

APPENDIX (C)

Sir,

I have been making inquiry respecting the manner in which the miner lays out his monthly gettings, and cannot find an instance to bear me out in stating that there is a rule or scale of guidance to be found among them; this habit of improvidence is induced from the irregularity of their gettings, the amount being often below what is sufficient whereon to subsist: on which occasions they dive as far into their supplier's credit as they are *allowed* to; and he knowing the average of their gettings, does not of course allow them credit for an ample quantity. I have conversed with a person who has dealt largely with the miners in St. Agnes, Illogan, Camborne, Redruth, and Gwennap, who knows their habits, and what they have been during 20 years, and who could probably refer to accounts with them in those parishes 50 years ago: he is an intelligent man, and says that the miner's pay is not sufficient; that he eats barley because he cannot pay for wheat; that he gets in debt as far as he can, presuming on the success of his children to help him out 10 or 20 years hence; after this long forbearance, the standby, as he is styled, finds very few children enabled or disposed to liquidate their parents' debt. The same person makes the assertion that he cannot look around and one family of miners without a fag end of debt either to him or to his predecessors in the business; with the exception of those who have the help of an acre or two of land, a house, &c., as a beginning; such by care and industry are the only ones that maintain their standing. I have no doubt but he would show you hundreds of accounts of arrears, varying from £1 to £20 and upwards, that he regards as loss; in a word, his steadiest dealers of the order in question have an account with this feature. So much for the miller, and I find it to be no better with the shopkeeper; the itinerant drapers and others have found out a way to deal with the working class which I think must work well. For instance, a garment may be accepted on credit, the payment being made at say 6d, 1s, or upwards per month. In this way some get into household furniture also, the tradesman being content to await the small monthly payments. It seems to be impracticable for some of them to lay by a sum for casual purposes, but being answerable for goods already had, they anticipate the punctual visit of the teaman or clothier, and by an easy compulsion put the idle pence aside to complete the payment, which would otherwise be unwarily squandered. It may be said that this enables them to obtain dress beyond their means of payment, but I think the sellers are too well acquainted with the finances of their customers, and the danger of offering expensive articles.

[Here follows the list of articles of furniture with their prices given in the body of the Report.]

The miners are much in the habit of making their utensils about the house, and generally mend their own shoes. The borrowing and lending of culinary utensils is very prevalent; this is an accommodation to the indigent among them.

I am, &c.,

John Phillips.

Tuckingmill, 28th June, 1841.

APPENDIX (D)

The following cases of injuries received by miners in the Fowey Consols, and treated by Mr. Pace, the principal surgeon of that mine, within the last two years, have been obligingly sent me by that gentleman. They will exhibit the nature of some of the severer casualties, not necessarily fatal, frequently occurring in the mines of the West of England, as well as that restorative power of the miner's constitution which often seconds, to an extent which could not be hoped for in hospital practice, the skilful and assiduous efforts of the surgeon, whose attendance is provided at so low a charge to the individual. Some professional details given by Mr. Pace have been omitted here.

No. 1. *Stephen Sylvester*, aged 16:

Fell a distance of eight fathoms under-ground, and his head came in contact with a sharp stone. After being removed to his mother's I saw him immediately, and upon examination, found that the os frontis was fractured, and several pieces of it were driven into the brain, leaving a triangular space with an oblique serrated edge. [Mr. Pace urged the necessity of operating, and after some difficulty on the part of the boy], operated upon him about six hours after the accident, and removed several pieces of bone which were imbedded in the brain, and also about a table spoonful of the brain itself, which protruded after the first incision was made. I also removed the serrated portion of bone and elevated the depressed, a suture was inserted and the wound dressed with adhesive plaister; the head was then raised upon and supported by pillows, and ordered to be kept constantly wet with a refrigerant lotion. The boy was also bled freely from the arm, and calomel &c., given to him. [Very strict antiphlogistic treatment, and attention to quietude, &c., followed.] The mother and relations strictly

adhered to my instructions, and much praise is due to them for it; and the boy attended divine service at St. Blayey [sic] church in less than a month perfectly well, and has remained so ever since; he is at present working at the mine.

No. 2. *Joseph Jeffery*, miner, aged 17:

Had a blow on the right parietal bone by a piece of timber under ground, and also a slight laceration of the scalp, caused by a nail in the timber. The lad walked home from the mine very quickly, and came into my surgery about six o'clock on the Wednesday evening. He went on pretty well with simple treatment till Saturday, when he complained of uneasiness in the left arm, and he thought it might have been struck by the timber; there was no want of power in the limb, or numbness. I ordered it to be well rubbed with a camphorated liniment, and applied a blister nuchae the next day (Sunday); when I saw him, the uneasiness had rather increased in the arm, but it was not powerless, not much pain in the head, no rigors, nausea, or sickness; but there was an increased action, with a peculiar jerk of the pulse, and an impression on my mind that some untoward symptoms were threatening him. I persuaded the mother to allow me to bleed him, which I did, and repeated the calomel, &c. Early the next morning I was sent for in haste and told that the lad was then in a strong convulsion fit. I went in a few minutes. and found him then in a very strong one; he was perfectly sensible, but complained of intense pain in the head, and he had a violent attack of subsultus of the left arm; I bled him again copiously from the arm, had leeches applied to the forehead and temples; the wound was quite healed - no tumidity about it - but I re-opened it with a lancet, and had the head shaved and kept constantly wet with a cold refrigerant lotion, had an enema administered, and after that cataplasms to the feet, and gave him calomel very freely, &c. The convulsions continued at intervals of two to three hours for three successive days, during which time there was no absence of recollection. I saw him on an average every six hours, night and day, for several days. Bleeding him frequently from the arm according to the state of the pulse, the head was blistered, and the leeches several times re-applied to the forehead and temples, the calomel, &c., continued, perfect quietude kept, and no light admitted into his room. The convulsions became weaker, the subsultus continued occasionally in the arm, but decreasing in violence, and in a few days both had left; but leaving the left side perfectly paralytic. By care and attention the lad's health gradually improved; a light nutritious diet was allowed him, and in a few weeks he recovered the use of his left side, and returned to his labour perfectly well.

