CHILDREN'S EMPLOYMENT COMMISSION 1842.

REPORT by THOMAS TANCRED, Esq., on the Employment of Children and Young Persons in the Mines and Collieries and Iron Works in the West of Scotland, and on the State, Condition and Treatment of such Children and Young Persons.

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Coal Mining History Resource Centre

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COMMISSION

(UNDER THE GREAT SEAL)

FOR INQUIRING INTO THE EMPLOYMENT AND CONDITION OF CHILDREN IN MINES AND MANUFACTORIES.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith: To Our trusty and well beloved Thomas Tooke, Esquire, Thomas Southwood Smith, Esquire, Doctor in Medicine, together with Leonard Horner and Robert John Saunders, Esquires, Toe of Our Inspectors of Factories, Greeting:- WHEREAS, an humble Address was presented unto to Us by Knights, Citizens and Burgesses and Commissioners of Shires and Burghs in Parliament assembled, humbly beseeching Us that We should be graciously pleased to direct an Inquiry to be made into the Employment of the Children of the Poorer Classes in Mines and Collieries and the various branches of Trade and Manufactures in which numbers of Children work together, not being included in the provisions of the Acts for regulating Employment of Children and Young Persons in Mills and Factories and to collect information as to the time allowed each day for meals and a as to the actual state, condition and treatment of such Children and as to the effects of such Employment, both with regard to their morals and their bodily health; NOW KNOW YE, THAT WE, reposing great trust and confidence in your ability and discretion, have nominated, constituted and appointed and do by these presents nominate, constitute and appoint you the said, Thomas Tooke, Thomas Southwood Smith, together with, Leonard Horner and Robert John Saunders, to be Our Commissioners for the purposes aforesaid; And We do hereby enjoin you to obey all directions touching the premises which shall from time to time be given you, and any two or more of you, by one of our principle Secretaries of State: And for the better discovery of the truth in the premises, we do, by these presentiments, give and grant to you, or any two or more of you, full power and authority to call before you, such persons as you will judge necessary, by whom you may be the better informed of the truth in the premises, and to inquire of the premises and every part thereof, by all other lawful way and means whatsoever; And We do hereby also give and grant unto you, or any two or more of you, full power and authority when the same shall appear to be requisite, to administer an oath or oaths to any person or persons whatsoever, to be examined before you, or two or more of you, touching or concerning the premises; And Our further will and pleasure is, that you Our said Commissioners, or any three of you, do, with as little delay as may be consistent with a due discharge of the duties hereby imposed upon you, Certify to Us. under your hands and seals, or under the hands and seals of any three of you, your several proceedings in the premises; And We further will and command, and by these presents ordained, that this Our Commission shall continue in full force and virtue, and that you, Our said Commissioners, or any two or more of you, shall and may from time to time proceed in the execution thereof, and of every matter and thing therein contained, although the same be not continued, from time to time by adjournment: AND WE HEREBY COMMAND all and singular Our Justices of the Peace, Sheriffs, Mayors, Bailiffs, Constables, Officers, Ministers, and all other Our loving Subjects whatsoever, as will within Liberties as without. that they may be assistant to you and each of you in the execution of these presents: And for your assistance in the due execution of this Commission, We have made choice of Our trusty and well beloved Joseph Fletcher, Esquire, to be the Secretary of this Our Commission, whose services we require you to use from time to time, as occasion may require. In witness thereof, We have caused these Letters to be made Patent. Witness Ourself at Westminster, the Twentieth day of October, in the Fourth Year of Our Reign

By Writ of Privy Seal,

EDMUNDS.

LETTER OF INSTRUCTIONS EXTENDING THE TERMS OF THE COMMISSION TO "YOUNG PERSONS"

Whitehall, February 11th, 1841.

GENTLEMEN,

THE QUEEN having been pleased to comply with the prayer of an humble Address presented to Her Majesty, in pursuance of a Resolution of the House of Commons, dated 4th of February, 1841, 'That Her Majesty will be graciously pleased to direct that the Commission appointees in answer to an Address of this House, on August 4, 1840, for the investigation of certain branches of Infant Labour, do include within its inquiry the Labour also of Young Persons designated as such by the provisions of the Factory Act' I am delighted by the Marquis of Normanby to desire that you will include within your inquiry the Labour of Young Persons designated as such by the provisions of the Factory Act accordingly.

I am, Gentlemen,
Your Obedient Servant,
(Signed) F. MAULE.

The Commissioners for inquiring into the Condition of Children employed in Mines, &c.

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TO HER MAJESTY'S COMMISSIONERS.

GENTLEMEN,

Under the head of iron-works I shall, in the present Report, include, for convenience and to avoid unnecessary repetition, all manufactories by which iron is procured or adapted for economical purposes, such as smelting or blast furnaces, puddling-furnaces, and rolling-mills (by which the pig-iron is rendered malleable and converted into rails, rods, boiler-plates, or chains, cables, in iron foundries, where cast-iron articles of all varieties are made, together with the mining operations by which the ironstone is obtained and the coal employed in the above processes, as well as for other manufacturing purposes, used for fuel is brought to the surface.

The most logical order will be to take the latter branch of the subject first, and describe the localities in which the raw materials, the ironstone and coal are worked my district, with the manner of conducting the mining operations.

Airdrie coal and iron-field.

By far the most important mineral field in all Scotland lies to the east and south-east of Glasgow and includes the district around Airdrie, chiefly in New Monkland parish, to which the celebrated black-band ironstone is confined. The most valuable stratum is so local that at present it is not known to exist beyond a space of from eight to ten square miles, though deposits to all external appearance very similar are found, but of inferior quality in other places. For instance, at Mr. Dixon's iron works at Govan near Glasgow, though the same seams of coal occur as in the Airdrie district they have bored 30 fathoms below where the black-band ought to come in, without discovering it.

Seams of coal and ironstone.

In order to give a definite idea of the relative positions and depths of the several workable seams of coal and of the ironstone in the Airdrie district, I append a table extracted from the excellent account of the parishes comprised in it contained in the new Statistical Account of Scotland No XXVI.

The coal measures extend to a depth of about 775 feet and consist of the following workable seams:-

Seams of Coal in the Lanarkshire Basin

Number of the seam	Names of the seam	Thickness of the Seam in Feet	Distance from Seam to seam in fathoms
1	Upper coal	Thin	14 to 16 fathoms
2	Ell or Mossdale Coal	3 to 4 feet	7 to 10 fathoms
3	Poytshaw or Rough Ell Coal		3. to 5 feet 6fathoms to a few inches the 2 seams being worked in some
4	Main Coal	4 to 5 feet	places together.
5	Humph Coal	Thin	10 fathoms
6	Splint Coal	2 to 5 feet	4 fathoms
7	Little Coal	3 to 3.5 feet	2 to 3 fathoms
8	Virtue-Well or Sour-Milk	2 to 4 feet	26 to 29 fathoms
9	Kiltongue	2 to 4 feet	22 fathoms
10	Drumgray	1 to 1.5 feet	6 fathoms

An upper black-band is sometimes found about 24 fathoms above the ell coal (No.2) but the true black-band is found from 15 to 16 fathoms below the splint coal (No.6) and is from 14 inches to 18 inches in thickness.

The value of this comparatively thin band of stone may be judged of by the following statement which I derive from the source above:-

> "The great iron-works of Gartsherrie, Sommerlee, Calder and Dundyvan, receive a great quantity ironstone from Rochsolloch, the property of Sir William Alexander, in New Monkland parish. The output at Rochsolloch alone is 4500 tons per month, and the annual come to the proprietor is about £12,6O0 per annum, on a property which, if let for tillage would yield only a few hundreds a-year."

Hot blast.

The circumstance which has given such immense value to this mineral and consequently caused a most rapid increase in the iron-works in the neighbourhood, was the invention of the hot-blast. The method of applying a heated blast to the smelting of iron ore was progressively developed and like most inventions, owes its present perfection to numerous attempts of different individuals, so that whilst I write, a trial is in progress regarding the validity of the patent obtained for the use of the hot-blast by Mr. Neilson of Glasgow about twelve years ago. Suffice it for the present purpose to say that the general plan now adopted is to drive the air from the blowing-cylinders through flattened arched tubes of iron arranged within a furnace of fire-brick, which tubes are rendered red-hot, so that the blast enters the smelting furnaces at a white heat of about 600 degrees Fahrenheit. The great advantages which result from the hot blast are - 1st. A great saving of fuel, as about two and a half tons of raw coal now do as much as eight tons with the cold-blast when converted into coke. - 2. The saving of labour, &c., in coking. - 3. Nearly double the quantity of pig-iron produced from each furnace in the 24 hours.

Moral less satisfactory than economical results.

However splendid the above results may appear when viewed only in relation to the cheap and rapid production of pig-iron, when we turn our attention to the state of society which (under the existing circumstances) any extraordinary development of industry is sure to produce, the feelings of triumph subside and we cannot but deplore the utter inadequacy of our institutions to meet any such emergency.

Let us glance at the statistics of population and production in Old Monkland parish and some other localities in which iron-works have been established.

LIST of IRON WORKS in the WEST of SCOTLAND, specifying the time elapsed since their Establishment the Names of the Works, the Names of the Owners, the Furnaces in Blast, and those out of Blast or Building, up to May, 1841.

No.	Years Established.	Name of Parish.	Name of Works.	Name of Owners.	Furnaces in Blast.	Furnaces Building, &c.
1	10 years	Old Monkland	Gartsherrie	W. Baird and Co.	13	3
2	5 years	,,	Sommerlee	Wilson and Co.	6	..
3	..	,,	Dundyvan	Dunlop, Wilson, & Co.	8	1
4	40 years	,,	Calder	W. Dixon and Co.	7	1
5	3 years	,,	Carnbrae	Allison and Co.	5	..
6	15 and 5 yrs.. the Mills 3	,,	Monklund Iron and Steel.	Buttery and Co.	5	..
7	Ancient	,,	Clyde	James Dunlop	6	1
8	40 years	Shotts	Shotts	John Baird and Co.	3	..
9	3 years	,,	Castle-hill	Ditto	2	..
10	..	Bothwell	New Mains, or Coltness.	— Houldsworth	2	..
11	Re-built 2 yrs.	,,	Omoa, or Cleland	R. Stewart	1	1
12	2 years	Govan	Govan	W. Dixon	5	1
13	..	,,	Wilsontown	Ditto	1	..
14	6 months	Dalry	Blair Iron-works	..	2	1
15	..	Kilbirnie	Kilbirnie Iron-works	..	..	1
16	1 year	,,	Galston or Cessnock Iron-works	M'Callum and Co.	2	..
17	..	,,	Muirkirk	Not ascertained.	..	..
				Total	68	10

Increase in population.

The manner in which the population has increased in consequence of the recent establishment of such extensive works within a limited district of country is shown in the following table for the parish of Old Monkland:-

Year.	Amount of Population.	Increase in a Year.
1755	1,813	
1791	4,000	60
1801	4,006	0·6
1811	5,469	146
1821	6,983	141
1831	9,580	259
1837	11,577	399
1841	19,678	2,025

Amount of produce.

The amount of produce of the furnaces in Old Monkland is thus stated up to April, 1839:-

Years.	Tons of Pig Iron produced.	Tons of Coal consumed.
1794	3,600	36,000
1806	9,000	130,000
1839	176,800	530,400

"Thus," remarks the writer of this account, "these furnaces alone [those in Old Monkland. parish] consume as much coal in a year as the city of Glasgow, including its manufactories and public works, and more lime than all the farmers in Lanarkshire." This estimate would now be far exceeded. The Gatsherrie furnaces are now producing on an average 200 tons a-day. The increase of population in the adjoining parish of New Monkland has been very similar to that in Old Monkland, viz. from 9867 in 1831, to 20,515 in 1841; about 108 per cent. in 10 years.

Condition of population.

This vast and sudden accession of population, consisting for the most part of irregular and dissolute characters from all parts - from Wales, England, Scotland and Ireland - has produced a state of society, upon the existence of which, in a civilised country, we cannot reflect without a deep feeling that at manifests something essentially defective in our religious and educational institutions.

Population at Coatbridge.

At Coatbridge, where a large portion of this population has been located within the last ten years, no church or clergyman has been supplied them till very recently, when a church was erected, chiefly at the expense of one out of the numerous employers of labour in the district. There is also a relief church provided also by voluntary contributions. These efforts come, of course, as must always be the case so long as things of this importance are left as now to accident and chance, too late. In the meanwhile a population has been growing up immersed more deeply than any I have met with in the most disgusting habits of debauchery. I feel that my powers of description are wholly inadequate to convey the feeling inspired by a visit to these localities. The able Report of Mr. Tremenheere upon the state of the districts about Newport in South Wales, in which the Chartist riots broke out, would apply not inaptly to the state of things about Coatbridge and Airdrie. Everything that meets the eye or ear tells of slavish labour united to brutal intemperance. At night, ascending to the hill on which the Established Church stands, the groups of blast-furnaces on all sides might be imagined to be blazing volcanoes, at most of which the smelting is continued Sundays and week-days, by day and night without intermission. By day a perpetual steam arises from the whole length of the canal where it receives the waste water from the blast-engines on both sides of it and railroads, traversed by long trains of waggons drawn by locomotive engines, intersect the country in all directions and are the cause of frequent fatal accidents, into which, by the law of Scotland, no inquiry is made. The population consists almost exclusively of colliers and iron-workers, with no gentry or middle class beyond a few managers of works and their clerk. I visited many of the houses attached to some of the works and found them in a most neglected state, bespeaking an absence of all domestic comfort or attention to social duties. The garden-ground usually lay a mere waste, unenclosed and not a spade put into it. The children, in rags and filth were allowed to corrupt each other, exempt from all the restraints or of domestic control. This domestic discomfort seemed attributable, amongst other

causes, to the crowded state of the habitations, which, from the want of buildings to contain the rapidly increasing population, were filled with lodgers. I was assured that some houses, with a family and only two rooms took in as many as 14 single men as lodgers. It is needless to observe how impossible it must be for a woman to preserve decency, cleanliness, or comfort under such circumstances. An infatuated love of money, for no purpose but to minister to a degrading passion for ardent spirits, seems the all-pervading motive of action in this quarter. I remember particularly the house of a workman, in which I found the wife in tears and hardly an article of furniture, a board supported on lumps of coal being the only apology for a seat, the bed-places and walls completely denuded. The poor woman, on being questioned as to the cause of this appearance of wretchedness, bitterly complained of the drunken habits of her husband and what was my surprise to learn from the manager of the works, that he was a very skilful workman, a furnace-keeper and could earn when he chose from 7s. to 10s. per day! We afterwards met him in liquor at the store, where he was insisting upon getting more spirits and so violent was his behaviour that at last the manager took him by the shoulders and turned him out, barring the door after him.

I was informed that, almost universally, the higher the wages the greater the discomfort in which the workmen lived and the sooner, on the least illness or other cessation of wages, they became destitute. In short, their moral condition or their state of civilisation is such as to incapacitate them from making a right use of money. As a manager observed to me, "they have more work to spend their money than to win it."

Another reason why they are generally careless of the state of their houses, I take to be that they have no feeling that they are their homes, or likely to be their permanent habitations. The houses being for the most built by the several works and quite inadequate to the demand, it is always understood that when a man leaves his work he and his family must remove from the house, or "flit," as it is termed. Thus the houses are held only from fortnight to fortnight, or from one pay-day to another. The greatest contrast is observable in other parts of the country where the workmen are engaged by the year and where, consequently, they are secure of their houses for that time at least, as in the Duke of Portland's collieries and others, in the valley of the Irvine, in Ayrshire, or where some houses have been built by workmen themselves, or can be hired by them independently of their employers, as at Chapel Hall iron and coal works, Lanarkshire.

Chapel Hall iron-works.

Though this last-mentioned work is but a few miles from Airdrie, the whole appearance of the place is strikingly different from most others in that district. The following is an extract from the notes I made on visiting it:-

"A long row of new houses for the workmen extends at intervals along one side of the turnpike-road, many of which have been built by operatives who can feu from 20 falls and upwards of land from the proprietor, Roberton. Till lately the price was 1s. per fall; it is now generally 1s 3d. All the strips of land, of whatever breadth, must extend backwards from the front of the house 50 yards and also a certain space must be left between houses and the road, which would give them a very neat appearance, were it not for the untidy habits of the natives, who cover this space with coals, the boundary between it and the road being a ditch full of soap-suds and other filth. However, they have all nice gardens, white blinds to their windows and a room and kitchen. As an encouragement to the erection houses, by which his property is rapidly increasing in value, Mr. Roberton is willing to advance half the cost of the building upon the security of the house and land. An average house costs £60. A woman, whose family occupied a room and kitchen which I entered, told me that they paid 8s. 7d. a-fortnight for the rent of the house and garden, coals, the doctor's fee, the blacksmith and the schooling. The above items might perhaps be thus distributed:-

	s.	d.	
Firing, perhaps	2	9	a-fortnight.
Doctor's fee	0	4	
Smith's	0	6	
Schooling	0	6	
	4	1	
Leaving rent	4	6	
or	£5	17	0 per annum.

Plan for raising school fees.

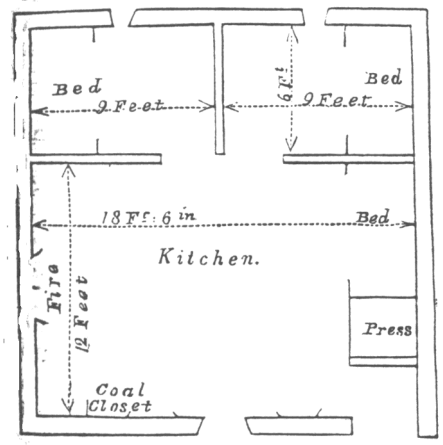
The plan of inducing the parents to send their children to school at these works and at Calder Bank (both belonging to the Monkland Iron Company) is peculiar and is said to work well. Every adult male employed the works and residing within a mile of them, is required to contribute weekly to the maintenance of schools. This payment entitles him to send one child (either his own or a neighbour's) to any of the schools supported by the works, either day or night school and if he sends more than one of his own children, he pays 1d. a-week extra for each. The several schoolmasters meet once a-week and send into the pay-office their lists of scholars, receiving each the 2d. or 1d. per week and the surplus at the end of the half-year is divided amongst them in proportion to the number of their scholars.

Insufficient school room.

The school-houses, fires and dwellings for the masters, are furnished by the Company. The attendance of children up to a certain age was very numerous under this plan. Indeed, one school which I visited was most improperly crowed - it was really impossible to get in at the door and on surveying the dense mass of children within they appeared to be standing on each other's shoulders - one class who were reading having to stand upon the forms amongst the writers, the floor being too crowded to allow of their remaining upon it. This will appear no exaggeration when it is stated that into a room 16 feet square and 9 feet high there were crammed 140 children of both sexes. This allows not 2 square feet of floor to each child, whereas the minimum allowed in National schools in England is 6 square feet. The 140 children occupied 256 square feet of floor, whilst the National Society's allowance would have at least 840. There was no play-ground but the road. The deleterious effects of this dreadfully crowded state of the school on both master and children need hardly be remarked. The former said that he had been lately laid up for a fortnight, chiefly, he believed, from being so many hours daily in an impure atmosphere. Very few works which I visited could be supposed so injurious to the health of the children as this school-room and I am afraid very many of these buildings, if not so bad as the one I have alluded to, are very deficient in proper means of ventilation.

Pearston colliery.

In mentioning collieries where attention is paid to the domestic comforts and morals of the workpeople, I must not omit an honourable mention of Mr. Macready of Pearston, near Irvine, in Ayrshire. This gentleman, in establish a new colliery, is anxious to secure a moral and well-conducted population, in which however, he encounters considerable difficulties. Plenty of men offer services but they are usually the refuse of other works and consequently, it is necessary to offer a premium to steady men, by giving a house rent-free.



For the arrangement of his colliery houses he obtained a prize from the Highland Society. The plan is very simple, each house being merely a square of 18 feet 6 inches within the walls. of this space, a strip of six feet wide is partitioned off at the back, which is divided into two

compartments. Thus the house consists of a kitchen 18 feet 6 inches by 12 feet, having a bed-place on the side opposite the fire, a press, or closet, between this and the door and one window. Out of the kitchen open two doors into small bed-rooms without fireplaces, each nine feet by six feet, having each a window one foot wide and four high. These separate rooms afford accommodation for lodgers and also the means of washing and dressing apart from the family in the kitchen. The floors are made of a kind of concrete of lime, gravel, &c. In the centre of the row of 15 of these cottages is a higher building which projects beyond the rest, and is designed for the school-room. The houses have a southern aspect and are each provided with a coal-shed and a garden beyond, privies being placed at each end of the grounds and planted out with larch and spruce firs. These young trees, I observed with pleasure, were not materially injured, though, left quite unprotected amongst the numerous young children and the gardens were all planted with potatoes.

Kilmarnock collieries.

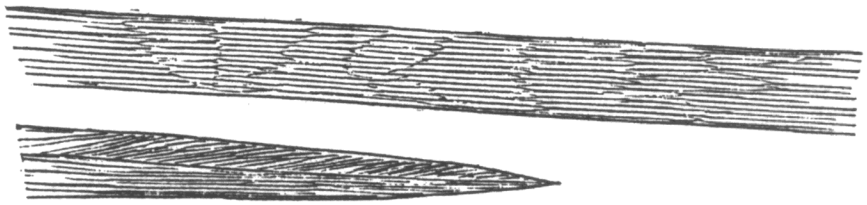
The Duke of Portland's collieries near Kilmarnock, under the able management of Mr. Guthrie, and likewise Mr. Bailie Finnie's in the same neighbourhood, are gratifying proofs of the success which attends well-directed efforts to improve the moral condition of such a population. Mr. Guthrie being very unwell at the time of my visit to that part of the country, I had not the advantage of taking his evidence but this is in some measure supplied by the evidence of Mr. Muir (No.32), who has adopted Mr. Guthrie's system in the management of the collieries of which he has charge. He states that most of the colliers are hired by the year and that this practice has had a very beneficial effect. He is also careful not to let children enter the pits very young, or before they have acquired some education. Mr. Guthrie's clerk also states (No.33), "Our people here on the Sabbath-day just go to church as regular as they go to the coal-work; Mr. Guthrie has got it so 'imbibed' in them; he sets them the example himself."

Quitting now for a short time the Lanarkshire coal and iron district, to which the above remarks chiefly apply, I will endeavour to give a succinct idea of the other mineral fields in the West of Scotland. The coal-fields in Stirlingshire, about Bannockburn and along the Firth of Forth, were included in the district of the other Sub-commissioner, Mr. Franks, to whom the East of Scotland was allotted.

Other mineral fields in the West Scotland, Dumbartonshire, Renfrewshire.

In Dumbartonshire there is only a small coal district as yet worked, not far from Glasgow, about Jordan Hill and Knightswood where also a sort of black-band ironstone is wrought to a small extent.

In Renfrewshire there are two coal-fields, Househill, or Hurlet, to the south-east, and Johnstone to the south-west of Paisley, where the principle sale for the coal raised here is found. Whether these are not two outlying branches of the Ayrshire Basin, which appears to branch off at the sea-side about Stevenston into three forks, one running by Dalry and Beith towards Johnstone, another towards Hurlet and the third up the valley of the Irvine to Galston, I leave for determination to those who have more time for geological investigations than I could devote to that subject. The Johnstone coal-field is a very singular one. It consists of five seams of coal, of which sometimes two or more, sometimes the whole five, are united into one thick seam with hardly any separation between them, so that the metals or rocks intervening between two seams which in some places amount to 60 feet, in others have diminished to a thin band of a few inches. In the Auchlodmont pit, which I descended, I visited, by means of cross cuts, all the five seams and in one place found them all worked together, a thickness of 16 feet. They are also thrown up, fractured by dykes in a most singular manner, sometimes seeming to overlap each other and at other places to thin off and disappear altogether. The figure represents in a rough way the appearance presented by a section me.



Johnstone coal-field.

In going through the old workings, instead of being forced almost to creep on hands and knees as in most pits, we walked upright through spacious vaults, observing the sections of different coloured rocks interstratisfied with the coal. The following section of the strata in this coal-field is given in the Statistical Account of Scotland, No. XIV:-

No.	Names of Strata.	Thickness of Strata.		
		Yds.	Ft.	In.
1	Greenstone	36	0	0
2	Sandstone and indurated clay in thin beds . . .	8	0	0
3	Fire-clay, with coarse ironstone	4	0	0
4	Coal	1	0	0
5	Indurated clay	0	1	0
6	Coal	1	0	0
7	Indurated clay	0	2	3
8	Coal	1	0	0
9	Indurated clay	0	1	0
10	Coal	3	0	0
11	Indurated clay	0	1	0
12	Coal	1	0	0
13	Indurated clay	0	2	3
14	Coal	1	0	0
15	Indurated clay	0	2	3
16	Coal	1	2	0

A peculiarity in this section is the great body of greenstone overlying the common coal measures. At the spot where this section is taken the coals lie as if they had been cut through and one-half slid over the other; so that in most parts this field is only one-half of the thickness here represented: it is very limited in extent.

Hurlet coal-field.

The other Renfrewshire field, namely, the Hurlet one, is also peculiar from the number of products raised from the same pits. These consist of limestone, ironstone, coal, aluminous schistus, and pyrites. The copperas from the later and the alum from the former of the last-mentioned products are products manufactured in chemical works near. A section of this field presents the following strata:-

No.	Names of Strata.	Thickness of Strata.	
		Ft.	In.
1	Earth and clay	42	0
2	Sand and gravel	8	0
3	Schistus, with many beds and bails of ironstone .	105	0
4	Limestone	3	0
5	Aluminous schistus . . .	3	1
6	Coal with pyrites	5	3

Ayrshire.

In Ayrshire coal is more extensively diffused, being worked in the parishes of Kilbirnie, Dalry, Killlwinning, Stevenston, Irvine, Dreghorn, Kilmarnock, Galston, Riccarton Dundonald, Mauchline, Muirkirk, St. Quivox, Ayr, Coylton, Cumnock and Daily.

The coal from Stevenston colliery, one of the oldest in Scotland, and in the valley of the Irvine as well as from Girvan, is shipped chiefly to Ireland for distilleries, lime kilns, &c. I understood that this trade has been somewhat affected lately by the competition of Northumberland coal, brought across the country by the Newcastle and Carlisle Railway, and shipped at Maryport. Little ironstone is yet worked in Ayrshire, two furnaces at Dalry, and one at Galston, being all as yet in blast, though more are building, both at these places and also at Kilbirnie.

Having now cursorily surveyed the mineral district comprehended in this Report, I will proceed to the particulars regarding the employment and condition of the younger portion of the labourers engaged in the several works, pointed out for special observation in the Instructions to Sub-commissioners.

I - AGE AND NUMBER.

The tabular returns requested from the principal iron-works and collieries in Lanarkshire not having been made, I regret that it is not in my power to give anything like a correct statement of the numbers of children and young persons engaged in these departments of labour. There is no doubt, however, that the number must be very large. What is perhaps of more practical consequence, viz. the age at which children begin to work in the different sorts of occupations included in the present Report, I can state more exactly from personal inquires. In the coal-pits children are taken down at a very early age, often when eight years old and even earlier, to keep the doors which regulate the ventilation in some mines. The use of these doors, however, is not so general the West of Scotland as in some parts of England, where the coal being at a greater depth fewer shafts are sunk and the fields being less broken up by dykes and troubles, the underground workings extend to a greater distance on one level than is generally the case in the West of Scotland. At nine or ten the child becomes strong enough to help another to draw or push a "whirley," the iron, wooden, or hazel carriage in which the coals are conveyed along small railways from the face of the seam to the bottom of the shaft, from which they are hoisted to the surface by machinery.

Colliers' rules.

The rules very general amongst the colliers for stinting or limiting each other's have an effect in promoting the employment of younger children than would otherwise be taken below ground. The general rule is that a man all not earn above from 3s. 6d. to 4s. a-day; consequently, whatever quantity of coal delivered at the pit-bottom is paid by the employer 3s. 6d. or 4s. - this is fixed by the men as a man's "darg," or day's work. No collier is allowed to deliver more than this, though the employer were willing to pay him for it. If, however, a man has children, they can draw this coal for him, and thus enable him to get through his darg in a shorter time and with less labour than if he had to draw them himself. When the child comes to about 10 years old he is considered by the colliers as "a quarter man," sometime called "a quarter "bain," or "ben." The employment of such a child entitles a man to deliver a quarter more coals above a man's darg and thus instead of 4s. to earn 5s a-day. At 12 or 13 a child is a half man and at 16 or 17 a three-quarter man and may then use a pick and hew coal for himself. A child of 10 would be of very little or no use alone but as the fact of his being in the pit enables his father to earn more than he otherwise could, he is induced not only to take him down but to bring down another younger of nine or so to help him in drawing the whirley.

The following table will show such particulars with regard to coal and ironstone mines as I have been able to compile from the returns made to me, which, however, embrace only one work in the Airdrie district:-

TABLE compiled from RETURNS made from some COLLIERIES and IRONSTONE MINES in the WEST of SCOTLAND, COAL MINES.

Name of Colliery, and of Owner or Lessee.	Number of Seams worked; Thickness and Depth of each.	Number of People employed.			Whether Females are employed; and Age at which Children begin to work.	Gross Weight of Loaded Corf, and Distance drawn.	Power of Engines.
		Adults	13 to 18.	Below 13.			
Govan (Lanarkshire), Wm. Dixon, Esq., Gorbals Parish.	1st seam, 4 feet. 2nd „ 3 „ 1 in. 3rd „ 4 „ 4th „ 3 „ 5th „ 3 „ 6 in. 1st „ 48 fath. deep. 6th „ 90 „	808	157	49	No females; some children begin work from 7 to 8; most about 9 years old.	7½ cwt. 50 to 200 fath.	300 horse power.
Thankerton and Gartsherrie (Lanarkshire), William Baird and Co.	..	..	..	..	16 females; children begin to work from 8 to 9 years old.	..	..
Hurlet (Renfrewshire), J. Wilson and Sons.	1 seam 5 feet 3 in.	..	25	14	No females; children begin work at 9.	..	..
Swindridge Muir (Ayrshire), W. Smith Neil, Esq., Dalry Parish.	Seams 2 to 5 feet; depth 13 to 28 fath.	55	18	4	No females; children begin to work at 10 years old.	5½ cwt. 500 yards utmost distance.	1 engine of 20, 1 of 10, and 1 of 5 horse power.
Kilwinning (Ayrsh.), Lord Eglinton, Kilwinning Parish.	Lady Hall Coal, 2 ft. 4 in. Ell Coal, 2 „ 4 „ Stone Coal, 2 „ 2 „ Main Coal, 4 „ 0 „ Depth of lowest, 40 fath.	50	19	5	No females; children begin about 10 years old.	4¾ cwt. 300 yards.	31
Stevenston, Messrs. Warner and Cuninghame, Stevenston Parish.	5 seams from 2 ft. 2 in. to 4 ft. thick; depth, 20 to 67 fath.	205	44	29	No females; children begin to work at 9 years.	4 cwt. Greatest distance 450 yards.	..
Caprington, J. Smith Cuninghame, Esq., Dundonald Parish.	1st seam, 4 ft. 6 in. 2nd „ 3 „ 0 „ Depth, 40 fath.	103	29	15	No females; children begin at 11 years.	6 cwt. Drawn 200 to 250 yards.	140
Kilgrammie, Joseph Whitfield, Esq., Daily Parish.	1 seam, 3 feet. 1 „ 4 „ 1 „ 5 „ 1 „ 6 „ 1 „ 8 „ Depth, 30 to 35 fath.	40	22	10	No females; children begin from 8 to 9 years old.	9 cwt. Drawn 100 to 200 yards.	1 engine of 30, 1 of 14, and 1 of 10.
Shewalton, Samson and Co., Dundonald Parish.	Seams, 2 ft. 4 in. to 2 ft. 10 in. Depth, 11 to 36 fath.	80	17	12	No females; trappers begin from 7 to 8; drawers 9 to 10 years.	4 cwt. 300 yards.	..
Drongan, Messrs. J. and P. Duncan, Stair Parish.	1st seam, 3 ft. at 8 fath. from surface. 2nd seam, 11 feet at 14 fath. below No. 1. 3rd seam, 5 ft. at 6 fath. below No. 2.	27	3	5	No females; boys begin from 8 to 9 years old.	2½ cwt. 100 yards on an average.	32
Dalzellowlie, Sir C. Dalrymple Ferguson, bt., Kirkoswald Parish.	1st seam, 15 feet. 2nd „ 7 „ 3rd „ 5 „ 4th „ 4 „ 5th „ 7 „ At from 10 to 29 fath.	38	8	5	No females; boys begin about 9 years old.	4½ cwt. Drawn by adults on sledges.	20
Dalquharran, Hon. T. F. Kennedy, Daily Parish.	1 seam, 14 feet. 1 „ 7 „ 1 „ 6 „ 1 „ 8 „ 1 „ 6 „ 59 fathoms deep.	31	12	8	No females, boys begin about 9 years.	9¾ cwt. 50 to 250 yards.	1 engine of 12 and 1 of 10.

