit, are already available and of some MPs, who take up over half the total. Some of the latter were not very significant - perhaps only of local importance, as were Murnin and Sloan; another, Forgan, though more interesting, soon faded from being a labour leader. And why, when space was obviously at a premium, were thirteen articles re-published with little change from the Dictionary of Labour Biography?

One important editorial decision was to leave out those Scots who spent most of their working life furth of the country. MacDonald is the most notable exclusion, though the inclusion of Gossip and Sutherland, whose greatest achievements were out of Scotland, indicates some possible inconsistency. This decision affects all the biographies. They do not concentrate on ways in which a Scottish background may have contributed to the making of labour leaders. Information on early life and influences is sparse. The emphasis is on the parts played in the organisation, activities and philosophy of the labour movement. There is even a tendency to give prominence to a certain type of leader. National figures, defined of course to give a high proportion of MPs, are most prominent, and on a more personal level it is notable that John Maclean is allotted twelve pages; the inclusion of Peter Petroff (six pages) is justified specifically because of his influence on Maclean; and it would seem difficult not to think that MacDougall is included (five pages) because of Maclean's influence over him.

The emphasis on the relation of a certain brand of labour leader to the detailed internal activities and ideology of the party, whatever it was, explains one of the disappointing features of the biographies. Some are curiously lifeless - almost impersonal - especially to those who knew the subjects either personally or by repute. Surely livelier assessments were possible in very different ways of such fascinating characters as Duncan and Robertson? Even a deeper consideration of Maclean's lack of humour - an unfortunate characteristic not at all typical of many in the labour movement in those years - might have led to some questioning of the assertions of his influence, assertions which seem to have grown with the death of most of those who knew him personally. There is also a mixture of blandness in the evaluation of some topics with pointed criticism in others. The introduction recognises the equivocal attitude of the labour movement to rearmament in the 1930s but the inconsistencies of many individuals on this most vital of matters between the wars is not brought out as clearly as seems warranted; why was it 'ironic' that Dollan's stand against fascism should coincide with his abandonment of pacifism? Was there any other way?

The choice of subjects may help explain a problem Dr Knox recognises. Leaders, by their very nature, are exceptional; no one should expect them to be other than different from most people in life-style or in political philosophy. There is then no need to be surprised that their plain living and high thinking did not spread into the ranks of those they claimed to lead. The problem posed by any such lack of identity is, of course, more acute for those who claim to speak with a popular political voice. The irony of the present biographies is that they often reveal active politicians but not leaders in the sense that they were emulated or regarded with affinity by many, certainly not by those beyond their immediate political associates. To

end on a personal note in that connection: it seems that of the three MPs for South Ayrshire included in the volume the one who had the most widespread influence in the community was James Brown and Emrys Hughes the least; yet by the standards of this volume the order would be reversed.

Much hard work has gone into the compilation of this volume and any criticism must be balanced with admiration for its achievement. The collection will be used profitably by many and a particular note of gratitude must be recorded for the bibliographical information attached to the biographies, of works both by and about the subjects.

UNIVERSITY OF STIRLING R.H. CAMPBELL

T. Louden. The Cinemas of Cinema City. (Glasgow: published by the author. 1983. Pp. 72. £1.80.)

Books like this should not be sent to middle-aged expatriate reviewers. They generate a surge of nostalgia for the joys of misspent youth that does nothing for the exile's mid-life angst. The memories crowd in on one: Saturday matinees at the Aldwych or the Westway in Cardonald; John Wayne at the Mosspark; 'Quatermass' at the Shawlands Embassy; 'Monsieur Hulot's Holiday' at the Cosmo; playing truant to see Christopher Lee's 'Dracula' at the New Savoy, only to discover my French teacher sitting behind me when the lights went up at the interval. Ah! the dear dead days beyond recall...

