

**CHILDREN'S EMPLOYMENT COMMISSION
1842.**

**REPORT by ELIJAH WARING, Esq.,
on the Employment of Children and
Young Persons in the Collieries of South
Gloucestershire and on the State,
Condition, and Treatment of such
Children and Young Persons.**

Edited by Ian Winstanley

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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, two 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 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 presentiments 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 of 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 presentiments. 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 Ourselves 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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I.G.W.

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REPORT by ELIJAH WARING, Esq., on the Employment of Children and Young Persons in the Collieries of South Gloucestershire and on the State, Condition, and Treatment of such Children and Young Persons.

TO HER MAJESTY'S COMMISSIONERS.

GENTLEMEN,

My duties in the coal district of South Gloucestershire, or rather in that portion of the county lying in a south easterly direction, having been completed, I have the honour of presenting you with the following statement of facts, and impressions, derived from my inquiries and observations.

I used all diligence in seeking interviews with the managing proprietor, or obstruction at every colliery but was not always fortunate in my attempts. No obstruction, however, was, in any case, offered to my inquiries, which were generally met by great courtesy and attention.

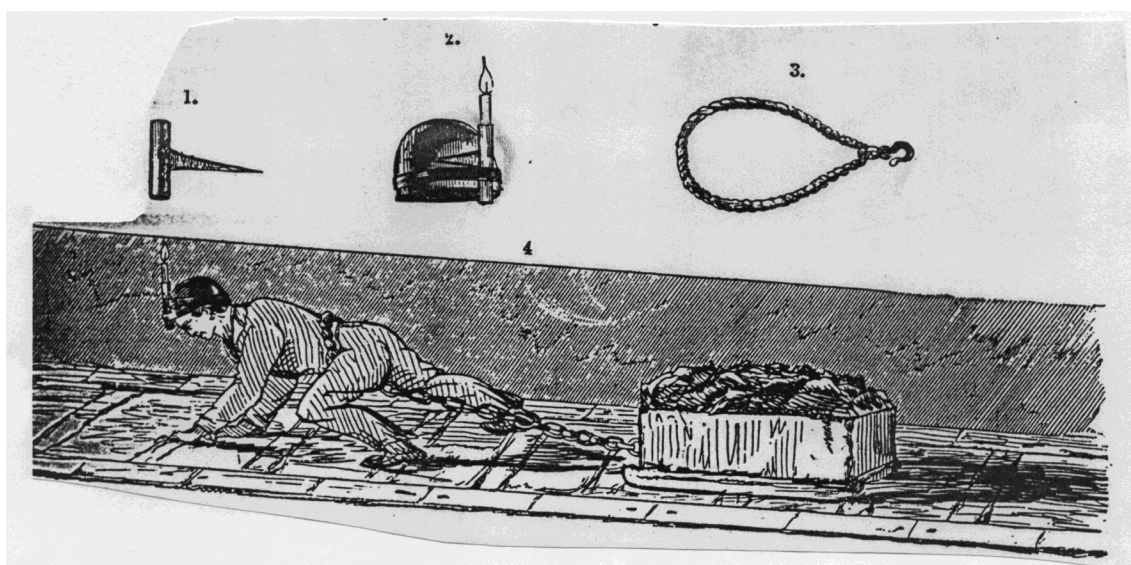
The coalfield of this district occupies the upper portion of an elliptical basin of limestone, taking its origin at Cromhall, near Wickwar, and extending into Somersetshire. The most southern point of Gloucestershire, at which coal works are in operation, being near the village of Bitton, about four miles from Bath.

This coalfield has long been very extensively worked, furnishing employment to generation after generation of many industrious families, particularly about Kingswood, and Coalpit Heath. The seams vary from one foot to six feet in thickness.

The nature of juvenile employment in these coal works, is so generally identical with that already reported upon in the Forest of Dean, that much detail, under this head, is unnecessary here.

The principal difference exists in two particulars. One is that the extreme narrowness of the seams, in some cases, as at Yate Common, where the coal is only one foot thick, altogether precludes adults from cutting it out, and the work is there done by young lads, whose size is suited to the contracted space. The other variation consists in the mode of drawing the tubs into the mainway, by a girdle of rope round the loins, attached to the load by a hook and chain.

1. The candle holder. A socket of iron, having a spike at right angles for the convenience of sticking the light in the sides of the pit when stationary. The spike forms a handle when the light is carried before them.
2. The skull-cap, having a leather band into which the candle holder is thrust when the hands are employed in locomotion.
3. The girdle and hook for attaching to the chain.
4. Represents the position of the girdle.



With respect to the first operation it appears inevitable, where such veins are worked. The quality of that referred to at Yate, is considered remarkably good, and comes out in blocks of regular thickness, requiring only the clearance of the superincumbent and subjacent clods so that it is wrought with little labour, the low stature of the cutters enables them to perform the task with comparative ease.

The mode of tugging tubs with the girdle and chain impressed me so painfully at first, that I was induced to examine closely into its effects on the frame, conceiving it to be a barbarous and unnatural mode of applying muscular power. The results of my investigation have, nevertheless, been satisfactory, as regards the adaptation of the custom to the circumstances which introduced it.

On minute examination, I find the direction of the rope girdle is across the lateral dorsal muscles, passing between the crest of the ilium, and the great trochanter, on each side, then descending in front quite clear of the pubis, so as to pass freely between the thighs, thus pressing but slightly on their superior anterior muscles, in consequence of the inclined position used in tugging.

A deliberate comparison of the action of the girdle, in the above position, with that of the shoulder strap tug used in the Forest of Dean, leads me to a conclusion strongly opposed to my original impression.

The bones principally concerned, in resisting the weight of a load thus pulled, are those of the pelvis, the ilea, the trochanters, and the thighs and legs, thus presenting a firmer series of bearing points, than could be obtained from the shoulder, with the spinal vertebrae curved nearly at right angles with the lower limbs, as they must be in dragging a load through passages not exceeding three feet in height, and often several inches lower.

The abdominal muscles also, are thus spared the great strain, to which they are subjected in the act of drawing from the shoulder and I should therefore infer that *hernia* is not likely to be often induced, by the mode of labour under consideration.

These anatomical facts and deductions, appear to corroborate the prevalent opinion of the colliers in favour of the girdle and chain as giving greater power over the load, than the shoulder strap tug. (See Mr. John Cook's Evidence, No.75.) The points of traction bear upon the os sacrum, and between the great trochanters and ilia.

The only discoloration arising from constant pressure, I invariably found across the loins, which proves the resistance of the load to be principally on the back of the pelvis. Excoriations are commonly produced when the girdle is first used, and many of the boys told me they were obliged to wrap old clothes round the rope at first, to prevent galling but this effect soon went off. When I conversed on the subject with the underground manager of Sir J. Smyth and Co., he aptly compared the boys to young horses, whose shoulders are tender when first broken to the collar.

On the same principle, however, that studies the soundness and comfort of a horse, by constructing his collar of smooth and elastic materials, it would appear at once benevolent and easy, to substitute some less harsh material, for the hard twisted rope used by these laborious boys.

A pad of stuffed leather might be advantageously connected with the rope, by rings fastened on the external side, through which the rope might be tightly reeved, as far as any pressure is produced, and then terminate as at present.

The most frequent course of haulage by the girdle, is down an inclined plane. or on a level but in some cases, as that mentioned at Cowherne Hill (See Evidence, No.59, also No.75), the ascending inclination is considerable. On these ascents, a wooden ladderway, or plank railroad, is used to facilitate the draft, and strong lads only are employed.

Where the ascent from the stalls to the top stage is too steep for tugging, the passages are provincially called *googs*, or *gugs*, and a windlass is employed to haul up the coal, to the stage where the boys receive it.

The daily hours of work vary from eight hours to ten, and the amount of labour considered a fair day's work, is variously estimated, according to weights and distances, of which several specimens will be found in the Minutes of Evidence.

WAGES.

The current wages of adult colliers in this district, are from 18s. to 20s. per week, when in full work. Lads from 14 to 18 earn from 7s. to 12s., and boys under 13 from 2s. to 6s. per week, according to their ages and capabilities. Many of the boys appear to be wretchedly paid for their labour, by the low remuneration of 3d. or 4d. a day. John Harvey, No.52, is a case in

point.