TABLE compiled from RETURNS, &c.—*continued.*

IRON-STONE MINES.

Name of Mines, and of Owner or Lessee.	Number of Seams worked; thickness and depth of each.	Number of People employed.			Whether females are employed; and age at which children begin to work.	Gross Weight of Loaded Corf; and Distance drawn.	Power of Engines.
		Adults	13 to 18.	Below 13.			
Whiterigg, W. Dixon, Esq., New Monkland Parish.	Seam, 10 to 13 inches. Wild coal, 8 in. Working places, 22 in. high. Main-way, 3½ feet.	251	39	19	4 females; 1 child at 8 years; others at 9.	11 cwt. Drawn by women and adult males.	153
Staurigg Plaw-yards, Cairn Hill, Raivyards, Coatdye, New Monkland Parish, W. Baird and Co.	..	Not stated.	132	82	13 females; boys begin from 9 to 10 years old.	..	..
Shotts, Chas. Baird and Co., Shotts Parish.	Coal, 2 ft. 6 in., 6 ft. 9 in. Blaes and iron-stone, 1 ft. Depth, 16 to 28 fath.	240	41	32	49 females; children begin to work about 9 years old.	5 cwt. 200 fathoms furthest. Drawn by females.	1 engine 50, and 2 gins.

It is stated in the Evidence and also in answers to your printed queries, that under 13 or 14 boys are of more annoyance than use to proprietors and that they would be glad that they were excluded from the pits at an earlier age.

In the different works for the manufacture of articles of iron the youngest employed are the moulders in foundries where hollow ware is made such as cast-iron pots and pans and in small chain-making; also the rivet boys in the boiler-making department. From 9 to 10 years old is a common age to begin. The nature of these employments will be described below. Boys of 11 and upwards are employed at the rolling-mills, where malleable iron is rolled into bars, rails, &c. and lads of 14 to 16 at the puddling-furnaces. There are three iron-works in the west of Scotland, where malleable iron is made, most of the workers at which are English. At 12 years old boys begin to assist in chain-making, or to assist blacksmiths.

II - HOURS OF WORK.

In collieries it seems the universal custom to begin work very early in the morning often by four o'clock, a practice which must increase the hardship of that sort of labour to young children, boys and girls. The collier usually engages not only to hew or pick out the coal but also to draw it to the bottom of the shaft. In order, therefore, to get coal ready by six o'clock, the time engine starts to raise it to the surface, when the rule is, "first come first served," the colliers are anxious to get coal picked out in time to supply the engine. The time of ceasing work in the afternoon varies considerably according to the hardness of the coal, the distance it has to be drawn, the demand and other circumstances. For instance, if a large quantity of coal drawn from considerable distances is to be raised by one shaft, the drawers must be kept waiting a long time at the pit-bottom till the first comers have sent up their loads before they can return to the face of the coal for another hutchful In some cases the children do not go down quite as early as the colliers, though if young it is safer for them to be lowered in the same corf with a man but in all cases they must remain down as long, if not longer, than the collier, in order to draw the last of his day's work. Consequently, when working full time, the children will remain down the pit 11 to 13 hours consecutively. The same hours apply to the trappers who keep the doors for directing the current of ventilation in some pits.

On inquiring the reason of the early hour at which colliers commence work the only explanation I have been able to obtain is, that some sorts of coal deteriorate if stored up at the pit-mouth, so that it is generally sent off to the furnaces, or by carts and canals for shipment or land sale, as soon as raised from the pit. I imagine, however, that habit and custom have more to do with the practice in most cases than any real necessity.

Night-work in collieries is very seldom practised in the west of Scotland and where it prevails is principally confined to adults called redsmen or on-cost men, who are employed in blowing down the roof, building walls along the sides of the main-roads and keeping them in proper

repair, or in levels to connect one seam with another, sinking pits, &c. In short, it is not the raising of coal but works preparatory to that operation, which cause night-work; excepting to a small extent in Govan colliery, which is the only one, as far as I am informed, where children work at night.

The hours of work in collieries are evidently too long for it is found impossible for men to continue them day after day and the general custom amongst colliers is not to exceed 10 days' work in the fortnight. This is the amount of work stipulated by the regulations of collieries, examples of which are appended. It would evidently be better for all parties were the day's work reduced to such an amount, say eight hours, that the colliers' could work steadily 12 days a fortnight. The objections I have heard to this are, that the men prefer rising later of a morning, and having a complete idle day now and then and that the expense of oil, picks, &c., would be nearly the same for a short day as for a long one.

No.1 - STANDING RULES and REGULATIONS by which all COLLIERS and others employed at GOVAN COLLIERY by WILLIAM DIXON, shall be, and by their acceptance of work are, bound to adhere to and perform.

1. That every collier or other person employed (not under special agreement to the contrary.) shall give 14 days' warning, in writing before he can leave his employment;- and shall perform his stipulated quantity of work within that time. That this warning shall be given to the clerk in the office, before the pay begins, upon a pay-day alone, and counted from that time.
2. That every collier and other servant (not under special agreement to the contrary), shall be obliged, on 14 days' limitation being given him, upon a pay-day, to leave the colliery and flit or remove, at the end of that period, from the house and garden he may possess.
3. That every collier and drawer shall apply at the office and get entry made of the strength he engages to be rated at, either for himself alone, or including that of his family and no alteration will be made upon such entry, unless 14 days' previous notice be given to the clerk.
4. That each collier and drawer shall put out his full work each day, for 10 days each fortnight, according to the strength he is rated at and shall take his instructions from the oversman as to the days in the week upon which he is to cleeck.
5. That each collier and drawer shall run the risk of his work being stopped by unforeseen occurrence or accident, but may be allowed (upon application to the oversman), on his two stated idle day, to make up the time so lost.
6. That no meeting of any kind shall be allowed in any of the pits.
7. That no collier or other person employed shall now be, or while so employed become, a member of, or connected with, any society whatsoever, that does or may interfere, in any manner of way, with the employer's just right of employing, retaining and discharging such workmen as may be considered proper; or with a workman's right of working and engaging to work, in the way, upon the terms, and with whom he may think for the best interest of himself and family.
8. That every person employed at the colliery shall enter as a member of the Govan Colliery Friendly and Free Labour Society, unless the managers of the Society have objections.
9. That every person above 16 years of age shall enter as a member of the Govan Colliery, Govan Iron Works and Forge Funeral Fund, unless the managers of the fund have objections.
10. That every person occupying a house belonging to the colliery shall pay at office, each pay-day, the school wages fixed by the managers of the school for each of his children from 6 to 12 years of age.
11. That the evening-school wages shall be retained in the office each pay, if not paid to the teacher.
12. That no person shall keep a dog, either at his place of work or in any of the houses belonging to the colliery, nor shall keep fowls.

No. 2 - CONTRACT for WORKERS at GATEHEAD COLLIERY, KILMARNOCK.

It is contracted and agreed betwixt the parties following, at Gatehead colliery, on the one part, and B.C., as manager of Gatehead colliery on the other part. That is to say, the said A. B. hereby engages himself to work as a collier at Gatehead colliery for the term of ____ months, from and after this date, and that in any of the pits the master may require his services, either by day or night, as desired and also, the said A. B. engages himself to give regular and steady work, and not less than 10 days per fortnight, unless prevented by distress, or interruption in the pits; and farther, he agrees to give two weeks' notice before the expiry hereof, if he intends leaving the work; and he agrees to submit and abide by the present regulations that are established in the work, or any that may be established during the currency of this engagement for the good government of the work. On the other part, the said B. C., as manager foresaid, hereby becomes bound to see that the said A. B. be paid the same rate of prices that are paid to other colliers in the pit or pits he may be put into, while under this engagements

and also to see that he gets the same privileges and regulations as other colliers in the pit he may be employed.
In witness whereof we have subscribed these presents, at _____, the day of _____, eighteen hundred and thirty _____ years, before these witnesses.

No.3 - CONTRACT for WORKERS at the DUKE OF PORTLAND'S COLLIERIES, KILMARNOCK.

_____ hereby engage to work as colliers at the Duke of Portland's coal-work's, for the space of one year from the dates of our respective signatures and during said period, we bind ourselves to attend to our work every lawful day, if required to do so; and to abide by, and implement, the rules and regulations as established at the works and never to absent ourselves during the period of this our agreement without obtaining the permission of His Grace's agent to do so and we are to keep good order at our work and not to keep, or allow to be kept, at our dwelling-houses, dogs, rabbits, pigeons, or poultry.

No.4 - REGULATIONS to be observed at AYR COLLIERY, and to which every man or boy employed at it, shall be understood to be bound, whether he has signed them or not.

1. Every one hereby declares that he never belonged to, or that he has now renounced being a member of, any union or association of working men and he binds and obliges himself never hereafter to be a member of any such.
2. That if, in violation of the above rule, any one should be found to belong, at any time any such union or association, he shall not only instantly be compelled to renounce it shall also forfeit one month's wages and be liable to pay the proprietor £5 sterling.
3. That there shall be no meetings of colliers or oncost held above or below ground. If there be any grievance to complain of, each collier or oncostman is to complain to the manager for himself alone.
4. That no man or boy who may he employed at the works is under any obligation to pay entry money, or give drink to those who were at the work before them and to prevent each being asked, the person or persons who ask it shall be fined at the discretion of the r or his manager; and any person giving it voluntarily and being thereby the means of keeping the men from their work, shall be fined in the like manner as above.
5. No warning now necessary on either part.
6. That every man shall give, as he hereby engages to give, regular and steady work and not less than 10 days per fortnight; and he engages to work and not less by night or day, and in whatever pit or pits his services may, from time to time, be required, he being paid for his same rate of prices as shall be paid at the time to the other colliers in the pit or pits he may be put into and if any collier does not give 10 days' full work per fortnight, he being prevented by illness or interruption in the pits, then for every day of that number he does not so work, he shall forfeit one full day's wages, if the manager choose to extract it,.
7. That, to prevent loss of work, if any man or boy begins a day's work, and does not finish the same, or produce a reasonable excuse satisfactory to the master or his manager, he shall forfeit on account and in payment of the oncost expenses placed in the pits, a full day's wages.
8. That every collier shall be bound, in the absence of putters, to assist in putting the coals of his pit, whenever the oversman shall require him to do so, he receiving 6d. per day above the ordinary putter's wages for the time being and failing his doing so, he shall likewise be liable to forfeit, at the discretion of the manager, one full day's wages.
9. That no collier shall be entitled to firecoal unless he has worked 10 full days in the fortnight.
10. Any collier exceeding the bounds allowed him to work in shall be fined at the discretion of the oversman or manager and all turns to the trams, &c., to be regulated by the oversman of each pit.
11. Any man or boy taking away the tools of another shall be fined 2s. 6d. for every such tool and if the loser of the tools is thereby deprived of his day's work, the 2s. 6d. is to be paid to him but if it shall appear that he returns the 2s. 6d., or any part of it, he shall likewise be fined 2s. 6d. but if such person did not lose his day's work, the fine shall go to the Poor's Fund.
12. Any man or boy lifting his hand and striking another in the pits, or on the road to and from the pits, or at the pit's head, shall be fined 2s. 6d. for the first offence and 5s. for the second.
13. That in regard to proving any of the offences mentioned above, for which fines or forfeitures may be imposed, the master or manager shall be the sole judge and if he is satisfied that the offence has been committed, there shall be no appeal to any party or court whatever.
14. Any man or boy committing any depredation on the crops or fences in the neighbourhood of, or leading to or from the pits, shall be fined, on proof thereof being adduced, at the discretion of the manager.
15. That for any offences not specially mentioned herein, the master or manager shall have the power to impose fines according to the degree of the offence.

16. I fines imposed under the above Regulations shall be paid by the manager to the Poors' Fund kept for behalf of the distressed about the work.
Ayr Colliery Office, 3rd August, 1837.

Iron works.

In iron-works such children and young persons as are employed either at the smelting-furnaces or at the malleable iron forges, where such are established, work alternate weeks in the day and night shift, remaining at the works for 12 hours successively, though the nature of their employment (to be described below) does not require them to be constantly occupied, or actually to be at work more than perhaps half that time.

In iron foundries, as in almost every other trade in the West of Scotland the regular hours of work are from six a.m. to six p.m., with two hours deducted for meals, making 10 working hours a-day, most works stopping earlier on Saturday and the dinner-hour being postponed till after work is over on that day.

Three classes of foundries.

Under the common name of foundries are comprised works of very different kinds. There are the general founders, who execute any job from drawings to order, such as cast-iron pillars for buildings, railing, cisterns for dye-works, by contract, &c.; these are generally smaller concerns and do not employ many children.

Then there are the hollow-ware makers, who cast pots and pans for export, also grates, bushes for wheels, &c. These employ the greatest number of children, as most of the articles manufactured being of a light description they can be moulded and cast by boys. The hours of work are sometimes two above the regular ones but as the cupolas in which the metal is melted can only be run only once a-day, and I have not seen more than two cupolas in a foundry, one run in the forenoon and the other in the afternoon, the moulding and casting, in which the most children are employed, is thus limited to certain times, beyond which it cannot be extended without enlarging the works. The above articles are cast in what is called green-sand.

The third description of foundries are employed in what is called loam moulding for heavier goods, such as parts of machinery, guns, &c. Such founders are also called engineers when they not only cast the machinery to order but themselves manufacture the engines whether for steam-boats or railway carriages. The first essay in steam navigation having been attempted on the Clyde, the manufacture of marine engines seems to have naturalised itself on the banks of that river at Glasgow and Greenock, where Robert Napier, Todd and M'Gregor, Caird and Co., and others, execute machinery for all parts of the world. In these very large works the rivet-boys, who heat the rivets with which the boiler-plates are fastened together, form the chief class of the children employed.

Causes of over-hours.

The last mentioned class of founders, namely, those who are also engineers, and who make and repair machinery, are the most liable to over-hours of work. In the case of machinery breaking, or of a boiler requiring repair at any public work, such as a factory, print-work, colliery, &c., or on board of one of the numerous steam-vessels on the Clyde, the engineers are required to effect the repairs at night, in order that as little time as possible may be lost by the accident. The frequency of jobs of this kind must of necessity require the employment of some hands at night-work a great many nights in the year. This, however, applies only to a few individuals at a time and for each person in a large work, does not amount to much in the year.

A more extensive demand for overtime is caused by the limited period within which a large order for machinery is sometimes promised. For sake of a single order it would of course not answer to enlarge the premises and ambitious men are sometimes tempted to undertake a larger order than their accommodation enables them to get through within the regular hours. Though Caird and Company of Greenock have gone to considerable expense in enlarging their works in order to obviate the necessity of over-hours, I found that their contract to supply steam-engines to some of the splendid West Indian mail-packets. now building on the Clyde, had been the cause of working two hours over-time for some months.

Ill effect of over-hours.

These over-hours, with the consequent extra pay, allowances of fermented liquors and the cessation from attendance at night-schools on the part of the younger hands, have a demoralising effect upon all the workers, to which it never can be the true interest either of the employer or of the State to allow them to be exposed. The great majority of workmen themselves, as well as of their employers, will, I feel confident from personal intercourse with them support the legislature

in an endeavour to do away entirely with overhours of work, unless in the exceptional cases of a few men repairing accidents at night. Upon this point I have before cited the opinions of manufacturers, founders and others, in my Report on Calico Printing, so that I will only further refer at present to the testimony of a few witnesses engaged in foundries, chain-works, &c., which will be found in the evidence collected by myself on the spot and attached to this Report. (Nos.44 to 48, both inclusive.)

III - MEALS.

In most collieries no particular time is specified for meals. The collier is allowed to put out a certain quantity of coals per day and he may choose his own hours for doing it, the only way in which the period of work is at all regulated by the coal-owner being that the engine by which the coal is raised to the surface begins to work generally at six o'clock in the morning, and continues at work till the day's out-put is all up. In the few pits where horses are employed below ground to draw the coal to the pit-bottom, a cessation occurs in the middle of the day for them to be fed. In other cases the children and others take down with them their breakfast, or it is sent down to them in the course of the morning, of which they reserve a part for eating afterwards and this refreshment they take when it suits them. The drawers generally eat whilst waiting at the pit-bottom till their turn comes to have their coals hoisted.

In the malleable iron-works also and the blast-furnaces, the workmen do not leave the place of work at meal-times but their breakfasts and dinners are usually brought to them by females and as frequent cessations occur in their work during the day, they have generally something at hand to eat during any idle time.

In foundries, chain-works, and others, for the manufacture of iron, the workmen always go home and have generally an hour allowed for each of the two meals taken in the regular working hours; when working extra hours, if beyond one or two, some refreshment, often bread and cheese and porter, is furnished by the employer and eaten in the work.

No machinery requiring frequent cleaning, like that in factories, being employed in any of the works to which the present report relates, no children or others are kept from meals for that purpose.

The chief remark I would add on this subject is, that two full hours for meals out of the twelve should be secured to all workers wherever it is possible for them to leave the works for the purpose.

IV - NATURE OF EMPLOYMENT.

To begin with children and young persons in collieries. The nature of their employment has been already incidentally mentioned. Their chief occupation, when very young, is to open and shut the doors in the sub-terranean galleries, by which the current of air is kept in its proper course for the due ventilation of the entire mine from where it enters by one shaft, or by one-half of a shaft, to where it finds its exit by another shaft, or by the other half of the same shaft by which it descended. The ventilation of a large mine is a very complicated affair and can be understood only by reference to a plan of the whole. Suffice it to say, that were a door improperly left open, on the passage of a whirley or carriage of coals through it, the consequence might be very serious, causing, at any rate, great heat and closeness at the place where the colliers are at work and should any explosive gas issuing from the coal, a great risk of loss of life. The only expedient I have found adopted to secure attention to the closing of the doors in Scotland is to seat a child behind them with a string in his hand, with which, on hearing the approach of a whirley, he pulls the door towards him and shuts it again when the whirley has gone through. These doors are trap-doors and the children so employed trappers. In many pits, however, the ventilation is secured by keeping two distinct shafts in connection, so a natural current of air is caused and trappers and trap-doors are dispensed with. This certainly is far better for the children, the employment being one behind them with a string in his hand, with which, on

hearing the approach of a whirley, he pulls the door towards him and shuts it again when the whirley has gone through. These doors are trap-doors and the children so employed trappers. In many pits, however, the ventilation is secured by keeping two distinct shafts in connection, so a natural current of air is caused and trappers and trap-doors are dispensed with. This certainly is far better for the children, the employment being one of the most monotonous and deadening to all the mental and physical powers of a young child which can well be conceived. The trapper has to sit, often exposed to damp, completely in the dark and in silence, from the time the whirley has passed, cheered only by the occasional gleam of a lamp from a passing whirley, or a few words from the drawers.

A much more numerous race of juvenile workers underground are the drawers - children, or young persons, who drag or push the loaded whirleys along the tram-roads from the place where the coal is worked out to the bottom of the shaft, where it is hoisted up with its load and the children return with an empty one in its place. Up to the age of 14 or so two children generally draw together, one pulling by means of leather loops through which the arms are passed, having a chain from them hooked to the front of the whirley and the other, a younger one, pushing behind with both hands.

It is a general rule, that colliers have no right to complain if the roads are kept three feet high and they are usually a few inches more than this. The amount of labour to which children are subject in drawing is very different, varying in proportion to the load drawn, the distance and the number of times it is traversed, the inclination of the road, the state of repair in which the tram rails or tram-ways are kept, &c. By a reference to the table (p.319), it will be seen that the weight of the loaded corf or whirley differs very widely different mines but this probably arises from some circumstances in the state of the road rendering the draught lighter or heavier. It is sometimes made of iron, sometimes of wood but more commonly of wattled hazel-rods secured a wooden frame and in all cases running on cast-iron wheels.

Any one who has seen the children at work can have no hesitation in saying that the physical exertion necessary in drawing is occasionally considerable. This exertion, however, is by no means continuous. The whirley has to be filled, which is in general chiefly done by the collier with a shovel and by lifting the larger pieces of coal with his hands. The whirley, being loaded and started on the tramway, runs pretty easily till perchance it gets off the rails at a sudden turn, or where another railway joins in. Then the drawer and his assistant, sometimes called the 'putter' must put their shoulders to the wheel to lift or drag it upon the rails again. After this they can take a little rest. Once more they start and perhaps hear a rattling and see a light in the distance. This is another pair of children trotting along with an empty whirley towards the face of the coal. As there is but one line of rails the drawer of the loaded carriage halloos to the others to stop, or to turn their whirley off the line. Thus a passage is left for the full one, which proceeds on its way. Now we will suppose they come to a part of the road where there is a slip in the strata, sometimes called 'a trouble.' Here the road rises pretty steeply for a short distance and now comes the tug of war. The drawer throwing his whole weight upon the chain and leaning his body so forward that his hands touch the rails, whilst the putter pushes with might and main behind, with many a puff they urge the load to the top of the ascent. Here they sit awhile till they have recovered their wind, after which they soon see the lights dancing about a-head and hear the hub-bub at the pit bottom. Here they have some time to wait their turn and perhaps eat a part of the food they brought down with them and pass their jokes with the other drawers. This lasts till the bottomer hooks on their whirley to the engine-rope and returns them an empty one, with which they set off at a run back into the mine, or what they call 'ben.' Thus the drawing, though occasionally hard admits of frequent periods of rest and refreshment. It affords a varied exercise to the body and limbs, so that I heard no complaints from the children of over-fatigue, or of being oppressed by the workmen for whom they draw, who are usually either their father, elder brother, or some relation, nor do medical men attribute any physical injury to the use of children in drawing. The employment of females in work, however, or indeed in any capacity below ground, will, I trust, be absolutely forbidden by the legislature. The practice of employing females in the pits is but very limited in my district, not extending at all to the west of Glasgow, as will be seen reference to the table given above and increasing as we approach the east of Lanarkshire and the borders of Linlithgowshire. In these parts however it is but of recent introduction, it having been one of the rules of the colliers' union that females should be allowed under ground. The temptation to employ them arises from their wages being lower than that of males. Nowhere in the west of Scotland, however, do they bear out coal on their backs, as I understand this is the case Fifeshire and the Lothians.

Both drawers and colliers wear a lamp hooked into the front of their Scotch bonnet. The Davy lamp is never used to work with but only occasionally by the foreman, who in some mines explores with it any parts considered dangerous before the men go in. The common working lamp is like a small tin jug, the wick being placed in the spout and instead of a handle having a sharp hook by which it is fastened to the bonnet. These lights, which appear to be dancing in the air, are the only objects visible on first arriving at the pit bottom and before (as they express it) "the daylight is out of one's eyes."

The employment of the colliers, lads and adults, is the most laborious of any about the pit and its nature will best be understood when the different modes of working the coal adopted in the west of Scotland have been described.

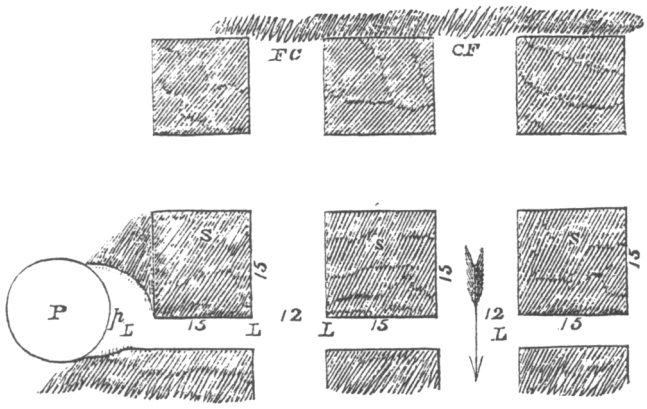


FIG I

Modes of working the coal.

There seem to be three ways in which a seam of coal may be wrought, denominated 'stoop and room,' 'room and rance' and 'long-wall.' The stoop and room plan is the most prevalent. This system of working is represented in Fig I: (P) is the pit-bottom; (LLL) a level road across the dip of the coal, which is supposed to incline towards the spectator in the direction of the arrow-head; a space excavated near the pit-bottom for the bottomers and drawers and under the roof, protected from falling coals, &c.; (RR, &c.) are rooms 12 feet wide, worked out towards the rise of the coal and also across, leaving square pillars or stoops (SSS)15 feet square. The dimensions of the pillars and rooms vary in different pits according to the strength of the roof but the principle is the same. The coal is brought down by the drawers from (FF, &c.) the face of the coal, by railroads, to the level road (LL) and from thence to the pit-bottom, either by drawers, or, more rarely, by horses. If the roof is sufficiently sound and it is considered worth while, when the coal has been thus worked out to the extremity of the property, the pillars are taken out, being at the most remote and the roof falls in, causing a sinking even at the surface of the earth. This operation is one of the most dangerous in which the collier is engaged, requiring much skill and experience to perform and sometimes the pillars are not removed at all.

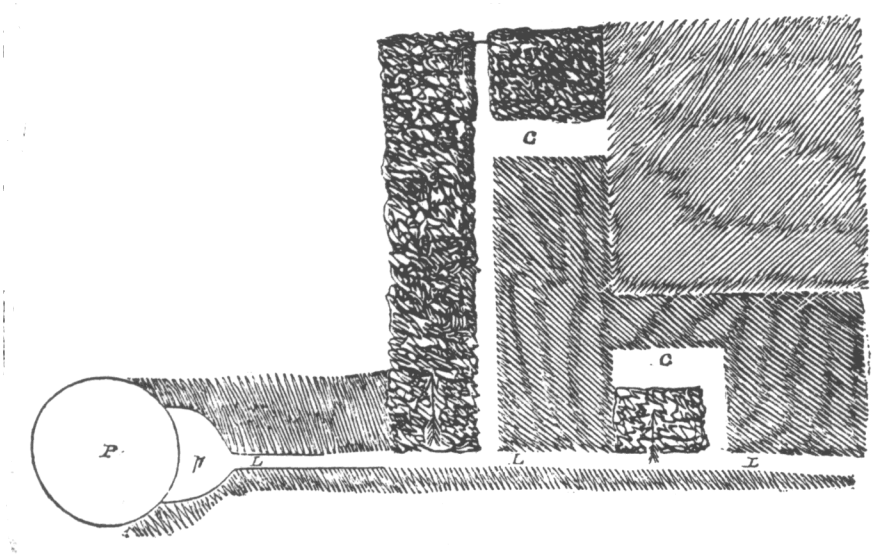


FIG II

Fig. II. represents the room and rance system which is adopted under peculiar circumstances, as at the Shotts iron-works, Messrs. John Baird and Son's. Here coal and iron-stone are worked out together; the coal lies at the bottom, above it clay-band iron-stone, then a stratum of blaes, and then balls of iron-stone. (P) represents, as before, the pit-bottom, and (LLL) the level road. From this road spaces, called 'rooms,' 5 yards wide, are worked up to the rise for a distance of 72 fathoms. These rooms are represented in the figure by the dotted parts, in which the arrows show the direction of the working; the shaded parts represent coal. On the right of the figure a room in an incipient state. The collier works out the coal and a space of 5 yards wide and 4 feet long; he then begins to build up the space behind him with the blaes, leaving only a road-way, 4 feet wide, to his right hand, along the edge of what is called the 'rance,' which is shaded In this way he proceeds, always supporting the roof by building up behind him and at the same time leaving an open road to his right hand, by the coal is brought down to the main-road (LL), till he reaches the distance of 72 fathoms; he then turns to his right hand, as shown by the arrow top of the figure and begins to work 5 yards wide in a contrary direction towards the level, thus taking away the rance and building up behind as before, contracting what was the roadway, which is now becoming shorter and shorter as he returns towards the level.

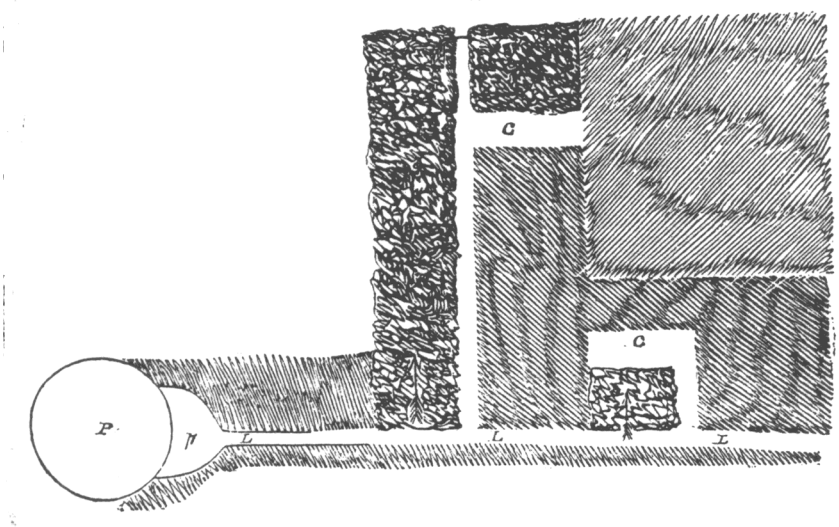


FIG. III

Fig. III. represents the long-wall working; the colliers are represented by the letters CCC, &c. and are each allotted a certain space (of 10 yards for instance) along the face of the coal to work at, having an 'open hand' on the left, i.e. the coal there being worked away by the man before them, so they have to 'shear it,' (or cut it through from the roof to the floor) only on the right side. In Govan colliery, near Glasgow, where this mode of working is adopted, it is the business

of part of the 'on-cost' men, called 'rippers,' to blow away the roof where the coal has been worked out to about 7 feet high from the floor and with the stones thus produced, others, called the 'redsmen,' build walls 10 feet thick for the support of the roof, leaving 6 feet in width between the walls for roadways where required. This oncost is always done during the night. The buildings between the roads are 'biggins,' and so enormous is the pressure to which they are subjected by the weight of the superincumbent strata, that they gradually yield and spread out, so that the roof sinks over the roadways to about 3 feet high, and the sides are brought together, leaving only 3 feet between them. Much of the rock of which the biggins are built, when they have stood some time, is crushed to powder, and the roadways would gradually be altogether closed up were not the roof often blown down and heightened by the rippers. So consolidated do the old walls become by this pressure, that to drive a mine through them is as expensive and laborious as penetrating the solid rock.

Description of the collier's employment.

In whichever way the coal is worked the labour of the collier is one of the hardest with which I am acquainted. The thickness of the seam sometimes affords him more space to work in than is the case in the generality of pits but yet he seldom stands to his work. The ordinary posture is sitting with one leg doubled beneath him and the other foot resting against the coal. In dining his body to one side so as often nearly to touch the ground with one shoulder he digs his pick with both hands into the lower part of the coal, or into a stratum of fire-clay, or some softer material beneath the coal. In this way he picks out an excavation often for a considerable distance under a mass of coal beneath which he half lies to work. When he has after two or three hours labour undermined as much as he judges it prudent to attempt, he inserts iron wedges by means of a heavy hammer between the coal and the roof above it, by which and by the weight of the ground above, the mass of coal is detached and falls. The cramped posture, the closeness of the subterranean atmosphere loaded with coal dust and the smoke of his lamp and sometimes with sulphurous exhalations, together with the bodily exertion, cannot fail to be very exhausting. He is subject besides to severe accidents from unsound parts of the roof, or from masses of coal falling upon him, from the inflammable gas which may burst in upon him and envelop him in flames, or from the deadly black-damp which may stifle him. Rivers or the sea have been known to break into pits and drown those below, the rope or basket in which he daily ascends and descends may break and precipitate him many fathoms, in short, so liable to accidents are colliers considered, that they are usually excluded from friendly societies, except those expressly intended for colliers and almost universally subscribe so much a month to a surgeon, who engages to attend to all accidents without additional fees.

Ironstone miners.

The labour of the ironstone miners is often worse than that of colliers. I have seen them at work in a space of from 22 inches to two feet high, where even when seated a man could not keep his neck straight and to get into the place where he was at work was no easy matter to me. The management of his heavy tools in such a confined space must be very fatiguing. Two men take between them 14 yards of the band of stone and make their own walls of the roof which comes down when the stone is extracted, leaving a road six feet wide to each space of 14 yards. The drawing in the ironstone-pits is never done by children, being too heavy for them. It is often, however, very improperly made the work of women and in other cases migratory Irishmen commence working under ground by engaging as drawers of ironstone, being the business easiest learned. Some of them then get on to hewing out the stone are generally a worse set than the colliers and not being regularly educated to the business are more liable to accidents from ignorance of the proper methods of working.

Children employed above ground.