Physically, this is not much of a book - only 72 pages, and a high proportion of them taken up with illustrations in the form of black-and-white photographs of cinema frontages and interiors. All that Mr Louden does, in effect, is to catalogue the cinemas of Glasgow from the first purpose-built picture house of 1910 (the Electric Theatre, now the Curzon Classic, in Sauchiehall Street), through the boom years of the 'suburban supers' in the thirties and forties, to the closures and conversions of the sixties and seventies. It makes no attempt at serious economic or social analysis: Mr Louden is much more interested in the architecture and the interior design and decoration of the cinema buildings themselves. And indeed his text and his pictures demonstrate that Glasgow's picture houses contained a wealth of architectural extravagance and whimsicality, from the sheer megalomania of Green's Playhouse, the biggest cinema in Europe which never achieved 'first release' status, to the 'lovers neuk' seats in the Elephant at Shawlands Cross from which it was not actually possible to see the screen. The styles are wonderful to behold: Govanhill Pharaonic, Muirend Moorish, Gallowgate Oriental, the Art Deco of the outer suburbs, the coffin-shaped Springburn Kinema standing cheek-by-jowl with Sighthill Cemetery. Glasgow architects evidently made a good thing out of the cinema, and some of them were men of obvious humour.

Mr Louden's book nevertheless brings some serious economic and social questions to mind. He makes it clear that the cinema was big business in Glasgow: at its peak, over 130 theatres graced the city, 'more picture houses per head of population than any other city outside the United States', as the author puts it. The buildings must have

represented larger fixed capital investments than some of the city's middle-rank industrial concerns. What was the impact of their construction and operation on the city's economy? Given the elaboration of their interior decoration, they must have done wonders for the painting and decorating business at the very least. Why did Glasgow in particular support such a large-scale cinema sector? Was it because the worst slums in Europe required the most generous provision for temporary escape? And what about the Glaswegian movie-moguls? Most of the money and enterprise involved in the Glasgow cinemas came from local families and individuals, the Greens, Alex Frutin, George Singleton, John Maxwell, A.E. Pickard and the like. Their background was often in the music-hall, or as showmen. Some of them made a contribution to the development of the entertainment industry far beyond Glasgow: Maxwell, for instance, was one of the founders of the nationwide ABC circuit. Where do these men stand, in terms of wealth or entrepreneurial flair or managerial success, in relation to the Glasgow business-community's more conventional members? Economic history takes plenty of notice of ironmasters, engineers, shipbuilders and shopkeepers: perhaps it ought to take more notice of cinema-owners. As far as Glasgow at least is concerned, they seem to have been in a big enough way of business between 1920 and 1950 to have made a significant contribution to the economic life of the city. And their contribution to the sum of human happiness among Glaswegians was arguably far superior to that of most manufacturing enterprises.

UNIVERSITY OF MANCHESTER A.J. ROBERTSON

N. Hood and S. Young. Multinationals in Retreat: the Scottish Experience. (Edinburgh: Edinburgh University Press. 1982. Pp. 193. £10.00.)

In "Multinationals in Retreat", Hood and Young trace the growth of Foreign Direct Investment (FDI) in Scotland, and conclude that until the mid-1970s inward FDI had been a substantial net benefit to the Scottish economy. Since 1976, however, a growing number of foreign-owned firms have closed or rationalised their Scottish plant(s), and this has resulted in considerable job losses that have had traumatic effects on the local and national economy. As a consequence of this trend, they argue that "the benefit-cost balance relating to foreign direct investment has changed markedly." In order to minimize further decline some suggestions for public policy are advanced.

In chapter one, it is seen that in Scotland the US has by far been the major source country of FDI, and that this inward FDI has really been a post-1945 phenomenon, and that the period 1965-1975 was easily the most important in terms of new openings by US MNCs. The authors consider the impact of FDI on the labour market, the regional and sectoral distribution of FDI, the size and age distribution of overseas-owned units, and the entry methods and motivations of the foreign-owned firms in Scotland.

All of the major studies on **foreign disinvestment** have addressed the problem for a "home" country perspective, and almost all of these

(e.g. Boddewyn; Chopra; Torneden; Wilson) have focussed exclusively on US foreign disinvestment. Hood and Young, on the other hand, examine the problems from a "host" country viewpoint. Their study compliments the works of the aforementioned scholars because, with its high concentration in US FDI, it was inevitable that most foreign divestments and rationalisation programmes in Scotland would involve US MNCs, and indeed this is reflected in the case studies: five of the six cases concern an American firm - Singer in Clydebank; Hoover in Cambuslang; NCR in Dundee; Honeywell in Lanarkshire; and, Goodyear in Drumchapel. The exception is the Talbot (Peugot) case in Linwood, and it was previously owned by the US corporation, Chrysler.