This lad is a pitiable specimen of a much enduring class of colliery boys, whose subsistence depends on their own exertions, often prematurely stimulated, either from being deprived of their fathers by death, or labouring under the curse of drunken, dissolute, and unfeeling parents, who would apathetically see their children enslave themselves, rather than contribute to their comfort by a single act of self-denial.

These neglected beings turn out in the morning, taking with them a scanty bag of provisions, to be eaten in the bowels of the earth, where they toil out their daily dole of eight or ten hours, then return to a comfortless home, taking their chance of a good meal, a bad one, or none at all. For a bed they are content with an old coal sack laid upon straw, or occupy whatever portion they can secure of a family bed, which must suffice for three or four other inmates.

Grovelling in their habits, depressed in spirit, and without any stimulus to improvement, these poor boys passively take such work, and wages, as they can readily obtain and if they can satisfy the cravings of hunger, seem to abandon all expectation of anything further, beyond the most sordid covering for their nakedness, and a place of shelter and repose. Some of them will eagerly ask permission to work by night occasionally, as well as by day, for the sake of a small addition to their weekly pittance.

To these victims of ignorance and poverty, the Sabbath is a day of wearisome vacuity, or reckless play. An act of worship is nearly as strange to them, as a Hottentot unenlightened by Christianity. Instruction they have no idea of, and if they had, the want of decent clothing would keep them from mingling with their better provided yoke-fellows, at the Sunday-school.

This is, indeed, the picture of an extreme case but it is only too correct an outline which might be filled up with still darker colours, in portraying the unhappy class to which Harvey belongs.

It will be seen by the evidence, that this half-fed and half-clothed lad, stunted in growth, so that his companion in carting, though two years younger than himself, is a full head taller, assists in drawing 2 cwt. of coal a distance of 160 yards, in a tub without wheels. I did not ascertain how many tubs are carted by these two boys, one pulling and the other pushing behind, during their day's work. From the general practice, I should say from 50 to 60. Even supposing them to be fewer, this is surely hard labour for the poor returns of 5s. 6d. weekly, that is 3s. to Harvey, and 2s. 6d. to his helper.

The other boy has a good and careful mother, who feeds him well, and keeps whole garments on his back, whilst Harvey's father is represented to be a drunkard, and his mother an improvident slattern. The poor little fellow told me, he had never in his life possessed a pair of shoes or stockings.

What chance has a poor lad, so unfortunately circumstanced, to obtain any other covering other than rags, or to emerge from a state of ignorance and degradation? Surely our fellow subjects thus situated, are not less worthy of compassionate help than the heathen of other lands, on whose British beneficence, and missionary zeal, are so laudably bestowed.

The rate of wages for the same description of work, differs materially in different pits and the discrepancies in some cases are striking. For instance, Charles Townsend aged 10, has worked six months in the Yate Colliery, and earns 4s. weekly while Robert Townsell, aged 12, earns only 3s., after working in the Lower Easton Coal works. (See the respective Tabular Returns).

There is also a considerable difference in the wages of boys working in the same pit, having reference to their respective ages. For instance, in the Kingswood Lodge collieries, Moses Anchorson, aged 10, earns 3s. per week at tugging and William Brain, aged 12 only 2s. 6d., at the same work, both having been in the employ years and a half.

These discrepancies appear chiefly to arise, from the greater or less ability of the boys, to accomplish a given amount of labour, within the working hours but scale of wages altogether takes a lower range in this district, than in the Forest, where the average payment to door-boys is 3s. weekly. The regular rate here is only 2s.

I particularly regret not having received the tabular returns, for the extensive and well regulated collieries of Sir J. Smyth and Co., in which the lowest wages, stated to me by Mr. Hewitt (See No.48), are 6s. per week for the youngest boys out of about 50, under 13 years of age, in their employ.

Few of the lads separate themselves from their parents, unless they go to work at a distance. The juniors sink their wages in the family stock and those who earn more money, allow a certain sum for their board, managing the remainder funds at their own discretion.

The truck system, in some instances, interferes with the payment of wages in cash and is unpopular here, as it is, and deserves to be, everywhere else.

SAFETY IN THE PITS.

Some of the pits are much infested with foul air, or chokedamp, which is generally sufficiently dispersed by ventilation, to admit the workmen with safety. There is a marked superiority in this respect, in collieries worked on a liberal scale, over others, which merit the denomination I have heard applied to them, of 'slovenly pits.'

Water prevails, more or less, in all deep coal works, but the interest of the proprietors requires it to be kept under, so that the colliers always work in the dry, except in spots where springs gush through the roof and then they are sheltered by planks, or iron plates, placed slantingly over their heads. The greatest nuisance to their comfort is a wet shaft, which cannot be traversed, in open tubs, without danger of a soaking.

At the Easton Coal works, the proprietors have caused a commodious 'hutch' to be constructed of riveted iron plates, in the form of an elliptical dome, with two entrances. In this hutch, seven men, and two or three boys, can go up and down together, snugly protected from the jets of water, as well as from any stone or other substance accidentally falling on them.

This humane and proper accommodation furnishes a praiseworthy contrast to the neglect of everything like attention to the health, safety and comfort of the colliers, which struck me on visiting another miserably wet pit at Cromhall. There I saw the poor fellows coming up in the coal tubs, at mid-day, to escape suffocation from bad air in the stalls, smeared with clay, and dripping with shaft water, from which they protected themselves partially, by hanging old sacks over their heads and shoulders. On inquiry, I found they had no other provision for their passage to and from their work.

As a protection to the pit's mouth, the sliding traps, or stages, are much adopted, and appear to be the best contrivances for effectually covering the shaft whilst the coal is landed. The top man, standing on the sliding stage, has merely to lay hold on the loaded tub as it swings over the pit, and by that action draws the stage, which runs on wheels and iron plates, across the pit's mouth. When the tub is lowered upon it, it is wheeled off and replaced by an empty one to go down. Any accident from overreaching is thus effectually prevented.

Stout plaited rope, or hempen strap, is the favourite material for winding, and appears to be much safer than chain, iron being liable to snap in frosty weather, giving no notice of a flaw to the eye, until it becomes imminently dangerous, whereas the rope gives timely notice of weakness, by showing the ragged end of a broken strand or two. All the most experienced colliers I have conversed with on the subject, give the preference to flat rope.

The only fatality involving the lives of boys, that has come to my knowledge, from a defect in the winding apparatus, was caused by the loosening of some wedges between the winding wheel and its shaft, whereby the wheel, running free of the shaft, precipitated two men and three boys to the bottom, with a violence that caused their death. Any recurrence of such a calamity is easily obviated, by using properly constructed machinery, in which it is impossible for the wheel to liberate itself from the shaft, unless it breaks in two.

SANATORY AND PERSONAL CONDITION.

The observations under the head 'Physical Effects of Mine Labour,' in my Report on the Forest of Dean, will equally apply to the district now under consideration.

Inflammation of the *bursæ* is produced by the same mechanical cause and chronic *bronchitis* frequently affects the elderly colliers here, as there. The prevalence of disease in the mucus membrane of the stomach, noticed by Mr. Grace, is attributed by that gentleman to the property of the water, and does not peculiarly affect the mineral workers, but extends over the general population.

There is but too manifest a deficiency in nutritious diet, and comfortable clothing, in the case of large families, where few are old enough to earn even the smallest pittance. Still the colliers, as a class, are considered better off than the agricultural labourers and I have every reason to believe this to be the fact.

Fatalities, and casualties, such as fractures, dislocations, and contusions, are not more frequent, than may be expected from the nature of the work, and habitual want of caution in the workmen. The only instance in which the men are reported by their manager, as careful about propping, is in the coal works of Sir J. Smyth and Co., which appear to be inspected with a systematic attention to details, worthy of imitation.

In cases of complicated, or very serious injury, the colliers of this district are happily within reach of that bountiful institution, the Bristol Infirmary where I've seen them, at all ages,

attended by the most skilful professional aid, and cared for in all other respects. One boy, aged 12, is now a patient there, with a badly contused foot, a lump of coal having fallen on it several weeks ago. The boy has been working five years in a colliery at Nailsea and he can read well, and amuses himself with easy books as he lies in bed.