Having now described the nature of the several employments underground, the only others in which children are engaged about coal or ironstone pits are driving horses on the railways which convey the minerals to the furnaces or to canals, &c. and the management of the engine which raises the mineral workmen up the shaft. I was not a little surprised to find that the management of a high-pressure steam-engine, on the proper working of which so many lives depend, was not unfrequently entrusted to a mere boy of from 12 to 14 years of age. In general, indeed, his father was the pit-head man and from his station could see and communicate with the lad, who acted entirely by his directions but still it appeared to me a practice full of danger. It should be mentioned that frequently the drainage of the Scotch collieries is all pumped up at one pit, whilst coals and men are raised by small engines for this purpose alone at distinct pits; consequently, every hutch which is raised or lowered requires the engine to be twice stopped to allow of its

being hooked on and off and if this is not done according to the signals given by the pit-head man and bottomer, serious accidents might occur. It is also necessary when men are going up and down to moderate the speed at which the engine works otherwise they would run the risk of being dashed against the rocky sides of the shaft. The bottomer consequently always calls out "Men on!" when men are coming up and it is the duty of the engine manager to regulate the speed accordingly. If too the engine does not stop at the proper moment, the men might be hoisted up and dashed against the pit-head frame, which has sometimes happened. All this requires vigilance and care on the part of the engineer, which can hardly be expected of a boy so young as many employed as such.

Kinds of steam engines used at the Scotch collieries.

It may here be observed that high-pressure steam-engines are used in collieries only in the Airdrie district and to the east of Glasgow. In Ayrshire I was surprised to find the old and imperfect atmospheric or Newcomen's engine still generally employed. It will be recollected that in these the vacuum is caused by a jet of cold water thrown into the lower part of the cylinder itself after the piston has been raised by steam applied to the under surface of the piston. The imperfect vacuum thus formed requires an extra weight to he attached to the corresponding part of the periphery of the fly-wheel in order to equalise the motion. I could, however, always tell by the sensation when I was lowered or hoisted up by one of these engines by the sudden impulses and the alternation of jerks and rest caused by the unequal action of the steam and the atmospheric pressure upon the opposite sides of the piston. The cost however of such engines is less and the consumption of fuel is not an objection at the pit-head.

Pig-mou1ding.

With regard to the nature of the employment in iron-works of different kinds, the making moulds into which the molten iron is run from the furnace into pigs, is the only employment connected with blast-furnaces in which children are used. Each furnace requires one moulder for the morning and another for the evening casting, each of which takes place at six o'clock and the moulds take about three hours to make. In front of each furnace is a space covered with sand, sometimes under a shed and sometimes in the open air. The boy who makes the moulds arranges on the ground a number of wooden bars at equal intervals side by side, resting at one end against a long bar which forms the matrix for the 'sow' as it is called and to which all the little iron pigs are attached when first cast. Seven or eight bars being now arranged at proper intervals and tapped with a wooden mallet to make them lie even, sand is thrown upon them with a shovel and pressed into the spaces between them with the cross handle of the shovel reversed. The bars being then again tapped to loosen them are neatly taken out and leave the impressions or moulds for the pigs. The process is then repeated till the necessary number of moulds are made. There are usually about six beds with from 28 to 30 pigs in each to a furnace. The pig-moulders are entirely the servants of the furnace-keepers and often their own children. Excepting the night-work, and the labouring on Sundays, there seems nothing injurious about this employment and not above 120 children are so employed in the West of Scotland.

The malleable iron-works, in which the pigs are converted into bar-iron, employ many more children and young persons, in proportion; though as this sort of manufacture is only quite lately introduced into Scotland from England, only three such works are as yet in existence, viz. Govan, Dundyvan and Monkland. The processes of this manufacture will therefore doubtless be more fully and accurately described, as well as the conditions of the workers, by those gentlemen who have seen it in its native country, Wales and Staffordshire.

Juvenile workers in forges.

The juvenile workers in a forge may be thus classed:-

Names.	Ages.	Weekly Earnings.
		s. d. *s. d.*
Catchers at forge-rolls and heavers-up to roller . . .	12 to 16	6 0 to 10 0
Straighteners and staff-carriers .	12 to 14	5 0 to 8 0
Door-drawers	10 to 15	4 0 to 6 0
Puddlers' underhands . . .	14 to 17	8 0 to 12 6

The iron is rendered malleable chiefly by means of the puddling-furnace of which there are from 15 to 25 in a forge, under an open shed generally of cast-iron. These are reverberatory furnaces, in which the iron is worked about in a peculiar way by means of long iron rods called staffs. Each puddler has an underhand or assistant, paid by himself, who charges the furnace, and often himself works the iron in the early stage of the process. As considerable exertion is required to keep the iron in a proper state and the door is open for the puddler to see into the glowing furnace, the heat to which he is exposed for a certain time is excessive and they generally work with the body quite naked above the waist. Each charge of the furnace takes from an hour and a quarter to an hour and a half before the process is complete and the furnace-man has a rest of about 20 minutes every time the furnace is fresh charged, his assistant resting towards the latter end of the process. When puddled the red-hot lump of iron is dragged along the paved floor of the forge by assistant with a pair of tongs to the forge-hammer, - a mass of metal of about 4 tons weight, worked by a steam-engine. Here the hammerman and his assistants turn it about till it has been beaten into a square block. It is then dragged off along the floor to the heating-furnace, where it is kept sufficiently hot to fit it to pass through the rolling-mill. The boys called door-drawers are attached one to each heating-furnace, of which perhaps there are from six to twelve. The boy's duty is to pull a rod, which raises the door of the furnace whenever the heater requires it. The iron then goes to the forge-rolls, through which it is passed several times in a red-hot state, the aperture being diminished each time till at last it is rolled out to a long bar, rod, or rail of the measured dimensions. Each time the bar passes through the roller it is supported by the catchers, who pass it back over the top of the roller to the heavers-up, who insert it again between the rollers. This is done by means of crooked iron rods, suspended at about a third of their length from a beam over head, along which they traverse, so that the boy, holding the longer end of the lever and catching the red-hot bar in the crooked end, hoists the bar up and passes it back to the heavers-up. This is hot work and not very light for young boys, the glowing iron sending out a powerful radiation as it approaches them. The mills are each taken by a man who is paid so much a ton of rolled iron and he hires and pays the boys and men under him. The bar or rod now rolled out to its proper dimensions, is dragged on one side and beaten straight by men or boys, according to its thickness.

There are also young persons assisting the shearers who cut the boilerplates and at the mills for rolling these out.

It cannot be denied that the forge work continued by one set of hands all day and by another set all night, without leaving the work for meals and occasionally causing exposure to great heat, though with frequent intervals of rest is a sort of labour at which no child under 14 or so should be employed.

Foundries.

The chief work of boys in iron-foundries is the making moulds for casting small iron articles, such as cast-iron pots, &c., cleaning and dressing the above, and in engineering works heating the rivets for the boiler-makers. In the greensand shops each boy has a bench with ground charcoal, sand, &c. on the floor besides him and a few simple tools. A space is allotted to each, extending from the wall towards the centre of the shop, where he places his moulds in a row when made. The cupolas or furnaces are in a state to cast twice a-day: once in the forenoon and the other in the afternoon. The smaller boys doing the lighter articles are at one end of the building and they rise in size and strength progressively. At the time of casting, two boys from adjoining rows convey the molten metal from the furnace in a pot suspended by a long handle, which they carry by each end. A third boy, or a man on purpose, ladles out the metal from this pot and pours it into the moulds. When sufficiently cool a boy takes off the outer cast-iron boxes in which the mould is formed, and knocks off from the article the ‘gate’ or excrescence at the part where the metal is poured into the mould. The pots are then dressed with sandstone and water to take off the rough parts, the sand which adheres to them, &c. These lads are generally apprentices, beginning about 13 years old and earning from 3s. to 4s. a-week, paid by the piece. I cannot learn that there is anything deleterious to health in the foundries, excepting that the brightness of the melted metal occasionally affects the eyes and as they are usually bare-footed, they are liable to get burns in the feet by stepping upon hot iron.

Riveters.

The boys employed by boiler-makers commence work at a very early age, some before they are seven years old and others at eight. Three men compose what is called a ‘squad’ of boiler-makers and each squad must have at least two boys, one to blow the fire in which the rivets are heated and the other to heat them and hand them up with a pair of tongs to the boiler-makers.

Sometimes two other boys are required; one inside of the boiler and another in the 'man-hole,' as it is called, by which the boiler can be entered to clean or repair it. There is nothing but the age to complain of in this employment; but considering the character of the men employed in foundries, &c., it is lamentable that children of so tender an age should be taken from home or school to be exposed to the corruption and bad example of such society.

Chainmakers.

In chain-making, which is paid by the link, a boy is usually employed to blow the fire whilst the chainmaker heats the bar out of which the link is to be made. Having twisted the link into a proper shape and cut it off from the rest of the bar, the man then returns it to the fire previous to welding it. Having taken it out again at a welding heat and passed it through the last link of the chain already made, he welds the two ends together and the boy comes round to help to 'strike the dolly', which is a piece of iron with a groove in it which just fits the particular sized link, and makes the part welded round and even like the rest of the link. The passing round to and from the bellows and striking sharp and quick, is hard work for a child, particularly if continued for too long a period. In chain-cable making a boy and a lad assist the journeyman. From the intemperate habits of this class of workmen they are apt to idle their time at the commencement of the week and to make it up by excessive hours afterwards. The boys soon imitate the bad example set them and begin early to drink and smoke.

V - STATE OF THE PLACE OF WORK

Under this head I am not required to say much in the present Report, as those employed in all kinds of iron-works usually work under open sheds where the temperature differs little from that of the external atmosphere and I have never found them rendered offensive by neglected drains, privies, &c. The coal pits which I visited were universally cool and well ventilated; indeed I desisted from the practice which I at first adopted of carrying a thermometer below ground, finding the temperature so much less than I had expected. The Hurlet colliery being a very sulphurous coal, the smell and taste in the mouth is very disagreeable but I believe cannot be remedied. In passing along the roads the children are generally met by a current of air. Nor have I much complaint to make of the wetness of the pits in general, though in some roads the water remained perhaps two inches deep. Also in some pits which are entered by a stair instead of by the shaft, the dripping from the top was very unpleasant and enough to wet the clothes of the workers. The evidence of medical men will show that they do not trace any ill effects upon the health of the children to their exclusion from daylight and the open air or from exposure to subterranean damp. (Nos.7, 9, 24, 34, 40.)

VI - ACCIDENTS.

The accidents incidental to the employments now under consideration are chiefly confined to the workers in collieries and ironstone mines. In every instance where I had an opportunity of seeing surgeons connected with which would furnish me as to the frequency and the nature of accidents which had occurred in their experience. I was, however, never fortunate enough to obtain any such particulars and the want of such suggested to me the propriety of a regulation obliging every public work to make periodical returns of the number and nature of the accidents happening to any of the workers, the result of each case and the length of time they were kept off their work in consequence.

From the recollections of surgeons, workpeople, and managers, I gathered that serious accidents, even fatal ones, are by no means rare and lesser ones of constant occurrence, in coal and iron pits. The falling of pieces of the roof or of masses of coal, are the most frequent sources of accident to the colliers. The drawers often receive hurts from being jammed between whirleys, for instance, where there is an inclined plane down which loaded whirleys have to travel, unless attention is paid to stopping the wheels properly, the whirley overpowers the children in charge of it, and probably commits some damage before it is stopped. At the pit-bottom, where a crowd of whirleys are always arriving and departing, it must be difficult to escape an occasional disaster. Men are sometimes killed by the fall of pieces of coal upon them from the baskets which are being raised up the shaft, though in general a space is excavated on purpose beneath the roof at the pit-bottom, so that no person need stand in the way of pieces falling as described. The most serious accidents, however, where they occur, are of course the

explosions of carburetted hydrogen. I have before remarked that it is never customary in the West of Scotland to work with the Davy-lamp, though in case of suspicion of danger a foreman is sent in the first thing of a morning to explore with one. The only security, however, against this fearful enemy is efficient ventilation and it seems consequently, to be most formidable on the first opening of a colliery, before the sinking of other pits connected with each other have established a constant and free current of air through the workings sufficient to sweep out all accumulations of the gas

Ventilating fan.

Mr. Houston, of Johnstone Castle, showed me a very simple instrument which he had found very effectual in drawing out impure air from his pits. It was a merely a circular fan with vanes like those of a winnowing-machine, only working horizontally in a circular case. This case was fixed air-tight into the mouth of the pit and being worked by hand was so powerful that its effects extended to the distance of three-quarters of a mile. To show the power it possessed, a part of the pit being on fire, the fan drew the flames and heated air towards it with such force that men were able to approach sufficiently near to erect a wall round the part on fire and thus to prevent its spreading. Black-damp was also drawn out of a pit where it was applied, so a man could walk behind it with a lamp, which, if he extended it far enough, would be instantly extinguished, showing exactly where the body of gas was.

Inquests on sudden deaths in Scotland.

The state of the law in Scotland with regard to deaths and injuries from accidents seem to me anything but satisfactory. The Procurator-Fiscal, a criminal law officer, is the only functionary who has authority to investigate cases of sudden death and these come under his cognisance, not from the fact of the death having been sudden or violent but only if there be reasonable suspicion that grounds for a prosecution for manslaughter or murder exist in connection with the case. Hence negligence in respect to dangerous machinery is not subject to that check with the invariable custom of a coroner's inquest in all cases of death by accident imposes upon it in England.

Upon this subject I beg to refer to the evidence of A. Alison, Esq., Sheriff of Lanarkshire and also to that of G. Williamson, Esq., Procurator-Fiscal for the town of Greenock and Lower Ward of Renfrewshire, in that which is attached to my Report on employments in 'manufactures' in the of Scotland (Nos. 175 and 176). I also subjoin letters from George Salmond, Esq., Procurator-Fiscal for Lanarkshire; from Alexander Murdoch, Esq., Procurator-Fiscal for Ayrshire and one from R. Rodger, Esq., Procurator-Fiscal of the Upper Ward of Renfrewshire; in rep1y to a letter from of which the following is copy:-

1. - To GEORGE SALMON, Esq., Procurator Fiscal for Lanarkshire, &c.

DEAR SIR

June 16, 1841.

As you were kind enough to offer me any assistance in your power in reference to my inquiries on the Children's Employment Commission, I venture to address you on a subject which has incidentally come under my notice during my visits to different parts of country, - I allude to the Scotch system of inquests or precognitions in cases of death from accident and also to the reparation open to those who may have been maimed for life by machinery in public works, by accidents in collieries, &c.

On mentioning these subjects to Mr. Sheriff Alison when I returned to Glasgow at the beginning of this month, it seemed to be his impression that the unwillingness of the County Commissioners to remunerate the Procurator-Fiscals for their trouble and expenses incurred in inquiring into the circumstances of deaths by accident and the consequent risk of loss to the public officer, unless something was brought out leading to a criminal prosecution had very much tended to discourage such inquiries and that they had consequently very much diminished in number of late years. He advised me, however, to apply to you for information on that head but I was not fortunate enough to find you at home, being informed you were in the country. As my circuit is at an end, I can now only apply to letter.

I should be very much obliged by your opinion (supported by statistics) as to the diminution of inquiries into cases of sudden death during the period that you have held your present office and the cause of their decrease if such has occurred. If it were possible I should like to obtain a return of the number of inquests on sudden deaths held annually within your jurisdiction for a series of years, specifying those for which you may have received no compensation for each year and those which led to ulterior proceedings, with the results.

The Glasgow bills of mortality show a considerable number of deaths by accidents each year and I should be curious to know into how many an inquiry has been made. I also find that fatal accidents are by no means rare in collieries but I presume, are seldom the subjects of official investigation.

I hope that you will not deem me influenced only by a national prejudice when I express my conviction that the practice which prevails in England in this respect is worthy of imitation in this country and that it is a satisfaction due both to the public and to the friends of the deceased to know that invariably an inquiry will be made into every case of death by accident. The check thus imposed upon the employers of labour by the consciousness that any carelessness on their part may lead to public exposure, and perhaps punishment, is also, I am persuaded, of use in promoting attention to the safety of machinery, of mines, coal-pits, &c.

I should esteem it a great favour to be furnished with your opinion on this point and also as to any alteration in regard to the means of remunerating such investigations, or to the law, or the officers who administer the law. which may have occurred to you.

From what I have heard, too, I am not satisfied with the means of obtaining reparation in the shape of damages, open to those who, though not killed, may have been crippled life by explosions in mines, or by accidents from dangerous machinery, &c.

I believe an action for damages in such cases is a very expensive process and consequently that redress is practically denied to those who may have suffered by the carelessness of their employers. A register of accidents to he kept by every public work, of which a copy should be returned periodically to some public officer, seems another measure from whence good would probably result. At present even the surgeons attached collieries, &c., do not seem to be able to furnish any statistics as to the frequency of injuries received in the works of which they have charge.

Hoping you will give me the advantage of your knowledge of the state of the law and of your experience of its practical working in regard to the points on which I am desirous of information.

I have, &c.

(Signed) THOMAS TANCRED.

2. - To THOMAS TANCRED, Esq., Sub-Commissioner, &c.

Sheriffs' Chambers, Glasgow, June 24, 1841.

DEAR SIR,

THE English system of coroners' inquests is unknown in Scotland, as is indeed the office of a coroner. In England the coroner's office is that of a judge, and his duties, like those of the sheriff, either judicial or ministerial but principally judicial. A most important duty assigned him is to inquire when any person is slain or dies suddenly or in prison, concerning the manner of his death and this inquiry is made by a jury,. If any be found guilty, the coroner has to commit them to prison for further trial, and also to inquire concerning their lands, goods and chattels, which are forfeited thereby but whether it be homicide or not, he must inquire whether any deodand has accrued to the King or the lord of the franchise by this death and must certify the inquisition and evidence under his and the jurors' seals to the King's Bench Court or the next assizes. The coroner is said to be chosen by the county freeholders, holds office ad vitam aut culpans and by 3 Henry VII., is paid certain fees for his attendance, &c.

In an ancient book of laws, known to our Scots lawyers by the title 'Regiam Majestatem,' and especially the part called the laws of Malcolm II., who began to reign a the year 1004, mention is made of an officer in Scotland called the 'Crowner.'

This officer seems to have been appointed by the Crown, ad vitam aut culpam. His duties appear to have been the attaching and, by imprisonment or bail, securing till the King's Justiciar (whose place is now supplied by the High Court of Justiciary) came round on his circuit, in spring and in autumn, to try all delinquents accused of high felonies or pleas of the Crown; and in stating his office, the following definition is given by Sir George Mackenzie, who was Lord Advocate of Scotland, in a work published in l688 - "The coroner was an officer who took inquisition of murders in corona populi the Laird of Ednam was the heritable coroner of Scotland; but this office is obsolete now except at Justice Airs, where the coroner yet presents all malefactors, and takes them to and from prison."

Since then the very name of the office has been lost throughout Scotland, and for long no inquiry was in use to be made into the cause of the deaths of persons, unless where circumstances indicated it to have been felonious, till several years ago, when the Advocate issued instructions to the sheriffs, &c and their fiscals, to institute inquiry the circumstances of all sudden deaths occurring in places of confinement. This order is dated 29th May, 1838, and as till lately all such places were under the charge of the burgh magistrates and not above three or four cases have been reported to me since, I am unable to give any lists of such cases and from no register existing, excepting what may be culled from the ordinary books of the gaols, &c in and about Glasgow, I regret it will not be in my power to provide the statistical information you want.

As already stated, the cases into which hitherto inquiry has been made by me, are such only as have afforded grounds to believe that the death occurred by violence or the like, this is done here by medical inspection of the body and examination of the places and persons discovered to be, or to have been, where the death happened, &c. The report of the medical inspectors and the written declarations of all the persons examined are taker privately and sent to crown counsel in Edinburgh. who decide and give directions as to whether any one suspected of homicide is to be prosecuted, or what other proceedings are to be adopted. In this you will perceive our procedure differs from yours inform in

form in so far as the investigation is taken privately by the sheriff and fiscal in the Sheriff's Chambers and in so far as it is submitted to crown counsel, in place of being taken by the coroner on the spot publicly, and submitted with the body to an inquest, as is done in England.
Though I am not aware of any instance occurring since my appointment as fiscal in 1816 where investigation was omitted, yet I have no doubt that, from the indifference of persons particularly in the country districts, to report such cases, unless very flagrant and there being no compulsitor, instances may have occurred where no report has been made to me and of course, no investigation made. On this account your establishment of a coroner's inquest is invaluable. as rendering investigation imperative and instant and as giving encouragement to every one to inform as soon as possible. But in Scotland the chief obstacle would be, as it always has been, to get money to remunerate the informer and witnesses, the jurors &c., especially as to cases where the cause of death has bee accidental and self-evident by inspection.
I am not aware how the expenses of such inquests are paid, or to what amount they may in England but at present everything here of that kind is grudged and if any expense were charged as to a case where the cause of death was plain, such as from a fall off a house or the like, it would be refused.
I agree with you as to the expediency of an inquiry being made imperative in every case of sudden death and as to the propriety of every master or manager of a public work being obliged under a penalty, to report every instance occurring at his work within some short period to the sheriff and his fiscal. And I am of opinion that our present mode of investigation, with report to the crown counsel, or in cases of pure accident to the sheriff and a record kept of each case, might, as less expensive, be submitted to by our county people as payable by them out of the rogue-money fund. At present they might lawfully refuse this, they think, because the fund is applicable to criminal inquiries ALONE, whereas ACCIDENTAL death or injury is not criminal. A statutory enactment therefore would be necessary to enforce remuneration for such proceedings.
In regard to injuries by accidents at collieries and other public works, it would assuredly be desirable to have some check on the proprietors and managers to compel them to have the places and whole apparatus and machinery in the safest and best order for their servants. But it is difficult to see how this is to be made a public question. unless the onus were imposed on them of proving that the accident occurred from no culpa of the master not defect in their workings, preparations or machinery, in their power to have remedied or prevented before the accident.
At present all such cases are with us purely betwixt the master and servant a private matter and involving nothing to warrant a criminal charge, never come before me.
I fear I may have failed in making myself clearly understood, or in explaining fully all you wish to know. I am sorry you missed me when you honoured me with your last call. Rest assured of my earnest desire to give you any information in my power and fail not to write to me if you consider it in my power to serve you.
Believe me,
(Signed) GEO. SALMOND.

In a subsequent communication Mr. Salmond adds the following information:-

The fund for payment of any criminal law proceedings is exigible and levied in virtue 2 Geo.I., c. 26, 5. 12; and 2 and 3 Victoria, c. 65; to which and to two printed papers calculated to explain how niggardly has been the conduct of the Commissioners in regard to the criminal department here, forgive me adding copies and referring you. By the first-mentioned statute it is enacted, "That it shall and may be lawful to and for the freeholders of every shire, county, or district in North Britain to assess the several shires and stewarties where their estates lie, at their meetings at any of their head courts yearly in such sums as they shall judge reasonable and sufficient for the purposes aforesaid and that such moneys so from time to time to be assessed shall be collected, received and accounted for by such person and persons and in such manner as such freeholders shall from time to time appoint and shall be supplied for defraying the charges of apprehending of criminals and of subsisting of them in prison until prosecution and of prosecuting such criminals for their several offences by due course of law and to and for no other purpose whatsoever. [This money is called rogue-money. - T. T.]
By the Act of Victoria the Commissioners have now got the charge of the rogue-money in place of the freeholders and they have in a partial way amended matters by agreeing to pay the fiscal's outlay 5 sooner than formerly. They have also determined on erecting a suit of public offices for the sheriff and myself but I am told that for what my department require I am to be obliged to pay 60/- a year. As to the inquiries into sudden deaths unless they fall under an Act of Parliament or the order of the Lord Advocate, no payment would be allowed me, as they and even Exchequer, would resist it, unless there were circumstances of suspicion, such as to render the same imperative. It would therefore in order to have the thorough investigation of every case complete as in England, have the law of England in regard to such cases extended to Scotland.
I am, &c.,
(Signed) GEO. SALMOND.

One of the printed papers above referred to, entitled "A Memorial for the Procurator-Fiscal of the Sheriff Court at Glasgow." contains the following passage:-

"But, besides the preceding wants, the great procrastination and in paying the accounts due to the Sheriff's Criminal Establishment is, and has of late been, most oppressive and distressing. Instead of the fiscal and the other officers having their dues paid at the instant the business is performed, as is the case, with the sheriff clerk in civil matters and all public functionaries whose emoluments arise from fees and as was the intention of the legislature in ordering a rogue-money fund to be raised and ready for the sheriff's purposes when required the system has been adopted of the county refusing to pay the sheriff's order on the rogue-money for any sum whatever and to stave off all accounting and payment for years together, leaving the fiscal no help for it but either to stop the public service or from his own resources obtain the supplies necessary to carry it on, consequently, throwing on him the burden and hitherto unrequited expense of keeping books and long accounts of every piece of business done and sum advanced - of making such accounts for Exchequer and the county - of attending auditings of them in Edinburgh, &c and, as these accounts are not taken in by Exchequer till some time after the elapse of a year subsequent to their commencement and no part of them is paid till the end of the second year and that without interest for even outlaid money, and after most ridged taxation and reduction, it follows that the fiscal has performed two years' duty and made two years' gratuitous advances of his own money, before he gets one farthing for it and that besides his unrequited trouble in procuring the money which rogue-money collector should have given him on the sheriff's order, he has sacrificed the interest which he himself had to pay for the money he advanced.
Nor is this all. After the auditor in Exchequer marks off such items as should have been had from the rogue-money and not before then, has an account to be made out and sent to the Commissioners at Lanark and here another disheartening delay takes place, which may be sufficiently explained by mentioning the undeniable fact, that, though, on 30th April, l839, when the fiscal from Glasgow attended the county meeting at Lanark an account due him for business in 1837-8 was then directed to be paid, yet up to the present hour, he and those assisting him, have been unable to recover a fraction of it while the fiscal has meantime been under the necessity of procuring the support required and also the supplies indispensable for the interest of the public in his department."

3. - To THOMAS TANCRED, Esq.

Sir County Buildings, Ayr, July 7, 1841.
I RECEIVED your letter of the 1st.
In eases of death by culpable conduct, we, in this county, take a precognition county or Exchequer pay the expense. But it is only when the public voice speaks out, seeking for inquiry in any case that such cases are attended to. However, the vox populi is generally well founded and is seldom concealed when it is thought death has been occasioned by unfair means.
We have no coroner's inquest as in England and the numerous instances of death by accidents are seldom inquired after, unless where blame exists and information is given.
The establishment of railways has doubtless increased the number of deaths by accident but I have no opportunity of learning the amount of precognitions taken or whether such accidents are more numerous than in former years.
I am,
(Signed) ALEX. MURDOCH

4. - PROCURATOR-FISCAL of Renfrewshire to T. TANCRED, Esq.
Sir, Paisley, 30th June.

I WAS favoured with your letter of the 29th ultimo, which I regret having been unable to answer sooner.
It has been the invariable practice here in cases of sudden death, where these are accompanied by any circumstances of suspicion, to direct a medical inspection of the body to take such precognition by the examination of witnesses is the nature of the case seems to require. This course is also followed in some other cases, which would not otherwise appear to require it; for instance, when a dead body is found and is unclaimed, or when, for their satisfaction, the friends of a deceased person dying suddenly wish an inspection of the body to be made.
When the result of the investigation shows that death has occurred through violence, the parties accused are apprehended and committed for trial and the proceedings are reported to crown counsel, who give directions as to the further disposal of the case. But when it appears that the death of the party has arisen from natural causes, or has been purely accidental, no further proceedings are taken, except in some cases of serious accident and of the public interest such as steam-boat explosions and the like, when it is also considered proper, from the public importance or nature of the ease, that the details of the occurrence, though the result of the inquiry proves it to have been accidental, should be submitted to the consideration of crown counsel.
According to your desire, I have prepared a statement showing the number of cases of accident and sudden death investigated in this ward of the county of Renfrew for the last ten years, stating the names of parties where known, the cause of the inquiry, and the result in each ease.

In regard to the expense of these investigations, the rule is, that in those cases reported to crown counsel the charges are defrayed by Exchequer; while the expense of those cases of minor importance not reported is defrayed from the county rogue-money and in this way the expenses of all the eases investigated here have been uniformly defrayed.

With regard to cases of accidental death, it may be mentioned that these are not usually the subject of inquiry unless accompanied by, or occurring under, circumstances giving rise to a suspicion of their having been caused by culpable recklessness or carelessness, or unless an inquiry is desired by the friends of the deceased and the same may be said of other cases of sudden death, where the notoriety of the circumstances under which they have happened leave room to suppose that they have occurred through improper means. I am not sure that a different course, making every case of sudden death the subject of inquiry, would afford greater satisfaction to the public who are generally interested in such cases only when some apprehension exists that they have been caused by improper means and in so far as the friends of the deceased are concerned, I certainly think that in many instances the publicity given to the case by a judicial inquiry would be extremely painful and repugnant to the feelings, - particularly in case of suicide, where the minds of relatives are peculiarly sensitive to any sort of exposure and where the cause of death is generally so notorious its to render a public inquest of no manner of satisfaction whatever but, on the contrary, worse than useless.

In regard to the mode of proceeding in making the inquiries that do occur, I am not sufficiently informed to be able to hazard an opinion as to the practice elsewhere. But I cannot help thinking that the mode adopted in this country of leaving such investigations to a public officer, medical assistance when required, without laying the details of the case before the public, at least in the first instance, is more in accordance with the feelings of the people of Scotland than a public inquest would be and is also of greater advantage in those cases where accused parties are to be secured, as well as in their trial afterwards, where no bias from the is previous proceedings can possibly arise.

As to the means of reparation to persons injured in mines and other public works, I am inclined to think that many cases of hardship exist for which there is no legal remedy. For except in cases of a very peculiar kind and of rare occurrence, arising from carelessness on the part of employers, in the great majority of instances no claim of reparation for injury will rest against any party, the injury having either been caused through the carelessness of the party himself or having been purely accidental. Where there are good grounds for claiming reparation a remedy is afforded by the Scots law to persons unable to bear the expense of a law-suit to enforce their claims, by allowing such persons, on their instructing a probable ground action, to be put on what is called the Poor's Roll, by which means their case is managed without expense to them.

Though the occurrence of accidents in mines and other public works may generally be imputed to mere accident, or the carelessness or recklessness of the workers themselves, it is not probable that in many instances less attention is paid on the part of employers to the due and proper means of precaution necessary to guard against accidents than what ought to be and it appears to me that the plan you propose of keeping a register of accidents in work and of making a return of these periodically to some public officer, - say the procurator fiscal of the district, - would be attended with advantage. Were it for nothing else, it would direct the attention of employers more particularly to the occurrence of such accidents and might beget greater watchfulness on their part, from a knowledge that every such occurrence must be accounted for. The return should be enforced under a penalty, and should specify particularly the nature of the accident and the cause of it; and it might also be proper that a copy of the return should be hung up in some public place in the work for the inspection of all concerned.

I hope that the particulars now given will afford you the information yon desire and I have only to add that I shall be happy to afford you any further explanation on the subject that it may be in my power to give.

I am, ROBERT RODGER,

For R. WYLIE and SELF, Joint Procurators Fiscal of the Upper Ward of Renfrewshire.

[The annexed table of precognitions on cases of sudden death investigated by the procurators fiscal of Renfrewshire (upper ward) for 10 years preceding Whitsunday, 1841, containing few cases of deaths caused by accidents in public works, has been omitted.-T. T.]

VII - HOLIDAYS.

I have observed in my Report on calico-printing that the only holidays secured to the people of Scotland by the Presbyterian Church, besides the Sundays, are two in a year, on the days of the fast, or preparation for sacrament the in each parish; besides these, one or two days about the NewYears holidays in all public works. These, I believe, are all the stated holidays which universally prevail; to these may be added another for works in the neighbourhood of Glasgow, viz. the anniversary of the Glasgow Fair. Glasgow Fair and 'Newrdy,' a contraction of New-Year's Day, or 'Hogmanay', the eve of the New Year, are common epochs from whence children date their age, the time of their employment, or other particulars.

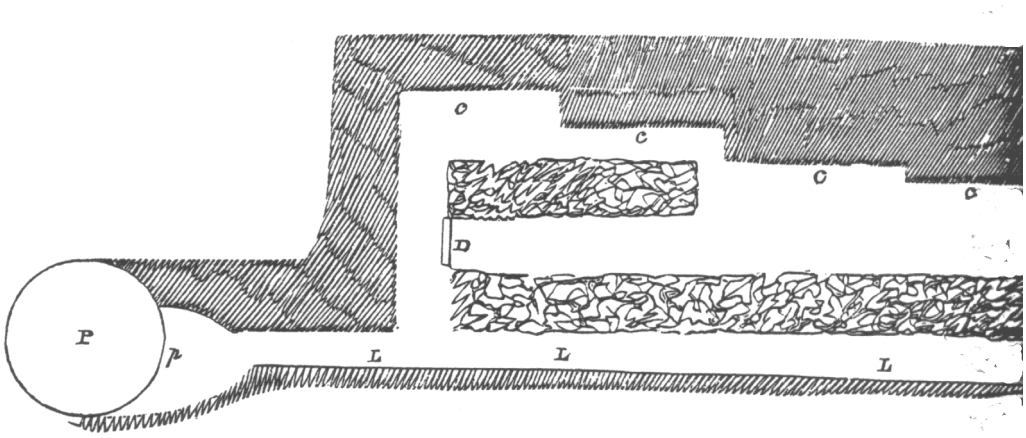
Besides the yearly holidays, colliers, as before observed, seldom work above nine or ten days in the fortnight and stopping work earlier than usual on Saturday afternoon is becoming very general in other works comprised in the present report. For daily recreation and play for the younger hands, alluded to in your instructions, there is not much time.