No. 3. *James King*, aged 20, miner:

Was brought into my house in his way home from the mine, having met with an accident from a fall under ground. On examining the right arm I ascertained there was an awkward oblique fracture of the humerus, close to the neck of the bone; there was not much swelling or tension. Considerable swelling and tension came on next day, with much constitutional disturbance, requiring strict antiphlogistic treatment. The man was of a plethoric habit, but of a feeble constitution; frequent doses of calomel, &c., were given to him, and the antiphlogistic plan strictly adhered to. In about a fortnight all inflammatory symptoms had subsided, and then the splints, &c., were re-applied as before. The young man was very much reduced; but the case did extremely well, and in a few weeks he returned to his labour.

No. 4. *James Reed*, aged 22, miner:

Was struck by a large stone on the left leg whilst at work under ground. Immediately after he was taken to his father's house, with whom he quartered, I saw him, and on examination found the tibia and fibula were both fractured, the tibia obliquely; there was also a long incised wound, from which there had been and was considerable haemorrhage. Ecchymosis had taken place to a very great extent, and the limb had evidently suffered very much from the compression. [Judicious surgical and medical treatment was adopted.] The haemorrhage had entirely ceased within the first twenty-four hours; but it proved to be most beneficial to the limb and system, inasmuch as it had relieved the one from swelling and tension, and prevented inflammatory action in the other. When the swelling and tension had subsided, which it had in a few days, I had the young man removed into another room, and I there completely reduced the fractures, and placed the limb in a fracture-cradle (the poultices were discontinued, and simple dressings applied to the wound). He was exceedingly reduced by the necessary confinement; but by the aid of tonics, and a generous diet, he was able to work in about six months from the time of the accident.

No. 5. *Joseph Gilbard*, aged 23, miner:

Had a severe blow on the back part of the head by a stone, producing concussion of the brain. I saw him immediately after he had been taken home by his comrades, who told me that he had lost about three quarts of blood from his ears; it was evident he had lost a considerable quantity, as his clothes were completely saturated with it; he was excessively cold, perfectly sensible then, but totally insensible when his comrades picked him up after the blow; he could not bear the least light; complained of intense pain in the head; there was no wound. I gave him some warm tea, which his stomach immediately rejected; and then had him removed to bed, bled him from the arm, and gave him more warm tea, which was immediately thrown up. I ordered his hair to be cut short, and to take five grains of calomel every two hours, and the head to be kept constantly wet with a refrigerant lotion. I wished to take some blood front the nape of the neck by cupping, but he objected, and leeches and blisters

were applied behind each ear, and about the nape of the neck. I directed that nothing should be given to him except tea, water, or gruel, and either of those in very small quantities. The pain continued in the head for about a fortnight, during which time I visited him three and four times a-day, and bled him very often, according to the state of the pulse; the calomel was continued in smaller doses in combination with occasional saline purgatives; the mouth was much affected by the calomel, and the man greatly reduced. As soon as he could bear it, a light nourishing diet was allowed him, and in a few weeks he returned to his labour quite well.

No. 6. *Richard Hellery*, aged 30, miner:

Fell down a shaft across a piece of timber, and was taken up apparently lifeless. I was sent for, and directed his comrades to remove him to his house as quickly as possible. (In all mine accidents it is truly admirable to witness the care and attention paid by the miners to their wounded comrades; if there have been any existing animosity, the offended party is the foremost to render assistance.) As soon as he was carried home I gave directions that he should be put into a warm bed; and when I saw him again, which was a few minutes after they had put him into bed, he was perfectly insensible, and his respiration exceedingly difficult. I gave him a few tea-spoonsful of warm tea with a little brandy in it, and had the abdomen, chest, and feet fomented with hot water, and remained with him until reaction took place. On examining him there were several deep cuts and bruises about the body and head; but the principal injury appeared to me to be in the lumbar vertebrae. I dressed his wounds, and bled him from the arm, and cupped him exactly over the injured part of the back, and extracted a good portion of blood; [other appropriate measures were employed.] I visited him three and four times a day during a fortnight, and he was insensible nearly the whole of that time, and his lower extremities were quite paralytic. [Active antiphlogistic means were used, and he] gradually recovered his recollection; I then allowed him a generous diet, and he has been, and is now, employed at the mine in good health, but with a partial paralysis of one leg.