After diligent inquiry, I have not been able to discover that *hernia* is more among the colliers, than other classes of labourers. On the contrary, I incline to the opinion, that it is more frequent both among agricultural labourers and mechanics. Mr. Grace of Downend, an experienced surgeon, who attends all workmen connected with the Coalpit Heath Collieries, has not observed any tendency to this disease, in the boys and young persons who tug by the girdle and chain and my own observations on the *modus operandi* of this practice, have led to the same conclusion, as already expressed when I further confirmed, by the opinion of several distinguished surgical practitioners, whom I have communicated the remarks on which it is founded.

The crowded state of some poor families, occupying small cots, is not only unfavourable to health, but to those habits of decency, which exercise a powerful influence on the character. Poverty, however, admits of no alternative in numberless instances.

The generality of the boys and lads possess Sunday suits, or at least clean round frocks and trousers, with decent hats or caps. There is no change of raiment, the impediment is too often improvidence but in numerous cases, it is real inability to superadd the cost of clothing, after needful food has been purchased.

A respectable hatter told me, that low wages and high priced provisions, had much crippled the resources of the colliers, and other operatives, that his trade, which lies principally among that class, had fallen off more than one half.

MORAL CONDITION AND INTELLECTUAL CULTURE.

The Coal district now under examination, has experienced a great moral change within the last half century. The colliers were formerly the terror of the surrounding neighbourhoods, and for gross ignorance, rudeness, and irreligion, were almost without parallels in any Christian community.

The labours of those great reformers of life and manners, the celebrated Wesley and Whitfield, began a work which has been making progress ever since, in the hands of not only their disciples, but those of the National Church, happily aroused and stimulated by their example.

The consequences are striking to those who knew the country forty years ago and I count myself among the number, remembering the frequent scenes, and continual dread, of outrages on property and public peace, which then prevailed. You could not ride through some of the villages and hamlets, without being insulted by boys, who would throw stones at both horse and rider, without provocation. '*The Kingswood Colliers*' was then a phrase, that conveyed every idea offensive to civilisation, order, and religion.

At the present period, there is, perhaps, as much decorum in the manners of the population, as is witnessed in the generality of rural districts and the numerous places of worship are well attended. Many of the colliers being members of various religious societies. Any open desecration of the Sabbath is considered reproachful, even among the non-professing portion of the community who are of sober habits.

National schools have long been established in connection with most of the churches, and have produced an improvement in the rising generation, proportionate to the extent of their operation but the progress of education, in the case of colliers' boys, here, as elsewhere, is commonly arrested at too early an age, by their going to work in the pits. Many of the children receive no schooling whatever, and make a sudden transition from uninstructed idleness to daily toil, in an occupation which calls forth no mental energy, and excites no spirit of inquiry. It cannot, therefore, be wondered at, if their existence presents little more than the mere animal routine, of work and play, food and sleep.

There is a dull monotony, and absence of device, in colliery labour, furnishing no stimulus to the uneducated mind, whilst the employment in iron manufactories, and many other mechanical callings, is calculated to excite an inquiring spirit, to exercise the observant faculties, sharpen the wits and enlarge comprehension. A corresponding superiority in the smartness and intelligence of these manufacturing boys, is a fact which has forcibly attracted my notice during this inquiry.

In this district, as in the Forest of Dean, I find Sunday-schools the grand agents of education to the working classes. They exist in all directions, are sustained with great zeal and

diligence by the teachers, and confer acknowledged benefits on the community at large.

Out of 58 Sunday-schools, of all denominations, to which I issued tabular forms, for the enumeration of all scholars employed during the week, in other labour than such as is subjected to the Factory Act, I have obtained returns from 32 and of them, 13 only embrace the class of labourers under present notice. Many of the others are in the city of Bristol, but all on the Gloucestershire side of the Avon.

In the 13 schools above referred to, 202 boys and young persons, working in the collieries, are reported as regular attendants. These all belong to dissenting denominations, and are generally well supplied with scholars. I regret that no returns have been furnished from the Church Sunday-schools, at Kingswood Hill, St. George's, Westerleigh, and Downend, all in the neighbourhood of coal works.

At Kingswood Hill, I attended a Sunday morning service, in a church containing 900 free sittings, secured in perpetuity, 100 pews. I should imagine, from the popular talents and devoted piety of the incumbent, as well as the appearance of the congregation, that there must be some regular worshippers among the colliers, whose children would naturally attend the Sunday-school under the auspices of the clergyman although the predominating religious bias of the class, is evidently to these Wesleyans, and other dissenting churches.

The largest Sunday-school I have seen, or heard of in this district, is held at the Tabernacle, Whitfieldite chapel, on Kingswood Hill. There I found 500 scholars collected, and preparing to attend the service of the chapel. Of this number the returns show 111 employed in trades during the week, 49 being colliers, from 8 to 18 years of age.

I examined many of the boys in reading at the several schools, and found them capable of any chapter I selected from the Bible. When I questioned them, their answers were about the average quality given on similar occasions.

Numerous as are the Sunday-schools in the coal district, the dwellings of the boys are often so distant from them, that they could not attend them without long walks to and fro. It has not been uncommon for the boys, with whom I expostulated, on their negligence of Sunday instruction, to plead this as a reason for their non-attendance.

The contrast between the aspect and manners of the boys, who take the benefit of instruction, and those who neglect it, cannot fail to strike any observant person. The latter often present a half intellectual, half brutalised expression of countenance, at once pitiable and offensive, and their behaviour usually corresponds.

At one colliery, I astonished a group of 13 boys, whom I collected about me with some difficulty, aided by the presence of the manager, by pointing out two of the number who had never attended school. I asked each boy in succession what Sunday-school he attended and when I came to the two, whose stolid countenances betrayed their entire lack of instruction, I said, peremptorily, "you don't go to any school." The two dunces turned their backs upon me, with a whimsical compound of chagrin and amazement in their looks, whilst the other boys gazed alternately at each other and at me, chuckling at the ready detection of their ignorant companions.

The early age at which stern necessity compels the poor man to call in his children's help, to get bread and clothing for the family, together with the difficulty of restricting the initial period of labour, renders the application of some educational means, at the earliest practicable age, more than commonly expedient for these heirs of penury and toil.

This consideration impresses me with the great advantage that might be derived, from the extension of Infant schools throughout the mineral districts, and wherever early juvenile labour is in request.

In these useful, but hitherto imperfectly estimated institutions, a foundation of knowledge and of right principle is laid, more solid and productive than is commonly apprehended. A boy, eight years old, who had been trained at a well conducted infant school, would be found better taught, than many boys of 12, after several years tuition at the common dame school of a village.

I found such a boy, in the only infant school I have met with among the collieries, and he, poor little fellow, a penniless orphan, was on the eve of commencing his dismal avocation of door boy in one of the pits. This school is at Kingswood, and is not, by any means, supported or patronised as it deserves. In Bristol these interesting schools are numerous, being more justly appreciated by benevolent and intelligent citizens.

The desirableness of evening schools, on the grounds which led me to recommend them for the Forest of Dean, is equally palpable in this district, the same amount of leisure for attending them, being in possession of the juvenile colliers belonging to it.

The too prevalent vice of bad language appears to be checked, in the best regulated pits, by a system of fines and where the managers are exemplary in this respect themselves, they exercise a powerful moral influence in controlling this offensive practice. Mr. John Cook, of Coalpit Heath, thinks they do better with out the fine, than with it. (See his Evidence, No.75.)

The propagation of vicious habits, by the example of parents to children, furnishes one powerful plea for the vast moral importance of education, and proves how essential it is for the improvement of society, that the rising generation should be trained into a better class of parents, than their progenitors.

The acknowledged social advance of the colliers, as a class, must be attributed to the attention which has been paid, of late years, to their religious and moral instruction and it affords, at once, an indication for more extended practice, and encouragement to attempt it, by the best methods that can be devised.

Neglect of public worship, is still a prevalent evil among the young colliers, although the number who frequent divine service, once on the Sunday at least, is said to be increasing. A steady old collier told me, that there were so many chapels about the country, and so many ministers regularly preaching in them, that some of the irreligious boys would go and hear a sermon, "for very shame at being seen idling about the roads on Sundays."