I beg specially to invite attention to the fact, that most of the blast-furnaces in the West of Scotland continue to work through the Sunday as well as on other days and nights of the week. To this practice I trust that Parliament will have no scruple in putting an immediate stop. It is proved by the example of those who adopt a contrary practice, that beyond the production of one-fourteenth more pig-iron in the week there is no peculiar reason for an infringement of the day of rest in the case of these works. Gartsherrie and Sommerlee iron-works have the merit of setting the example of stopping 12 hours on the Sunday. Mr. J. Baird, of the former company, informed me that they had found great advantage from the practice. The men were much the better for it and the furnaces too. If a furnace is 'cutting' - i.e. if the blast goes round the charge instead of through it and thus acts upon the bricks of which the furnace is built instead of on the ore - the stopping on Sunday will often set this right and the blast will then take a proper direction.

VIII - HIRING AND WAGES.

Drawers to colliers are generally their own children, or younger brothers or sisters and are paid by the adult whom they assist. In some cases from the destitution to which the want of a regular relief for the poor subjects families and particularly orphans or children of widows in Scotland, a collier is enabled to obtain the services of a child by merely supplying him with food and clothing. An instance of this is given in the Evidence (No.118).

The subjoined table will give the information which I have received regarding the points specified under this head in your instructions:-



It is rare that any formal contract is entered into with the juvenile workers above specified, unless they are apprentices and even in that seems seldom the custom in Scotland to bind them by formal indentures. Legally, I believe, the ordinary contracts made in Scotland with apprentices are binding only for a twelve month, regular indentures being considered an embarrassing tie upon both parties, without any equivalent advantage. When hired without contract by the master, it is generally understood that a notice of a fortnight, or whatever time may elapse between one pay-day and the next, is to be given and received by both parties but if the boy or lad is only an assistant to the workman and paid by him, no such implied contract is presumed; he may be discharged at a moment's notice.

The following is a specimen of the form required to be filled up in their own handwriting by all boys applying to be received into the service of Messrs. Liddell and Co., founders, of Glasgow, upon which they remark as follows:-

> We are very rarely give work to any boy who cannot write, because we have found least that three out of every four boys who could not write at the time of their entering our work have never done any good, being either worthless workers or worthless characters, or both.

SCHEDULE to be filled up in the handwriting of boys applying for work at the Globe Foundry.

The boy's name,
His age last birthday,
His parents' names, and the business his father follows, if alive,
The number of his father's family,
Their residence, Street, No.
Who he resides with, if not with his parents,
The nature and kind of work he has been at, if at any,
The department of the business that the boy wishes to learn, whether smith-trade, brassfounding, iron-founding, or tin-smith,
The name of the church that his parents and he attend,
Dated _____ 18 . The boy's subscription,

(This paper must be subscribed by the father of the applicant, if alive; and by two or other individuals of known probity, certifying that to their personal knowledge what is written above is correct. It is fully understood that these subscriptions do not in any way bind the parties so subscribing to guarantee the future good conduct of the boy applying for work. The persons now subscribing this are requested to give their address.)

We certify, that to our personal knowledge what is written above is correct.

_____ father of the boy.
ROBERT STEEL, provost, Rutherglen.
ANDREW LECKIE, flesher, 281, Argyle-street.

I have not found that any practice exists in the employments now under consideration, of masters lending money to parents to be repaid out of the labour of their children.

Truck System.

The greatest abuse which prevails in the West of Scotland in reference to the payment of wages, not only in collieries and iron-works, but in other branches of manufacture, as bleaching particularly, is the system of stores at which the workers are more or less obliged to deal. I have no hesitation in saying, that the spirit of the Truck Act, and in some cases its very letter, it is most grossly violated in numerous works, by which unfair and illegal profits are made from the hard-earned wages of the workpeople. It is almost the must universal custom in the Airdrie district for the iron-works to have connected with them, within the gates of the works, or close adjoining the dwellings of the people, a store or shop, where not merely provisions, but every article of clothing and in many instances spirits, are sold. At the first establishment of these works in an uninhabited country, a few miles distant from any town, it might have been a great convenience to the people to have heavy articles, such as meal, potatoes, &c., retailed at a common store near at hand and if the prices were moderate and the quality of the articles good, there was an advantage to the workers in the plan. But still, even in that case, the free option should be permitted to every one of dealing where they choose. Without this indispensable condition the system is always liable to abuse; and even if ever so fairly managed, the workers will not believe but that an unfair advantage is taken of them. Of course it is impossible for me to specify particulars as to the tenure on which the stores are held by those whose names are written above them and who are ostensibly the lessees; but I will leave it to you gentlemen to judge whether the circumstances do not wear a very suspicious aspect. In the first place, the workmen are not free to deal where they like. The periods of pay are at longer intervals in Scotland than is usual in England, being often once a-fortnight and not seldom once a-month. The excuse for this is the amount of trouble which would be caused by more frequent pays. But the trouble appears to me manifold greater under the present system, which leads me to the conclusion that that trouble is not unprofitable. According to the present system, the workmen or their families cannot in general abstain from lifting a portion of their earnings in the intervals of the pay and a clerk must be constantly at work keeping an account of these advances, which are to be deducted on pay-day. These advances always find their way to the store and the trouble of making them would not, I think, be taken were they expended in the public shops.

Modes of evading the Truck Act.

The thing is managed in several ways. For instance, a woman goes to the store and says she wants so many ounces of soap, tea, sugar, so much meal, potatoes, bacon, &c. These articles are entered by the storekeeper in her pass-book, with the price of each and she goes to the pay-office,

close to the store door perhaps and shows the book, upon which the clerk reckons up the amount, pays her the money and back she goes to the store and procures the articles. Another plan is this: the wife goes to the store, takes what articles she wants and leaves it to the storekeeper to set the amount against her, having 'a line' from the master to say what the wages of herself or husband are. On the pay-day the storekeeper sends in his books to the clerk, and the amount of each person's advances is deducted from the pay. At some works, I believe, the workman obtains credit at the store, and receives the whole amount of his wages according to law; but if he failed to pay up his account at the store, or did not deal there at all, he would not long be allowed to remain in his house or employment. In one instance I found that the law was directly violated by the payment of all advances upon the wages in ticket-money, of which the annexed figure is a specimen. (This new coinage consists of shillings, sixpencees and half-pence of pewter).

This was at a bleach-field, in which department of manufacture the payment of wages usually takes place at excessive intervals, only once in six or seven weeks and the earnings not exceeding 6s. or 7s. a-week, the women are virtually compelled to receive advances to procure necessary articles of subsistence.

Profits of stores.

The profits of these stores are known to be very large and instances have been often mentioned to me of ironstone contractors taking a pit at less than it could possibly pay at, calculating that they should make up the deficiency by causing their workmen to deal at a shop in which they had an interest. I believe the abuse is carried to its greatest extent amongst the ironstone miners. It is the general custom to let the ironstone-pits to contractors, who engage to deliver the calcined ore at so much a ton. These contractors are often needy men, unrestrained by any very nice feelings of honour and the workmen being often Irishmen, and of very dissolute, improvident habits, the temptation of getting spirits, &c., on credit, draws all their wages to the contractors' store. On this point I beg to call attention to the striking facts mentioned by the Roman Catholic priest at Airdrie (Evidence, No.20); also to that of Campbell Snodgrass, Esq., justice of the peace, &c. (No.28; see also Nos.26 and 41 of the Colliery Evidence and Evidence on Bleach fields, No.52, towards the end). Mr. Baird, of the Shotts iron-works, well known for the attention which he pays to the moral character and comfort of his workmen, and who, as a foreman of his expressed it, 'will not hear of a store,' informed me that at some ironstone-pits of his own he could get workmen at lower wages than his neighbours, because he paid them in hard cash and had no store. Many manufacturers, whose feelings of honour forbid them to adopt stores, have represented to me the disadvantage at which they are thus placed so long as their neighbours are allowed to make this extra profit out of their workpeople.

Present the existence of a middle-class.

The effect of the stores is also injurious at Coatbridge, where there can no longer be any excuse for them, by preventing the rise of a middle class where one is so much needed; for here they sell, as before observed, not merely articles of household provisions, but all sorts of clothing and many things which would be much better purchased in the town. It should be observed that this pernicious custom of stores, as far as collieries and iron-works are concerned, is confined in the west of Scotland to Lanarkshire, not existing in connection with the Renfrewshire or Ayrshire collieries.

The subject is one to which I sincerely hope the attention of the Legislature will be directed. I am aware that it is not easy to prevent evasion of the law but should the present inquiry result in the appointment of some Inspectors of other public works similar to those now appointed to watch over the observance of the law in factories I see in these officers a means of securing the workmen against the abuse to which I am at present referring. Such inspectors might have power to take evidence on oath and to call for all necessary papers and documents and thus to ascertain the terms upon which stores are connected with works are rented by the nominal lessees and whether wages are always paid in full in the current coin of the realm, as well as the prices and qualities of the articles sold at the store. It should also be provided that no spirits should in any case be sold at stores and that on abstract Truck Act should be conspicuously exhibited in them.

Arrestment of wages.

Another subject deserving of notice as closely affecting the welfare of the working classes in Scotland, is the law of arrestment of wages, by which a creditor has the power of interfering between the employer and his workpeople by preventing the wages being paid to the latter. The

last Acts of Parliament by which this subject is regulated are 7 Will. IV. and 1 Vict. c. 41. Since this a Bill, tantamount, I believe, to the abolition of the law of arrestment in the case of workers' wages, was introduced in the last Session of Parliament by the Lord Advocate but the opposition excited against it on the part of the retail dealers and others was so strong that it was withdrawn. As an opinion derived from my limited experience is worth anything, I must say that I think the evils resulting from the law, in the inducement it holds out to shopkeepers to give improper credit to workpeople, and to workpeople to involve themselves in debt, far outweigh its supposed advantages.

The circumstance which tended most to make me question the soundness of my opinion, was the fact of its being opposed to that of Mr. Sheriff Alison, who is known no less for the ardent concern he takes in all which affects the interests of the lower orders, than for his historical and economical writings. On referring, however, to the evidence which he was kind enough to give me on this and other subjects (Miscellaneous Evidence, No.175), it will be seen that this support of the system of arrestment arises in great measure from a dread of the increase of the evils of the truck system. In the first place, however, I ventured to state to him that I think, from his having become acquainted with these evils chiefly by sitting as judge in the small debt court, thus seeing only the worst side of the character of the working classes in regard to improvidence that he has been led to form an exaggerated estimate of its extent. In the next place, I always contemplate and have proposed above, a vigilant superintendence of these stores, which should in great measure prevent the evils of which Mr. Alison most justly complains. Having stated the opinion which from what I have seen of the working of the stores on the one hand, the consequences of the arrestment of wages on the other, I have been constrained to adopt, I will give the reasons against the present system of arrestment in the words of a gentleman whose experience as an employer of workpeople to a large extent and whose great benevolence of feeling, entitle his opinion to very great weight:-

Dear Sir,
Glasgow July 6, 1841.
I have today forwarded the return of the people employed in our warehouse and with it a short essay on the arrestment of workers' wages in Scotland.
I do not flatter myself I have adduced anything which has not been known before at head-quarters. All I have attempted is merely to give a short statement, as plain as I could of how the law affects the working classes at present.
Perhaps you will do me the favour to spare a few minutes in perusing the document.
The more I inquire into the system of crediting workers and particularly the ‘club-ticket’ part of it, I feel the more and more convinced of the pernicious tendency.
We give employment ourselves and through Messrs. Guthrie, Kinloch, and Co., and Messrs. Sharp and Thomson, who are employed by us exclusively, to upwards of 2000 workers not partially but entirely in our employment and who depend on it for their sustenance.

REMARKS ON THE LAW OF ARRESTMENT OF WORKERS WAGES.

Having expressed ourselves to Mr. Tancred unfavourably of the present laws of Arrestment of Workers' Wages, we were requested by him to send along with our return of our return a statement of the sentiments on the subject.

being manufacturers, it may be thought we are interested parties and likely to give a one-sided view of the case, it is therefore necessary to premise our observations by mentioning that we have no interest ourselves in any way, nor are Messrs. Guthrie, Kinloch, and Co., nor Messrs. Sharp and Thomson, who are employed by us exclusively, interested, either directly or indirectly, in any stores or shops of any kind, for the supply of workers with articles of food, clothing or anything else.

We confess we are much annoyed by the system of arrestment of wages and put to a great deal of trouble in consequence but beyond that we have no direct interest in the matter and our chief object in now noticing the subject is for the good of workers generally. and particularly our own.

Our testimony may therefore be received with perfect confidence, so far as any pecuniary interest on our part is concerned.

We may also state that mill-owners and proprietors of public works have no direct interest in doing away with arrestinent. With few exceptions they are a class of highly respectable men, who wish to take no unlawful or improper advantage of their workers. We think the Factory Inspectors and Sub-

Commissioners who were lately appointed by Government to examine into the state of the working classes, will verify what we I now stated.

It may be true that managers of factories and public works may sometimes secretly and without their employers having the least knowledge of the matter, get a consideration from certain shopkeepers for granting what is called lines, that is, by giving the workers notes to shopkeepers to get food or anything else upon credit and at the pays keeping for the shopkeepers the amount the workers owe them. That this is practised we have no doubt but it must be to a very limited extent and in the most clandestine manner, as a manager would risk his situation if it was known to his employers he practised anything of the kind.

The law of arrestment of wages enables the shopkeepers to give credit to any worker employed in a factory by having the power of arresting his wages at the pay but the annoyances, trouble and vexatious caused to the master, his managers and clerks, are beyond what may at first sight appear and we shall give a few instances that have occurred to ourselves, merely for the sake of example.

In our factory in Peel-street we have at present in our possession thirty arrestments which have been left in our hands, on worker's wages and not one of the workers are in our employment. These thirty arrestments have been lodged with us within six months and for every one of them we have been obliged to make a thorough search of our books and in case any of the parties should be with us under false names, we have had to inquire particularly at all our tenters or sub-managers. Peel-street factory is in suburbs, about ten minutes walk from the centre of the town but the officers who lodge the arrestments, to save themselves the trouble of going to the work, frequently deliver them at the warehouse in town and compel us to take the trouble to send a clerk or some other person to the works.

Some time since one of the weavers had her wages arrested, and when she was told of it she left the work. The person who had arrested the money called on our manager after the pay and demanded payment, which was refused, as the consent of the worker could not be had. He then threatened to summon us before the sheriff and compel to pay him, which we at last did, rather than be at the trouble of going into court. Six months afterwards the same weaver applied for work and as she was a good worker, we gave her employment but before the first pay her wages were arrested again by the same person and as before, when she was informed of it she left the work. The person a second time threatened us with the sheriff's court and as formerly, rather than be annoyed, we paid the money and got a receipt. We had no sooner done this than the weaver summoned us before the sheriff and we were obliged to pay to her one-half of her wages, with all the expenses.

Another time an arrestment was left at the work against a weaver said to be in the work. We examined carefully the books, but could not find such a name. The person called for the wages after the pay and insisted being paid them, as he said he could prove the weaver was in the work. He summoned our manager before the justice of peace court, when, after waiting nearly the whole day, the case was dismissed through some informality in the arrestment.

We could give very many instances such as these of the annoyance and trouble we are put to by these arrestiments but they are unnecessary for our present purpose.

There are from three to twelve arrestments left at our factory in Peel-street every pay (two weeks) and it is the most disagreeable thing possible to witness the disputes that take place between the persons who leave the arrestments and the workers.

We have repeatedly known workers' wages, amounting to l5s. or 20s., arrested for the small sums of 1s. and 1s. 6d. and having from 4s. to 8s. of expenses to pay.

When the arrestee does not know the factory in which the worker is employed make the money sure they arrest the wages of that worker in three or four different factories, thereby giving, in these three or four factories, the managers and clerks the annoyance and trouble of looking through their books to find the individual against whom the arrestment is laid.

The best proof that these arrestments are unbearable and vexatious to many employers is that hardly a newspaper is published in Glasgow without some advertisements giving notice that they pay their workers daily, and thereby get free of the law altogether.

But if arrestments of wages are annoying and vexatious to employers, we do not consider their case worthy for a moment to be considered in comparison to the evils inflicted on the working classes. The masters do suffer and it is hard and seems unjust they should be put to so much trouble about debts in which they have no concern whatever.

But when we consider its effects on the working classes, the gross imposition practised on them the want of morality it engenders, we are surprised the legislature has not interfered long since to put a stop to a system, the working of which leads to so many bad consequences.

In most of the factories and public works in Scotland workers receive their wages in fortnightly monthly payments. It may be asked, could the terms of payment not be easily reduced from two or four weeks to one week or even less? In answer it may be stated that the making up of the pay is a matter requiring a great deal of trouble in balancing every worker's account and it will be at once seen that to do so oftener than every two weeks would be nearly impracticable.

In the intervals between the pays workers often run short of money. chiefly from a want of calculation in the distribution of their funds and from careless and improvident habits arising nearly altogether from the facility of credit in consequence of the law of arrestment of wages.

In this state workers have no alternative but to apply to the shopkeepers who give credit. There are two classes of shopkeepers, one who sells for cash, the other for credit. The credit shopkeeper incurs considerable risk in receiving payment, from dishonesty and want of ability on the part of those who purchase from him and in nearly every case is put to great trouble and considerable expense in recovering payment.

In Glasgow, workers frequently give false names to their employers, for the express purpose of contracting debts in their real name, or evading the payment of old debts and thereby swindling the shopkeeper.

The law expenses of credit shopkeepers amount to a considerable item and their charges altogether are very heavy and of course must be added to the cost of their goods. It is therefore palpable that their *cost* with charges must be much higher than that of shopkeepers who sell for ready cash. Their rate of profit must also be much higher, for two principal reasons besides those already given. In the first place, the credit system necessarily requires more capital for the same extent of business than the cash system. In the second place, it is a more complicated and troublesome business and involving much more anxiety.

Altogether, from bad debts, law charges, extra expenses of various kinds, a larger capital and more trouble and anxiety, it is quite evident the credit shopkeeper cannot sell his goods of equal quality nearly so low as the shopkeeper who sells for immediate payment.

The difference has been estimated at from 20 to 30 per cent. for an equal quality of food or clothing. *The worker therefore pays for the credit he receives from one-fifth to onethird of his whole wages.*

Besides all this, credit shopkeepers sell inferior articles, their attention being chiefly directed to the selecting of such customers as can be safely trusted and looking after their accounts. The worker who buys on credit is in the position that he must take such goods as the shopkeeper can, or is willing to, give him. A worker could make his wages go a fourth or fifth further in purchasing his necessaries and luxuries had he the ready money to go to the cheapest and best dealers.

It has been argued that credit is of great advantage in times of depression of trade, when workers are thrown out of employment and that if it were not for the credit they then receive they would in many instances starve, or become a burden on society. That, if the law of arrestment were done away with, shopkeepers could not give credit, not having any hold on the earnings of the workers.

This argument is wrong, as it is not in times of depression of trade that shopkeepers extended their credit to workers. *The very reverse is the case.* When a worker or a class of workers are thrown out of employment they are immediately marked by the shopkeepers and although they had ample credit when in employment, they are then at once deprived of it, or at least have it greatly curtailed.

Shopkeepers are too much alive to their own interest to trust unemployed workers, unless they have dependence on the integrity and character of the individual and such will get credit whether the law of arrestment is in force or not, because credit in such cases will not be abused.

The great majority of the working classes in Glasgow now depend on credit and to deprive them of it all at once would certainly be a great privation and could hardly be recommended. At least one year's notice would require to be publicly given before it would be prudent to put any new law in force.

But the question comes to be, how have the working classes been brought to depend so much on credit? It is easily answered. It has been entirely owing to the law of arrestment. If that law had never existed they would not have been in the state they now are as the shopkeepers would not have given credit to any but those who were people of good character and on whose honesty they could depend. We deny that credit would be entirely done away with to workers if the power of arrestment was removed. No such thing would be the case but the dealer would take care only to credit steady and respectable workers.

The law of arrestment has produced a very injurious effect on the morality of the working classes. Whether in good or bad trade they are constantly steeped in debt and knowing that they pay higher for every article than it could be purchased for with ready money. they consider themselves as plundered and many of them do not hesitate to cheat and deceive the shopkeeper and in doing so think they are only acting towards him in the way he deserves. Workers generally do not reflect that it is the fault of the system of credit that compels the credit dealer to charge higher than the cash one.

When workers get deep in debt and are not willing or cannot retrieve themselves by honest industry, they clandestinely leave the place and often change their names. In the higher and middle circles of society, persons of good character getting deeply into debt are thereby often led to commit crimes they would never otherwise think of and if such is the case with well-educated individuals and people who have every advantage of knowing right from wrong, we ask what is to be expected from the working classes in the same condition, with at most a very limited education and perhaps none at all but who by the sweat of their brow must work themselves out of debt, with the cheerless prospect of having long ago consumed all they are working for? We believe the law of arrestment to be one main source of the general demoralisation of late years of the people of Scotland, particularly in large towns and to it we trace in a great degree the feeling they very generally possess, that they are the victims of oppression by every class above them.

We think we have said enough on the general principles of the credit system arising out of the law of arrestment to make it clear that no good to the working classes does or can accrue from it, which is

not in a tenfold degree counterbalanced from its pernicious effects on their comfort and morals. As to the argument that the employer would take the place of credit shopkeepers and indirectly supply his workers upon credit with such articles as they wanted and thereby produce an evil greater than at present, we reply to that by stating that at present it is against law for employers to do so and besides government have factory inspectors who look after the interest of the workers and whose duty it is to see the laws properly put in force.

There remains to be noticed another system of crediting the working classes and which we consider by far the worst and leading to greater evils than any we have mentioned, we mean the 'club-ticket system,' of which it will be necessary to offer a short explanation.

There are two distinct classes of credit shopkeepers. The one supplies the workers with provisions of all kinds and spirits. These have their shops in the immediate neighbourhood of the dwellings of the working classes, chiefly in the suburbs. The others supply clothing of all kinds and have their places of business in the centre of the town There is one peculiarity connected with the clothing establishments and that is, instead of keeping their accounts in small pass-hooks like the provision dealers, they employ agents living in all parts of the town, who issue one-pound notes to workers, called 'club tickets'. Any worker known to have employment can get one of these notes, upon getting a fellow worker to be security and paying is to the agent for guaranteeing payment the shopkeeper and for 20 weeks afterwards paying 1s. each week, making 21s. which the workers pay for a one-pound club-ticket. The agent also gets a commission from the shopkeeper for issuing these notes and for his trouble otherwise, we believe of at least five per cent.

On presenting this note at the shop, the worker is entitled to receive in clothing payment to what is called the value of 20s. but in reality not worth more than perhaps 15s.

We shall state a few of the effects of this system on the working classes. A married woman having her husband working in a factory wishes an article of dress for which she has no immediate use but having an inclination to be smarter than her funds will allow, goes to one of these agents with a neighbour as security and gets two or three notes' or tickets of one pound each: she then repairs to the shop and probably purchases a silk gown or shawl: she calculates she can save out of her household expenses the 23. or 3s. weekly. A daughter, wishing some rather expensive article of dress, does the same. A death takes place in a poor worker's family and as they are naturally anxious to make a respectable appearance, without the funds to do so, they have recourse to these club-tickets and entail misery on themselves probably for years. A worker having his daughter married does the same and the whole family, with the young couple, get involved in debt, which likely leads eventually to their ruin.

But these club-tickets do far more injury in another way, and of which we shall give an example in one of our own workers. One of our workers last week was in need of money, she went to a club-ticket agent and procured two tickets of a pound each. She then went to the warehouse and received goods for them; from thence she repaired to a pawnbroker and pawned the goods for a little ready money. The facts we have stated are not solitary but we believe occur daily.

One-pound bank-notes are of universal circulation in Scotland. They are convertible at any of the banks or anywhere else into 20s. The public have the most implicit confidence in them. The club-ticket people, acting on that confidence, have had their notes made so like the bank-notes that the difference to a casual observer is hardly to be distinguished. The workers attach a value to these notes on account of their similarity to the bank-notes and the imitation is evidently for the purpose of making an impression on the workers' minds that they are truly of the same value the one as the other. We have attached two club-tickets and two Scotch bank-notes for inspection, to show their similarity. The one club-ticket we purchased the other day, the other is of old date, which we received from our manager.

These club-tickets are neither more nor less than the same as bank-notes payable in clothing at from 20 to 30 per cent. above its real value. At the present time when so much pains is taken to endeavour to correct the circulation of the country we humbly think the question of allowing them to circulate may be taken up on the ground of their being a circulation the same as bank-notes, but not payable in the Queen's coin.

JAMES BLACK and Co.
Glasgow, 23, Exchange-square,
6th July, 1841.

The and bank-notes will perhaps be returned, as they are, or should be, of the value they are represented.

In two subsequent communications the writer of the above paper gives his opinion as to the alteration of the law proposed to be effected by a new bill now in preparation.

Dear Sir,
Glasgow, 19th July, 1841.

I understand there is a bill preparing by the sheriff and others here, and from all I can learn it will do no good to workers but it will remove all the grievances of which the masters complain and I suspect this

is artfully managed, for the purpose of silencing the masters and I have no doubt it will have the effect. I had no idea till lately of the quiet but powerful opposition which the Lord Advocate's bill encounters. There is a whole host of lawyers depending for their subsistence on the arrestment of wages. They ate nearly silent, but they urge on, with all their might, the shopkeepers, house-factors, &c.
To give some idea of how the matter stands and the desperate manner in which all club-ticket people exert themselves. Messrs. Oswald and Dennistoun, our present members, were understood to be favourable to the Lord Advocate's bill and the credit shopkeepers were so incensed at it, that 170 or upwards of them, Whig voters, signed a requisition, requesting Mr. Campbell, the Provost, and a Conservative, to stand in opposition which he did but lost the election by about 300. This was done for no other purpose than that, if possible, the Lord Advocate's bill might be thrown out.

Dear Sir,,
Glasgow, 21st July, 1841.
I have just received a copy of Sheriff Alison's bill, which I take the liberty of enclosing for your perusal. I have only taken a hasty look at it and, so far as I can see, the master will be freed from the annoyance he suffered under the old bill but the poor worker will not be in one whit a better condition than he was before, if not worse. I have also sent you a newspaper with an article upon the subject, written, I understand by the editor.
I trust I am not encroaching too much upon you on the arrestment question.
Believe me, dear Sir,
Thomas Tancred, Esq.

[The article referred to appeared in the Glasgow 'Scotch Reformer's Gazette,' July 3rd, 1841. It contained the following case:-

"James Simpson, weaver, Stirling's-road, aged 54, a married man with a wife and small family, earning between them not more than eight shillings per week, called at this office on Thursday, July 1st, with the following summons or charge against him from the Justice of Peace court:-
"State of Debt and Expenses subjoined on the charge.
1840. (We withhold the pursuer's name.)

April 16. To balance of principal sum in decree, this date	£0	3	0.5
Expenses in said decree	0	4	7
17. Charging fees	0	2	4
Fees of six arrestments, at 2s. 4d	0	14	0
Total		£1	3 11.5

"Is this not this infamous? Is it not disgraceful? Is it not scandalous to the law of any Christian or civilised Country? What! for the balance of a miserable debt of three shillings and one halfpenny, there is heaped upon this wretched weaver, struggling with adversity, struggling actually for existence from morn night till morn, the unconscionable sum of fourteen shillings for six arrestments; the whole legal expenses amounting to upwards of one pound sterling for a debt of three shillings and one halfpenny."]

For additional information regarding arrestment of wages, vide Colliery evidence No.22, and Miscellaneous Evidence No.174.

It is a point deserving of observation, in reference to the manner of remunerating labour, that piece-work, particularly if of a laborious nature, seems to have a tendency to demoralise the workers. By the offer of an amount of wages, only limited by what the man's bodily endurance can enable him to earn, he is led to task his strength to the utmost, and to reduce himself to such a state of physical exhaustion that an entire cessation from labour becomes necessary afterwards and with a false notion of renovating his strength, he is induced to apply the stimulus of ardent spirits. A man, never brutal or ignorant, often ranks in the estimation of his fellow workmen according to the wages which he is able to earn and thus it becomes a matter of pride and emulation to turn out occasionally an extraordinary amount of work. I believe the masters would usually much prefer steady to the alternate fits of slavish exertion and complete idleness but where trades' unions still exist in any force, as amongst the moulders and engineers in foundries, it is found impossible to obtain fair work for the wages paid unless by resorting to piece-work. (On this subject vide the opinion of the curator-Fiscal of Greenock, Miscellaneous Evidence No.132, and Colliery Evidence No.43.) On no other principle than the one above noticed can I account for the great difference in character between workmen apparently engaged in such similar occupations as smiths and chainmakers. The former, being employed to execute many odd jobs for shipping, cannot be well paid by the piece and are on day wages. These men, working on the same premises and for the same employers, as the chain and anchor makers, who

are on piece-work, are of the most opposite character, being generally steady and respectable. [Vide Evidence, No.48.] The following interesting observations by Mr. Andrew Liddle, an extensive iron and brass founder, Argyle Street, Glasgow, show the same superiority in the smiths as compared w iron founders.

In the four distinct trades named above I find great difference of moral habit and desire for improvement. The following is the scale:-

First, Smiths,
Second, Brass-founders,
Third, Tin-smiths,
Fourth, Iron-founders.
For several years I took notes of the relative proportions of those that attended schools and of those that did not. The following may be considered the average of several years observations, which of course applies only to boys and young men:-

Of smiths there attend schools	20 per cent.
Of brass-founders	16
Of tin-smiths	10
Of iron-founders	4

The degraded state of the operative iron-founders may be traced chiefly to their dissipated habits. That trade was introduced into Scotland in 1760 or 1761, by workers from Yorkshire and other English counties and from Wales, most of whom are very dissipated their children and apprentices very generally acquire the same habit. Good wages and full employment have continued without interruption till this day and so have their dissipated habits. The iron-founders have a firmly-rooted trade's union society. I will hazard another opinion why they are so degraded. Their work requires no mind. They are mere copyists. The mould, or model, or pattern, is given them. They have only to take the impression, or form, in loam or sand, which requires no application of thought. For these reasons not one out of a thousand raises himself above being a mere operative. Not so with the model-maker, who very often is brother to the iron-founder, and who of course got the same moral instruction and had the same example. The model-maker has to apply his mind; the consequence is that many of this class become proprietors of foundries and consequently masters of the iron-founders. It is a law in the iron founders' union that no model-maker shall be foreman in a foundry. About six years ago I noticed that only one iron-founder in my employment was at any school. The fees being payable in advance, he borrowed the amount, viz. 7s. 6d. After attending only one night, he sold the ticket to another worker, not an iron-founder, for 5s., and dissipated the proceeds.

IX - TREATMENT AND CARE.

The principal stimulus to the exertions of the younger hands in all the departments of labour now under consideration is on one hand the hope of higher wages and on the other the fear of dismissal. In collieries, as before observed, the drawers are for the most part near relatives of the adults whom they assist, and the same is often the case with the boys employed in iron-works of different kinds.

The apprentices are seldom bound and consequently are only on good behaviour and being often paid by the piece, they are on the same footing as regards encouragements to exertion as the journeymen in their respective trades. In short, no inquiries in any town or work which I visited tended to bring home to either the masters or men in any class of works any systematic tyrannical usage of the boys employed by them. In all works it is professed to be the duty of the foreman to take care that no violence is offered to the younger hands and though an occasional blow may, I have no doubt, be inflicted, the boys being free to leave their employer when they please, the evil cannot amount to anything very great.

X - PHYSICAL CONDITION

I made it in all cases a special object of inquiry both amongst the workmen themselves and also of medical men attached to works or practising in the neighbourhood, whether any injurious effects to health either in youth or in more advanced life were traceable to the different employments. In regard to colliers I have before shown and the evidence of workmen bears me out in the fact, that the labour of children is often severe for their age, from the hour at which they rise in the morning and the physical exertion occasionally necessary in their employment. It appears, however, that from the intervals of rest, amounting in most cases to four or five whole days in a fortnight and from the more nutritious diet general amongst colliers, as well as from the varied motions of the limbs and body in the sort of employment in the children are used, no ill effects to their bodily health or conformation result from colliery labour. In the single instance where a pit is habitually worked at night, the health of the children seems indeed liable to fail, but I the employment of children in such cases will not be allowed much longer. No deterioration was visible to me in the adult colliers, who are I should say, rather athletic in appearance but the hardness of their labour and the confined air and dust in which they work, is apt to render them as well as to unfit them for labour at an earlier period of life than is the case in other employments. These effects though, I repeat, seem attributable to the nature of their actual employment and often to their intemperate habits, rather than to the severity of the labour to which they have been subject youth, or to the early age at which they began to work.