No. 7. *William Davey*, aged 42, miner:

Was at work at the mine, and in tipping the waggon over, the handle broke, and he fell with great force over the tram-road, a distance of about twelve feet, upon his head. He was taken up immediately partially stunned, but sensible to all that was passing, without the power of articulation. I saw him very soon after; he had a long jaggy wound on the top of the head, from which there was scarcely any haemorrhage; he complained of much thirst. I gave him some warm water to drink, which he did with great difficulty; he could then speak, but indistinctly. I asked him if he could discern me or any object about him; he replied in the negative. I had him removed to his home, and bled him from the arm about two hours after the accident, gave him calomel, &c. The difficult deglutition had then very much increased, and he complained of pain and uneasiness in the head, and about the nape of the neck and throat. There was such extreme sensibility over the cervical vertebrae, that he could not bear the slightest touch; he had not the least power to move his head in any direction. This continued for several days, and also the difficulty of deglutition and imperfect vision; he was occasionally delirious, and his speech was rather faltering; there was no concussion of the brain, but evidently cerebral disturbance, with inflammation of a portion of the theca of the cervical vertebrae. It was one of those cases which required watching, and I saw him three and four times a day for some days, bled him from the arm several times, and had leeches applied to the injured part of the vertebrae, behind the ears, and about the neck and throat; I also cupped him, and applied several blisters, and put the system under mercurial influence. He recovered slowly; and in about ten weeks from the time of the accident, he returned to his labour perfectly well.

No. 8. *Jacob Waters*, miner, aged 46:

Had a fall under ground with a piece of timber. I saw him immediately after his comrades had carried him home, and had him undressed and put into bed. On examination I found a very severe compound fracture of the tibia and fibula of the right leg, the tibia protruding several inches, with such extensive laceration of the muscles of the limb, that it might have been twisted off very easily. After cleaning the wound, (I beg to observe here, that the wounds of miners received under ground require the greatest care and attention on the part of the surgeon to remove if possible every particle of dirt or mud from them; for in some peculiar habits, if this be not particularly attended to, very severe constitutional derangement is the consequence, attended with considerable danger to the patient,) and gentle extension being made, I reduced the fractures and placed the lacerated portions of the muscles, &c., in their natural position, as far as the case would permit of. [Various judicious measures adapted to the varying circumstances of the patient are here detailed.] The man suffered great pain and uneasiness in the limb, and in a few weeks I removed a partially exfoliated portion of the tibia. I was frequently urged by the man himself to amputate the limb, but declined doing so, as I always have done, and shall do, if I see a chance of saving a limb without risking the patient's life. Batley's Sedative Solution was frequently given, and the man's strength kept up by a generous and nutritious diet, aided by quinine, porter, wine, &c. This case was to me a most anxious one; one which required a vast deal of watching, care, and attendance on my part, and great patience on the part of the patient himself; but it gives me great pleasure to be able to say, that in about eighteen months from the period of the accident the man was capable of renewing his labour under ground, with a perfectly straight and strong limb.

No. 9. *James Baker*, aged 56:

Of very spare habit, had his left thigh fractured in four places by a very large stone. The whole system as well as the limb suffered greatly from the concussion. I was sent for soon after the accident occurred, reduced the fractures, and placed the limb in a doubly-inclined fracture-cradle. I ordered a saline draught to be given with a sedative every four hours; the man went on very well for a few days, when he was suddenly seized with severe rigors. Inflammatory fever followed; and the persons in attendance, in rendering him the necessary assistance, displaced the fractures, which were obliged to be reduced a second and a third time: after which the man's powers seemed to be entirely giving way; but by great care and watching, the case ultimately did extremely well, although it was a very anxious and troublesome one. The man was removed to his relations, a distance of fifty miles, in a few weeks; and I have since heard that he walks about with the aid of only a stick, and scarcely any difference in the length of the limbs.

APPENDIX (E)

Answers were received from several medical men professionally connected with mines in the different districts, in reply to written queries addressed to them. The queries may be first stated. They were these:

1. *Have you found that, in the mines with which you have been professionally connected, accidents have happened to boys under ground, owing to the weakness and carelessness natural to the early age at which they are employed?*
2. *Will you state the particulars of any serious mine accidents within the last two years, where the parties injured have been under your care?*
3. *If you have directed your attention to the comparative health and longevity of those who have commenced under-ground labour at a very early age (as under 12), and those who have not worked under ground under the age of 14, be so good as to state the conclusions at which you have arrived?*
4. *What are the general results of your experience as to the health of the surface and the under-ground labourers in the mines in your neighbourhood?*

Mr. T. P. Gurney, resident at Marazion, has favoured me with the following answer:

1. I have not particularly observed that accidents have occurred in consequence of carelessness natural to early age. I have, however, frequently perceived that the soft parts connecting the different joints have given way, and children have materially suffered in consequence.
2. I have not had many serious mine accidents within the last two years; the ones I have seen have arisen from the explosion of a rock, where the face and eyes have been injured, with almost the entire loss of one or both eyes; also the hand was seriously injured so as to be doubtful if amputation of a part ought not to be performed; it was not however done, and the cure has been most complete. I have seen three deaths, two from falls, where there has been fracture in one, concussion in the second, and injury to the bladder to the third.
3. I do not think that boys go under ground so early as 12 nor have I observed that they suffer in very early life; from 35 to 50 they break up from disease of the viscera, both lungs and liver.
4. They frequently change, when labour is scarce; after having worked under ground, they for a time work on the surface, and then again return to their former employ. Those who never go under ground are just on a par with agricultural labourers. In Wheal Vor I find the females suffer from amenorrhoea mid dysmenorrhoea.