I fear a too common state of affairs, in this respect, is exhibited by the following analysis of tabular returns from the Kingswood Lodge Coal works. It also includes the proportion of Sunday-school attendants:- 'These works employ 96 boys and young persons, from nine years of age to 17, of whom 36 attend no place of worship, though eight of that number go to a Sunday-school. There are 27 unable to read, and 59 Sunday scholars in the whole establishment. Isaac Shortman, one of two boys each nine years old, attends neither school nor chapel; and Benjamin Wiltshire, the other, goes to the former, but not to the latter.

A better state of things appears at the Easton, and Golden Valley, Collieries. Returns of the latter only are filled up with the minuteness requisite for correct analysis, showing the following results. There are 42 juvenile hands employed from $9\frac{3}{4}$ years old to 17. Of these one only does not attend public worship. He is 17 years of age, and is wholly ignorant of letters. Six only cannot read, and all but seven attend a Sunday-school.

Similar results, of both descriptions, variously modified, would probably be found in other coal works, had the tabular returns been supplied, or minutely filled up but these may suffice to demonstrate the necessity of still further reform notwithstanding the improvements, acknowledged on all hands, to have been accomplished.

Drunkenness is not a reputed habit of the colliers, as a class, though they are liberal consumers of beer, in proportion to their means of obtaining it, which must needs be scanty enough, where families are large and full work is not constant. In the month of June last they were restricted to four days in the week, at the principal collieries, in consequence of a slack demand and thus a man's wages did not exceed 12s. and a senior boy's from 4s. to 6s. per week. When earning full wages they are commonly improvident, rarely laying by anything for the time of need, even when they have easy families, or none at all.

GENERAL OBSERVATIONS.

The partial returns of tabular forms, leave me no alternative but reckoning round numbers and I calculate that there are about 260 boys under 13, and 400 young persons between the ages of 13 and 18, employed in the coal works of its district.

The youngest boy I have heard of is George Woodington, who has been working as a door boy one year, though he is now only seven years and a half old (see note to No.58). This infantile labourer has never been taught his letters, but attends a place of worship with his father.

The comparative condition of the collier boys and those employed in agriculture labour, furnishes little matter for comment, beyond the trite fact, that the former have a less healthful appearance than the latter, who enjoy the benefit of sunshine and fresh air in their work although their food is often inferior, both in quantity and quality, to that which the higher wages of the collier enable him to procure.

Compared with boys employed in iron manufactories, or other mechanical works, the juvenile miners sustain a great disadvantage, in the absence of anything calculated to quicken their observant faculties, or call latent ingenuity into action. Hence 'the march of mind' finds fewer illustrations among them, than in the former class.

There appears to be an *esprit du corps* among the colliers, which attaches their progeny to the work, as a sort of hereditary calling, distinguished by a degree of adventure, from its exposure to danger, and abandonment of daylight. I have, however, met with some young boys who acknowledged a preference for more cheerful occupations. The orphan boy already mentioned, as taught in the Kingswood infant school, and about to commence his labours in a coal pit at eight years of age, frankly replied to my question how he liked the thoughts of it, 'Not at aal Sir.' What could such a poor desolate little fellow do, but submit to his allotment,

with whatever sinkings of heart at its gloomy and unnatural character? He will, probably, soon cease to think it a hardship but I have often thought of him with compassion.

Any legislative restrictions, as to the age at which boys should be admitted to colliery labour, would, I apprehend, be evaded to a great extent. Both parents and children would be under temptation to deceive, impelled by considerations of gain, especially whilst low wages and a high price of food, are concomitant.

The health of the boys does not appear to suffer from their work, which varies, in a generally fair adaptation to their strength, and is rarely continuous for a period exceeding eight hours. They are sprightly in their movements when quitting their labour, and often walk two miles or more to their homes.

The same stunted character of growth, is remarkable in those employed at the 'low delf,' or narrow seam, collieries, here as in the Forest of Dean.

Night work is of rare occurrence, and principally arises from the necessity of repairing the roads underground, at hours when they are not required for the transit of coals.

Wages are usually paid at regular periods, and in money, except where truck shops are connected with the works. Parents receive the wages of the younger boys.

The limited period allotted to the Commission for local operations, has precluded any detailed inquiry into the state of the national and other public schools, as connected with the interests of the young colliers in this district. In general terms I can venture to state, that these schools are well conducted, and pursue the course of instruction usual in similar institutions.

The art of writing is very rarely possessed by the boys or young men, and does not form a part of the instruction given in the Sunday-schools, frequented by this class of labourers.

Female labour is altogether dispensed with in the coal works of this district, though a few amazons yet practise the vocation of coal carriers, on their own account, from the pits into the city or suburbs, rivalling the men in strength of sinew, and vigour of lungs.

The use of corporal chastisement, appears to be countenanced by many coal proprietors, under the notion, that idle or unruly boys cannot be managed without it. The advocates of this practice, nevertheless, repudiate any cruelty, either in the mode or extent of its application and though the boys admit that such punishments are inflicted, their most common expressions, when questioned on the point, are merely, '*Sometimes we do get a hiding,*,' or '*They do hit us a clump or two, now and then.*' I have reason to think, the older lads often play the tyrant towards the boys but where no formal complaint is made, it must often be impossible, to detect abuses, perpetrated in the recesses of a mine.

I have only to add that my report is altogether founded on personal observation, and comparison with statements derived from other sources having visited all the coal works, of which minutes have been transmitted, and acquired a growing interest in the objects of the Commission as I proceeded with my inquiries.

I have the honour to remain, Gentlemen,

Your most obedient servant,

ELIJAH WARING.

EVIDENCE COLLECTED BY ELIJAH WARING, ESQ.

SOUTH GLOUCESTERSHIRE.

COALPIT HEATH - Eight Pits.

No.48 Henry Hewitt, Esq., Assistant Manager of Coal-works at Coal-pit Heath consisting of Eight Pits, carried on by Sir John Smyth, Bart., and Co.

May 12th. 1841.

Two hundred and eighty to three hundred hands employed and all the works are wrought by shaft and steam power, the depth varying from 40 to 85 fathoms. They are kept dry by four pumping engines, of which are generally sufficient. They employ from 40 to 50 boys under 13 years of age and have very little use for doors in the pits, the workings being so extensively connected with each other the ventilation is perfect. The boys are employed in leading coal, i.e. drawing the small tubs containing about 1 cwt. each, into the horseway and some assist the cutters in filling. He thinks there are about 50 young persons over 13 and under 18, the youngest of these are similarly employed. The oldest are cutters or fillers, some below, others at the pit's mouth. The youngest earn 6s. per week when working their full time, and the eldest from 10s. to 12s. per week. They are paid by piece, and all are independent of the men. Some of the boys quit the employ to go into Wales at 15 or 16. These are generally the least steady. The hours of work above ground are from six to six, with an hour and a half for meals. The men and boys in the pits do not average over eight hours per diem. They are not troubled with bad air, being well ventilated everywhere. Most of the boys can read, the youngest mostly go to the Sunday-school but very few can write. A National school is established at Westerleigh [the parish church] and another is about to be connected with a chapel of ease to be erected on the Heath. There have been no serious accidents of late.

Mem. - I have made arrangements to see some of the boys in these works, by visiting them again at suitable hour. Their dwellings are scattered for miles round the country, and they are off home the moment they reach the surface of the earth. I missed them by only a few minutes, on my way from Yate Coal works, two days after I took the above notes from Mr. Hewitt.

YATE - two pits at Yate Common.

No.49. Mr. Joseph Staley, Managing Partner in Coal works at Yate Common, in the parish of Yate (Two Pits), carried on under the firm of Staley and Parkers.

May 14, 1841.