In all the kinds of iron-works enumerated above, the place of work is an open shed plentifully ventilated and if occasionally exposed to great heat the atmosphere at least is cool. The principal causes of ill health amongst the founders, moulders, &c., in towns are their intemperate habits and the filthy habitations in which too many of them reside. The character of the wynds of Glasgow, though nothing but a personal inspection can possibly convey an adequate idea of their horrors, is as well known as description can make it by the picture which Mr. Symons has drawn of them in his Report on Hand-loom Weaving in Scotland, quoted by Lord Normanby in his speech on the Drainage Bill in the House of Lords, February 12, 1841. I will therefore only remark that till something effectual is done to secure more salubrious convenient and respectable dwellings for the labouring classes, any provision for the healthiness of works or the comfort of the workers at their place of employment must be nugatory. The only injurious physical effect which I heard of connected with the manufactures in iron was a deafness with which boiler makers are apt to be affected in consequence of the din caused by riveting the plates together and which it is said may in general be obviated by wearing a cotton wool in the ear. Men are, however, often too careless of their organs of hearing to take the slight trouble of providing so simple a protection.

The long hours and hard work occasionally exacted from boys assisting chain-makers cannot be proper at their age and I believe a legislative restriction applied to them would second the wishes of the employers. The men being often of very irregular habits are inclined, much against their master's to take idle days in the early part of the week or fortnight with the intention of making up the time by long hours of work at the end of it - a practice injurious to both the moral and physical condition of those who practise it and of the children and young persons, whose hours of work (and of idleness) must conform to those of the men. (See Evidence, Nos.44 and 48.)

XI - MORAL CONDITION.

I come now to that highly-important particular in estimating the state of the workers in the several departments of industry now under review - their moral condition. I have above attempted to convey an idea of the utterly depraved state in which a large portion of the colliery and iron-work hands in the West of Scotland are living. In reference to the collier population it must not be forgotten that, to use the words of Dr. Cleland, 'Previous to the year 1775, all colliers and other persons employed in coal-works were by the common law of Scotland in a state of slavery. They and their wives and children, if they had assisted for a certain period at the coal-work, became the property of the coal-master and were transferable in the same manner as the slaves on a West India estate were held to be property and transferable on a sale of the estate.' - Cleland's "Statistics of Glasgow," p.200.

They were emancipated by 15 Geo. III. c. 28. Though there is doubt that the degraded state iii which this class of labourers continued up within the last 60 or 70 years must still leave some bad effects upon the moral condition; yet it is proved by examples of works such as the Shots in Lanarkshire, Gatehead, and the Duke of Portland's in Ayrshire, &c., that attention to education, to a supply of the ordinances of religion, to the character of the workers allowed to settle amongst them, to their domestic comfort and to the numerous other particulars which a coal-owner

anxious for the improvement of his workers may regulate, a considerable degree of propriety of conduct may be obtained amongst colliers. It is when they are brought together of a sudden from all quarters, without an attempt at selection, left destitute of all means of religious instruction or of moral control, that the natural consequences of such neglect are produced, resulting in misery and degradation to the people and danger to society. Two iron-works, Dundyvan and the Monkland, where malleable iron is made, have drawn a great number of their men, amounting with their families to about 1000 persons between the two works, from Wales, Staffordshire and other parts England. These people, taken from their native places and planted in a country of strangers away from their relations, their religious teachers and the restraints social and moral by which men are influenced and receiving very high wages, have, as I understood, distinguished themselves even in that country by their excesses and irregular conduct. They are provided with a superior class of houses, erected expressly for them, consisting of two stories and with about twice the accommodation required for the Scotch, they form a society amongst themselves, not mingling with the natives and expend their high wages in good cheer of every kind, occasionally entertaining each other with wine, turkeys and other sorts of poultry. Whilst at work I understood they have always beside them a large jug of beer and gin, of which they copious draughts to replenish the abundant perspiration caused by the excessive heat of the puddling-furnaces at which they work. Every indulgence is provided for them but their religious and moral condition is left to be cared by chance Methodist teachers, or other inadequate means.

The above may be considered a singular instance but it is nevertheless a real instance of the social evils which large capitalists may and do create under the present absence of obligation to provide adequate religious and moral instruction to the population collected together by them. I attribute no particular blame to the proprietors of these works, on the contrary, one of them, the Monkland Company, has shown an anxiety for the schooling of the children in their works. I complain, then, not of individuals but of the licence which our institutions afford to inflict any amount of corruption upon workpeople and to expose society to danger by a postponement of every care the moral condition of the employed to the one object of money-making.

Had not the Messrs. Baird, of their spontaneous and individual liberality erected a church and obtained a clergyman for Coat Bridge, though this done perhaps 10 years later than it ought to have been, that rapidly increasing population would still have been without a clergyman of the church of Scotland authorised to stem the torrent of iniquity, and to proclaim the Gospel amongst them. And yet can it be imagined that this increase of population occurred without a corresponding increase in the pecuniary wealth of the district fully adequate to provide ample means for religious and educational purposes?

Two parties are always benefited by an increase of population of this kind, viz. the landed proprietor and the employer of labour. As an instance of the increased value of land arising from the establishment of iron-works this neighbourhood, I may cite the following account of a property from the 'New Statistical Account of Scotland, No. XXVI., May, 1840.' The great iron-works of Gartsherrie, Sommerlee, Calder, Dundyvan, and Chapel Hall, receive a great quantity of ironstone from Rochsilloch, the property of Sir William Alexander. The black-band here yields from 30 to 40 per cent. of iron. The output at Rochsilloch alone is 4500 tons per month, and the annual income to the proprietor is about £12,600 per annum from a property which if only let for tillage would yield only a few hundreds per annum!' As to the wealth of which the vast increase of population is an index in the manufacturers, I will only say, without mentioning names, that there are works employing hundreds of people and paying thousands a month in wages, with all the expensive machinery for smelting and rolling iron, the proprietors of which 15 or 20 years ago were poor men. Let it not be imagined for a moment that I wish to imply that gentlemen who have shown such enterprise and skill as is here displayed have not deserved well of their country, all I strongly insist upon is that their own interests, as well as those of the country, do most imperitively require that a quota of this wealth should be deemed due from the very first creation of a public work to be set apart for the religious and secular instruction of the population employed.

Illustrations evil caused by the population outgrowing the means of religious instruction.

Quitting for a little the iron and coal fields, let us see how this let alone plan has worked for the moral deterioration of other parts of my district. We can not turn to the history of any one parish in it without finding illustrations of the false policy of leaving the moral condition of the people to the chance efforts of voluntary benevolence. The history and moral statistics of each parish is to be found in that invaluable work, the New Statistical Account of Scotland. In general we shall find in the accounts of agricultural parishes that the population has been stationary or but slowly increasing, the sittings in the parish church sufficient, the children well taught in the

parish school, (some advancing as far as Latin or the higher parts of mathematics,) wages moderate, spirit shops few, pawnbroking unknown, pauperism trifling and the general condition of the people respectable - such a population, in short, as the much-boasted parochial system of Scotland, when properly carried out, produces. Turn now to any manufacturing parish and in every feature the portrait is deformed; one would imagine a wholly different people or country was the subject of the writer's description.

Barony parish, Glasgow.

I will take the enormously-overgrown barony parish of Glasgow. In a scarce book, reprinted by the Bannatyne Club, for the loan of which I am indebted to Mr. Smith, the well-known publisher in Glasgow, there is a description of Glasgow as it was less than 200 years ago. The picture is drawn in a Report by Thomas Tucker, sent as a Government Commissioner for the settlement of the revenues of excise and customs in Scotland in 1656. After describing the ports and the trade carried on the east and north coasts of Scotland, he passes over the western coasts north of the Clyde as 'places destitute of all trade, being a countrey stored with cattel, craggie hills and rockes, and planted with the ancient Scotts or wilde Irish, whose garbe and language they doe still retayne.' Thence he 'returnes southerley as Glasgow, a very neate burgh towne lyeing upon the bankes of the Cluyde. This towne, seated in a pleasant and fruitfull soyle, and consisting of foure streets, handsomely built in forme of a crosse, is one of the most considerablest burghs of Scotland as well for the structure as trade of it. The inhabitants (all but the students of the college which is here) are traders and dealers; some for Ireland with small smiddy coales in open boates from foure to ten tonnes, from whence they bring hoopes, ronges, barrell staves, oates and butter; some for France with pladding, coales and herring (of which there is great fishing yearly in the western sea), for which they retune salt, paper, rosin and prunes; some to Norway for timber and every one with their neighbours the Highlanders, who come hither from the Isles and Westerne parts; in sumer by the Mull of Cantyre, and in winter by the Torban to the head of the Loquh Fyn (which is a small neck of sandy land, over which they usually drawe theyr small boates hito the Firth of Dumbarton and soe passe up in the Cluyde, with pladding, dry hides, goate, kid, and deer skyns, which they selle and purchase with theyr price suuch comodityes and provisions as they stand in neede of from time to time. Here hath like-wise beene some who have adventured as farre as the Barbadoes but the losse they have sustayned by reason of theyr goeig out and comeing home late every yeare, have made them discontinue going thither any more. The scituation of this towne in a plentifull laude and the mercantile genius of the people, are strong sigiles of her increase and groweth, were shee not checqued and kept under by the shallownesse of her river, every day more and more inreaseing and filling up, soe that noe vessells of any burden can come neerer up then within fourteen miles, where they must unlade and send up theyr timber and Norway trade in rafts or floates and all other comodityes by three and foure tonnes of goods at a time, in small cobbles of three, four, five, and none of above six tonnes a boate.'

The check upon the trade of Glasgow which the Commissioner perceived has been successfully removed and the 'neat burgh town, of four streets,' with its trade in 'smiddy coals' and 'open boats,' has become one of the great emponums of the world. So far the picture is bright and glorious but why should no part of the millions of revenue thus created have been consecrated to the moral elevation of the immense population thus congregated together? The barony parish alone now contains 109,229 inhabitants; being an increase of 31,844 persons since the census of 1831, or 41 15 per cent. By a reference to the Fifth Report of the Church Building Society of Glasgow, it will be found how miserably inadequate all the voluntary efforts and sacrifices which have of late years been made to supply the deficiency of churches has proved. The Report gives the increase of sittings provided in all sorts of places of worship, established and dissenting, from 1 to 1839; these amount to 23,280. On the other hand, the population of Glasgow had increased in that period from 202,000 in 1831 to 273,000 in 1839 i.e. an increase of 71,000 souls. For this additional population alone (according to the Report presented to the Religious Instruction Commissioners in 1836), there would be required 42,600 sittings. There were provided, as before stated, only 23,280 sittings. Thus it appears that in the first fervour of a new scheme, stimulated by an enormous amount of spiritual destitution previously existing (amounting to a deficiency of church accommodation of 49,123 sittings), all the efforts of benevolence left to its voluntary exercise did not above half supply the mere increase of population in the period specified, making no impression at all upon the 49,123 sittings before in arrear but at the end of the period leaving the deficiency in proportion to the whole population even greater than it was when church-building commenced!

Local wealth arising from an increase of population should be chargeable with the religious instruction of that population.

However wholly inadequate the results have proved, the providing the necessary funds for the number of churches built must have proved a serious burden and entailed heavy sacrifices upon the comparatively few benevolent individuals whose feelings are accessible to the claims of their fellow creatures. Accordingly the Report adverts to the "melancholy fact, that but a small number of our wealthy fellow-citizens have hitherto enrolled the selves as members of the society. And this points out the duty of endeavouring, by calls and solicitations, to increase the number." Thus the eternal interests of the poor and the safety of the State, are made to depend upon the success of begging visits from door to door, or upon "money collected chiefly in London in aid of Church Extension in Scotland." (Report, p.20.) "Glasgow", says the Report, "stands distinguished amongst the cities of Scotland for the mercantile enterprise of its citizens but it is not forgotten that its ancient motto was, 'Let Glasgow flourish by the preaching of the word.' And though of late years mercantile may have too much interfered with Christian enterprise, the evil of a neglected population has now grown to great a magnitude, that it can no longer be let alone with safety." Now, I would ask, can it be the part of prudent statesmen to let a dangerous condition of society be the inevitable result of an increase in the wealth, commerce manufactures, population and everything which ought to constitute the safety and prosperity of a country? Were I asked what remedy I should propose, I would say distinctly that it should be a local one; that the funds necessary for keeping the educational and religious establishments on a par with increasing population of each district should arise from the local wealth, created by this increase in the numbers of its inhabitants. I think the plan of applying for a parliamentary grant from the general resources of the country for the purposes of church extension, may be justly objected to, unless under a peculiar emergency. What I would desire to see would be a self-acting machinery which should constantly cause the religious and educational provision for the people to expand gradually and uniformly with the population, of each locality. Were parliament or the public ever so liberal and prompt in their contributions there must always be a strong case made out, that is, there must always be a great amount of evil allowed to accumulate before either voluntary contributors or parliament would be induced to afford aid.

The unprecedented rapidity with which of late years population has grown up in certain localities has placed us in an entirely new position and one for which our institutions are no more fitted than was the state of our representation previously to the Reform Bill. Parliament must look the altered state of the country calmly in the face as it is and, disregarding the watchwords of party, provide for every member of the state his birthright by the laws of England - instruction in the duties, the warnings, the promises and the consolations of Christianity. Such instruction can be adequately and regularly supplied only by making the cost of it a necessary incident to all increase of property which involves an increase of population. As the support of police, of workhouses and the poor is justly made a local charge, so should the prevention of spiritual destitution be provided by those who profit by and the cause of the increase of population. The principle adopted by a noble Duke in Scotland for providing against pauperism on his estate seems to me the one which it would be most fair to apply to the prevention of the evils now complained of. A manufacturer had made an application to the noble proprietor to be allowed to feu some land adjoining a water-power, for erection of a public work. The Duke expressed his willingness to consider the proposal but first requested to be furnished with an estimate of the number of men, women, and children who would be employed in the contemplated work. This being submitted to him and having made a calculation of the number of families who would be located upon his property in consequence of the proposed work, he said that he would accede to the terms offered on one condition, which was, that, for every male and female adult and child respectively employed by the manufacturer, he (the latter) would agree a certain sum annually towards a fund to be applied to the relief of the pauperism which would necessarily be created by the proposed increase of population.

Further illustrations.

Lest it should be supposed that the Airdrie district and Glasgow furnish instances of the neglect of providing religious and moral instruction resulting from the present state of the law on those points, I will shortly state facts relating to other districts in the West of Scotland with which my inquiries brought me acquainted. These statements might have been multiplied to a much greater extent had my limited time allowed me to inquire minutely into the circumstances; all I can state are merely a few broad gleaned from public documents.

Abbey parish, Paisley.

The able account of the abbey parish of Paisley, in the New Statistical Account of Scotland, drawn up by Dr. Burns of that town, to whose .activity and zeal in assisting my inquiries in that town and neighbourhood I am most deeply indebted, contains the following statement. After describing the great advances in manufacturing skill and taste in Paisley, he proceeds:-

> In the mean time our educational and religious means did not keep pace either with the advancing population or the growing degeneracy. So long as a decent pecuniary encouragement is wanting to that most useful class of citizens, the teachers of youth in elementary branches, we can scarcely expect any rapid change for the better. The means of public religion and of pastoral superintendence have not been adequate to the exigencies of a growing population and that beautiful parochial economy which the fathers of the Scottish Reformation handed down as a most precious boon to their successors, has become in this, as in all our large communities, little more than a shadow.

The Abbey parish, within and without the burgh of Paisley, contains, by the last census, 27,95l inhabitants.

In a note is added:-

> Dissent in Paisley is of comparatively modern growth and it has been occasioned chiefly by mismanagement on the part of the guardians of the Established Church. The two relief churches, the largest of the dissenting meeting-houses, are flagrant proofs of this. The West Relief was built in consequence of the refusal of the town council to erect a church in the western district in the year l78l and the East Relief was occasioned by a similar refusal, in l8077, to abandon the plan of 'rouping' seats (i.e., letting them by auction), and to build an additional church.

Parish of Neilston.

The next example which I will adduce of the advance of everything but the means of religious and moral improvement is a country manufacturing district in this same county of Renfrew - the parish of Neilston.

Dr. Ritchie, who practised as a medical man in this parish for several years, has inserted an account of it in a medical journal, from which I have quoted, in the evidence on bleaching (No.64), some facts relating to the medical statistics of the population.

In this account of the parish, written in August, 1828, he gives the following summary of the progress of wealth and population:-

> The art of bleaching linens was first introduced into this parish about the year l765. A printfield was established about 1770 and the first cotton-mill was erected in l780. About 1791-2 the spinning of cotton became much extended, and the art of bleaching entirely altered. Within this period the rent of land in the parish did not average above 3s. per acre; much of it was in the state of unreclaimed moss; the roads were of a very impassable kind and the usual mode of conveyance for goods was by pack-horses. Since the above period. improvements in every department of the cotton manufacture have succeeded each other with inconceivable rapidity. A necessary result of these changes has been a rise in the rental of land. In 1791 this had already amounted to £4200., or nearly 7s. per acre and from that year till 1816 it received a further augmentation of about 215 per cent., the real rental as stated in the county-cess books, in 1816, being £13,139. 12s. 4d. or something more than 21s. per acre. A corresponding change has taken place in the aspect of the country; the land is under superior cultivation; villages have sprung up in the vicinity of every public work and the roads have become equal to those in any part of the kingdom. By the government census, the number of families in 1811 engaged in agriculture were 1821, and in 1821 it amounted to 204, an increase of 12 per cent. At the former period the number of families engaged in trade and manufacture was 672, and in 1821 it was 1040, an augmentation of 55 per cent.

Dr. Fleming, who wrote the account of this parish in the New Statistical account of Scotland, brings the particulars down to a later period. The following table is compiled from data there collected:-

STATE of NEILSTON PARISH in the Two Years 1790 and 1837, showing its progress in less than Fifty Years.

	In 1790.	In 1837.	Increase.
Cotton-mills	2	6	3 fold.
Printfields	1	8	8 fold.
Bleachfields	1	8	8 fold.
Rental of Parish	£3,000	£16,475 5 9	above 5 fold.
Value of land at 30 years' purchase	£90,000	£494,250 0 0	
Population	2330	9187	4 fold.
Contrast with the above the Church Sittings.			
Church-sittings	429	830	not 2 fold.
Then turn to the Publicans.			
Publicans	6	58	nearly 10 fold
Schools	3	13 and 5 at Mills.	5 fold.

Note.-The above table says nothing of the increase of capital vested in the parish in the various public works.

In reference to the last item, the considerable increase in schools (though so much less than the increase of spirit shops) does not seem to have produced all the good effects which might have been hoped for, had a corresponding increase in the parochial ministrations and pastoral superintendence accompanied it. At the previous page of the Account, we are informed that:-

> The great body of the people are keenly alive to the benefits of instruction and anxious to have their children taught. But notwithstanding the prevalence of education, it must be affirmed that, amongst the lower orders of the people, dissipation, profanation of the Lord's-day, and uncleanliness, are as common as ever. Respect for superiors seemingly laid aside and the conduct of boys and adults at the elections for a member of Parliament has only to be witnessed to convince any one that education has not purified their hearts, bettered their dispositions, humanised their feelings, or rendered their manners more courteous. Politics, faction and party spirit, at such times, seem to take Christianity out of their hearts, if it ever was in them. Kindness is preserved only for friends; the most rancorous and savage dispositions are cherished for enemies. Their cry is liberty, yet the liberty they take to themselves they will not allow to others. Indeed education never has, nor ever will have, any real permanent effect on the mind and manners of mankind, unless it be a Christian education, which alone can bring forth the fruits of righteousness- 'Glory to God, on earth peace and goodwill to the children of men.'

The population of Neilston parish, by the census of this year, amounts to 9577 persons.

Stevenston parish.

Our next illustration of the deteriorating influence of material, unaccompanied by moral progress, shall be taken from the adjoining county of Ayr. It is derived from the New Statistical Account of Scotland, No. XVII., which contains the history of Stevenston Colliery, one of the oldest in Scotland, an ancestor of the present proprietor having begun to work coal there in 1678, at which time the mineral was carried from the pit by stairs on the backs of the wives and daughters of the colliers. Near the shore between Stevenston and Saltcoats are still to be seen the remains of the engine-house in which was erected in 1719, the second steam-engine that had ever been employed in Scotland, made by Newcomen and close to the line of the first navigable canal in Scotland. "These objects," observes the writer, "mark the beginnings of that career of enterprise which has so greatly changed the face of our country and the condition of its inhabitants and had progress in religion in our beloved land kept pace with our rapid advance in other respects, we should have continued to be for a name and a praise among all the nations the earth." By a table in Robertson's Description of Cunninghame, it appears that, on an average of all the parishes of that district, the rental was 18 times more in 1809 than in 1653. The greatest rise had taken place in Stevenston parish, in which the rental at the latter period was forty-five times greater, having increased from £100. 10s. to £4536 17s. 8d. How much more, however, has the wealth of the parish increased if we take into account the great additional revenue arising from the coal-mines, the stone and lime quarries, the railroad, the harbour, &c., some of which were not in existence at that period and others yielded almost nothing! The increase of inns, public-houses and whisky-shops has as usual been rapid, amounting in 1838 to 33. The writer of the account remarks, "A few inns are needed for the accommodation of travellers and for the

transaction of business but the rest serve as so many decoys and traps to lure and destroy the thoughtless in their neighbourhood. The sale of spirits in grocers' shops has had a most pernicious influence, especially on the female part of the community, who are tempted to add a dram to the other commodities they purchase. But the most pernicious influence is that of several families clubbing that they may drink together cheaply in one of their houses; for in this way husbands and wives and children all in the debauch and drunken habits are perpetuated from generation to generation. We are grieved and ashamed to mention the sum annually expended in this parish for ardent spirits. We have learned from the excise officer of the district the quantity sold in it last year and, without taking into account what is bought at a distance for the use of private families and exclusive also of all that is expended for wine and ale, porter and beer and calculating at a rate greatly below the retail price, it amounts to the enormous £4125 for a population of 3681 persons in 1836 - this is truly lamentable!

Mining district of South Wales.

The last example which I will give of the state of society engendered by the neglect of providing for the due expansion of parochial ministrations is derived from the "Report of Mr. Seymour Tremenheere on the State of Elementary Education in the Mining District of South Wales," contained in the Minutes of the Committee of Council on Education, 1840.

> "The parishes which were the focus of the insurrectionary movement (i.e. the Chartist outbreak in November, 1839) were those of Bedwelty, Aberystruth, Mynnyddyslwynn and Trevethin, in the county of Monmouth, and Merthyr Tidvil in Glamorganshire, adjoining Bedwelty on the west. The people are for the most part collected together in masses of from 4000 to 10,000. Their houses are ranged round the works in rows, sometimes two to five deep. The entire population of these five parishes, according to the lowest given by persons most conversant with each, amounts to 85,000. Most of the adults are earning from 25s. to 60s. a-week." In describing the situations in which these works have been established, the Inspector says:- "In the remote and insulated localities in which these dense masses of people are congregated they have few opportunities of observing habits and rules of conduct differing from their own." Again, in favour of the truck system, it is urged that, "It was originally necessary as the only certain method of providing supplies for large bodies of people suddenly collected together in desert spots many miles distant from any market." Thus their bodily supplies were attended to but the church was brought no nearer to them than when the hills were tenanted by their native moor-fowl. The supply of religious instruction is thus estimated:-

Parishes.	Places of Worship.		Sunday Schools.		Population.	
	Of the Church.	Of Dissenting Congregations.	Of the Church.	Of Dissenting Congregations.	1801.	1839.
Bedwelty	2	30	None.	27	1,434	20,000
Aberystruth	1	9	1	6	805	8,000
Mynnyddyslwynn . .	2	8	None.	8	1,544	7,000
Trevethin.	5	24	3	22	1,472	16,000
Merthyr-Tidvil . . .	2	22	2	17	7,705	34,000
Total	11	93	6	80	12,960	85,000

> "The places of worship of the Establishment are, for the most part, calculated to contain many more persons than are said usually to frequent them (which is partly explained in the next sentence). Of the 11 belonging to the Establishment three are inconveniently situated as respects even the nearest mass of the population. There are also large masses which are distant from any place of worship of the Established Church. Of the 93 places of Dissenting worship the congregations were stated to amount on an average to two thirds of the number which the buildings are capable of receiving. The exertions of this portion of the religious community have been great in endeavouring to provide spiritual superintendence and places of worship for these masses of population, which have sprung up on spots in most cases distant from the parish church and so rapidly as far to outstrip the means o£ spiritual care provided by the Establishment."

Parochial institution must be rendered capable of expanding co-extensively with the increase of population in each locality.

The above few instances are only samples of the astounding change of circumstances which has occurred in certain localities within the last 50 or 100 years. What wonder if those interests, which are not the most palpable, nor the first thought of, have been overlooked ? - that the ancient institutions of our country have not kept pace with such unprecedented changes? We are

in a condition of society which those institutions were never calculated to meet and it behoves statesmen and all who are anxious for our common safety, most seriously and dispassionately to consider how our establishments may be fitted to supply the cravings of that large class of her Majesty's subjects who are the least cared for of any.

To leave the most important interests of all to chance benevolence, I think neither experience nor theory can warrant. Before religious establishments had the means of penetrating to every obscure corner of the country, Christianity flourished only in towns, the inhabitants of rural districts (Paganii) were synonymous with unbelievers. At the present day it appears probable if our establishments are to remain stationary, that the population of our large towns having completely outgrown them, will, in their turn, become little better than pagans. The only effectual remedy that I can imagine is to consecrate a portion of the increasing wealth of each locality, from whatever source it arises, to the purpose of secular instruction and moral and religious training and thus to bring the light of knowledge and the ministrations of religion to every man's door. That a capitalist should be allowed, as is now the case, to bring together a thousand or two of human beings and to raise up a village on what was perhaps before a barren moor, without any obligation attaching to him to contribute one farthing to the regular means which our constitution has established for christianizing and educating that population is an anomaly which cannot but be productive of the worst consequences. Men, thus left uncared for, probably become, for the most part, sensualists and infidels, unless they join the congregation of a dissenting minister. The population is left to increase 'with a signal disregard' not only to the 'comfort,' as the Marquis of Normanby declares, but to the morality 'of the human machines thus aggregated by the demand for their labour.' (*Speech on Drainage of Buildings Bill*.) In time the evil becomes so glaring and monstrous that benevolent individuals, who perhaps derive no advantage from the population in question, feel themselves called upon to incur serious pecuniary sacrifices in an endeavour, in some degree, to supply the educational and religious deficiencies of the people. By great exertions, by begging from door to door, by sermons or speeches, by popular preachers from a distance, by bazaars of ladies' work, by balls, and by all the ingenious contrivances by which a lack of Christian charity is sought to be supplied, a school and in some cases a church, both most inadequately endowed, in every arrangement of which the most parsimonious economy is conspicuous, are at length planted amongst the degraded multitude. The effort, however, is made years too late and the benevolent promoters have the satisfaction of hearing inquiries how it can be imagined that people living in undrained houses, crowded ten in a room, without decent clothes, which have been pawned, without education to understand a sermon, given up to debauchery and squandering, can be reclaimed by placing a church amongst them. These reproaches are too well founded; the church and school remain empty. It is indeed an almost hopeless task to undertake the reclaiming again so corrupted a population. But how was it they were allowed to fall so low? - how it that their country did not secure a portion of the gains created by their work for the purpose of maintaining a pastoral superintendence over them from the very first? The establishments for religious and moral education should have grown with their growth and then it may be safely predicted that their domestic comforts would have been more in proportion to their earnings, that the spirit-shops and pawnbrokers would not have increased so rapidly, that police expenses and poor's rates would have been moderate, prosecutions for riots and combinations of workmen less frequent. We should not hear complaints like the following from a minister of a parish partly agricultural, partly manufacturing. - Statistical Account of Scotland, No. XIV., p. 332:-

> "True it is, though strange, that those who have only from l6s. to £. per week are more independent and infinitely more comfortable in their clothing, furniture and supply for the table than those who have from £1. 10s. to £2, aye £2. 10s. a-week. The one class is generally frugal, sober and contented with their situation and circumstances. The other a dissipated, prodigal, literally wretched and poor, ill fed and ill clad, discontented with their condition and everything and everybody around them."

Having now glanced hastily at the main cause and origin of that moral degradation which afflicts all our great seats of manufacturing industry, though none more than those comprised in the present Report, entailing misery and disease upon the people and disorder on our social system, I leave the subject, with an earnest hope that the cursory remarks I have made may lead to a perception of the real cause (viz., the stationary condition of our religious establishments amongst a rapidly increasing people) of that degradation which has mainly created the necessity for the present inquiry. All the consideration I have given the subject leads me to the conclusion that is nothing which necessarily causes a peculiar amount of evil in a manufacturing or mining population but that the means which are found available for moral purposes in rural districts have only to be extended and thoroughly carried out, to raise the moral character of our artisans at

least as high - I hope much higher - than that of the average of agricultural labourers. Though the amount of corruption already engendered by neglect cannot at once be corrected, yet in new seats of industry, which increasing facilities of communication are every day raising up, we may prevent the recurrence of the disastrous state of things which we now deplore and ultimately we may hope, by the use of the appointed means, to be rewarded by seeing our manufacturing population becoming as virtuous and intelligent, as they now are allowed to be beyond all others, valuable as workmen.

XII - COMPARATIVE CONDITION.

Most of the occupations of the younger male hands included in the present Report are a preparation, or apprenticeship, to a business in which as adults they gain a comfortable livelihood. The trapper in a coal-pit becomes, in due time, a putter, then a drawer, next a collier and unless he has passed through these regular gradations and even if not also the son of a collier, the other workmen are often jealous of his employment in their business. The reverse of this, of course, is the case where the injurious practice of employing female drawers exists - this occupation being of course anything but a preparation for the proper discharge of their peculiar duties when grown up. In the several branches of the iron business the boys assisting adults generally, I believe, continue to follow the business to which they have thus obtained an introduction, if only their character is good enough for them to obtain an apprenticeship. This, I believe, is their greatest danger - that the bad example of the elder workmen too often corrupts the younger hands and thus the master becomes unwilling to promote them to higher departments in his works.

In regard to the condition of the children unemployed in any of the places visited by me, as compared with those at work, in no part did the former class appear in so wretched a condition as at Greenock. From the maritime character of this place, an immense number of children are either virtually or fact fatherless, their fathers being either absent on long voyages, or dead.

The effect of this want of fatherly care and of the consequent helpless state of their remaining parent, is lamentable, as will he seen by a reference to the evidence of the Rev. Andrew Gilmour (No.129). I learned that there was some idea of endeavouring to set on foot some sort of House of Refuge like the one which answers so admirably at Glasgow for the teaching and reclaiming and teaching honest trade to the numbers of poor children now doomed course of crime, as certainly and inevitably as a total inability to escape from it can bind them to it. This sort of institution is even more necessary in Scotland, in the absence of any efficient relief or destitution, than it is in England where the workhouse affords some sort of refuge and education to children thus circumstanced but my decided opinion is, that before many years we shall see the necessity generally acknowledged of an institution for training up, at the public charge, those whom their parents are unable or unwilling bring up properly to be attached to every town of any considerable magnitude. If properly conducted, such institutions I am persuaded would not only nip in the bud a large proportion of crime, which causes infinite expense and loss to the community but would also materially benefit our colonies by furnishing a supply of labour where so wide a field invites its employment. A parliamentary grant, to be appropriated in aid of local efforts in the same way that the educational grants are now disposed of, in compliance with a code of regulations for such institutions, would be a domestic reform of, importance.

I now conclude this Report, which the magnitude of the subjects incidentally treated - most of them not peculiar to the particular branches of employment to which it is ostensibly confined - has, I fear, swelled beyond its due dimensions.

I am, Gentlemen,
Your obedient humble servant,
THOMAS TANCRED

Twizell House, Northumberland.
July 31, 1841.

EVIDENCE COLLECTED BY THOMAS TANCRED, ESQ.

COLLIERIES, IRONWORKS, FOUNDRIES, AND CHAINWORKS, IN THE WEST OF SCOTLAND.