In the case studies, the authors review the history of each firm and its Scottish operation, the fortunes of the parent company, and the contribution of the Scottish plant. Against this background, they examine the European and Global strategies of these MNCs in an increasingly hostile environment, and explain why the strategic value of the Scottish plant was reduced, or in the case of closure, eradicated. All this is done very skillfully and the authors very economically convey an enormous amount of information.

However, all these case studies rely mainly on newspaper reports and company accounts. Only in the Hoover case does it appear that an employee was approached as a source of information, and as a result sometimes a misleading impression is given due to the reliance on papers not renowned for their neutrality in the reporting of industrial affairs. For example, the authors suggest (p.47) that the impact of labour disputes led the Singer management to reduce the importance of the Clydebank factory, and they record that "in the first half of 1965 alone ... there were 76 separate stoppages". However, the Chief Executive Officer of the parent company recognised that these stoppages arose from the huge changes management were making within the factory. He said, "We endeavoured to do it in one leap, to make it a modern factory. We tried to do too much in too short a time". This quotation comes from a journal too, but the point is that any Union representative would have been able to show how untypical 1965 was in the Clydebank factory's history.

The third, and final, chapter makes some suggestions to policy makers, in the hope that Scotland will continue to attract and maintain FDI. It is very critical of UK industrial policy, past and present. It also reveals the remarkable inconsistencies in regional policy over the past two decades. The case on Singer at Clydebank was completed before the town was designated an "Enterprise Zone". As such, Clydebank could offer special conditions to any business prepared to open premises in the zone; 100% derating for Industrial and Commercial Companies, and very low, or rent free, premises, are just two of the financial inducements the zone offers. Ironically, the Singer Company availed itself of the "no rates" offer and opened an office where six engineers design machines for manufacture overseas!

Hood and Young also criticise the slow development of a national stratgy for attracting FDI. The authors stress the need for UK policy initiatives and point out that the UK's share of US FDI in Europe has already declined. This decline has coincided with the tremendous growth of US FDI in Eire, and whilst the authors stress that the two trends are not directly related, they do commend the package offered by the Irish Development Authority to potential investors.

"Multinationals in Retreat" should appeal to academics in a variety of fields, from Economic History to International Business. Employees, past and present, of the companies studied will also find the book informative and stimulating. The book is aimed primarily at policy makers as it seeks to remedy their inadequacies. It can only be hoped that this book reaches the audience for which it was intended. Foreign disinvestment is a subject of growing concern. It would be unfortunate if the authors failed to follow up their first work on this issue.

UNIVERSITY OF GLASGOW MICHAEL McDERMOTT

D. Sims and M. Wood. Car Manufacturing at Linwood: The Regional Policy Issues. (Paisley: Dept. of Politics and Sociology, Paisley College of Technology. 1984. Pp. 94. £2.00.)

This work derives from the remit of the Clyde Valley Industrial Policy Archive to accumulate information for case studies of Ravenscraig and Linwood. Subject to the 30-year rule, Cabinet and other ministerial sources are used together with normal published sources and discussions with interested parties. A perceptive foreword is provided by John Foster.

The study is concerned with the regional policy aspects of Linwood rather than with car industry economics, management strategy and industrial relations. Chapter 1 deals with the hitherto neglected role of Linwood prior to the coming of Rootes in 1961. This includes an account of government activity leading to the transfer of the Beardmore operated munitions factory to the Oxford-based Pressed Steel Company. Instead of the hoped-for expansion of car body building at Linwood, however, Pressed Steel developed their new factory for general engineering and rail equipment (including what was regarded as unfairly subsidised competition with Pickerings of Motherwell, Beardmore's wagon-building subsidiary). With expansion in the British and overseas car industry, car bodies were eventually produced in somewhat greater numbers by the later 1950s.

In Chapter 2, the negotiations and motivations which led to Rootes coming to Linwood are discussed and Chapter 3 deals with the more familiar story of government's involvement with Chrysler from 1964 and PSA (Peugeot-Citroen) from 1978.