They employ from 30 to 35 hands. There are not more than five or six boys under 13, the two youngest are from eight to nine years old, who work with their father. Perhaps three boys not more than 10 years of age. They assist in cutting and carting out the coal from a one foot seam. There are no door boys employed, because there is sufficient ventilation without being particular about closing them. The carters generally manage the doors as they pass. The boys earn from 6s. to 9s. per week when they get handy at cutting. They have not more than three or four under 18, all over 15 are earning nearly men's wages, say 15s. per week. The men earn from 18s. to 20s. He considers two tons a fair day's work. The wages are paid in money every Saturday. The older boys receive their own. The boys, in carting out the coals from the *googs*, [narrow inclined planes up which the coal is pulled by a chain and windlass], when short distances, draw by the *girdle* or *tugger*, i.e. a rope round the waist, with an iron hook depending in front, to which a chain, passing between the legs is attached. If for longer distances, they use wheeled carriages on a railway. No horses are used underground at present. The smaller boys

do not tug more than 1 cwt. at a time. The carts generally hold about 2 cwt. each. The thickest vein is two feet six inches and is worked by the young men. The boys cart through a two feet six inches passage, the men have four feet, there being a bed of soft stuff above the coal, to cut away before they come to the roof. The shaft is 45 fathoms, worked by a steam engine, and strong plaited ropes which he thinks are decidedly safer than chain, as it gives more timely notice of any defect, by a strand or two giving way, whereas a link of iron is sometimes near breaking, a good while before it is discovered, and then separates on a sudden. He has had many years experience in Staffordshire and Derbyshire, having been brought up a collier, say for 40 years and has been years in this coalfield. The workings are quite dry. A pumping engine of 60 horse power is constantly at work when there is water. Three or four days a week is sufficient in summer. Hours of work average eight to nine hours a day and there is no night work at present. He always employs two sets when it occurs.

Some of the boys and young persons attend the Church Sunday-school, and others the Dissenting day school. Most of them can read a little. They look clean and tidy on Sundays. He thinks they are no healthier boys in the country.

YATE.

No.50 Mr. John Wilks, Manager of three Coal pits on Yate Common, worked by Messrs. Long and Co.

His general statements correspond with those of Mr. Staley, No.2. The whole complement of hands about 50 with no boys under 12 and only four under 18. The lowest wages are from 7s. to 8s. per week. The depth of shafts about 60 fathoms and they pump out all the water by a 40 horse power steam engine, in about three hours out of 24 but never more than seven hours pumping necessary.

He thinks the parents too generally remiss in sending their boys to Sunday-schools, of which there are several in the neighbourhood. From his own observation as a teacher, he considers these schools of great value to the young people who are employed during the week.

Mem. - I saw several boys in, the above collieries whose appearance was favourable, having respect to the nature of their occupation. It is rare to see an underground boy with a fresh complexion. The mode of *tugging* the coal appears calculated to injure the loins, but the boys I have asked say it does not hurt them. They are a very much inclined or leaning posture in tugging. I shall take an opportunity of examining into this more strictly. The leather straps over the shoulders, used in the Dean Forest collieries, are apparently better adapted to the work, as regards comfort, and the application of muscular power. [See Report for further observations on the girdle-tug.]

WARMLY COAL WORKS.

No.51 Mr. Thomas Waters, Managing Partner of Coal-works at Warmley (Two Pits), carried on by the firm of Davidson and Waters.

May 17th., 1841.

They employ 60 hands, 11 under 13, and 10 from 13 to 18, the youngest nine years. The wages vary from 2s. 6d. up to 10s. a week, depending much on skill and activity in work. A few are paid by the day repairing roads, carrying in pit timber, &c. The shafts are 80 and 84 fathoms deep. The deepest shaft is for the pumping engine, 50 horse power. The winding engine is 22 horse power. There is a plaited rope, and running stage over the pit. The ventilation good, except when the wind gets against the pit's mouth, when the foul air is troublesome. There has been no accident from foul air. One man killed about two years ago by falling asleep under an old *topping*, where he should not have gone, and the rubbish falling on

him, he was suffocated. He went there for warmth, being out of the draught of the pit. About the same time another was killed by a slip of coal suddenly separating, and sliding down on him, in the line of stratification. A man's finger was cut off by the fall of a sharp stone 10 weeks ago. They work a two feet two inches seam. The roof generally is good. Part of the workings are 40 yards wide. The wages are paid every Saturday in money only. He considers the colliers, and population generally to be more civilised than they were 30 years ago but there is plenty of room for improvement still. The nearest public school is the national, at Siston, one mile off. There are two Sunday-schools within that distance. The boys are all carters, and occasionally employed taking in pit timber, &c. He thinks most of them can read but fears few of them regularly attend a place of worship. He knows of only one boy who has not a decent change of clothes for Sunday and that boy has a sottish father, and a badly managing mother. He thinks the pit boys are generally more immoral than the agricultural boys. Their countenances rarely look so healthy as the latter, but they are commonly hearty feeders, and live as long on an average. Some of the old colliers, who have been used to blasting with gunpowder, are asthmatic.

Mem. - There is a geological fact connected with this colliery worth noticing. To me it is quite new. The seam of coal, usually running two feet two inches in thickness, occasionally expands for a short distance into a swell, or *gout*, of 20 yards. One of these extraordinary lumps continued for 100 yards in length. The strata of this coal field dip to the eastward, 1 foot in 25.

No.52 John Harvey.

He is a carter in Crown Pit [Mr. Waters's] and says he is 13 but he looks not more than 9 or 10. The men say they know him to be the age he states. He draws coal with another boy, about two hundred-weight at a time, eight score yards, on rails, with slides underneath the cart. The ground is all level and is pretty dry, except in some hollow places, for a few yards. He does not catch cold, or lose his appetite and earns 6d. a day. He works from six o'clock to two, or *thereaway*. He gets potatoes and butter, or potatoes fried with bacon, when he goes home from the pit and *gets whatever he can catch*. He is always very hungry after work. He seldom has as much as he could eat. He does not go to Sunday-school, because he has no clothes besides what he works in. He cannot read and never had a pair of shoes or stockings in his life. He has seven brothers and sisters. One brother earns 2s. 6d. a week in the same pit with himself. He thinks his father earns 12s. a week in the Spelter Works. He sometimes works at night, for the sake of getting an extra sixpence. He goes down at 10, and up at six next morning.

Mem. - This boy has evidently been stunted in his growth. I should say more from want of sufficient food than any other cause. He states that he has rarely as much as he wants, and subsequently acknowledged that he had sometimes gone without food for two or three days! He is straight, and not badly proportioned, but has altogether a melancholy and *starveling* appearance. Mr. Waters confirmed this boy's statement, on my naming his assertion of having gone without food for two or three days, saying that he learnt the fact too late to obviate such sad privation. It was named to him immediately afterwards, and he knows this poor little fellow did actually work in the pit for three days, without food, from sheer poverty, which should not have happened, had he known in time that the boy was so badly off. He has a drunken father, and an improvident mother. What a deplorable lot!

No.53 George Chambers, aged 11.

He works in the same pit with Harvey but is taller by the head, though two years younger. He earns 2s. 6d. a week and is Harvey's partner in carting. He has a mother who takes good care of him. He goes to the Sunday-school, and to church at Siston.

Mem. - This boy has a healthy appearance.

No.54 Charles Osborne, another carter in the same pit.

He is 16 years old and has worked at carting ever since he was 10. Hauls the carts about 40 yards. He is subject to bad headaches, more when there is bad air in the pit and feels better when he comes up into the open air. He cannot eat his meals sometimes. Never works by

night. He can read a little but does not go to a Sunday-school. He thinks he will go from this time forward.

Mem. - This boy has a sickly complexion and countenance, but is well grown. The work evidently does not suit his powers.

No.55 Abraham Brain 10 years old.

He is a carter in the same pit, '*I do push with another boy.*' He has worked for 12 months in the pit and earns only 3d. a day. He can read a little but does not go to Sunday-school. He has no shoes. He complains of tightness on the chest and looks delicate.

Mem. - These boys all agree that the bigger boys often impose more than a fair share of the labour upon the smaller ones and sometimes tyrannise over them by blows and abuse. They say they do not like to tell tales, by complaining to the master, except when they are very ill used but their master is always displeased when he hears of such things, and calls the big boys to account. It does not appear that any severe injuries have ever been inflicted in this way but it is a subterranean modification of *fagging*, peculiarly capable of great injustice and cruelty. Mr. Waters informs me that it is not uncommon for the boys to ask permission to work a night or two occasionally, for the sake of the additional earnings. There cannot but be great poverty in families, with so low a rate of wages, where much depends upon the children's earnings.

No.56 Samuel Britton, aged 18.

He is a carter in the same pit and has worked 11 years and now earns 9s. a week. He can stand upright in most parts of the pit. He cannot read, and does not go to Sunday-school.

Mem. - This is a robust, well grown lad, with a healthy countenance.