I am indebted for the next to Mr. George Vawdrey, practising at Hayle:

1. I cannot say that I have - there being in most of the mines that come under my observation precautionary rules, the infringement of which is visited by punishment in the shape of a fine levied on the juvenile offender. I have, however, witnessed, in two or three instances, the lamentable effects of young men being too precipitate in their anxiety to examine the charge after having ignited the fuse, when from some cause or other the explosion has not taken place so readily as they anticipated; the consequences were very serious: in one case a total loss of sight, beside various other mutilations; whereas, by invariably allowing a certain time to elapse between igniting the fuse and going to inspect the hole, these accidents, which are by no means of very rare occurrence, might be avoided.
2. In Wheal Virgin Mine a youth fell 16 fathoms, causing fracture of both thighs and concussion of the brain; death took place in about 12 hours. In the same mine another individual received a blow on the loins by the fall of a large stone on the part, occasioning severe injury to the kidneys, which ended in death at the expiration of four days. Three or four

simple fractures of the leg have also occurred during the last two years. In North Wheal Alfred Mine a man fell nine fathoms; besides several wounds in different parts of his body, he suffered principally from a severe contusion on the loins, producing partial paralysis of the bladder; recovery took place after many weeks. In the same mine a stone fell 30 fathoms perpendicularly on the head of a man working in the engine-shaft, causing extensive fracture of the skull; death ensued in six hours. In Tin Croft Consols a lad fell 40 fathoms, and was of course killed instantaneously.

3 and 4. Having been but recently professionally engaged in the mines, my observation had not induced me to make any estimate of the comparative health and longevity of those employed at the surface and the under-ground labourers.

Mr. S. P. Arthur, who is extensively engaged in attendance on the labourers in the deepest mines in Cornwall, in the parish of Gwennap, has kindly furnished the succeeding statement:

1. The majority of accidents that happen to boys under ground arise from carelessness and weakness, natural to the early age at which they are employed.
2. I have attended many serious mine accidents within the last two years, but am unable to give any particular description of the different cases. The most frequent are injuries of the head from falling out of the ladders.
3. I have not paid much attention to the comparative health and longevity of those who have commenced work under ground at a very early age, and those at riper periods, but I have no doubt that the practice (which prevails to a great extent in this neighbourhood) of employing boys of a tender age to work under ground is very injurious to their future health and happiness.
4. I find that the surface labourers are a healthy, strong, and hardy race, and live the usual period allotted to man, whereas the under-ground labourers have altogether a sickly unhealthy appearance, and seldom reach the age of 50 or 60.

From the Eastern District, Messrs. Robinson and Vawdrey, of St. Austle, have answered the queries thus:

1. No, not any.
2. No serious accidents have occurred.
3. Most of the boys attended by us have commenced under-ground operations at 16.
4. Those who work on the surface are more healthy than those who work under ground; the latter are more liable to pleuritis, pneumonia, asthma, and phthisis.

Mr. Pace, principal surgeon to the Fowey Consols, has obligingly transmitted the following remarks:

In reply to Query No. 1: it seldom occurs that accidents happen to boys who work under ground, for this reason, that the miners have very strict injunctions from our agents and captains to take the greatest care of them, and they are not allowed to descend or ascend without being preceded by a miner, until they have been at work for a considerable period, and are considered capable to take care of themselves.

In reply to Query No. 2: I have given the particulars of several cases, and regret that an accidental destruction of some papers, amongst which were notes of many other cases, will prohibit my giving you the details of them.

In reply to Queries No. 3 and 4: my observations have led me to conclude that if a miner were to take care of his health and have timely medical assistance, and adhere to the advice given to him that his age would equal that of any other labourer; but a miner's mode of living is bad, and I believe many a good constitution is thrown away by bad management. For instance, miners at a very early age (14 or 16) contract a habit of smoking tobacco, and unfortunately it increases to such an excess, that I am inclined to believe that more constitutions are ruined by that and drinking, than by their labour. I have felt much interested in the welfare of the miners, and having had such a multitude of them under my charge for several years, I have taken many and frequent opportunities of counselling them on the management of their health; but in very many instances I am sorry to say that my advice has been mocked at, and my time wasted; this I attribute to their being generally uninstructed, nevertheless it has not, nor will it prevent me from doing what I deem incumbent on me. When once the habit of smoking is contracted, I have before observed that it increases rapidly. The moment a miner wakes in the morning, the first thing he does is to strike a light and smoke his pipe; then he makes his fire and boils the water for his breakfast, by that time his pipe is finished; and as soon as he has taken his breakfast he fills another pipe and smokes that on his way to the mine; as soon as he gets underground perhaps he smokes another, and so he continues to smoke all day; if he happen to wake during the night he will have a pipe, and at the end of the week it is not unusual for him to have smoked a quarter of a pound of tobacco or more; the consequence is, that it takes away his appetite, after a time destroys the digestive powers, tremors follow, and the miner becomes blanched and emaciated. Next, to his mode of living: a miner rarely eats anything but cold potato pasties, with perhaps a small quantity of