No.1. February 11. James Scott, aged 18:
He is a native of Glasgow. Will have been three years in the House of Refuge next March. His last employment before he came into the house was being apprentice to a shoemaker, at which trade he continued 18 months but on the death of his mother (his only surviving parent), he fell into bad company and left his employment. Before commencing this trade his brother, collier, employed him to draw for him in one of Mr. Dixon's pits, called 'the Fire-work' at Brig-end beyond Gorbals. When his brother had picked out the coal at the face of the seam, his work was to split it and shovel it into 'hutches,' which are small carts made of iron in which boys draw the coal to the bottom of the shaft, no horses being employed in these pits. The seam of coal in which he worked was not quite five feet thick. He could stand in it then, but not now. The pit was wrought night and day and with the two sets of boys about 200 altogether. He had to take his turn a fortnight at a time in the 'day shift' and the same in the night one. The engine starts to draw up the coal about six o'clock morning and the boys generally go down about half past four, 'by stairs,' not by the engine. There were 50 steps to go down. He left work about six in the evening. He took down bread and milk or coffee, as much as would serve till night and had no regular hours for meals but just eat them when he was waiting at the bottom of the shaft till it was his turn to have his coals hoisted up. A man empties the coal at the bottom of the shaft from the hutch (or small carriage by which the boys pull them down the railway) into 'creels' or baskets (now made of iron), in which they are hoisted tip by the engine. The 'howker' or picker is allowed to work out five carts of coals a-day, and gets 2s. a cart wages and he pays out of it 6d. a-week to a doctor and 6d. a-week to sharpen his pick and 3s. a-day to the boys for drawing the coal s and one boy if he is able may earn the whole. Sometimes boys are struck with the collier's fists and sometimes their faces all cut but Mr. Dixon fines them if he finds it out. Sometimes the roof falls in and hurts the boys drawing the carts but they generally hear a crack and take care to be out of the way. Has known 10 boys hurt, two killed outright in by firedamp and sometimes the coals fall on the collier. This pit is very dry, except one road under the Clyde in which boys went and it wet their feet. Never was sent to school and never knew a drawing-boy sent to school, 'they were kept too close at it' but the parents taught them to read at home. Boys who keep the trap-doors for the ventilation go early as eight years and remain all the 'day shift' and others keep the doors at night, wages 6d. a-day. They don't draw till they are about nine and more between 10 and 11. When the 'night shift' went down about six o'clock in the evening and remained till six in the morning, the day set being already down, beginning to get the coal out of the face but not allowed to draw any till the night set have done. Take victuals down and eat at about 12 o'clock at night, when the horses [which draw the carts of coal above ground] are getting a feed of corn and then the engine stops half an hour.
This lad can now read and write and said the six times in the multiplication table. Working along his brother he was allowed to be a collier very young and had a pick made for him lighter usual. But in general they do not become colliers till 18.

BRIDEWELL, GLASGOW.

No.2 February 12. Peter Neilson, aged 18, native of Ireland:
Began to work at about 14 years old in a pit near Airdrie belonging to Messrs Wilson and Co. First worked as a 'putter' to his father together with his younger brother who then only eight years old. He has now 'seven of his folk,' his father and six brothers, in the pit besides himself and a brother, who are in Bridewell. The putters, one or two if necessary, are set to draw the coal in the hutches; when two are employed one pulls and the other pushes behind. The one that pulls has an iron chain attached to his shoulders by leather loops, which is used in case a steep bit of

the road, or if the hutch gets off the rails. In this way the coal is drawn to the bottom of the shaft, there being no horses in this pit. The seam [called the Pyetshaw] is three foot and a half thick and lies below the seam called the 'Main Coal.' When he left it the shaft was 35 fathom and one yard deep, very dry, no drip, and dry to the feet. The regular hour for the day shift to go down is between four and five a.m. but he has been at work at one o'clock in the morning and often at three, to drive levels or take out the pillars, because he says the roof is more apt to fall in at night than by day, it is supposed because the heat of lamps and number of men working in the day kept it from falling [might the expansion of the air have this effect?] The day shift comes off at two or three o'clock but when taking out pillars or 'stoops,' there was no regular hour. The collier is his own master and may work out as much coal as he likes and is paid by the piece but the men have a union amongst themselves and only allow each man to 'howk' and draw 'eight hutches' but two colliers will employ only one drawer, because it comes lighter in the last pit - the distance to be drawn was 30 or 40 fathom. The putter need not go down before six o'clock when the 'cleet' or engine starts to draw eight hutches by two o'clock. Work every day but Friday;. The putter gets 2d. a hutch, sometimes one putter pulls for two colliers. The colliers pay their putters the boys keep the six trap-doors must he down 'before the colliers, between one and two o'clock in the morning,' and they are between 'six and seven years of age' and they must see their trap-doors secured and shut before they come up between two and three o'clock p.m. He has two brothers, the eldest Nicholas, the youngest Paul, the eldest between eight and nine and Paul between seven and eight, who keep trap-doors. As soon as ever they come, home they go to bed. About four p.m. the night shift goes down and works till four in morning. Often waiting at the pithead till the day shift come up. The miners who drive the levels and the colliers are all one. In this work, i.e. driving levels, they take it 'by the fathom,' at 16s. a fathom and are not paid by the quantity of coals but by the distance driven. The putter then paid by the master [i e. proprietor] and not kept to his eight hutches they get 3s. or 2s. 6d. a-day; six of his folk paid 4d. a-month each to the doctor and 1s. a-month to smith for the pick. In the old 'Red-brick' pit, (which he was in before the last,) seven men were killed at different times when he worked in it and his brother's shoulder-blade broken in taking away a stoop; boys often squeezed between the hutches; if the boy in front misses his foot the hutch runs over him and 'tears all before it,' and then they all cry 'Awa' for people to get out of the way. He was six weeks lamed by a bruise between two hutches; the pit-head man cried down 'Corning,' and then the engine stopped and gave time for eating from 9 to 10 and dinner after they go up. At night took down only 'loaf bread, for if eat porridge you'r aye sweating from the time you go down till you come up'. 'The work is hard and no air to cool.' At night you wrought on till they called 'Corning' at nine o'clock at night and you took bread, or bread and cheese and drank the 'best of water' in the pit. After dinner and bed he rose at five for a night-school for two hours, for about three months. None went to the school before going into the pit, for they began 'putting' at six or seven years old but they went to a night-school; kept by one Jackson, who made his living by teaching the colliers, and some adults. Jackson also kept a day-school for the night shift.

GOVAN IRON WORKS.

No.3. March 31. Mr. James Allan, manager of the Govan Colliery since 1822, and connected with the works 26 years:

There are four pits now in work at this colliery, and six seams in work. The workmen are divided into colliers and 'on-cost men.' The latter perform all the work not done by the collier, such as building sides of roads and heightening them, clearing away the rubbish left by the collier, cutting through dykes, &c. The on-cost men always work at night and not in the day, unless at a dyke or slip, when they work night and day, till the colliers can resume. These men go down between five and six at night and come up about same time in the morning, taking down 'their piece' [i.e. meal] with them. To three of the pits one stair goes down and to one pit by the engine. This plan is adopted as safer, also requiring less time to draw up coals than men; coals are hoisted up in about a third of the time, so that using the engine for raising men causes a loss of time. The colliers go down from four to six a.m. and must be down by half-past five, otherwise there would not be coals ready in time to start the engine at six. The boys in the pits are divided into 'drawers' and 'trappers;' the first draw the 'whirleys,' or carriages, in which the coals are brought to the foot of the shaft and the 'tappers' open and shut the trap-doors for the ventilation. The work of the drawers and trappers does not commence till six o'clock but some who are sons of the colliers may go down with fathers earlier. The engine works from six a.m.,

till the coals are out at night but it works beyond seven at night and the children do not come up till the coals are all out. They begin as trappers about eight years old. The market for the coals is partly for consumption in Glasgow and about half for exportation to towns along the Clyde and to Ireland. Not a third part are used in the iron-works. All the breakfasts, [generally tea and loaf bread, cheese or ham, and a piece for the rest of the day], goes down in one corf about nine o'clock and there is generally a slackness in the work for about half an hour but no regular m time is allowed. They get their regular dinner after they come up. At one pit, called the Quarry Pit, where the greatest quantity of coal is just now produced, about one-third of the men work a night shift but this is an expensive way of working, as, if the work could be equally distributed amongst all the pits, the men in them could put it all out in the day-time. There is no combination amongst the men at these pits as to the quantity to be put out by each per day; they have established a friendly and free labour society, to which all are obliged to belong and the purpose of which is the support of the sick and mutual protection against the combined colliers. Where the combination exists, every man's 'darg' or day's work is restricted to about two carts or six corves or hutches and none are allowed to work but the regular bred collier, who has been taken down early. In the combination, if a man takes down a boy only to the pit bottom and sends him up again, or lets him sleep on his coat, he may work out another hutch. If the boy has reached 10 years old he is considered as 'a quarter man' and at 12 'a half-man,' at 17 'a whole man,' i.e., a collier taking down his own son at 10 may work out two carts and a half; at 12, three carts; and one of 17 may work out for himself. If a man takes one, not his own son, the boy is not considered 'so strong' - i.e., is not so soon a half or a whole man. Mr. Allen thinks they should not be taken down under 12 years old. The pits here are examined every morning by men with Davy-lamps, to ascertain that all is sale but they do not generally work with them. All the pits in this colliery are worked on what is called the long wall system i.e., the roof is supported by walls and all the coal worked out without leaving pillars. The coals here are preferred large, which is one reason of this system both in Scotland and Ireland. The holidays in the year are principally about New Year's Day and they generally take two or three days then, not being restricted. Twice a year the colliery hands are all idle for a day at the fasts and there is slack work about Glasgow Fair. Individuals may take the whole of any one day, or two half days, in each week but there is no general holiday or half holiday. Any man earning less than four full day's work a week has to pay house rent, whereas, otherwise, he gets his house rent free. Pay day is Saturday on each fortnight. More of them take holidays on Monday than any other day of the week. The 'drawers' are always paid by the men they work for, unless the contractor pays them, and the men do not draw their own coal. The trappers are paid by the contractor when the on-cost is let, which is the usual plan. The on-cost is let in each seam separately or to different contractors, perhaps in different parts of the same pit. There are rules sanctioned by the men which forbid any striking below ground and if a complaint is made of children being abused [as they often do complain when it is not their father who does it] an inquiry is made and fines levied according to the rules, which are put into the friendly society fund.

By printed rules of the work, a written warning on both sides of 14 days is required, on discharging or leaving, unless for some valid reason allowed by the courts and men have been put into Bridewell for leaving without. There is a rule in the work that all employed at the colliery and residing in the colliery houses, shall pay for the schooling of all their children, 9d. a month each from six to twelve year old for boys and from six to ten for girls whether they go or not. The children under 12, taken from the day-school by their parents to work, have a right to go to the night-school for the same payment. Most of the colliers but few of the on-cost men, live in the colliery houses, the rest in town. No store or shop is connected with works. Till within 18 months there was a shop close to the office, and the men were constantly asking credit in the office, called subsistence and spending it next door in whiskey, &c. It was found such a nuisance, that it was pulled down and given up as an evil and now the whole money is paid without deduction. Each individual is now paid in change. About 10 or years ago they used to be paid collectively but it was found that they went to public houses and often spent all their money there instead of paying their shops. It was a great evil to the men and though it causes a great deal of trouble to pay all in change, yet they find a pleasure in doing it. The school was never found to succeed, or any other attempts for their benefit, till the whole management was thrown upon the men themselves. They have a school society, a reading-room and library, a funeral society and a friendly and free-labour society, as well as an instrumental band, which are all managed by the men. They have an instrumental band of about 25 instruments and a violin band of six or seven besides a bass. A bandmaster is provided by the work, and £10 a-year allowed to the band-master. The schoolmaster gets £10 from Mr. Dixon and his coal free and £52 from the school-fund and about £2. as a present at the end of the year and the proceeds of the

night-school for himself. His assistant receives from the fund about £35 per annum. The schoolmaster and the clerk at the forge every other Saturday give a lecture in the school-room on scientific subjects, admission to which is provided by tickets purchased at 1s. a-piece during the winter. The band is in attendance and after the lecture they perform and there is singing and recitation. This is the third year; the two first years admission was free but now they have adopted tickets and 400 were sold, as many as the house would hold, this year. Besides this, the 2d. paid at the door amounts to from 5s. to 10s. per night.

The following paper has since been forwarded by Mr. Allan:-
Answer to Query 1.

The method which is generally adopted for ventilating the workings of pits is to divide the shaft by a midwall or partition of timber, the air descending by the one division, and, after traversing the workings, ascending by the other; this method is found sufficient in ordinary circumstances for conducting the air, when proper attention is paid to the air-courses, the ascent being accelerated, when necessary, by a fire in the bottom of the ascending division of the shaft; however, this method cannot be depended upon in a deep pit, where two or seams are being wrought at the same time, particularly where carburetted hydrogen gas exists to any extent. The difficulty arising principally from the impracticability of making and keeping the partition at all times sufficiently air-tight.

The above method was found quite inadequate for the purposes of good and safe ventilation in one of the pits at this colliery. The pit is 90 fathoms deep; the output from it was extensive, and was produced from three different seams of coal, which emitted a great quantity of carburetted hydrogen gas. Every precaution was taken to prevent an accumulation of the inflammable air; nevertheless several explosions did take place, by which a number of the workmen were burned and some lives were lost. The employment in consequence was very unsteady and attended with great expense. In order to remedy this great and growing evil, an additional shaft was sunk (seven feet diameter) at the distance of 12 feet from the original one, new machinery adapted for raising the coals by these two pits was erected; the wooden partition taken out of the old shaft and a furnace erected at the bottom of the new one, which is kept constantly burning. The effects of this alteration, as was anticipated, have been the efficient ventilation of the workings, the workmen enjoying comparative safety and being kept in regular work. All the pits at the colliery are now fitted up upon the same principle, having a partition of solid strata betwixt them in place of a wooden one. The first outlay is considerable but after being fitted, becomes a great saving of expense, independent of its other beneficial.

Answer to Query 42.

There has for a long period of years been a school in connection with Govan Colliery, the patronage of which was given by Mr. Dixon to the late Rev. Dr. M'Lean, minister of Gorbals parish, and quond sacra of the locality of Govan parish, where a great part of the workmen the colliery reside. The Doctor appointed the schoolmaster and was expected to have examined into the management and success of the school, which he utterly failed to do. Young men were generally appointed as teachers, who did not look forward to teaching as a permanent employment. Their conduct, in many instances, gave offence to the parents and as the sending of the children to school and the payments to the schoolmaster were voluntarily, the parents withdrew their children whenever they were offended at the teacher.

This state of things continued until 1826; a society was then formed at the colliery, of all the workmen became members and the managers of that society being elected annually by the members, Mr. Dixon gave the sole management and patronage of the school into the of the managers of this society. This was shortly followed, at the request of the workmen, by a regulation at the works, 'That every person occupying a house belonging to the colliery shall pay at the office each pay-day the school wages fixed by the managers of the school for of his children from 6 to 12 years of age.' Since that period the school has done a great of good. The children who have attended school regularly are good scholars but the great source of evil is in the irregular attendance of the children. The parents in general are uneducated themselves and from that cause, I believe, are not sufficiently alive to the interest of their children to enforce regular attendance, although they are obliged by the regulations of colliery to pay for them. At present, payment is made for 271 children, the average attendance does not exceed 130 and on the roll-book of the school there are only 236, showing that there are 35 who never go to school at all, independent of the many who attend only two or three days each week. It is for this reason that I have suggested, in my answer Query 30, that being able to read and write should be made a criterion for the admission children to work from 10 to 14 years of age and after a short period I would venture to affirm that there would be few who would not be admissible at 10 years of age, the parent then have a pecuniary interest in the early education of his family and the employer would all likelihood be interested to the extent of providing school accommodation for their workmen's children in the locality of his works.

Mr. Leggat, the schoolmaster, is engaged by the managers of the school at a yearly salary of £52 and when the school-funds admit, they give him a present in addition. They presented him last year with

the sum of £14, although he had taught for them only eight months previously. He has the fees of the evening-school but so little interest is felt in the evening-class, that the teacher was under the necessity of vacating the school for six months last year. It is open and 80 scholars have engaged for a quarter. The teacher is allowed an assistant, paid £30 per annum from the funds.

The building wherein are the school, class-room, teacher's-room, with reading-room and library above, was built and fitted up by Mr. Dixon at an expense of about £500 and up by him to the managers of the school about three years ago. In addition to this he gives £10 per annum to the teacher in lieu of house-rent and supplies the school, reading-room, schoolmaster's house with free coal.

The school wages, at present, are 9d. per month for each child, from 6 to 12 years of age.

The reading-room has only existed about three years. It is optional on the part of the men to be member and for this obvious reason, a number of the workmen cannot read and it might have been reckoned unjust to compel them to contribute to an institution from which they could derive no benefit. The reading-room is managed by a committee of the subscribers, elected half yearly. It is supported by payments of 1s. per quarter, and Mr. Dixon supplies them with the following London papers, viz. 'Times' and 'Morning Chronicle' daily, and the 'Examiner,' 'John Bull' and 'Dispatch,' weekly papers. There are, in all, 30 papers in the room weekly, besides periodicals and there are at present 189 subscribers. It is upon all the days of the week from 7 a.m. to 10 p.m. and because it is open on Sunday, Mr. Turner, the present parochial clergyman, has deterred a number of the workmen from subscribers. A correspondence having been entered into betwixt the directors and that gentleman upon the subject, Mr. Turner states, "I have no wish to conceal the fact, that I most cordially disapprove of the reading-room being open upon the Lord's-day and can by no means believe it is to be an institution calculated for the moral and intellectual improvement of the neighbourhood. I am fully aware that many of our workmen have spent many hours there upon a Sunday which would otherwise have been spent in the dram-shop.

The library has been established at the colliery for 14 years and at first consisted chiefly of donations of books from Mr. Dixon and other individuals who had a desire to promote information among the workmen. The workmen are all members and it is now supported by quarterly payments of 6d. from each member. There are now nearly 1400 volumes in the library. The librarian changes about 20 volumes each day and upon the Thursday evening about 30 volumes.

The Friendly and Free Labour Society was instituted in 1826, having two objects in view - the support of sick and infirm workmen and the protection of the workmen from the threats and intimidations of the combined. Happily, no part of the funds has been required for the latter purpose. The society has done much good to the workmen. It is supported by fortnightly payments of 6d. from each member. They have about £300 in Mr. Dixon's hands, for which they are paid five per cent interest.

About 14 years ago, at the request of the workmen, a regulation was made at the colliery, "that every person employed above 16 years of age should pay 6d. to the widow of any workman and 3d. to the representatives of unmarried workmen, who may die while employed at the works." This fund did a great deal of good, by placing in the hands of widows a sum of £28 to £30, which supported her and family until she found out some permanent means of support.

This regulation was abrogated in March last at the unanimous request of the workmen and changed into a Funeral Fund for defraying the funeral expenses of any individual of a members family, the allowance to a widow being fixed at £12. The whole workmen above 16 years of age, employed at the colliery, iron-work and forge, are members. This fund will prevent the workmen from getting into debt when visited with bereavements in their families, having a fund provided for a casualty which is certain to all. The fund is supported by periodical payments, which I would estimate at from 9s. to 10s. per annum and is under the management of the master court of the Friendly Society.

In addition to the above institutions there are, fortnightly, lectures upon moral and scientific subjects, delivered in the schoolroom gratuitously by Mr. Leggat, the schoolmaster and Mr. Granger, clerk at the forge, upon alternate nights. For the illustration of the lectures, there is a good chemical and other necessary apparatus and an excellent magic lantern with slides. The lectures are followed by recitation, sentimental and comic singing and other amusements. The expenses are defrayed by tickets for the season at 1s. each. 400 of these were sold last season and those who had not obtained tickets got admission at 2d. each. The money collected in this way alone amounted to from 5s. to l0s. each lecture night.

The master court of the society have also the management.

The amusements which follow the lectures are much enlivened by music, there being an instrumental and a violin band established at the works, the former consisting of 25 instruments and the latter of seven the instruments of the band belong to the works, having been raised by subscription. Besides subscribing liberally for the purchase of the instruments, Mr. Dixon has erected an orchestra in the school for the accommodation of the bands and to ensure the permanency and proficiency of the instrumental band, he has fixed a salary of £10 per annum upon the band-master. The band is also under the care of the master court of the Friendly Society.

The whole of the institutions taken notice of in the foregoing statement, with the exception of the reading-room, are under the care of the master court of the Friendly Society, who meet upon the Tuesday evening of every week and transact the business of them all and, from the whole of my experience, I can unhesitatingly say, that they manage all of them with great discretion and propriety.

I beg to transmit a copy of the standing rules and regulations of the colliery, with copies of the rules of the various institutions so far as these have been printed.
(Signed) JAMES ALLAN, Manager
Govan Colliery, 5th May, 1841.

GOVAN COLLIERY (visited personally.)

No.4. April 1. Robert Ferguson, collier, adult, examined in the colliery at work:
He comes down at three in the morning, and works till four, or five, and sometimes as late as six in the evening. He and his brother and another collier, have four drawers amongst them, three of which drawers are his brothers. They each work six or seven carts of coals and fireclay a-day, according as the powder brings down more or less of the coal at once.

[He shows me how he works. He kneels, and inclining to one side, picks out the fireclay beneath with his pick. In this way he undermines a mass of coal and then applying wedges, and perhaps a blast of powder, between the roof and the top of the seam of coal, he brings down mass, which he supports with wooden posts if inclined to fall before he wants it.]

The six carts would make 18 whirleys full of coal a-day, to be drawn about 30 fathom from the place where he is at work to the bottom of the pit and the empty whirley to be brought back 18 times. Each collier works at 10 yards of the face of the coal. His oldest brother, who is a drawer, is about 17, the next about 15, the next 12, and the fourth drawer between 11 and 12. This boy lives in his house and he feeds and clothes him but does not pay him any wages. He is not related to him. The boy's father is in the iron-works. He has no contract or bargain with the boy's father but just has the boy for his meat and he may keep him all his days if he likes it. They all come down the tow at the same time [i.e., by the engine], never by the stair, if they can help it. He has never paid 'his passage-money' i.e., a fine for using the engine when they are throng of work. He is paid 14d. a cart for coals and 6d. a cart for fire-clay and last week he worked out 50 carts, 21 of which were of fire-clay, the rest coal [29 carts of coals at 14d. a cart, 38s. 2d. 21 carts of fire-clay, at 6d., l0s. 6d., together his week's wages, £2. 8s. 8d.] The on-cost, i.e. night-work and the drawing of the coals in the day, in this part of the workings, are let to a contractor, Ritchie, who consequently pays the drawers. The collier's business is to hew out the coal, to 'break out' the coal [i.e. break up the large masses into pieces which can be lifted], and to fill it into the whirley with the hands or the shovel. For this he is paid by the company and the contractor makes some arrangement with him about his drawer. In other parts the 'on-cost' alone is contracted for and the drawing is paid for by the company to the collier, who hires and pays his own drawer.

[The temperature where this man was working which was as warm as any part of the pit, I found to be only 58 degrees and a very good ventilation constantly kept up.]

No.5. April 1. Another collier:
Is working at 150 or 160 fathoms from the Quarry Pit, which is the nearest to him. He works about six carts of 14 cwts. each per day, for which he gets 16d. a cart and pays own drawer, who must either be a man, or he must have two boys, on account of the distance to be drawn. His drawer is a man with a family, to whom he pays 2s. 9d. a-day. Another collier near him employs two boys. of 12 and 14 years old respectively. They come down [i.e. the colliers,] at four or five a.m. The drawer has his whirley at the bottom of the shaft ready for the engine when it begins to hoist up the coal at six. If the boys 'are forward' before five o'clock, they get down by the engine, otherwise, by the stair, which most of them do. The stopping of the engine in the evening regulates the time when the drawers can go which varies from three to six p.m., according to the quantity to be raised. Generally on Monday after pay-day the engine stops at two o'clock and only the steady men work on that day.

No.6. April 1. Francis Conery, aged 9:
Is a trapper [i.e. opens and shuts the trap-door for the ventilation when the whirleys go past.] He comes at six a.m. and goes at six. He gets down and up by the engine. He sits on a board in a niche in the wall without a light, quite in the dark, and holds a rope which is fastened to the door and when a whirley comes either way he pulls the rope and so opens the door and when the

carriage has passed he shuts it again. He has some bread, tea, tea and cheese, sent down by the engine and brought to him by a drawer, or if slack he can run get it himself. It serves him for the day, as long as he is down the pit. He has not eaten all he got this morning yet. He sometimes falls asleep at his door when he is in the night shift: this is one week out of three. When he is asleep, the drawer raps at the door and wakes and opens it. He gets 8d. a-day, and is 'no able' to be a putter yet but when he can he shall get 1s. a-day. His brother is a trapper here also, and is older than he is. Neither of them ever went to any school, day or night.

No.7. April 1. --- Buchanan, Esq., Main-street, Gorbals:
Is surgeon to the Govan Colliery, together with his partner Mr. Tindale, who is now dressing the leg of a drawer injured some days since by being jammed between two whirleys. They were going down an incline and the boy in charge of the one behind him was a new hand and did not understand it, so that he let his come against the patient. He will be unable to work again for some time. Wishes he were on the sick society, as he should get an allowance whilst unable to work. Mr. Buchanan says that it is only for the last two years that he has had to attend to the accidents in Govan Colliery, since the death of the former surgeon he before only attended the families of the workpeople. He keeps no register of cases, only a daily list. He cannot therefore speak quite accurately as to the number of accidents in the last two years but they have chiefly been of a trifling nature. The severe accidents which he recollects were two being severely burned by firedamp but they recovered.. One man leg broken by the coal falling upon it; and one of the con-cost men lost his sight by the powder igniting, when he was blasting the rock, unexpectedly. As to medical disorders, rheumatism and coughs are the most prevalent and these he considers owing in a great measure to coming up heated and sitting to smoke at the pit head. And also that they are often so wearied by the day's work, that they throw themselves down on the floor of their kitchen and there lie before the fire for some time before they wash or dress themselves. He has frequently cautions them against this practice. He thinks, however, that there is more consumption among the lower class immediately about where he lives than amongst the colliers. Those who work in the colliery are subject to a peculiar sort of phthisis, called *phthisis melanotica*, the symptoms of which are a cough and expectoration of a black mucus, supposed to be caused by of the lamps and the dust of the coal. Young subjects generally recover from it; in older ones it prevents work by the cough. Asthma is rather common amongst those in advanced life. Scrofulous subjects coming from a distance often get better at the colliery. So many strangers have been brought together by the recent extension of the workings, that it is difficult to say much about the duration of life but those who have remained stationary from early life have died well advanced in years. Altogether, if they were but more temperate, considers the employment not unhealthy. As to the children, if the parents only do them justice as to food and clothing, they are stout, plump and active, and better in health than those of the same age in mills. Some of the poor Irish children who live near him and work in the colliery, are pale and ill-looking but that is the fault of their parents, not of the labourer. Fever, if it exists in the colliery dwellings, may usually be traced to some female who has caught the infection in the mills in Glasgow, where many of them go to work. He has I now a case of a girl, a worker in a mill, who has fallen sick of fever, though there is no other case anywhere in the colliery village but, perhaps, now she has it, it may spread a little. Not above two or three have complained to him of being ruptured by the work.

CLYDE IRON WORKS (visited personally)

No.8. March 30. James Dunlop, Esq.:
Has been proprietor and manager of the Clyde Iron Works since 1837. Few under 18 are employed in the iron works; we would not employ such, because not strong enough, unless to drive the coals along the railway from Hamilton Farm Colliery to the works. There are at present six furnaces and another building. Each furnace requires for the 24 hours and two shifts two keepers [who take charge of the furnace and let out, or tap, the metal], two assist-firemen [to heat the blast and generally to assist the keeper], two fillers [who charge or fill the furnace], two men to fill the barrows in which the charge is taken up to the furnace and two boys to make the moulds for the pig-iron to run into. About 70 pigs are cast in each of two beds. This makes 10, including the boys, to each furnace and a pig-wheeler 11 [see blow]. The hours of work are from six to six every day alike, Sundays as well and breakfast time is at nine and dinner at two and

during the hour for each meal they arrange amongst themselves to get the meal, taking each other's places. The whole of the eight adult workers the furnaces are paid so much a ton, according to the quality of the product; the boys are hired and paid by the keeper and are generally their own children; some keepers and firemen make their own moulds and dispense with the boys. The making the moulds for the pigs does not require above three hours and consequently many of the boys go to a school built by the firm and to which they appoint the master, the children paying each 10d. a month. There are also men called pig-wheelers, who wheel the iron from the beds to stack it in the yard; they are paid also by tonnage, one to each furnace but they assist each other. They have very hard work and are the most irregular in the works. The metal is wrought near Airdrie and at Cross-basket, about ten and six miles from hence and the output is let to contractors, who deliver it at the pit and it is brought here at the expense of this company, who also manage the workings, supply rails and props, &c. A cart and man also carts away from the slag furnaces. Mr. Dunlop thinks the furnace-men not a bad set of men and certainly improving. Last New Year's Day, which is a criterion of an inclination to dissipation, they were never so quiet. Wages are paid monthly, on Saturday night and all must give and a month's warning and this is an established rule of the works, and would be considered an implied contract in a court of justice; in some other works a shorter period is the rule. There is no general rule in the trade. Drunkenness on duty, if at all a practice, is a cause of dismissal and not coming on a Monday after pay-day would cause a temporary suspension, as for a week. There was an old rule in the work, that children should be obliged to go to school till a certain age and it ought to be done now till 12 years old.

No.9. April 5. Dr. Adams:
Surgeon to two collieries and certificating surgeon to some factories; he also has patients from two or three foundries but is not regularly paid by the firm for these as he is by the collieries, he therefore cannot say much about the foundries but he has been astonished at the fewness of the accidents in them; he has had some accidents from the machinery but no serious burns from the molten metal; he is surgeon to the collieries of Mr. Neilson at Kepper and of Mr. Grieve at Rock-hill; some explosions have happened in them but every one through carelessness, by letting out the fire which causes the ventilation, or from not examining the workings with a Davy-lamp before the colliers go down. It is often on Mondays that such accidents happen, the gas having collected on the Sunday. Amongst colliers bronchitis or asthma is very prevalent amongst the older hands and also an eruption on the skin of the men, perhaps from the irritating nature of some of the mineral waters; he however knows of no injuries caused to the children's health by too early or long-continued employment; they get bruised by parts of the roof falling and also by the hutches running against them. As to boys in foundries, the only deleterious effect of their work he knows is soreness of the eyes caused by the heat and brightness of the molten metal and perhaps also by the charcoal-dust used in casting.

KNIGHTSWOOD COLLIERY, DUMBARTONSHIRE (visited personally.)

No.10. April 3. James Macleod, pit-head man at the Knightswood Colliery
It is near three years since the colliery was opened and he has been pit-head man two years. The colliers each are allowed by the combination to put out only a certain number of hutches. The top of the seam of coal in work is called Parrot-coal, the under part of it, gas-coal and beneath this is ironstone. There are about twenty-nine inches of coal and four or five of ironstone; a sort of black-band. One man cannot earn more than another but each earn from 3s. 6d. to 3s. 8d. a-day. On one side of the hill they receive 7.5d. per hutch, (a hutch being 4 cwt.) and on the other 8.5d., from a difference in the ease of working and about 3d. a hutch for ironstone. When a boy is 11 years old, he is called ‘a quarter’ and any one who employs him below may put out a quarter more than the regular quantity of coal. At 14, a lad is ‘a half bain,’ at 17, ‘a three-quarter bain’ at 19 ‘a whole bain’ or man; at 17 a lad may begin to put out coal for himself; there are not many children under 11; perhaps at 10 years old a child may take down his father's breakfast, and help his brother to draw but he counts for nothing. The Colliery is ventilated by an air-pit and no children are employed as trappers, for the doors close of themselves and an old man and another, who are always about looking after the roads, &c., see that the doors are kept right. Mr. Malcolm, the manager of the colliery, adds, that the men drink most terribly and very seldom work on the Monday after pay-day. The nearest church is two miles and a half off. Very few

children go to a school, which is half a mile off; they have houses with a single roof for the whole family; they have gardens laid out but when some road-scrapings were laid on to improve the land, they would not spread them on the ground, they are 'that lazy. Most of the men are Scotch, the few Irish are as steady as any. No notice is taken of their not coming on Monday to work. The gas-coal is valuable and is shipped to Paisley, Glasgow and even to Aberdeen but Glasgow is chiefly supplied from Lesmahago. To clear the from water they do not use a pump but draw it up in a barrel which fills itself in a sort of well. The engine starts to draw the water between four and five in the morning. They have no need of the Davy lamp since they opened their air-pit before that, two years since, there was an explosion in the pit, when one man was killed and five sorely burned; they had struck through into the waste. They work this pit by leaving 'stoops' or pillars of coal 12 feet apart and 15 feet square, which are afterwards themselves cut out. The hutches themselves in which the coal is wheeled are at this pit raised by a horse-gin.

> The one I went down in was formed at the bottom of a frame of wood, through the side bars of which were inserted, in the middle of their length, two iron pins, with eyes hook on to the chain, which is double at the end and secured in the wood by pins. The four sides were wattled hazel; I should consider them hardly safe but they the most common; some have only a single hook and eye.

No.11. April 5. Robert Baird, Esq., 259, Argyll Street, partner in the Gartsherrie Iron Works and Collieries in the Airdrie District:
Says:- 'there is not a worse place out of hell' than that neighbourhood and murders may be committed every day and never be heard of. They maintained some policemen a while but the county would not support them; they have a store in which two-thirds of the wages of the men who deal there is spent in drink; it destroys the men and they would give a good deal to prevent their drinking. He thinks as much as £7000 per week is spent in that district in drink. Nothing would so increase the wealth of this nation as any reformation of these people. He thinks savings-banks would do good but they have not been well managed. He would have the power of licensing public-houses taken from the justices. They are most improperly lax in the regulating of them, the houses are as thronged on the Sabbath as any other day of the week. Some of the older justices are respectable but they are afraid to interfere. The boys begin to drink and smoke at 10 years old. They have built a church belonging to the establishment. They have resisted the union amongst the colliers and no unionist is allowed to go down with them if known. They pay by the hundredweight for coals raised by each man so that he works only the regulated number of hutches, he may make them heavier or lighter as he pleases.