COAL WORKS, LOWER EASTON.

No.57 Mr. William Boulton, jun., Managing Partner in the Coal works at Lower Easton viz. the Easton Pit, and Brickyard Pit, carried on by the firm of the Easton Coal Company.

May 18th., 1841.

They employ about 160 hands. Not more than three boys under 13, one of these is only seven and a half years old, and has worked in the pit about a year. There are about 49 lads under 18, the youngest keep doors, and earn 2s. a week. The others are carters, earning from 6s. to 10s. a week. The Brickyard Pit has a 126 fathoms shaft, the other pit only 80 fathoms. The seam at the former is four feet and at the latter two feet ten inches. There are two pumping engines respectively 40 horse and 80 horse power. The Easton main shaft is much troubled by runs of water. The men have a covered *hutch* of thick plate iron, to go up and down in, seven at a time. The air occasionally troublesome on sudden shifting of the wind. There have been no accidents arising from this but about three years ago, two men and three boys, were killed in consequence of the wedges round the shaft of the winding wheel giving way, as they were descending, and the wheel running free of the shaft, they were violently precipitated to the bottom. One boy was killed by falling down the shaft at night. He attempted to get into the hutch, on *the dark side*, just about to be lowered, and missed his footing. One man recently fell 66 feet, from an accidental slip on a partition in the shaft, where he was engaged making some repairs. He broke his thigh bone and injured one ankle, a slight contusion on the head was the only other injury! He is now nearly recovered. Night work is always carried on by a separate set of hands. *Must* repair the roads in the pits by night. It would interrupt the work, in the day time.

Mem. - The parents generally receive the wages. The wages are fixed by the employers. All is piece work, except the door boys, and those who attend to the roads and pit timber. The young men

seldom leave their parents till they get married. Wages are paid every Saturday in money. The boys cart the coal from 30 to 50 yards into the mainway, where it is received by the larger, or *carriage*, boys, and hauled to the shaft. Most of the colliers attend church or chapel. I cannot speak to their powers of reading.

No.58 John Palmer, aged about 15.

He works at Mr. Boulton's coal works and earns 5s. a week. He drives a large carriage of coal weighing from 7 to 8 cwt., assisted by another boy, about 50 yards. The tub runs on wheels and iron plates. He works always at night and has done so for the last two years. He gets his sleep in the day time. He goes into the pit at six in the evening and remains there till six next morning. He earns about 6s. a week. He can read the Bible, and always attends the Sunday-school at the *Moravian* Sunday-school at Kingswood Hill. Some of the boys go to the same, some to other schools. A good many stay away, and cannot read any. His partner, of course, works at the same hours with himself.

Mem. - This lad looks pale, but otherwise has no indications of unhealthiness, such *unnatural* hours of work considered. He said he enjoyed his sleep in the morning, and felt refreshed by it. I have since seen him in the Sunday-school, and learnt that he is very regular in his attendance there. I went to the mouth of Easton Pit to see the colliers come up after work, and saw the urchin of seven years and a half emerge from the *hutch* with his father, his white cheeks strongly contrasting with the coal dust smeared over them. He had his candle stuck in front of his cap like all the rest. The poor little fellow answered my questions cheerfully, and seemed quite naturalised to his doleful vocation. There was something at once grotesque and revolting in the *workmanlike* demeanour of this pigmy collier. His father assured me he had been with him in the pit for 12 months.

HOLE-LANE COAL COMPANY'S PITS. Cowhernhill, one Pit, Hole Lane, two Pits.

No.59 Mr. Samuel Long, aged 48, Under Manager.

May 24th., 1841.

He is underground manager of the *Hole-lane Coal Company*, one pit at *Cowherne-hill*, and two at *Hole-lane*. They employ about 150 hands, he supposes 40 under 13, the youngest from seven to eight years of age, one of these was only six when he commenced work. He thinks there is about the same number of hands under 18. Three of them are door boys, the smallest earns 1s. 6d. a week. The others are carriage boys. Some carriages take six bushels, some only three bushels, the latter for the smaller boys. Two boys to each carriage, the bigger boys bring out the coal from the stalls in tubs holding a bushel and a half each, sliding on wooden ladders up an ascent of 2 feet in 12 feet. The ladder is formed of plank laid on the floor, about 16 inches from outside to outside, with cross bars about one foot asunder, by which the boys ascend on their hands and feet, hauling the tubs after them by girdles of rope to which a chain is affixed, passing between their legs, roughly sketched, thus. [A rude pen-and-ink drawing was here introduced, in the MS.] If under 50 yards, 104 tubs are considered a fair day's work, for which the price is 20d., whether one boy or two. A *strong* boy will do this day's work by himself. From over 50 yards to 150, they pay the same wages for 62 tubs but rarely have such a length as 150 yards to haul. They generally lay down rails when they require such a distance. The seams worked are six feet, and two feet six inches. The depths of the several shafts are, 108, 60, and 34 fathoms, worked by steam engines with running stages over the pits. The Cowherne Pit requires 16 hours out of 24 pumping to keep dry. The engine is 36 horse power, that at the deep pit is 64 horse power. The men go up and down in tubs. The hours of work from five o'clock to one with half an hour allowed for the meal in the pit. Boys working at night rest by day. Most of the night work is the repair of roads and pit timber. They have had a few accidents. One man has been killed by a stone falling out of the roof. About 10 days ago a man was killed by the fall of a coal heading whilst *hunching*, i.e. cutting in underneath the seam. He was careless about using props. Most of the boys can read, some can write and he thinks there is hardly a boy in the pits who does not go to Sunday-school. He is well satisfied, from

long experience, of the great advantage of Sunday-schools to the working classes. Some of the young persons in these collieries have grown up decidedly religious characters, from being so trained. He has a rule that any man or boy in the pits swearing a profane oath shall pay a fine of 1s., or quit the work. The fine goes into the sick fund. To this fund men and boys earning 1s. a day pay 2d. a week, those earning under 1s. they pay 1d. only. The reason there are no 'doctors' clubs' here is that most of the colliers belong to benefit societies, which employ a surgeon for the members, and the parish doctor attends their families. During the prevalence of influenza lately, many of the boys were ill with it but are now generally healthy.

No.60 William Fry, aged about 16.

He is a carter in the pit at Cowherne-hill. He draws about 2 cwt. of coal for 100 yards on iron plates, with wheels to the tub. He earns 4d. a day. He never went to any school before he began to work, not long ago. He now goes to the Moravian Sunday-school at Kingswood-hill. He works at night every other week. The biggest boys cart the coal where the way is steep. He never works above eight hours in the 24. He hauls by the girdle but it does not hurt him now but it did at first. He does not hear other boys complain, after use.

Mem. - Judging from the apparent pressure of the tugging rope, or girdle, on the sides of the abdomen, I have been surprised at no cases of *hernia* among these boys. I hear of ruptures occasionally, but have had no cases specified hitherto. From the description given, all the reported cases appear to be *inguinal hernia*. Not having been yet fortunate enough to meet a surgical practitioner among the coal works, it remains for me to make inquiries at that source of information. [See Report for general results on this head.]

GOLDEN VALE COLLIERY

No.61 William Bryant, aged 41, Underground manager.

He is underground manager of the Golden Vale Colliery where not more than eight boys under 13, the youngest is about 11 and say six lads under 18. The earnings are from 1s. 6d. to 12s. a week. All are carters. They require no special door keepers. They work a vein averaging two feet and a half, but very irregular. The hours of work from five o'clock to one. Most of the boys can read a little, and attend Sunday-school. A fine of 6d. paid to the sick fund for swearing. He has not heard above one oath in the pit for the last six months. He has been a collier all his life and used to cart coal by the girdle and never felt any harm from it after the first seasoning. It made him raa [raw] at first. The foul air is kept under by ventilation, but is often troublesome. He had one man fall down insensible from it, but he was restored on being taken into fresh air. One man was killed some months ago, falling down the shaft, whilst repairing some of the machinery within it and another lost his life by neglecting to put in props, whilst '*binching*' under a head of coal. Most of the men and boys attend chapel. He thinks the present generation of colliery boys an improvement on the last but "*rough enough still, a good many of 'em.*"

No.62 William Short, aged 11.