salted pork baked in them; and frequently the pasty he has taken to the mine with him to eat in the course of the day will be taken back with him at night untouched, because he has no appetite to eat it; and so, literally speaking, time after time, the system has no nourishment afforded it, and is still continued to be drained by a constant discharge of saliva, caused by the excessive use of tobacco. I have mentioned before, with regard to drinking, a miner after working hard will frequently, in his way home, go into the first beer-shop he comes to and drink a pint of beer or porter, because he will tell you he feels weak, and it will give him an appetite for his supper; after he has had one pint he will have a second and a third, and I have known when two or three of them have met together that they have drunk two or three gallons; this frequently happens on the day they receive their pay. Others again I have known to drink half a pint of brandy and eat half a pound of cheese at one time: all these inconsistent excesses must of course tend to weaken and disorganise the system. I have often cautioned the miners against a very dangerous custom, and advised them to discontinue it; and that is as soon as they arrive at the surface, after working perhaps nearly naked, they will plunge their feet immediately into the cold waters in the leets or drains, and frequently wash the breast with it whilst the perspiration is running down it in globules. Again, miners will climb too rapidly, there is no necessity for it, they are not obliged to be on the surface at a certain time or moment, or to descend within a given time, so long as they work the number of hours allotted to each corps, therefore the mischief that it produces is brought on voluntarily; they are equally as incautious under ground, for they will sit upon cold stones and stand in the cross-cuts after working hard, and whilst in a copious perspiration, frequently will drink a gallon of cold water in less than six hours. When they meet with foul air, and feel it to affect them, they are as negligent as ever, and delay applying for medical treatment until they can work no longer. The symptoms they mostly complain of after working in it, is a general lassitude, with pain and aching about the knees, calves of the legs, pain in the head, tickling cough, load on the chest, dim sight, fluttering about and palpitation of the heart, confined bowels, and a black sooty expectoration, and in some habits where the system has been previously impaired the absorbents have been considerably affected, and a complete and sudden oedematous attack produced.

I have had opportunities of observing, in a few cases, that agricultural labourers who have abandoned their employment and become miners are perfectly unfit for under-ground work, and very soon become affected, and have been obliged to return to their former employ; but miners who have through the whole course of their lives been accustomed, and from boyhood habituated, to work under ground, and have taken care of themselves and not indulged in the baneful excesses I have alluded to, I have no hesitation in saying that I believe the periods of their lives would equal those of any other labourers.

Lastly, I have to thank Mr. Edmund Pearse, who resides at Tavistock, and has had long-continued and large experience among the miners of Devonshire, for these observations concerning them:

I regret that, in consequence of not having kept a regular and classified account of cases that have come under my management, I cannot reply to your queries in as satisfactory a manner as I could wish. To your first inquiry I answer, No; but the case is different in factories where the children have in-door occupation, and are consequently by no means so healthful and robust as are the mining boys and girls; indeed there are no young people who look so full of health and spirits as do those who work in the mines; that is (as the miners term it) at grass, or in other words, on the surface.

To your second query I reply, that we have had several cases of fracture and concussion within these last two years, such as fractured thighs, crania, and *concussio cerebri*, but, so far as I can recollect, none that have been fatal; and these sort of accidents proportionably, much less frequent than formerly, that is, say thirty years ago; the diminution of accidents arising from the general improved method of working mines.

To your third query I reply, that I have not directed my attention to the comparative longevity of miners dependent on the ages at which they were first put to work, but of this I am quite certain, that from the better method of working the mines, namely, their driving adits of a larger calibre, and consequently ensuring a freer ventilation, &c., the longevity of miners is considerably increased, and pulmonic disease materially diminished. Thirty years ago, in this neighbourhood, no disease was more common among miners than pulmonary consumption, and that brought on by repeated attacks of pleuritis and pneumonia, the subjects of which diseases would never afford themselves sufficient time and rest perfectly to recover from one attack before they would be seized with another, from going again to their work in damp places and in bad air before they had sufficiently recovered.

A solution to your fourth query may be gathered from what I have already stated.

EVIDENCE COLLECTED BY CHARLES BARHAM, ESQ., M.D.

MINES OF CORNWALL.

Explanation of the letters prefixed to the depositions of persons examined.

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| A. Magistrates | F. Adult Miners |
| B. Clergy and Ministers of Religion | G. Miners' Wives |
| C. Medical Men | H. Mining Children and Young Persons |
| D. Private Persons | I. Patients who have been employed in mines |
| E. Mine Agents and Employers | |

Copper Mine (No. I), Trethellan

No. 1 (E.1) Mr. Sprague. Examined April 19, 1841:

Is one of the agents managing the mine. The greatest depth at which the mine is worked is 75 fathoms below the adit; the adit is 64 fathoms from the surface, so that the whole depth is 139 fathoms.

Has there been introduced into this mine any change in the distance of the staves of the ladders, which was formerly, I believe, almost always one foot? Yes, the staves in this mine are all 10 inches apart, and the ladders are inclined nearly 2 feet in a fathom; the lode underlays a good deal; the ladders are 5 fathoms in length; there is a platform at the foot of each, but no penthouse over the head of the ladder below.