GARTSHERRIE COLLIERY (visited personally.)

No.12. April 12. James Chalmers, collier, working with his two sons and 13 years old, in the Open-cast Pit, Gartsherrie
He works six carts of 14cwt. a-day, three carts for himself and three for his two boys who are each 'half a man.' They first came down at 10 years old. He was down to his work at 3 o'clock this morning and that is his general time and they work till 2 or 3 in the afternoon and all go up together. At 12, a boy is a half man; at 14, three-quarters; at 17, a whole man. 'They rise over soon of a morning to go to a night-school.' They go to a Sabbath school and both can read and write a little also. They go to bed between 6 and 7.

No.13. April 13. Janet. Snedden, aged 9.
Is a trapper in the Gartsherrie Pit, No.1; comes down with Janet Ritchie, a single woman who hooks on and off the corves on the chain for drawing coal up the pit. Comes down a quarter before 6 and goes up again about 4 p.m..

No.14. --- Cameron.
Road-man and looks after workmen in the same pit. There are about 50 drawers in the pit [which I visited], 20 of them girls. We see two of them pushing a hutch both about 12, cousins, named Janet Mickley and Martha Paterson. It is about a year since most of the lasses came into this pit. The roads were getting far [i.e. long] and the lasses are not paid as high as boys would be. They come down between 4 and 5 and go up again about 3 p.m. The engine stops from 12 to 1 for the horses, who draw the coal from the pit-head to the furnaces, to get their corn. It is between 500

and 600 fathoms from the pit to where the colliers are working the coal about two-thirds of a mile; [this distance we travelled two of us in a 'whirly' pushed by a boy]. The collier is paid from 2s. 4d. to 2s. 6d. a ton for what he puts out and a single man's 'darg' [or day's work] is from 4s. to 5s. It takes the drawer half an hour to draw each hutch of coal from the face of the coal to the pit. This is the splint coals, the deepest worked here but the pit is cool and well ventilated.

No.15. April 13. George Lindsay.
Has been a collier 42 years. He began about 11 years of age to assist his father with a pick and in filling the hutches. At that time there were no railroads and they drew below ground with horses. To make the roads high enough they blew up the pavement. It was when the iron railways came in that 'they were putting away' the horses and brought boys draw. There are more lasses now drawing in this pit than he remembers before in this part of the country. A great many of the colliers' children begin to work when too young. He thinks 12 years old is as young as they ought to come down. He put some of his own sons in at eight years old, a weak one to help a strong one. Nine years since he wrought work at Mr. Dixon's pit near Govan. He knows of no other where they work night and he made very good wages but he 'did not love it,' it was not natural. He had two own sons drawing to him and they were the first to fail. They left him and then he was obliged to go also. Where he first worked was in Ayrshire for a country sale; there was no public work there and they did not spend so much of their money in drink as here.

No.16. April 12. Mr. M'Arthur.
He has a private day-school of about 120 scholars, in what was a hand-loom weaver's shop, of which there were several here four years ago but very few now. He has been between four and five years teaching here. He distributes about 800 tracts monthly for the Glasgow Tract Society but he believes that eight out of ten to whom he gives them do not read them. He has to turn out two or three children from his school every day to wash their faces. The men marry between 18 and 20 years of age and the parents thus find themselves with a family before they have experience to govern them properly. The mothers do not control their children properly nor allow him a sufficient authority over them. Much of the population is migratory, and on leaving a place they do not think much harm of leaving in debt, particularly the women. He thinks the system of stores attached to works has something to do with the constant changing of hands. They are allowed credit at the store, which they would not get as strangers at the shops; now if they were to remain long enough at a work to get credit in the neighbourhood, they might cease to deal at the store. He tried a night-school but he made nothing of it from the irregularity of attendance and the self-will of youths who had never been properly broken in. It ruins a night-school, which ought to be chiefly devoted to teaching writing and arithmetic, to have children learning to read and thus disturbing the others and occupying the master; hence he often refused to admit those who could not read. There are two small schools where a few girls learn needlework. Drunkenness is the bane of the population. It is so common that 'the being the worse for drink,' as they call it, is looked upon as no offence. Two or three families will join in drinking whisky at home and even the children are dosed with it by their mothers as soon as they can gulp it down. The best paid drink the hardest and those who earn moderate wages are often the most frugal. He has known a woman with a family who had eight lodgers, with only a room and a kitchen; thus they have no regard to comfort but only think of gain. At Summerlee they have gardens to of the houses and some of these were cultivated at first but the others pilfered things from them and so they were given up. There is no reading-room in the place, or musical or mechanics' institute, the only recreations are dancing and playing at coits; things, however, are gradually improving; two churches and three Sabbath-schools have been created since he first knew the place.

ROCHSOLLOCH IRON-STONE PITS. (visited personally).

No.17. April 13. William Lochland.
He is contractor for one of the Rochsolloch iron-stone pits which I visited in his company - he was bred a farm-servant in Dumfriesshire. It is 10 years since he came here. He has worked as pit-head man of an iron-stone pit. Many who contract are 'cloth merchants' - [i.e. linendrapers] grocers, &c. who have a practical man on the spot to manage for them. Most contractors, however have been miners. Really if Government could do something to put away whisky from

the land it would be a blessed thing, it both breaks the Sabbath and brings ruin on families. The Women are falling into drinking and the young ones are very fast learning to drink. He calcines about 1200 tons of black-band iron-stone at once and this burns out in about a month. He receives 5s. 6d. a ton for the calcined stone and it loses about one-half a the process. The depth of the black-band from the surface here varies from 11 to 24 fathoms. The workmen's houses here are let only fortnightly. If men were hired by the year they would take more interest in their houses and cultivate their gardens. The few houses built by operatives are let by the year and the tenants of these may work for whom they choose but those who live in houses belonging to the works if they lose their place are also turned out of their houses.

No.18 Joseph Smith, agent.
Four works have taken these pits between them, viz., Gartsherrie, Calder, Dundyvan and Sommerlee. The Royalty is rented for 10 years, of which 4 have expired. There are 10 pits now worked, in which there may be about 50 persons under 18 years of age and of them perhaps 20 females of from 16 upwards. Some of the latter are very staid, others flippant enough. Most are single women. The pits are let to contractors at a month's warning on either side. The contractors pay all the hands employed, both miners and drawers. There is generally one drawer to each two miners. A man's work is six hutches a-day and a boy's two hutches. The miners are paid fortnightly and mostly live at Airdrie. The contractor, who takes each pit furnishes his own horse for the gin and has six new hutches given him, he must uphold and procure any more which he may require and he also lays the rails low ground, which are supplied to him. A woman draws from 28 to 30 hutches a-day, a distance of about 40 fathoms, for 2s. per day. They come down at seven in the morning and go up at six, p.m. There is a sort of slaty coal an inch or two thick under the iron-stone. This is picked out and then wedges are driven in between the iron-stone and the roof with large iron hammer called a 'mash.' The masses of stone which fall are then broken up with the hammer. Fourteen yards of the face are taken by each two men and they build their own walls of the roof which falls with the iron-stone, leaving a road 6 feet wide for each 14 yards. This seam of black band dips to the S.W. The contractor receives from 5s. to 6s. 6d. a ton for calcined stone, each ton of calcined being equal to 2 tons of raw. Children are not allowed to come down under 10 years old. Four shillings a-day is a man's darg, a boy of 13 counts for a quarter of a darg.

> The seam of iron-stone, and a flaky rock which falls with it, make a cavity of about 2 feet high under which the miner sits to work, bending one leg under him and extending the other so as to rest the foot against the stone. Thus in a stooping posture he has to use his heavy tools which must be very hard work. Many a one, they said, had lost their lives by the roof falling but not at this place.

DUNDYVAN IRON-WORKS (visited personally).

No.19. April 13. William Miller.
Was 16 years teacher of a private school in Airdrie, since that clerk and weigher in the Calder Iron-works, now clerk in the Dundyvan Iron works. The school was for the children of working classes and contained about 100 to 140. Previous to 1821 Airdrie was quite a weaving population and when he first remembers it the population was stationary. Since that time the population has considerably more than doubled. There were four places of worship when he first went and now ten, besides small meeting-houses. When a collier flits, i.e. changes his work, and goes to a new residence, the new master has 'the fudling of him,' i.e. gives him whiskey, and they are a wandering race the most of them. If hired by the year they always expect some pounds as a gratuity. Some houses in Dundyvan of only one room have 18 human beings, family and lodgers, in this one room, half of them being at night and half by day. The school fees about here are 3d. a-week reading, 4d. a-week writing and arithmetic. There is no reading-room, mechanics' institute, musical band, or any other public amusement amongst the colliers but they join in clubs of 12 or so, and take in papers, chiefly Fergus O'Connor's 'Northern Star' and the 'Glasgow Patriot,' also a few of the other papers not of Chartist opinion but the one-half are not given to read anything. The engineers and mechanics are also mostly Chartists. Four years ago the combination was in force and then any man not a regular bred collier by birth had to pay £4 and even regular bred colliers at successive stages, as they became half men, &c., had to pay 5s. for each step. No man could make a bargain about work with his master unless by leave of the 'house', i.e. the committee who met for a certain district. At the strike in 1837 many young

hands amongst the hand-loom weavers became colliers. At the time of the association all the women were put out both of the coal and iron-stone pits but now they are coming in again. At Arbuckle a school has been built and let free to the master and all workers who have children have the school-fees deducted from their wages, whether the children go or not. They could not possibly get on with the work without stores, because fresh hands coming without credit and hardly a shoe to their feet, could not get their breakfast if it were not for the store. At Dundyvan it is nothing against a man that he does not deal with the store, in short it is less trouble when they do not. It is for their own accommodation. Some contractors lead their men to deal with a relation and some receive percentage on shops to which they give credit.

AIRDRIE.

No.20. April 13. Rev.. Daniel Callaghan, Roman Catholic priest at Airdrie.
Has been here 14 months since the chapel was opened. Young single men come from Ireland to work here and consider themselves quite disconnected with the general population of the place, intending often to return to Ireland with a little money to pay their rent. Absenting themselves, however, from the Sunday services they sometimes fall into habits of intemperance and never say anything. Observes a visible change in regard to external morality [as riotous conduct in the street on Sundays] within the last 12 months, attributable to their being again brought within the influence of religious observances. He considers that he has nearly 5000 people under his charge, which extends eight or ten miles round. His district includes eight iron-works. The people of three others being under the care of a priest who lives at Glasgow and comes out on Sundays to do duty at Hamilton, so many more than the chapel will hold [which is between 700 and 800] are desirous of attending that only last Sunday he requested those who attended the morning service not to come again in the evening and vice versa. Two months ago a branch of the Total Abstinence Society, connected with Father Matthew, was established and he has enrolled 550 members but he does not hurry the thing for fear of relapses. He considers the migratory character of the mining and colliery population is to be ascribed partly to the tenure on which they hold their houses. The day a man ceases to work for a particular employer the same day he is turned out of his house and may be done at a fortnight's warning. The people thus feel themselves wholly unconnected the place. In one work this point struck him forcibly, where 10 families whom he visited, consisting perhaps of 50 individuals, who seemed to consider themselves settled, had all been removed when he next called in about three months. He thinks stores in many instances most iniquitous. In small concerns he thinks them highly demoralising, for instance, the persons who contract to work iron-stone pits often demoralise the men employed by them through shops kept perhaps by a wife, a brother, or at least a friend. The workmen buy at the store or shop and errors perhaps are committed in the accounts kept against them. On pay-day the account is sent in from the shop and the amount stopped off the man's wages and no remonstrances are listened to perhaps things are charged which the men never have had, or more than they had, or at a higher price. The men finding themselves wronged, in their turn take advantage of others. If an article is not to be had in the store, as often happens and the man has no credit elsewhere, they lend him money, at 1d. in the shilling interest, to purchase he wants elsewhere. Some men, by his advice, have ceased to deal at one of these stores in which they complained of unfair dealing and, at the end of the fortnight, when it was found that there was nothing against them at the store to be kept off their wages, they have been told they may look out for work elsewhere. He now advises his people to get some things at the store, as potatoes, meal, &c. in which they cannot be much cheated and to buy other things from independent shops. He has known some earning good wages who did not receive clear, after paying their shops, enough to keep them in decent clothes for the Sunday. Last fortnight a woman was telling him that she had saved half-a-guinea out of her husband's two last pays by following his advice in only partially dealing at a store. He wishes it to be distinctly understood that in works with large stores he hears nothing of these complaints, it is only the stores in which small contractors, &c., are interested to which he alludes. There are still a number of hand-loom weavers at Airdrie, as there are young hands always ready into a vacant shop. Notwithstanding the long hours they work and their inadequate earnings, many of them shudder at the idea of going into a pit. Many houses which receive lodgers have as many as 14 persons in a room, which has a most pernicious effect both on health and morals. They have two beds which you see on entering the room and two at night pull out from under these and cover nearly the whole floor. Men coming in dirty from the pit throw off everything but their trousers and begin to wash themselves before the girls

of the family. Arbuckle and Dykehead are two places where iron-stone miners are dreadfully huddled together from the scarcity of houses. Most of them are here to-day and away tomorrow.

No.21. April 14. Rev. William Jackson, minister of the West-quo sacra parish, Airdrie.
There was fever here last winter to a great extent and nothing being provided for a period of affliction, the people are immediately thrown into a state of destitution. The migratory population about the works has a demoralising effect. The moment a man of this class gets into difficulties he moves away or if he has an illegitimate child, to avoid a decree of aliment for its support, he removes and the expense is thrown upon the parish. There is not a single endowed school in Airdrie, being new parishes. When the original parishes were laid out, a fund was reserved for endowing parochial schools but this has not been done in the new ones.

MONKLAND IRON COMPANY'S WORKS (visited personally).

No.22. April 14. Mr. Kirkland, manager and clerk of the store for the Monkland Iron Company, Calder Bank.
The sheriff substitute who held a small debt court at Airdrie has since February made arrangements heats which will very much increase arrestments of wages. Formerly only the wages due above the sum of 9s. a-week, in the case of single men and of 12s. per week for a family, could be arrested. Now only half the above sums are allowed for subsistence and all above 4s. 6d. and 6s. respectively may be arrested. The creditor consequently will now be able to over a much larger amount than he could before. Many shopkeepers are consequently are more ready in giving credit than they were before and this is a torment to the employer and the arrestment costs the workman 5s. for the first time his wages are arrested for any debt and 2s. 6d. afterwards. There are certain shops which will allow men's wives to have goods on merely stating their husband's employment and where he works, without requiring further security. They get these paid for by instalments and employ agents to serve arrestments, which are printed for them and filled up by their clerk, the agents being paid regular wages and the fees for the arrestment going into the shopkeepers' pocket. The annoyance to the employers is very great, because these agents will often serve arrestments in several works in which a particular man they wish to get hold of is not employed. In such cases the employers must appear in court, for unless they appear they are held to confess the debt and forced to pay it. If they dispute the validity of an arrestment they must produce their books and undergo a cross-examination as to the particulars. In cases where they have workmen whom they wish to keep but who have extravagant wives, they are forced, to avoid arrestment, to pay the wage every second or third night, which is a great trouble. They cannot secure them set against an arrestment by paying beforehand, as till the money has been earned it is not held be paid.

> [N B. This plan of paying wages in money frequently has at least the good effect of rendering the workmen independent of the store, and enabling him to deal where he likes.]

Mr. Kirkland says the horses and the labourers who work with them begin at seven a.m., work till twelve, when they have an hour whilst the horse rests, and then go on again till five. This is only nine hours' labour for a horse, which is less than most children work in these parts. One of the schoolmasters here lately became agent for the Glasgow savings' bank, and the colliers immediately declared openly that if a man were known to be putting into it and saving, Mr. Buttery would forthwith reduce their wages. However, the 'above-ground men' [such as engineers, wrights, &c.] support it. The system of schooling adopted in these works is, that each man employed at the works, and residing within a mile of them, whether he have children or not, is obliged to contribute 2d. weekly towards the schools, of which there are three one at Calderbank, and two at Chapelhall. Every man employed as above may send a child to any of the schools [whether his own or a neighbour's], either to the day or night-school; if he sends more than one of his own he pays an extra 1d. a-week for each. The masters meet once a-week and send in lists of all their scholars, for which they receive 2d. or 1d. a head and all the surplus is divided in proportion to their scholars amongst them. The company allow the three school-houses, the fires, and a house for such of the masters as are married.

> [The children attending to-day at the three schools I found to amount to 28O, many more being on the books. The evening scholars amount now to about 120.]

The schoolmasters are chosen by examination, by a committee consisting of representatives elected by the workmen the different departments and they are merely on monthly wages, and may be turned off at that warning.

SHOTT'S IRON-STONE PIT - WATER ENGINE PIT; visited personally.

No.23 April 16. Johnny Miller, aged 10:
His father was a labourer in Inverness; died eight years since of fever; sister has been three years in service in that town. No other brother or sister. His mother and himself left Inverness for Glasgow about 18 months since. "Does nae ken what brought her awa", came in a boat by sea and canal. His mother set up a small shop in Glasgow, where she sold sugar and tea and toys; it was in William-street, near the Briggate; she died of fever. What shop she had kept her while she was lying, and paid the doctor and people tending her. He came away along the road and the 'folk' bid him go to Airdrie, where there were a 'heap o' pits'. Stopped one night in a farm-house by the way. At Airdrie found one Duncan Leveston, who gave him work, drawing coals for him for six months, till the pit was done and then Duncan went to work at an iron-stone pit, where he could not draw. This man gave him his food and any old bits of 'duds' [i.e. clothes], but no money. It is "well on to four weeks" since he left it, during which he has been going about from one farm to another herding cattle, &c. Was never at a school; had a little 'spell' [i.e. spelling-book] the other day in which he was learning his A, B, C, but lost it out of his pouch. At Glasgow he just went about the street; was never at the police office; never worked at a tobacco shop.

This boy was admitted on trial to work in the Shotts Pits after he had told his story as above.

No.24. April 16. William Brownlee, Esq., surgeon to the Shotts Pits and Collieries:
Has held this situation for two years and a half. Has paid particular attention to the girls in the pits, being struck with the fact of their employment when he first came. While he has been connected with the works nine illegitimate children have been born in them, but only three of these of women working in pits, and one of these has since married the father of her child. The half of the above girls were living away from the place and only came here to be confined. Hence he concludes that employment of females in these pits is not conducive to immorality. Neither does he think it injurious to their health. He had an instance of a young married woman who had a premature birth from an accident, and was some time out of health from it; she had formerly been drawing and thought she would try it again and she recovered when at that employment. He only remembers two accidents to miners, one of which was from a hutch overturning and hurting his back, which laid him up five weeks. There are less accidents here than in most other pits.

SHOTTS MANSE.

No.25 April 16. Rev. Walter Colvin, minister of Shotts parish:
At the Cleland or Omoa iron-works in his parish a number of people have lately been added to the population under the new proprietor, Mr. Stewart. He visited every house in the place to induce the people to send their children to school and persuaded the proprietor of the works to subscribe 5s. per annum. He then placed a teacher there, but he is half starved for want of scholars and will be obliged to leave it. A school did exist here four years ago, but the heir of the person who built it pulled it down. The present school is held in a garret with two small windows, in which the Methodists preach. Mr. Baird, of Gartsherrie, has told him of families receiving from him £300. a-year in wages the whole of which they consume in eating and drinking, whilst their houses are without furniture and their children in rags and ignorance. The

English workers at Dundyvan malleable iron-works get some of them £1. a-day. They drink immensely of rum and beer, which they keep by them at work in a pitcher and at home they entertain each other with wine. They eat turkeys, geese, &c., and have raised the price of poultry in that part of the country.

HURLET COLLIERY; visited personally.

No.26. April 22. Peter Boag, bottom-man of the Haugh Pit, Hurlet, Mr. Wilson's:
His office is to hook on the full baskets and take off the empty ones from the 'tow' or rope by which they are hoisted up. This pit is 47 fathom deep. When working at full speed they raise 80 baskets of 5cwt. each on an average in an hour. They generally stop the 'cleet' or engine for half an hour at 11 o'clock to feed the horses. Three horses are used to draw coal in this pit, which is very rarely the case in this country. They have had no very serious accidents lately here. Thirty-six years ago there was a very serious explosion in this pit by which 18 people were killed; 16 funerals went away in one day to Paisley and two at Neilston. The coal produces a great deal of fire-damp but by opening other shafts into it, it is now very well ventilated. The Househill Pit, which is so near that they can hear the men working in it and in the same seam has had very many accidents. In nine years they have had 32 or 33 people killed there, besides others injured. They prove in the morning with the Davy lamp but never work with it. This Hurlet seam of coal is used for manufactories but is too sulphury and dirty for houses. They raise from this pit four different minerals; viz. coal, copperas ore, or 'galls,' found in the coal, aluminous schistus above the coal and finally limestone. Mr. Wilson has works for making the copperas and alum. A collier's 'darg' [or day's work] is 16 baskets per day. This is about as heavy a darg as any in Scotland and they are paid from 3s. 3d. to 3s. 6d. a-day for hewing and filling. The drawing to the horse-road is contracted for. He himself keeps a night-school at Nitshill, where he sometimes has 60 scholars. For 16 years he has had no drawers in it. "The drawers themselves allow it is too laborious for them; that they are wearied when they go home too much to attend school." Many of his scholars are married man. They cannot work more than five days a-week either at hewing or drawing; it would be too much. He thinks the children are put to work in the pit much too young. He thinks the stores are a great evil. 14 or 15 years ago, when there were no stores, the men wrought much better. The men would be much better off if they dealt in shops on their own credit. "Everything is a great number per cents. dearer" in the stores. There are stores connected with many public works, factories, bleachfields, &c. and even railway-contractors have stores. Some shops allow 1s. in the pound sterling to the contractor on what his men spend at the shop. The store connected with Mr. Wilson's works is not objectionable, as it is bonafide let to a shopkeeper but many, though carried on in other person's names, are well known to belong to the proprietors of the work. The shops will not trust men who work where there is a store, because they know that they have always the store to fly to.

No.27. Patrick Kinnon, a drawer, aged 9:
Helps his brother. They come down to work about half-past five; they get up again between four and five; do not go to evening-school. Dennis Daily and his brother, aged respectively 19 and 14, drawers, have to go and come to and from their work together about seven miles; live at Cross Arthurly.

THORNHILL HOUSE, NEAR PAISLEY.

No.28 April 23. Campbell Snodgrass, Esq., lessee of Elderske and Craigen-feoch Collieries, justice of the peace, &c.:
The colliery children are generally ignorant; witness does not see how it can be otherwise, as long as they go down to work so young. The school is one mile distant. The arrestment of wages causes great hardship to a workman; it encourages the shopkeepers to allow men to get into debt and, once in debt, the man is at the mercy of the tradesman. He may charge his customer what

price he chooses for articles and if the man leaves the shop the tradesman pounces upon his wages by an arrestment. What is called an arrestment in dependence is served together with the summons and this has the effect of locking up a man's whole wages till the cause comes on for hearing in the small debts court, even though the man may all the time owe the tradesman nothing. As to stores attached to works, they are the nefarious business that ever was. There are no stores about here, nor lines given to shops; nor have the men houses or fire allowed them, or let by the work to them. They are quite independent; they are paid every Saturday. A house consisting of one kitchen is rented at about £3. per annum, which is paid half-yearly, or may be paid weekly. As an illustration of the effect of stores, he knew a certain colliery and lime-work, of which he has heard it repeatedly said and he believes with truth, that it would have been a losing concern to the proprietors but that the profits on the store and whiskey-shop were so great that they more than made it up. Some of his men once went to work at this place but soon returned, entreating to be taken back, being, as they said, here paid 'in white money.'

IRVINE.

No.29 May 3. The Rev. Andrew Glen, missionary, Ecentiate of the Scottish Church:
Has been engaged amongst the colliery population connected with the collieries in Sewalton, Fairlie, and Gatehead for the last five years and now, giving up the two last, is to take in their stead the workers of Pearston, Mr. Macredie's. He held his former appointment from a society for promoting religion in the parishes of Dundonald, Kilmaurs, and Fullerton. In the above localities all but a very few of the collier families reside in houses provided by the proprietors of the works, from which they must remove as soon as they cease to work for the proprietor and may be turned out at a fortnight's warning. Many are also strangers from Ireland. From these circumstances the collier population has a tendency to be more unsettled than persons connected with other public works. The man knows that if he can obtain work in any other colliery there is a house all ready for him. At Fairlie particularly the population has been very unsettled, so much so, that within five years the village has been twice emptied of its inhabitants and repeopled. In the other two collieries this extreme fluctuation has not occurred, partly from a more steady system of management and partly from greater care in the selection of the workpeople. On often pressing upon those at Fairlie advantages of paying more attention to their domestic comfort, as relates to their gardens &c., the common answer was, "We dinna ken "hare we might be the next fortnicht." On the other hand, at Gatehead every little patch they can have access to they plant potatoes and cabbage. At Shewalton, being on the borders of a waste sandy muir, many have enclosed parts for potato gardens and this spring several collier boys employed in drawing have collected branches from neighbouring woods and slabs from the saw-mill, and enclosed little gardens, half the size of a small room, for the cultivation of flowers. About Shewalton they are much attached to the place and like one large family, having intermarried amongst each other, having a moral security in the character of the master as to the permanence of their residence. Since the commencement of the mission, about 11 years since a great improvement with regard to the education of the children has taken place, according to the testimony of the farmers, managers of works, &c. and one school has been established and another which serves for the two collieries of Fairlie and Gatehead, has been very greatly improved in efficacy. The influence of permanent residence is conspicuous in the different degree of attention of the schooling of their children paid by the workers &c. with Fairlie, as contrasted with those connected with the other two collieries. In the latter, too, a gratifying anxiety is manifested by the parents to send their children to school, though still the male children are removed at a very early age to be employed in the pit, females are also very soon employed at sewing muslin at home and taking care of the you, members of the family. The little girls do not at first earn much at muslin embroidery but they, as they call it, 'get their hand set,' and so become more skilful at the work, remonstrated with by Mr. Glen as to removing them so soon, they excuse themselves by saying, 'Oh, but we're going to put them to the night-schule.' The average hour of commencing work in the morning is four o'clock, often earlier, as early as three. Children, and all together; they come up again about three or four next afternoon, sometimes so late as seven. Accidents but too frequently occur, often by recklessness of the workmen. The principal causes of accident are the falling of the roof, burning from fire-damp in one seam at Fairlie, breaking of the rope which draws up the coals and men and the hutches crushing drawers when descending steep parts of the

roads below ground. There is a vast deal less intoxication amongst the workers at the two other collieries than at Fairlie and in general in collieries. The time of work in the fortnight is dependent upon the demand but the men would prefer working about ten days a fortnight. At the Gatehead and Fairlie mission station there is a library, the subscription to which is 9d. a quarter; not many of the grown-up people make use of it but the books are eagerly sought after by the Sabbath scholars. A great many copies of the Scriptures have been sold to colliers within the last five years and all the more respectable read more or less on a Sunday. The copies of the Scriptures said to be purchased have generally been as school-books for their children. Previous to the mission some of these works scarcely sent an individual to church but within the last five years two school-rooms, holding about 80 each, are filled, and sometimes above 100 are packed in. Altogether, it is the opinion of Mr. Glen and of the minister of this parish, in whose presence this evidence is taken, the Rev. David Wilson, that in traversing the collieries in the whole West of Scotland, I shall find few, if any, in so good a condition as Shewalton and Gatehead and also Mr. Macredie's, Pearston, just now commencing. And Mr. Wilson desires to add, that this is mainly to be attributed to the attention which has been paid to the education and religious instruction of the operatives in them.

STEVENSTON COLLIERY, AYRSHIRE; visited personally:

No.30. May 2. John Ballantine, manager of Stevenston Colliery, in the Parish of that name:
There are, on an average, 130 men in these pits, and he believes about 75 boys drawing to them but he has nothing to do with them; they are paid by the colliers, and are generally own sons. They are paid weekly every Saturday. and they have no store connected with the work, nor is that the custom in Ayrshire. The colliers go down from half-past three to six a.m. and up again between three and five in the evening. The men live in houses which they rent at the village of Stevenston, at from £2. 10s. to £3. per annum, including a garden. They most of them set their own potatoes and some have even enough to sell a part of the produce. The colliery is one of the oldest in the country. The building still exists in which stood one of the first engines for pumping erected in Scotland by Newcomen. This was up in l725 and the colliery was wrought long before that. The men are stinted by their own rules to earn not above 4s. a-day and for this they put out from eight to ten 'creels,' as the hutches are here called. At between nine and ten a boy is counted a quarter-ben, and his master can put out 5s. worth. The sons of persons who are not regular colliers have to pay 5s. for each quarter-ben which they are admitted to. Colliers' sons pay only 3s. to become perfect colliers. He has known them hold meetings and inflict a fine upon a man who did more work than his neighbours. They do not in general work above nine days a fortnight.

GATEHEAD COLLIERY, KILMARNOCK; visited personally:

No.31 May 4. Mrs. Gray:
Is the wife of James Gray, the engine-man at one of Mr. Guthrie's [i.e. Duke of Portland's] pits called the Kiln Pit; her husband has three brothers colliers in Mr. Finnie's pits at Gatehead; her father was a weaver at Tarbolton, eight miles distant. Has been here a year, and 'her man' wrought seven years at Mr. Howie's, near Kilmarnock, Galston; her husband goes to the engine to draw water before the colliers go down at three o'clock of a morning; the colliers go down from four to 6am., according time the coal is wanted for shipment at Troon. The time is about the same for
commencing at all the pits she knows; they are very often 'by with their work gen twa o'clock,' at this pit, but that is earlier than most others, because there are fewer men. Where there are maist men they are longer down, because it takes longer to draw their coals. About 12 hours is the general time men are down at other pits; this quarter year and better they have not been above six days a fortnight working, on account the little shipment; if they could get it they would like very 'wee' to work ten days a fortnight. They take the boys down at 10 years old to work; they

only give them two 'foos' [i.e. two loads or four kreels] at first, in three-quarters of a-year, they give them three and six 'foos' when they come to half a dark, when they are about 13 and at 15 come to three-quarter dark. The boys draw all the creels; what she means by their having the above number of 'foos' or loads is, that the collier is allowed to put out so many for the boy. It must be sore on the children to stay down and work so long; it keeps them down; they are not generally so healthy boys that's down as those that work above ground. A heap o' folk think its want of air being confined below ground so many hours. In summer sometimes the air's that foul they cannot work, they are obliged to come up, men and boys and all. Some o' the colliers tries to get their boys into trades, or learns 'em to be 'gig-men' [i.e. to manage the engine] and keep them above ground as long as they can. Her man worked below ground when he was a boy but he did not agree with it, he drove a horse below at Muirkirk but he could not stand it; it made him sick and sleepy; it made him unco' dull and sleepy. After he was married he began to a few weeks in the pit but he was obliged to give it up from the same cause; has heard of mothers and fathers say that they wished their children to be well forward with schooling and a bit stout, before they took them down; she thinks they should never go down under 12 years old if folk could keep them up to that, but a heap of folk must take them down to help to keep the young ones. It's very dangerous work; a heap of them get hurt with stones falling from the roof and by coals when they fall over fast on them in working them; there's no much firedamp in these pits. Mr. Guthrie's work has a school, and the colliers who have wee anes send them either to it or to other schools; they are all keen to learn 'em to read, to be that forward that they can read the Bible and a heap of them, after they are working, learn to write at the night-school for an hour at night but many of the girls do not learn to write the girls work at flowering muslin but they don't win above 2d or 3d. a-day for a while the work's that ill that she has a cousin in the town who sits close to it and is a real good 'shower,' [sewer] and cannot win above 6d. a-day. The children when they go down the pit maistly takes enough to serve them the day and get dinner when they are by with their work. often they are unco' hungry for dinner. They take cheese and bread and whiles tea whiles milk for dinner pork and potatoes, or flesh meat, or broth. The Gatehead folk have a library to which they pay 9d. a quarter and many colliers are in libraries which are managed by ministers or missionaries. She shows me the catalogue of the one her husband is in. The 2nd rule is, that *'it shall consist of books fitted to promote the intellectual, moral, an religious improvement of the readers; nor shall any work containing unsound opinions, or having a dangerous tendency, be admitted.'* Rule 4 is, *'that it shall be under the management of eleven curators, who shall be in full communion with the church, and shall be chosen from the several districts of the congregation.'* Most of the men in Mr Guthrie's, and about Gatehead, work very steady and attend the kirk Some of the young ones are very ready to get intoxicated after pay but about Fairlie work they are quit extraordinary, do not gang to the kirk or to preachings and get themselves intoxicated on Saturday nights and that makes them unfit for attending kirk on Sabbath. The purpose of this inquiry, if it is to get the children more time for schooling, is a gude thing and can na' do ill to ony body. She thinks all the best disposed of the colliers would approve of a limitation of the working age to 12 years old.