He works in the Golden Vale Colliery and earns 4d. a day. He carts a bushel and a half of coal up the ladder by the girdle but says it does not hurt him none, but used to at first. He never hears the boys complain of any pain after work is over, nor while they are at work.

Mem. - I examined this boy minutely, with reference to the effect of the girdle, which is uniformly a piece of circular rope, with an iron hook in front, depending between the legs, to hitch on the chain. There is a slight discoloration across the loins, where the pressure is greatest but no other perceptible injury.

Out of 13 boys and lads I got together at this pit two only could not read, and had not been to any school. These two had such stolid and unpromising physiognomies, that I marked them' out as non-

readers before I questioned them.

PUMPHREY COLLIERY.

No.63 Pumphrey Colliery, near Mangotsfield, is carried on by Fryer and Co.

May 25th, 1841.

There are only two lads under 18 in this pit, the youngest 15 and earns 1s. a day. Both can read, and attend Sunday-school. The shaft is 49 fathoms and we work four veins, viz. two feet six inches, two feet eight inches, another of the same thickness, and three feet six inches, at the distances of and 6 fathoms below each other. The first is struck at 10 fathoms.

CROMHALL COMMON COLLIERY.

No.64 Cromhall Common Colliery, carried on by Long and Keeling.

It is a very wet pit with pumping engine at work. I could not see Mr. Keeling, who was busy underground but conversed with several of the men and boys, as they came up, at the pit's mouth. There are few boys here. They earn from 2s. 6d. to 7s. a week. The cutters earn 17s. a week at most. One boy was very ragged, and said he had no better clothes. He has no mother, and a drunken father and as might be expected, is wholly uninstructed. The hours of work as usual. The air very bad, which sent several of the men out of the pit before the regular hour of leaving work. They work a two feet and a half vein, at 60 fathoms and employ about 40 hands.

No.65 John Pick, a stout hale lad, aged 16 to 17

He has worked four years at Cromhall Pit and earns 7s. a week. He carts 40 tubs a day, of four bushels each, 40 yards on level ground, unassisted with neither wheels nor plates. He can read very well, and attends Sunday-school. The ragged boy drives the horse in the whim.

Mem. - I examined this lad particularly, as to any injury arising from the mode of hauling by the tug and girdle and found no marks of injury. He says it used to gall him at first over the hips. He acknowledges his work to be hard. The men said none but a strong boy could do it. Neither boys nor men could be persuaded that the shoulder straps, used for hauling hods in the Dean Forest are better than rope girdles. One of them said truly, '*Every country do like his own way best.*'

WAPLEY COAL PIT.

No.66 Mr. John Newman Underground Agent to Sir Bethel Codrington and Co. at Wapley Coal pit.

May 26th., 1841.

He has been a coal manager for 40 years and employs 31 hands, five boys under 13, the

youngest 11. There is only one over 13 and under 18. All the boys are carters and haul one and a half hundredweight on wheels 70 to 80 yards, the smallest boys two to a tub. The wages are 4s. to 8s. a-week. Sometimes they work extra, when the bigger boys will earn 15s. The cutters earn on an average 20s. a week. They work a two feet vein. He has hauled with a girdle and chain himself when 12 years old. He felt his loins sore at first but no inconvenience afterwards. He reckons 35 tubs a day's work for a big boy and 18 for a small boy. They all read, and go to Sunday-school and most of them can write a little. Wages are paid weekly and the average hours of work eight in 24. When there is night work there is a change of hands. They tub up all the water at nights, and in the mornings, Sundays included. The ventilation is good and there have been no accidents of any sort. The pit's mouth is remarkably well defended, has a sliding cover. He has no doubt of the superior safety of plaited rope to any iron chain. He has used a plaited rope for seven years, and found a chain cable break in half that time. He allows no bad language. Most or all of the men belong to benefit clubs. He does not allow the colliers to frequent beer houses. They generally attend chapel. The boys all look tidy on Sundays.

Mem. - Caught one small boy as he was running from the pit's mouth, and examined him about the *girdle*, with the same results as in other cases. He looked healthy and intelligent but, like nearly all of his class, was very shy of talking with '*a strange gentleman.*' Called also at one of Sir John Smyth and Co. collieries, at Westerleigh Hill, where they have a very dry pit, requiring nothing but tubbing up to keep the water in order. In this pit they have a horse at work, as they have in several others of this company's pits, and the whole establishment is remarkably neat and orderly. The employment of horses in pits is a great saving to the labour of the boys.

SHORTWOOD COLLIERIES.

No.67 Mr. Charles James, aged 47, Underground Manager of the Shortwood Collieries, carried on by Messrs. Waters and Reynolds.

May 27th., 1841.

We employ, in three pits, about 120 hands, 30 boys under 13 the youngest from 8 to 9, about 20 above 13 and under 18. Two of the youngest mind doors at 2s. per week. The rest are carters and hauliers, at from 1s. to 1s. 6d a day. The seams worked are respectively 3 feet, 2 feet 6 inches, 2 feet 8 inches, and 20 inches. Wheels are used to the tubs wherever it possible. Coal hauled up the *googs* by windlass. 4 cwt. of coal in a tub is easily drawn on wheels and plates. He reckons five tons hauled 300 yards on a level a fair day's work. The workings are kept middling dry by engine pump. There is not much foul air. He thinks two thirds of the boys can read. Not more than half go to Sunday-school. Has been a collier from eight years of age. He has hauled a hutch till he would fall down out of breath. He never felt an injury from the girdle and has known rupture to occur, but very rarely.

One man was killed by a head of coal falling on him while setting timber which he should have done before. This was about two years ago. He finds the collier, generally very careless about propping. They have had many injuries arising from this want of caution. The hours of work 8 to 10 hours. Night work is principally about the roads. The wages paid weekly. He thinks many of the boys would attend an evening school if they had the opportunity. Most of them look decent on Sundays. There is a fine of 1s. for swearing in the works. He considers the general habits of the colliers improved within the last 20 or 30 years.

No.68 Joseph Wiltshire, aged 12.

He is a carter in the Shortwood Coal works. He tugs 4 cwt. of coal, helped by a bigger boy, about 150 yards, partly on ladders, and partly on level and earns 4s. a week. He works from six o'clock till two and works at night every other week. The big boy sometimes abuses him. and beat him. He has not complained to his master. He went to school before he went to work. He reads very well, and attends Sunday-school. He says the girdle does not hurt him in any way.

Mem. - I have uniformly remarked that the boys, on coming up from the pits, appear active and cheerful, and usually set off at a quick pace for their homes, frequently running and playing tricks with each other, particularly on a fine day. I always endeavour to be on the spot at the hour of quitting work, for the purpose of making my observations upon them more extensively.

SOUNDWELL PIT - two Pits, Samuel Whittuck Esq.

No.69 Samuel Whittuck, Esq.

June 4, 1841,

I visited the collieries carried on by Samuel Whittuck, Esq., at Soundwell, but could not find the manager at either of the pits. I learnt that there were about 20 boys under 13, or of about that age, employed as carters, and earning from 2s. to 7s. a week. My information was principally derived from a filler in the coal yard, about 45 years old, who had learnt to read and write at an adult school, and greatly deplored the want of schools for poor children when he was young, observing, that if the boys knew how much occasion they would have to regret their ignorance in after life, they would not neglect the many opportunities now presented to them. I caught a number of boys coming out of the pit, and found most of them very stupid' and uncouth, even more so than common among their class. Their appearance was healthy, after the underground fashion, and they ran as lightly as bucks, on their road home. One of them said he would go to a Sunday-school, if there was one nearer his home than two miles.

No.70 William Beese, aged 14, and his brother George Beese, about 12.

They haul coal by the girdle in Soundwell Pit, about six yards, on wheels, through a four feet passage and earns 6d. a day each. Both agree that they are not injured by their work. They have good appetites, and generally enough to eat but could sometimes eat more than they can get. They are ready for a good run as soon as they come up. Both read, and attend Sunday-school.

No.71 Daniel Poole, aged 50.

He has been a collier all his life; earns 13s. a week cutting coal in Soundwell Pit. He enjoys good health and is learning to read in the Moravian Sunday-school at Kingswood. He has nine children, and would send them all to school on Sundays if they had decent clothes. He finds it hard to maintain so many, provisions being dear. He likes to keep himself and his family clean and wholesome. He thinks colliers better men now-a-days than they used to be.