Have you found that the labour of climbing is much lessened by this alteration in the distance of the staves? The miner would travel 200 fathoms as easily as he would 150 before; there is a great difference in the ease of climbing between the 10-inch and the foot stave, but it must be adopted on all the ladders alike; nothing is worse in climbing than to find at one time that you have not lifted your foot far enough, and at another to bang it down upon the bar from having lifted it too high. No accident that I can recollect has happened on our footway.

Do you know what is the usual length and inclination of the ladders in the mines in this neighbourhood? I have been employed in a great many of the mines in this district; the length of the ladders is mostly about 5 fathoms, and they are inclined from 15 to 18 inches in the fathom; there are very few of the old 10-fathom ladders.

Do you know whether there is any material difference between the larger and the smaller mines in the condition of the surface labourers? There is not much difference in this part of the country; the conveniences for shelter are commonly less in the smaller works.

Are you aware of any irregularity in the payment of wages in any of these works? In this neighbourhood the payments on the owners' account are quite regular; here all the surface labourers are paid separately at the month's end. We often have complaints of the men not paying the boys employed underground; we were desired the other day to check a man's pay who had come here from another mine where he had not paid the boy hired by him; when such complaints are made against a man who continues to work in our mine, we pay the boy ourselves, and deduct the sum from the man's pay.

What do you consider to be the hardest work performed by the young people at surface? "Jigging" is perhaps the most irksome; the position is constantly stooping forwards, and the exertion strains the back, which often aches; I used to feel this myself; I jigged for nearly two years together. The jiggers are rather small boys, because they can stoop better.

Another agent, who stood by, said that he had known in several instances in other mines when the jigging was continued for many days in succession by the same boys, they have brought up blood. In this mine they take it by "pairs" (relays).

Do you find it necessary to employ many more surface labourers at one time than at another? No. We keep the same hands constantly employed. At "sampling", they take the filling the barrows and the carrying them to the "doles" (heaps, into a certain number of which the ores are divided, for the convenience of purchasers), in regular succession.

Have you noticed the food the boys and girls bring with them for their dinner? They have chiefly potato pasties, with some of them a little meat, mostly pork in them; "hoggans" are not so plenty as they used to be. There is in most cases as much as they can eat.

Another agent stated that they commonly collected in groups for their dinner, but that he had observed some of the girls steal away at times to eat their meal behind a hedge, ashamed of the meanness of their fare. He had likewise noticed the occasional faintness of young women at their work, he believed arising from insufficient sustenance.

There is no accommodation for warming the dinners in our mine, nor for supplying any warm drink. The "hoggan", called also in different districts "hobban" and "fuggan", is a coarse kind of cake, prepared by incorporating pieces of potato, or sometimes raisins, with a sheet of dough, which is then rolled up and baked.

Does the nature of your ground require the use of a large quantity of gunpowder? Our

ground is very hard, and we are almost always "shooting". We use about half a ton of powder a month; the air may be tolerably clear for a time in the mornings before the first "shooting" but it is afterwards mostly very thick with powder-smoke, often so that you can hardly see your hand.

The ores are ground in this mine by a machine called a "crusher". which is worked by steam. The persons employed in supplying the stones to this mill, and in removing what has been broken, must inhale a large quantity of mineral dust. The agent who went with me to the "crushers" said that the inconvenience was much less in this mine, as it was only necessary to use the machine once a week, but when water-power was used, he knew mines in which it was constantly at work, and the dust was in them very hurtful.

No. 2 (H.1) John Henry Martin, 12 years and 8 months old. Examined at Trethellan, March 6, 1841:

How long have you been lame? I had gatherings when I was six months old (scrofulous affection of the right hip-joint).

My father died two years ago. I can "travel" and play with the other boys. I don't feel any more in that leg than in the other.

This is the first place I came to work, about a year and half ago. I then went underground in "Wheal Brewer" (a mine at that time connected with this). My work was "blowing air"; this was 60 fathoms below adit, 120 from surface. I could climb "tolerable well".

My work here is "washing up". My feet are wet all day; do not take cold; have lost no time from sickness.

I come here at 7 o'clock in the morning; take my dinner, which I bring with me, at twelve. Generally dine on potato-pasty. Lives half a mile off (in fact nearly two miles). Sometimes travels the distance in half an hour. Has hot tea for breakfast, and bread (barley or white) and treacle.

Mother has twelve children, eight boys and four girls. Three brothers older than himself work underground here, and one sister at Tresavean.

Mother keeps on a little farm, in which the younger brothers assist, and the elder ones too when out of "core" ("course" or turn of work at the mine).

Goes to Sunday-school at the Methodist Chapel at Stithians; has gone there for three or four years. Learns to read only.

I heard him read in the New Testament, which he did tolerably well.

Has no holidays except Christmas and Good Friday.

He changes when he gets home if his clothes are very wet.

Gets potatoes boiled or baked for supper. Goes to bed at seven or soon after.

He gets 12s a month wages, from which 2d is taken for the doctor (for surgical assistance only).

Earned 10s last month. The cold weather prevented his working some days. He "came up to the 'floors', and found the tables covered with snow, and the 'pickers' could not work." Went home again.

Does not feel tired when he leaves work. None of the boys complain of being tired.

I give my wages to my mother.

No. 3 (H.2) Samuel Tippet, 10 years and 7 months old. Examined at Trethellan, March 16, 1841:

Has worked here at the "floors" a fortnight now. He worked before at the mine for two "spurs", two months each time, at the "slimes". Gave up "because the slimes was knacked." His work now is "washing up".