GATEHEAD.

No.82 May 4. Mr. John Muir, manager of the Gatehead Colliery (Mr. Finnie's), on lease from Lord Eglington:

Has been manager about four years and a half. There are about 110 colliers, which is an increase of 20 men since he came The coal is worked for shipment to Ireland and the continent, at Troon. Some sent even to Falmouth and Plymouth for steam-vessels, distilleries, public works; have four seams, only three in work; called one, ell coal, three feet thick; two tower-table seam three feet two inches thick; three, major-coal three feet ten inches; four main coal four feet six inches to five feet. The three last only are worked, the deepest pit 44 fathom. No horses used, coal dragged by boys and men the furthest here 400 yards, whirlies carrying 4 cwt. The whirley, when it has become water-logged with itself weigh pretty near upon 2 cwt. This is the weight allowed on the steelyard; the trade goes and comes according to the markets The stint or restriction as to work imposed by the colliers' rules only extends to the amount of his daily earnings, which must not exceed 4s. a-day but a regular man may work six days in the week and thus earn 24s., whilst man irregular one may earn only five days' wages or 20s. and so on. According to the quality of the

coal, as to ease of working. and its distance from the bottom of the shaft, the quantity that a man should put out in a day is estimated and from the quantity the price per load is reckoned, so as to amount on the given quantity to 4s. a-day. The witness was 19 years managing a small colliery for Mr. Guthrie before he came to this work and he known the 'dark' or day's work vary from 14 to 9 loads, still the day's wage remain same - for instance, 4s. The man either draws his own coal, or has a boy who, according to his age, may enable his father or man for whom he draws to put out a quarter dark, half a dark, &c. more than he otherwise would be allowed to do and thus some families have three or four boys. He has three families, two of them having three dark, and one three and a half in the family, which makes their earnings 12s. and 14s. a-day. The, who has three and a half dark is as decent a man as any in the country, goes to church and keeps his home comfortable. The colliers here mostly live in houses belonging to the work which they have free, with a bit of garden; other houses are rented by the work for them and some receive 50s a-year to find houses where they like; most of the colliers are bound or engaged by the year. About 10 or 15 of the latest comers are engaged only fortnightly, so as to be free to be discharged if a slack time should come. The plan of binding by the year was adopted by the witness on his coming from the Duke of Portland's works in which this custom prevailed and since he came he must say the colliery is in a much better state, there is not so much drinking, fighting, &c., and the people continue much more steadily at the work. Fairlie Colliery where they are only on a fortnight hiring is a great contrast, there has been continual flittings. Mr. Glen, the mission also, who acted in this part of the parish under the parish minister (by whom he was partly paid), by means of his Sunday-school, and weekly services, and visiting on Thursday a portion of the houses, produced a great moral effect. For the surgeon 1s. a quarter is stopped from the wages. When a man proposes to put a child into the pit he must ask the witness's 'liberty' [or leave] and he always ascertains that the child 'is passed his schooling,' and is 10 years of age at least before he allows it. He thinks 10 years full early to go down and has refused to let them go down even at 10, but he considers the state of the family. For instance, if a man has a family of several daughters older than the boy. He thinks independently of such circumstances that 12 years is quite young enough. He thinks that probably many parents would not object to a restriction of the age at which children should be put down the pit to 12 years, though some doubtless would grumble. He thinks the bad effects of working to young consist more in a loss of proper education than in regard to health. For the first months children of 10 years old do not go down till three hours or so after their father, viz. about six a.m. and. up again from three to four, till they get inured to it. It is not the custom in Ayrshire to have stores connected with the works and he has heard complaints of men who have worked where they have them. The men far prefer being paid in money and allowed to deal where they like; they would not allow colliers to keep spirit-shops; this is always a question put to men before being engaged. They have seven or eight trap-doors for ventilation but these are not kept by children, the oversman has the charge of them and sees they are kept properly shut. The trapdoors, however, need be kept shut only at night. The witness, being a native of Killlmarock and having never been employed in other coal districts, cannot give any information respecting other localities.

KILMARNOCK COLLIERY.

No.33. May 4. James Findlay, clerk at the coal-office:
Has been in the office 12 years and his father is still working as a collier, and two of his brothers have gone into the pit; the eldest was near 12 before he went in, the younger one about 10 to assist his brother; it is safer for the parents to go down with the children, otherwise it is severe on them going down so early when young till they get accustomed to it. They go to bed early about seven o'clock; the night-school here meets about five o'clock, only for the six summer months, and the children come up about three or four, or before three sometimes. The parents are usually anxious they should be pretty well on with their education before they go down the pit and a school has been connected with the work for 19 years. It is attended by about 100 scholars, boys and girls, in the day-time. You may search Scotland before you'll find a better work than this and we're endowed with a good manager poor fellow, and I'm very sorry he's so ill. Our people here, on the Sabbath-day, just go to church as regular as they go to the coal-work; Mr. Guthrie has just got it so 'imbibed' in them; he sets them the example himself. They raise here about 200 waggons every day that they work. If there is less demand they work fewer days. Each waggon contains 28 cwt - they are now only working half-time; three days a-week. This is more convenient than half of each day, for cleaning themselves, and also they say the expense of oil

would be nearly the same, also they do not rise from bed so early in the morning the days they do not work. Mr. Guthrie being very unwell is not able to see me and the work last visited being conducted on the same principles as Mr. Guthrie's, by a man brought up under him, the witness thinks he has nothing more material to mention.

KILMARNOCK

No.34. May 8. John Thompson, Esq., surgeon:
Attends several collieries in the neighbourhood, having been regularly engaged about two years and a half and shorter periods. During that period the most serious accidents have arisen from stones falling upon the men whilst sinking the shafts. A few slighter accidents occurred but the greatest mischiefs connected with this employment is the low moral condition of the colliers. As a whole they are generally given to intemperance though there are some quite the reverse. The latter are of course far more comfortable and have their children better educated, nor do they send them so early down the pits. The evil effect of being work prematurely is not visible in any deterioration of health but is the cause of their being brought up in ignorance by which they are led to form the same perverse habits as the preceding generation. In consequence of the rule existing amongst them which limits each day's earnings to a certain amount, a man who is ambitious of earning more than the sum limited, by taking down a boy of any age, becomes entitled to earn more than if he worked alone. This temptation is too strong for some parents to resist and instances have been reported to witness, (one by a collier so recently as yesterday morning,) of colliers carrying the child too and from the pit on his back. Young children thus exposed to hear and all that goes on amongst a number of colliers soon imbibe the bad habits which distinguish their class. The consequence of intemperate habits and in some degree of the nature of the occupation, is at a more advanced period of life an impaired constitution, so that a collier at 50 generally has the appearance of a man 10 years older than he is. The improvement of the moral condition of this class, which should lead them 'from principle' to be careful of their own and their children's health and education, would be attacking the evil at its root, and would be far more efficacious than any mere restrictions as to age of employment.

> The experience of the witness as to the moral state of the collier population, and also as to the effect of the employment on health, being identical with that collected from other sources, it is not necessary to take down his evidence at greater length.

AYR COLLIERY; visited personally:

No.35. May 6. David Neavon, aged 12:
Has been hewing coal a fortnight; for two years before was 'trapping' [i.e. keeping a trap-door] in Ayr colliery. They go down at five o'clock, or any time before six at which time the engine begins to draw up coal. They are generally out of the pit between two o'clock and six in the afternoon. Their breakfast is sent down at nine o'clock, when engine stops to feed the horses which draw the coals below ground. It is gay hard coal. He earns l0d. a-day, and is paid by Maister Gordon [the proprietor]. There are some far younger than him keeping trap-doors, as young as eight. The young ones go down with their fathers. He lives in Kilmarnock-street, Ayr. He has a brother 13 or 14 in the pit. He went to school before he went down to pit and now goes to a night-school. Was five years the day-school but reads only 'some little.' He is in the Testament. A 'wife' keeps night-school in Cross-street, at which he pays 2d. a-week. Goes into school from six to eight o'clock.

No.36. May 6. William Price, a native of Girvan:

Is a putter, i.e. draws the coal from the face where it is worked out to the main road. He is paid by Mr. Gordon 1s. a-day. Can read a little, no much. There is one store for meal at the office and another in town: the colliers' wives take the meal out of it, and it is marked down in the book and kept off their pay. There are not many who lift no pay [i.e. do not take it in advance] and who deal at other shops.

No.37. May 6. Mrs. Saunders, wife of James Saunders, oversman of Braehead Pit, Ayr Colliery:
Has two sons down the pit of the ages of 15 and 13; the elder has been four years down and the younger two years. 'Heaps o'them that are in the pit are not above eight or nine keeping they trap-doors.' The father having care of the pit employs the youngest boy to go errands and the eldest is now redding along the roads [i.e. picking up the loose coals which fall from the tubs as they are drawn by the horses, any stones which fall from the roof &c.] He's too 'light' for hewing. Hewing the coal is gayan heavy work, and his father thinks he's just o'er light for it. He would be at it himself if his father would let him. The father's rather against it, for he kens it himself that its heavy work. The boys are called about if the morning and by the time they get on their 'claes' they're awa'. The trappers are 'no needed' till between six and seven o'clock, when the coals begin to come up. The boys are taken down sooner than they would be if folks had another way for them [i.e. if they manage otherwise]. Before the hindmost colliers is up its maistly six o'clock. The trappers are there till the last yane [one] that comes outo' the pit. They're needed to the very last. Her house is better than some of them. The one she was in before was very inconvenient having no closets to put anything away. They're a new row of houses just built by the where they're all colliers together but they're aye leaving them every other week. 'They canna be bothered with them.' They don't like them because they have no yard or garden. There's just a road on each side and a double row of houses between. No convenience for anything. There's nae need for shifting if they're comfortable, and have things to fit them. Her daughter is a very good reader. There's a school up the village and you just send a wean and pay if you like it. There's no compulsion to send them. When the men have all whether they send their children or not, like it is done about Glasgow, 'it gars [it makes] some o'them send their weans that would nae do so.'

CROOK'S Moss PIT, AYR; visited personally.

No.38. May 6. Stephen Trew, aged 16:
Came down as a trapper at nine years old. Has been helping his father, who is a collier these five years, since he was 11 years old. He is a three quarter man now. 'He could make an offer at hewing' when he first began, at 11 years old but could not do a great deal. It was gayan hard work, and is so still. He went to school for three years and was in Bible and Collections; has forgotten a heap since he came to work. Half a year since he tried the night-school a little. The father working with him here observed,- 'To tell truth, Sir, when he has been working here till six o'clock at night the school's out o'his head - head a heap o't. He's more ready for his bed.'

No.39. May 6. William Wilson:
Is oversman of the Crook's Moss Pit, which we visited together. The pit is about 40 fathoms deep and there are two seams, the one of splint coal, which is principally worked, is about three feet and a half thick. The bottomer, who hangs the tubs on the 'tow,' or rope, stands within the door-head, which protects him from any coals which may fall. They work the rooms 15 feet wide, and leave the pillars of coal between them from 12 to 15 feet square. The roof is so bad that the rooms have to be built up at night within four feet of the face of the coal and leaving only room for the railroad. The roof is constantly liable to fall, being a till which softens by exposure to the air and to damp and splits off in broad plates. There is nine feet of this till between the coal and the hard metal above. The floor also heaves up very much so that the old workings when abandoned soon close up of themselves. This makes it necessary to employ a number of oncost men, who build up the rooms at night. A few boys only are employed at night bailing out water from the workings to the dip. The 'darg' [or task for a collier] is 12 'foos,' i.e. 56 cwt., six foos making 28 cwt., here called a ton. This is paid at 3s. 6d. the 12 foos. It is 800 yards to the face

of the coal. The putters, who are mostly Irishmen, are paid by the master to draw the tubs from the face to the place where the horses are harnessed to them. These Irish are very irregular men. He thinks one reason why the collier population at Gatehead and at the Duke of Portland's works are better conducted than they are here is that in those collieries the men draw their own coal and thus there are no putters employed. Some of the houses here have as many as six lodgers. A man and a family are plenty in one house. They have a kind of false beds which they make up for the lodgers. It is his opinion that about 12 years old is quite soon enough for a boy to go down the pit. 'If we could take them at half that age there are plenty of parents would send them down. Many times, almost every day, parents are urging upon us to 'take children in too young to do any good.' As to women going into pits, 'its no becoming,' and should be put a stop to he would be more against that than letting in younger children. His daughter is married to a collier. Young children are not allowed to ride the tow [i.e. to be let down by the engine] alone. They must go down with their fathers or elder hands. He remembers no to children in going up and down.

No.40. May 6. Mr. Gibson, surgeon to the Ayr Colliery, residing at Ayr:
Has just returned from the colliery, where there was an accident yesterday, by which a man's arm and leg were fractured by the falling of the roof. The children in the pits are usually very healthy, as is proved by the rapidity with which they recover from accidents. He believes there are scarcely any men working in this pit above 60 years of age;, they generally become incapacitated for that sort of labour from 45 to 60. They marry very young; they have never a farthing left after they have been ill a week; it reduces them to temporary destitution. By the rules of the works, after continuing six weeks at it, they are compelled to subscribe to a friendly society, from which they get 5s. a-week if confined to bed; 4s. if able to walk; and 5s. 6d. when old and past work. Most of the accidents in this colliery from fire-damp result from recklessness on the part of men disregarding the cautions of the oversmen, who examine any dangerous parts of the workings with a Davy lamp every morning before the hands begin work. One man is thus sometimes the cause of several being injured as well as himself. Ignorance and inexperience is another cause of accident from parts of the roof falling, &c. and thus there are more 'oncost' men who suffer by these accidents than regular colliers, who the understand method of working under ground. Having read over the part of the 'Instructions to the Sub-Commissioners,' specifying the points to be ascertained from medical men connected with the public works, witness says that none of the surgical diseases enumerated result from the work. Fever is 'less' prevalent amongst colliers than amongst hand-loom weavers inhabiting the same localities, though the colliers are much more given to debauchery. This exemption from fever he attributes to the more generous diet and the greater quantity of animal food which the colliers consume. Colliers are subject to become asthmatic and the children are much subject to tubercular disease of the mesenteric glands: the lungs often become ultimately affected. This appears generally traceable to want of comfort and of proper care in infancy in regard to diet, cleanliness, &c.; not proceeding from want of natural affection in the mothers but from ignorance of the disastrous effects of bad culture, some of the mothers being as the men. Amongst delicate children employed as apprentices by hand-loom weavers at a too early an age, there is not infrequently low fever arising from over exertion and sitting too long at the loom at an early age. There being no other works included within the terms of the present inquiry in Ayr, the witness has no experience with regard to the effect of on the health of children and young persons.

GALSTON IRON-WORKS; visited personally.

No.41 May 7. William Rew, aged 38:
Has been a collier at Galston for seven or eight months. He worked before at the Water of Girvan, Mr. Kennedy's colliery, where there are about 30 colliers. They go into the pits fully earlier in that country than here; he has seen muckle of them go down at eight years old. They are 'no fit' to do much good that age. The drawing comes to be pretty heavy in some places and

if there is a wean 'to put the hutch' at such places, it makes it easier for the drawer. He was no very old when he first went 'till 't,' but he could not do much. He just helped to fill, or the like o'that. There are no trap-doors in those pits. It's very sore work on either old or young. You rise very early in the morning, and it may be six or seven o'clock before you're home at night. They were more timous about the work at Girvan than here, the hours were not so long. Where there are many men, it keeps you a heap longer in the pit. The cleet's not fit to raise the coal, and the tubs have to lie at the bottom till they can be drawn up. 'If we he making anything of a boy so young, its maistly done by th9 faither's body;' it's to very little good for what the boy will do himself. They may help to ease them a little and the boys are anxious to go down themselves. That's at Girvan, where they can go in by an 'ingonee' at eight or nine o'clock, after breakfast. When they have to rise so early, they're not so keen upon it. He has a boy down the pit who is past 10 years old and was at school. He can read but not so well as he'd wish him. When a man's a family he's keen to get a little help any way he can. If he had steady work he'd rather have him at the school yet. He thinks it would not make much difference, or hurt men much, if parents were legally forbidden to send boys into pits below 12 years old. He thinks a boy may begin to do something at that age. The colliers here have now all struck work since last Saturday, near a week. They had only 14 days work in the last month and they now propose to give 20 days in the month and they to bind themselves for a twelvemonth. Since he has been here, some months they have not worked more than 15 or 16 days. There was not work to maintain them. He has been at work where there were stores and he does not approve of them. A man could live for 10s. a fortnight cheaper if he could get his money every Saturday night, and no lines. The stores, if they be good at first, never continue to have good articles long that ever he saw.

CESSNOCK IRON WORKS, GALSTON.

No.42. May 7. Malcolm M'Callum, Esq., manager and partner:
Ironstone has been known to exist about Galston for many years, but it was not worked from a fear that the distance from a market would render the adventure unsuccessful. They now send all the pig-iron to Liverpool, whence it is sold in Lancashire and Wales for foundry purposes. The coal here was previously worked only for local sale. On an average there might then be 15 men employed, now there are 70. The proprietors of collieries would well pleased at some legislative restriction as to the age at which children should be allowed to go below. They are only an annoyance when too young. The witness, before coming to Kilmarnock resided at Airdrie. The colliers here are not in that wretched state that they are in about Coatbridge, &c. The smallest house here has a bit of garden and there are few lodgers. About Coatbridge it is impossible for building to overtake the great numbers of the population. Streets upon streets are built but still there is not accommodation. The colliers, however having been originally slaves, and bought and sold with the land, there are still great remains of ignorance and consequent jealousy of the masters amongst them. This ignorance and these feelings of distrust, the witness fears it will require a considerable time to eradicate.

PHOENIX FOUNDRY, GLASGOW; visited personally:

No.43 April 5. Thomas Edington, jun., partner and manager:
The branches of business carried on here are iron-founding, engineering [i.e. casting and making locomotive engines and other machinery], and iron merchants. The number of varies from 350 to 250 hands. A 20-horse engine is employed. There is no night-work and they discourage working over-hours or late time, as unprofitable to the master and injurious to the men. The printed regulations will show the times of beginning and ending work and meal-times. The fan-blast is the only part of the machinery kept going at meal-times. The hands, old and young, are all paid by the firm, excepting the boiler-making, which at present is contracted for and the hands paid by the contractor. Almost all the young hands are bound apprentices from four to seven years and

those who are not will be soon. There is a strong union amongst the foundry hands, or, as they are called, 'moulders.' The union chiefly affects this work by encouraging the men and apprentices to 'put down' or make much less, for a fair day's work than they can well do; so that the only resort, is piece-work. The founders and some of the engineers are a very drunken set and the temperance society is very badly observed: getting very drunk periodically at New Year and then joining it again and the example of the elder ones teaches the smallest boys to smoke and drink. [A boy can get drunk for 4d., the price of a gill of whisky, or two glasses.] They are seldom taken in here under 12, and at 14 become apprentices. Many men take one holiday in the fortnight some two. So many different kinds of work are done here and these goods are sold to so many different markets, that the hands are kept pretty regularly and constantly employed;. This is in the foundry. In engineer work the business fluctuates more. When they have a demand for locomotives, or other machines. They do not prolong the hours of work but take on more hands, who are discharged again when the work is done. In other works, where they have less capital and cannot wait so long for their money, the work is more irregular. Some have no warehouse to keep a stock of goods and not being in so many markets, only a particular season is suitable for shipping goods to a particular market and thus they are very busy at one time of the year and slack at others. The metal is run at the Phoenix foundry twice a-day, from one cupola or furnace in the morning and from the other in the afternoon. The cupola must be well lighted before the blast is applied and after every casting it has to be 'chipped,' or cleaned out. A man in the works used to teach a night-school for small fees and they allowed him a room rent free but the children went here and there to schools in the neighbourhood and it was given up. There is a public school near the toll [at a short distance] for the district, to which their firm subscribe.

VULCAN AND LANCEFIELD FOUNDERIES, GLASGOW; ROBERT NAPIER'S, ESQ.; visited personally:

No.44 April 9. David Elder, Washington-street, Anderston, manager of the two foundries and engineer works; and his brother manager of the boiler-making in the same works:
They have succeeded in getting a very steady set of men in the boiler-making and engineering departments of these works, by discharging all who would not give 12 days' work in a fortnight. Many of them have been brought up in the country as blacksmiths. This steadiness could not have been attained under the combination, which was broken through by them a few years ago. Four or five years since they never could calculate upon having the whole of their hands at work again after a pay-day, till the ensuing Thursday, and this happened fortnightly. Two or three years past they began the plan of stopping work at the hour [two o'clock] on Saturdays, and this has had a very good effect, as the men thus get time to lay out their money to advantage before dark. There are about 50 men and boys in the boiler department of the Vulcan. The hours are very regular, 11 days 4 hours in the fortnight [as I verified by inspecting the time-book for last month]. If they have an extra job to finish, they choose a few select hands who are best fitted for it. The rivet-boys, if they conduct themselves well, become riveters at the boilers and get from 16s. to 20s. a-week. A full hour is allowed for each meal, 'and it is not too much.' The evil these workpeople labour under is, the wretched habitations in back courts and closes where there are collections of filth, dung-pits, &c., which render their homes comfortless and unhealthy. The Drainage Bill will be of vast benefit in this neighbourhood. The 'moulders' [i. e. those who make the moulds and cast the pieces of machinery] are still under a strong combination and are a bad set of men. If discharged by their employers, they are supported out of the funds of the union. They encourage the boys to ill practices, as to convey spirits into the works, &c. and are irregular. They prevent hands not regularly brought up to the business from being taken in by the master and are bad workmen often. They are limited by their rules as to the quantity a man may earn per day. If he were starting a new work he would make a clean sweep of them and introduce fresh hands. In the engineer department [i e. where the engines are finished and put together], they pay fees from £50 to £100 to be allowed to learn the business. They are now working here two over-hours. They have seldom any accidents here. In some foundries a man or two is killed every year from bad slinging of heavy goods by the cranes, by suspending them by too slight ropes, &c. Every man cleans his own machinery in the working hours. Several naval officers have been admitted to study the parts and the action of the various movements in steam machinery in these works. They show me a model of a marine engine now executing for one of

these gentlemen. Mr. Napier gives them a certificate of having frequented his work for a certain period, which is of use to them if seeking the command of a government steamer. The London works will not admit them in this way. Mr. Napier has now engines in progress for a British steam-frigate; one for the East India Company, to run from Calcutta to Suez; for iron steamers for river navigation in India; for the Turkish government; for the Sultan's private yacht; and for Naples.

GREENOCK

CAIRD AND CO's MARINE ENGINE MANUFACTORY AND FOUNDRY; visited personally.

No.45. May 18. John Scott Russell partner and principal manager:
Has held this situation between two and three years, during which he has had the direction of between 800 and 900 men. On first coming to undertake the management here from a somewhat similar establishment near Edinburgh, the witness found that the practice had been had to employ a small number of men and to work them much beyond the usual hours, i.e. to work a great deal of over-time. The usual hours of work are from six a.m. to six p.m. with two hours for meals. Every alternate Saturday, when they receive their pay, they work eight hours. These hours, however, were frequently exceeded when witness first undertook the management. Witness very soon found, by observing the men at their work, that when they had a prospect of being called upon to work over-hours, they saved themselves during the day, working much less energetically than they otherwise would, in order to be able to continue work during the over-time. The men themselves like working over-time for the sake of the extra wages. The men besides he found in general considered the extra wages earned by over-time as money gained by extraordinary exertion and as not part of the fund to be taken home for domestic use but legitimately theirs, to be spent in extra indulgence. Another evil of over-work is the claim which it gives the men for what they call 'an allowance' i.e. some refreshment, generally some fermented liquor, which induces the habit of intoxication and is injurious alike to health and morals. Witness has tried coffee, but the men do not like it. In consequence of the various evils attending over-hours above specified the course taken by the firm was to enlarge the works at an expense of £10,000 and to take on a considerable addition of hands, the consequence of which has been highly beneficial in a mercantile point of view, having caused a large diminution in the aggregate wages paid for a given amount of work. This appears by the yearly balances of accounts, showing, for instance that out of £70,000 worth of work executed in a year, less had been paid in wages by several thousand pounds, under a system of regular hours, than had been paid in former years on the contrary system on a corresponding sum. As to the effect upon the workmen, all that can be affirmed is that they have bad less money to devote to bad purposes; for it is a lamentable fact that the magistrates of the town complain that the classes of workmen who receive the largest wages are most frequently brought before them for various offences. Mr. R.'s opinion is, that a man's well doing varies somewhat in the direct ratio of his regular earnings, and certainly in the inverse ratio of his casual earnings. Witness, however desirous of improving the moral condition of the people in the works, which certainly is not good, cannot see his all as to the means by which it is to be accomplished. To raise a demoralised set of men to the state of regularity of conduct which is desirable, is a task far more arduous than it would have been to have preserved a moral tone amongst them from the first. In regard to founders and engineers, so marked a line is drawn between them and their employers that they would look upon any attempt of this sort with the utmost jealousy. as intended only to get them in some way more into the master's power. You may build churches and schools but the evil having been allowed to grow unchecked, they will remain empty. Had means of instruction been afforded earlier, so as thoroughly to have imbued the habits and feelings of the people from the very first and to have expanded co-extensively with the increase of population, a tone of religion and morality, and the beneficial control thereby exercised as well as a demand for a higher class of gratification, and also a much better feeling between masters and workmen, by which the former would be far better served, would have been the happy results. At present the prevailing feeling amongst the men towards their employers is, in too many instances, how to do the least work and to exact the utmost for it. There is no cordiality, no sort of mutual desire for each other's prosperity. The

men trust to their union for protection and support; the masters, in self-defence, depend upon the poverty and improvidence of the men, i.e. they have no other check over them.

No.46. May 18. John Harper, chief clerk at Caird and Co's Manufactory and Foundry, in which situation he has been six years:
Witness pays all the men through the foremen of the different departments but they most strictly provide that there shall be no need to go out of the work to public houses to get change. He collects about £400 worth of change every pay-day, once a fortnight, both silver and copper, for the use of the various foremen. Every man and boy in the work is in the wages book and the immediate servants of the firm, though one man may have control over others as far as work is concerned [such as a smith having two or three hammermen under him], all these subordinates are paid directly by the firm. The regular hours of work departments are from 6 a.m. to 6 p.m. Any work after this being paid as time and quarter, i.e. for each hour's work they are paid as for an hour and a quarter. Besides the over wages after eight o'clock a certain amount of provisions or refreshment is allowed after the following scale:- For working from six till nine, 4.5d.; till ten, 6d; after ten o'clock, 1d. per hour; or 1s. 2d. for the whole night; boys half of the above. Upon an average there will be 30 or 40 men working over-time every night for two or three hours: but the over-time is much diminished within the last year. Boys and adults work the same hours in all cases, taking the pay from May 1st to 15th as an average fortnight, the following table taken from the daily time-book may be given of an example of the over-time worked by the different departments:-

Description of Workers.	Men and Boys till their apprenticeship is out.		Total Number.	Average time worked in the fortnight; the regular time being 11 days 8 hours.			
	Men.	Boys.		Days.	Hours.	Days.	Hours.
Draughtsmen	5	5	10	11	5		
Pattern makers	6	9	15	11	8	to 11	13
Joiners	16	0	16	13	10		
Fitters } Engineers {	85	16	101	12	10	to 15	10
Finishers }	29	9	38	11	8		
Turners	35	11	46	11	8		
Labourers assisting at different branches	48	0	48	13	10		
Smiths	78	12	90	11	8		
Boiler-makers	162	48	210	13	0		
Moulders	77	13	90	13	0	to 14	0
Copper and Brass Smiths	71	7	78	11	10	to 13	0
Railway-coach Builders	26	4	30	13	0		

Some months ago there were at least 100 more workers than the above.

No.47. May 19. Robert Simpson and Michael Collins, adults:
Have been boiler-makers at Caird and Co.'s foundry, Greenock, for 11 and 13 years respectively, the latter having previously worked as a rivet-boy. Some rivet-boys come to work from six to seven years old [there are two or three such in the foundry now], and others at 8 years old. The youngest commence with oiling the punch which cuts out the holes in boiler plates; after a week or two at this he begins to blow the fire at which the rivets are heated; after being six or seven months at the works they begin to keep a fire, i.e. to heat the rivets. Three men compose what is called a 'squad' of boiler-makers; one called the holderup works inside the boiler and holds a hammer against the rivet, whilst the two others, called 'riveters' hammer the red-hot rivet tight by flattening the head of it; to each squad of boiler-there must be at least two boys, one to blow the fire, the other to heat the rivets and perhaps there will be two more, one inside of the boiler and the other on the top to hand in the heated rivets to the holder-up. The wages of the boys when they first come are 3s. per week for the first year and rise 1s. per year. At ten years old they may commence an apprenticeship, which lasts five years, the wages rising 1s. a-year as before. The regular day is ten working hours; 'but bless your heart they often work over-time - too much of it' - 'a man's never better than when he works regular hours;' - they have had to push to get the boilers ready for the ships building for West-India mail-packets and for seven or eight months have been working constantly till eight at night. Nearly 200 men and boys have been working these hours. Besides the regular over-time for all hands, particular squads have

been working till 10 or 12 and sometimes all night in the works; besides squads repairing on board boats on the river for two night's together. 'Its bad enough for the boys, poor things.' Sometimes the same boys will have to work a week or a fortnight running till 10 o'clock. The boys are completely lost as to schooling; the most of them is orphan bairns. Widows get them into the works. Some of them have been at school, but they 'canna' do muck to it.' They might get to night-school if the hours were regular. It is very proper that Government should think of regulating hours, for many grow up to manhood with very little education, education that is of no consequence. It makes a great difference to an apprentice whether he has been well educated. You ken a great difference in his way of working and 'he has more kind of freedom to speak, you know.' Boiler-makers are all paid by the week, not by the piece. Most of the men when they have been at the work a few years get a dullness of hearing. Both the witnesses are partially deaf; 'there is hardly one in our line but what's dull, and some very dull.' They tried cotton in their ears after they began to be deaf but could not bear the feel of it. They mention two men who have preserved their hearing by using cotton from the first In general the whole men, almost all we ever worked with yet, would like regular hours without the extra pay.

JOHN SCOTT and SON'S SMITH, CHAIN, AND ANCHOR WORKS; visited personally.

No.48. May 19. Messrs. John Smith and John Miller, manager and assistant manager: Commenced the chain making on a large scale about 11 or 12 years ago. In the chain making there are 20 journeymen and six apprentices, each having under them a boy, and five or six, two boys. The regular hours of work are from six to six, all days alike. In the last spring they had not a single night that they worked over-hours but often at that season they have two or three weeks, or a month during which they work till eight o'clock. They study all they can to avoid over-hours for they consider them profitable neither to man nor master. When the men get a deal of money there's some that cannot rest till they've got rid of it. As Burns said:-

'he has nae gien to much misquidden
But coin his pocket wadns bide in'

Boys come as 'blow boys,' and to 'strike the dolly,' as young as 10 or 12 years old and are paid by the men they assist according to what the chain-maker earns. A very few of them become apprentices. Apprentices get half wages of journeymen after two or three months pay them about 4s. a-week. One apprentice is pointed out to me who has only 16 months apprentice and earned last week 18s. 7d. getting half a journeyman's wages per link. The great majority of the men and boy are Irish, a good many from Newcastle-on-Tyne, who are much the same as the Irish. They are almost or their instruction very limited, not aware of any of the boys going to night-school. A great many of the chain-makers are very drunken. They pay on Friday in order to try to secure more of the wages for the wives and witness really thinks it an improvement. He generally loses the Saturday work but gets them usually to begin work on the Monday again. 'Poor wretches, they work very hard when they are at it, and they say drinking is the only enjoyment they get.' A great many hardly know their right hand from their left. The dissipated are mostly quite ignorant, not able to 'throw up' their own work [i. e. to reckon it up]. George Lamb, a Newcastle man, a very good workman as an anchor-maker, would not have known his own name, 'if every letter had been written as large as himself.' You might have paid him with whisky permits instead of bank-notes and he would not have know the difference.' 'he drank immensely heavy,' and died of intemperance. The boys soon get corrupted by the imitation of the elder workmen and begin to drink and smoke. They used to be much annoyed by the workmen taking idle time in the early part of the week and 'pulling up' or making it up by working excessive hours at the latter part of it. Since, however, they have replaced the bellows by a fan-blast, worked by power, they can prevent all this by stopping the engine at six o'clock. Witness knows nothing that has done so much good as this. He never got them to attend so close to work as since the blast was commenced, only 12 months back. They have between 30 and 40 blacksmiths in the same works, under the superintendence of witness and he thinks you may search the whole kingdom and not find so steady a set. They are on day wages and not paid by the piece. Though not earning near the wages of the chain-makers, the one earning 15s. to 25s., the latter £3 to £3 15s. pert week [having a man a boy to pay out of it], the blacksmiths are by far

more comfortable in their houses, their clothes &c. They frequent church and not one but can read, write, and count.