Mem. - The shaft at Soundwell is 200 fathoms deep. The deepest in the district.

CORK PIT, DEEP PIT and STARVEALL PIT, MESSRS. WILLIAM BRAIN AND CO.

No.72. Mr. Bryant, Underground Manager to Messrs. William Brain and Co., in the Cork Pit, Deep Pit, and Starveall Pit.

June 11th., 1841.

There are about 300 hands employed. 123 boys of all ages but not more than 30 under 13. The youngest is 11. The youngest are door boys and assist in pushing the carts of coal, earning from 4d. to 7d. a day. The oldest boys haul one bushel and a half of coal 60 to 100 yards by the girdle on carts with slides. Seventy carts hauled 60 yards is a day's work at 1s. 2d. Not four out of five can read much. The majority go to a Sunday-school. There is 6d. fine for swearing, which goes to the sick fund but no fine has been levied for several months. The seam of coal lies about 52 fathoms down, 2 feet, 2 feet 6 inches, and 1 foot 5 inches. The hours of work are 8 to 10 hours in the 24.

No.73 William Johnson, aged 13 last November.

He works in the Starveall Pit and is a carter. He has worked at it four years and earns 4s. a week. He has always carted ever since he began to work. He thinks the girdle a very good way of tugging. He does not mind a little wet. He reads, and goes to school at Kingswood.

No.74 William Stone, aged 13 on 23rd last November.

He has worked in Mr. Brain's colliery six years and a half. He was first a door boy and helped to carry in pit wood. He earned 1s. 6d. a week. He is now a carter, and earns 7s. 6d. a week. He began carting at 11. He hauls 30 yards by girdle, mostly down hill and works from 8 to 10 hours daily. The roads are rather wet, but HE is used to that. The girdle never hurts him now

Mem. - This is a tall, fine boy, and quite intelligent. There is a striking difference between the Sunday scholars, and the idlers, among these boys. From the latter it is difficult to extract a rational reply to the most simple question, and they are generally as sulky in their manner, as pigs held in a string against their will.

COALPIT HEATH, Sir John Smyth, Bart., and Co.

No.75 Mr. John Cook, aged 46 Underground Manager to Sir John Smyth and Co.

June 11th., 1841.

He has acted for all their collieries during the last 10 years and has been a collier from six years of age. He considers their boys generally steady, comparatively speaking, far more so than they used to be 20 years ago. This is partly from better management, and partly from schooling. He has doubts of the fines for swearing doing good, because the boy who is fined curses the man who fines him as soon as his back is turned, and does it far more after being fined, through anger than he would have thought of doing before. This has been his observation, from long experience. He thinks when the intended new church and school house, are built on the Heath, the major part of them will attend public worship. Some of the boys are badly off for Sunday clothes, sometimes owing to bad management, sometimes to downright poverty. Some of the colliers, who have boys at work will sometimes earn from £2 to £3 a week, but they almost never save anything against a rainy day. Some cannot, possibly do more than live from their earnings. They are now working only four days a week, owing to a dull trade, thus the men are earning only 12s. and boys from 4s. to 6s. a week. A day's work for the carters is thus calculated, under 40 yards, 13d. for 80 bushels of coal, over 40 yards, 19d., over 80 yards, 2s. 1d. and over 120 yards, 2s. 7d. for the same quantity. A lad of 16 to 18 will execute the largest of these day's works. A good many of the boys can read but very few can write at all. Most of them attend Sunday-schools. He used to haul with the girdle for years and years. The first week it made him sore, then it went off, just like breaking a young horse to a collar, which galls his shoulder at first. The boys who haul with the shoulder straps in the Forest cannot haul anything like the heft these boys do with the girdle. Some of the young men, from 18 to 20 years old, will haul eight bushels by the girdle, up ladders rising one foot in a fathom for 40, and even 80 yards. He has seen men's noses bleed with the strain of this labour.

The colliers, of all ages, eat their dinners as soon as they go home from work, then wash themselves, and put on the shirt and smock frock they left at home in the morning. Once they strip naked, and wash themselves all over. The *daily* washings are only over the face, back, shoulders, arms, and hands. The men and boys all pay 6d. per quarter to the doctor, to attend themselves only, not their families, who are attended by the parish doctor in case of need. He thinks a parish doctor is no more good to the poor souls than a pig is out of a sty. They don't care about them. He wishes the colliers would adopt the plan pursued in the Forest of Dean and in South Wales. They have what they call a *plate*, *i.e.* a subscription of 3d. a week from the men, and 1d. a week from the boys, as a fund in case of sickness. He considers colliers better off, as regards living, than the farm labourers. Few of the farming people earn more than 10s. a week. He has known of but one man in the collieries, and he is superannuated, who has applied for relief to the Union. He should say, if evening schools were established handy to the works, a great many of the boys would be glad to go to them. The boys who haven't got learning do not like to be made fun of by those who have, and would like to learn themselves. He thinks no collieries in the country have been so free from accidents as Sir Smyth's. The men are careful about propping and all the men belong to benefit clubs. The seam they work is two feet and a half, the thickest six feet. He thinks a plaited rope safer than a chain winder and has proved both, and rejected the chains.

Mem.- I saw and examined a number of boys at Sir John Smyth and Co's. main colliery and their evidence differed in nothing from all the others but these very extensive workings, being dry, and remarkably well ventilated, afford superior advantages to the men and boys employed in them. The whole of this fine concern exhibits the advantages of capital, combined with skill, in no common degree.

No.76 John Lines, aged 13, works for Sir John Smyth and Co.

He hauls by the girdle and has done so for four years. The girdle never hurts him and he earns 1s. a day. He works eight hours and has potatoes and meat for dinner when he goes home. He attends the Wesleyan Sunday-school at Kingswood and can read a little. He walks four miles to the pit every morning.

No.77 William Gawen, aged 1.5, same work and wages as last examinant.

He does not go to Sunday-school. He used to go but they told him to go home. He does not deny that it was because he was idle. He has a mother, but no father and mother has help from the parish. She has two other children. He has better clothes for Sunday, but not very good. He gets enough to eat, but not always as good as he would like.

Mem. - In these collieries they employ 12 horses altogether, partly in working the winding machines which haul the coal up the *googs*, or *guqs*, and partly in drawing the carts to the main shaft. This materially lightens the labour of the boys. The general introduction of horse labour in the pits would be a great improvement, as has been manifested in Glamorganshire, under my own observation but where the seams are various, the workings would not always admit of it. 13 small ponies might, probably, be introduced with advantage.

Mem. - The above completes my local inquiries among the collieries. On the question of health, the medical gentlemen with whom I have conversed concur in opinion, that, with the exception of occasional inflammation in the *bursæ* of the elbows and knees, the colliers are not more liable to disease than other classes of labourers. Having addressed two written queries to Mr. Grace, an intelligent practitioner residing at Downend, I annex them, together with his answers. Mr. Grace's practice among the collieries being very extensive, I attach great value to his opinion. He is, moreover, evidently a gentleman of benevolent and considerate feelings.

To HENRY GRACE, Esq., SURGEON, &c., DOWNEND.

1. Have you observed that the boys and young persons employed in the collieries, and other works in your district, are subject to any particular diseases not commonly incident to such persons otherwise employed? if so, have the goodness to state the most important particulars?

2. Have you had reason to think that any fatal accidents, or serious mutilations, and other casualties occurring among the coal works, &c., within the range of your practice, have been attributable to defective provisions against danger, such as inattention to the state of the machinery, ropes, &c., or insufficient fencing to the main shaft?

1. After a practice of 11 years in this district, I should certainly say that they are not more subject to any particular disease, than the surrounding agricultural population. The only disease peculiar to the district is a weakness of the mucous membrane of the stomach affecting all classes, the cause of which I cannot explain, unless it arises from the peculiar mineral properties of the water, which, when boiled in an iron vessel, turns any vegetables, tea, coffee, brandy, &c. black.

2. Certainly not but generally the result of carelessness on the part of the miner, in not supporting the roof with proper caution.

HENRY MILES GRACE,

Downend, June 17th, 1841.

Member of the Royal College of Surgeons,

London, and Licentiate of the Apothecaries' Company.