He lives with his grandfather about half a mile off. He pays his wages to his grandfather.

Had seven shillings a month on his first "spurs", and now gets *ten*.

He sometimes feels tired when he leaves work; chiefly in the back and legs.

He brings potato "hobban" with him for dinner. For breakfast he gets milk and water and bread, barley and wheat mixed. For suppers baked potatoes, with pork sometimes. Goes to bed at eight; likes to stay up longer.

He goes to school in the New Church (Lanher); has gone to Sunday-school two years. Learns to read and spell.

Heard him read in the Testament; he read pretty well.

No. 4 (H.3) William Harris, 15 years old. Examined at Trethellan March 16, 1841:

Is quite well in health. Has been at work four or five years. Was at Tresavean first. Has been here for ten months, "griddling" and wheeling stuff. He feels tired at night in the "chines" (loins); this passes off with rest.

The only accident he has suffered from was a gathering of the finger, from its being poisoned with "mundic water"; this kept him a week from work; he feels nothing from it now.

His father died from a hurt 12 years ago. His mother was left with five children. She married again. His father-in-law takes good care of him. He is "hind" with Mr. A. Jenkins (a gentleman living in the country, some miles off).

He goes sometimes to Sunday-school; has never been at any other.
 His wages are 15s a month, which he pays to his mother.
 All the family are employed in mining; they are all healthy.
 He works sometimes a little at harrowing and different things about the farm, after he comes home from the mine; is not forced to do so.

No. 5 (H.4) Thomas Knuckey, 14 years and 2 months old. Examined at Trethellan, March 16, 1841:

Has a slight hoarseness; has had it "to and again just ever since last Christmas."
 His work is "jigging;" he sometimes gets wet in the feet at this work; does not feel his feet cold; he does not change his shoes and stockings when he gets home; does not always get them dried at night for him to put on next morning.
 He lives with his grandmother; his mother lives at some distance.
 He gets potato "hobban" for dinner; barley bread and butter for breakfast; and boiled potatoes, with fish at times, for supper.
 He has worked in this mine three years and at Tresavean two years before.
 He went to day-school for two years before going to Tresavean, and since that to Sunday-school, at a Methodist Chapel.

On trial he wrote fairly, ciphered a little, and read well.

No. 6 (H.5) Grace Bawden, 17 years and 9 months old. Examined at Trethellan, March 16, 1841:

She has been in good health at the mine, where she has worked for a year and seven months. She was previously employed at straw-bonnet making for two years; she gave up this in consequence of her health failing. Finds that her employment at the mine agrees with her very well. Her work is "spalling" and "cobbing;" she would as soon do one as the other.

The difference between "spalling" and "cobbing" is this; the former is the breaking of large stones with a long-handled hammer, usually performed in a standing or rather stooping posture, in the open air; the latter consists in reducing the stones to a smaller size, which is effected by a short-handled hammer, with the aid of a sort of anvil; the girls sit at this work, and are often surrounded by a large heap of the broken stones, by which the lower extremities are apt to be chilled. This is commonly done under shelter.

She lives two miles off, in lodgings; for these she pays 6d a week, which includes cooking her victuals; she is not very comfortable in them. Brings a pasty with her for dinner. She earns 9d a day. Went to Sunday-school at Lanher.

She read pretty well. I was informed that she was expected to be married ere long.

No. 7 (H.6) Martha Williams, 11 years and 5 months. Examined at Trethellan, March 16, 1841:

Is very well and hearty; is employed picking, which she finds easy work. She has been a year at work here; this was the first place she went to work; she lived at home before with her mother at Redruth; does so still; her mother takes in washing; her father has been dead this brave while, he died when she was about two years old. Went to day-school before she came to the mine; learned to read, not to write; goes now to the Baptist Sunday-school.

I put her to read in the Testament; she read very badly.

She walks out from Redruth in the morning, and back in the evening (a distance of more than five miles a day). She gets milk and bread, as much as she can eat, for breakfast; pasty with meat in it for dinner; and tea or potatoes for supper. She goes to bed about seven o'clock.

Copper Mine (No. II) TRESAVEAN

No. 8 (E.2) Mr. Joseph Jennings. Examined March 23, 1841:

Is one of the principal agents superintending the working of the mine; his age is 42; he went to work at surface at 10 or 11 years of age; continued to do so for two years at Wheal Jewell.

Did you feel any ill effects from your employment at this time? Suffered only from wet. and cold, being always of a rather delicate constitution.

At what age did you go to underground work? About 13; this was in the same mine, about 60 fathoms from surface. I went down with my father, and was employed in wheeling stuff and otherwise assisting him.

Were you aware of any ill consequences resulting from your change of employment? I did not to my knowledge suffer in the early part of my being underground at all; but when I was about sixteen I went to work at Weal [sic] Squire, and I then suffered from the labour of filling the "kibble"; besides that I worked very commonly "double core". After being in that mine for a year and half I returned to old Wheal Jewell, and worked as a "tributer" for about three years, at 12 or 15 fathoms from the surface; I did not suffer then.

Do you know of any change having taken place of late years in the ages at which children generally begin to work at the mines? If any difference exists, the children are younger now

than formerly; this is to be attributed in part to the difficulty of obtaining relief under the New Poor Law. In the course of a month we send back many, thinking them too small for the work, being from 7 to 8 or 9; they are brought by the mothers, who complain that they cannot get bread for them.