To permit analysis of regional issues, a distinction is drawn between the performance of the plant and of the project. In comparison with the Albion truck and bus works at Scotstoun, Linwood is seen as a less successful plant (producing a small car when demand was moving up-market) but, as a concept, the authors suggest that it could have been a more effective instrument in creating both direct and indirect local employment in pursuit of regional objectives. Government is severely criticised for not taking a more positive line in encouraging indigenous Scottish firms to become component suppliers and it is equally criticised for a failure to secure control over multinationals which could have prevented the disaster of closure in 1981. Government

is accused of making little effort to create integrated regional policies even when it appeared, as in the early 1960s, that regional policy was in the ascendant. All too often, the short-term political gains from prestige projects were placed before longer-term strategies.

Sims and Wood have a strong belief that more powerful and better-directed government action could have produced greater employment on Clydeside but they do not seem to appreciate how these beliefs conflict with the realities of decision-taking in a mixed economy and a democratic society. Even if stronger policies could have been adopted, the authors are undecided as to whether government should have encouraged a greater local multiplier by bringing more of the car industry to Scotland (though still leaving most of it in England) or concentrating all truck production in Scotland. Leaving aside the opposition to such changes which would have arisen from other areas, such 'solutions' would have given the Scotland of the 1980s the problems which it has avoided by not having a concentration of car production on the scale of the West Midlands.

Possibly influenced by the absolute increase in unemployment, the authors fail to recognise that - relatively - Clydeside has made far greater jobs progress than the West Midlands in the past decade. Surprisingly, no reference is made to the De Lorean affair in Belfast and, throughout, one would like to have seen more awareness of the alternative employment returns from different types of government spending. In reiterating their beliefs, Sims and Wood have also missed some valuable opportunities for making greater use of the material which they have assembled for 1947 to 1963. With only one year available for research and writing-up they could well have concentrated on this period.

UNIVERSITY OF GLASGOW TOM HART

Abstract of Output and Sales at Govan Collie[ry]

1805		Coals Output @ Game Pit	Coals Output @ Fiers Pit	Coals Output @ [illegible]	Total Coals Output	Coals Sale @ Game Pit	Coals Sale @ Fiers Pit	Coals Sale @ [illegible]	Sale @ 4/6	Sale @ 5/	Sale @ 5/6	Sale @ 6/	Sale @ 7/	Total Coals Sale	£	
January	28	34⅔	21½	4	60⅙	45⅚	24⅔	5	3⅙	35⅓	.	37	.	75½	20	12
	29	55⅓	28	15⅓	98⅔	65½	37⅙	15½	.	57½	.	61	.	113⅙	31	6
	30	58⅔	56½	16⅔	131⅚	72½	59½	20½	3⅙	79[illegible]	.	69½	.	152½	41	10
	31	48	35	12⅔	95⅔	57	38⅔	16	6⅙	51	2	52½	.	111⅓	30	8
February	1	58⅔	51⅙	24⅔	134½	71½	53⅔	31⅚	8	66½	2	78½	2	157	42	4
	2	70⅓	41½	18⅔	130½	77⅔	54	28½	13½	61⅙	.	85½	.	160⅙	43	19
	4	47⅓	29½	"	76⅚	62⅚	35	4	6⅓	39½	.	52	.	97⅚	26	18
	5	32	31½	"	63½	35½	36⅔	.	4⅔	34⅔	.	37	.	76⅓	20	16
	6	58⅔	47⅔	18⅓	119⅔	72⅓	43⅓	18½	6⅔	59½	.	68	.	134⅙	36	15
	7	59⅓	54⅔	5⅓	119⅓	71⅚	60⅙	5½	6½	64½	2	64½	.	137½	37	9
	8	61	57⅙	21⅓	134½	65	52⅓	27⅓	.	63⅔	.	79½	1½	144⅔	40	5
	9	66⅚	78⅙	14⅚	159⅚	77⅔	74	11⅚	6⅓	76⅓	.	75	5½	163½	45	.
		650⅚	522⅓	151⅚	1325	775⅙	564⅓	184½	64½	684½	6	760	9	1524	418	8
Over [illegible]		124⅓	42	32⅓	199	[illegible]										
		775⅙	564⅓	184⅓	1524	133	99⅙	41⅚								
Sold		775⅙	564⅓	184½	1524	124⅓	42	32⅔								
		"	"	"	...	257⅓	141⅙	7[illegible]								

Sold

64½ Carts Coals @ 4/6 p Cart	14	10
684½ — @ 5/	171	2
6 — @ 5/6	1	13
760 — @ 6/	228	.
9 — @ 7/	3	3
1524 Carts	£ 418	8