Have the goodness to state how you were employed after the period last referred to? I worked at tribute and tutwork in different places till I was from 27 to 28 years of age, when I went to Cathedral as agent; I continued there for seven years, and then came here in the same capacity in 1835. During all this period I enjoyed tolerable health; for the last two years I have suffered in the throat and chest; this is, I suppose, the effect of hard work.

I feel much from climbing the ladders, especially since I had an attack of indigestion, attended with a rash upon the skin, which came on after I took a glass of beer while heated and fatigued with climbing.

This was no doubt an attack of urticaria. Mr. J. was affected when I saw him on this occasion with the chronic pharyngitis, so commonly associated with disorders of the gastrohepatic system. He is a well-grown and strong man, though carrying some of the usual signs of dyspepsia about him. A few weeks afterwards he scarcely complained of these ailments.

Will you inform me what education you received before you began to work, and what afterwards? My schooling was very little; I learned to read a little at Sunday-school before going to work at surface, and afterwards to write a little at an evening-school. The rest of what I know was picked up as I could.

What are the hours of work in this mine for the surface labourers at the different seasons of the year? From seven in the morning to half-past five in the evening are the hours of work all the year round, but in the winter they begin and end with the daylight. There is no difference in this with respect to ages.

Is any method adopted by which the duration of the labour is sometimes shortened? Yes; they often have a task set them, after finishing which they are free to go; they generally do so. It is very seldom that any but the elder girls work extra time after their tasks are finished, and they not often.

Is work ever done on the surface after the regular hours of closing? At "sampling", which occurs twice in the month, and especially in the winter, when the days are short, "bucking," which is done by girls seldom under 16, unless very strong, is carried on by candle-light; this is perhaps done four nights in the month on an average, and is generally continued till about half-past eight. This working is voluntary, but a girl might be considered lazy and lose her place if she declined.

Is any difference made according to age in the time of underground labour? No: all alike work eight hours, with exception of those employed in the sump, who work six hours only; there are only four in the whole mine.

Do the boys occasionally work longer than you have just stated? Those employed at tutwork very seldom exceed their eight hours: the tributers, who are considerably fewer, do so sometimes when their "pitch" is very promising. Boys of the former class are commonly recommended to the men by the agents. The tributer chooses his own boys, and is not interfered with unless it should be noticed that he is employing some very small or weakly boy, when he would probably be advised to get a stronger one in his place.

A change has, I believe, been made in this mine with respect to the distance of the staves in the ladders: what is its extent and effect? A large part of our footways is now furnished with ladders, the staves or which are ten inches apart; this is found to be a great relief in climbing; the miners will go many score fathoms out of their way, in order to come up by these ladders. We intend all to be of this kind when new ones are supplied. They are about 4½ fathoms in length, and are inclined 1 ft. 9 in. in the fathom; this is found to be the best inclination for dividing the weight of the body between the hands and feet. The distance of the staves is usually 1 ft., and in old times it was often 14 in.

Do you consider that it would be practicable, as far as the work of the mine is concerned, to allow the boys and girls under 14 years old to leave work at 4 o'clock, with a view to their attending an evening school? The sacrifice arising from such an arrangement would, I believe, be very trifling indeed.

No. 9 (H.7) Henry Francis, 16 years old. Examined at Tresavean, March 23, 1841:

Has worked underground about three years. Has been underground from seven o'clock this morning until now (between two and three). Has been employed in turning and beating the borer, in the 75-fathom level. Goes to hoeing potatoes, and other husbandry, when his father wants him, after he leaves work at the mine.

His pulse is 70; he has a rather delicate appearance, and is small-sized for his age.

No. 10 (H.8) Thomas Dunstan, 16¼ years old. Examined at Tresavean, March 23, 1841:

Has been underground since six o'clock this morning. In the 136-fathom level. Has been employed in "rolling" (wheeling stuff), which is his usual work. He does not feel much tired. Comes up the ladders "brave" fast. Sometimes feels out of breath. He has worked underground, altogether about six months. He takes some food with him to eat underground. Could not get any water, though very thirsty. Has been three years employed in this mine. Sometimes he works with his father when he gets home.

Pulse 75. A rather small but hardy-looking boy.

No. 11 (H.9) James Orby, about 18 years old. Examined at Tresavean, March 23, 1841:

Has been underground since six this morning, in the 75-fathom level. Has been *holing* and *beating* the borer. One about as much as the other. Has gone underground these three years. He stays overtime (16 hours) about once a month. Does not feel much tired now. Does not think much of the *climbing*. His work is commonly "rolling"; this he finds the hardest work. He always takes his meat underground. Sometimes he cannot get water, and then he cannot eat his "crowst".

Pulse 70. A strong and well-grown lad.

No. 12 (H.10) Henry Vincent, 18 years old. Examined at Tresavean, March 23, 1841:

Has been underground since six A.M. in the 200-fathom level (about 1500 ft. from the surface). Has been employed "tramping" (pushing the tram-waggon along a railway) in various places; the road is clean and dry. He reckons on its taking him half an hour to go down and an hour to get up again. Does not feel much fatigued on coming to the surface. He sweats freely underground. Takes his dinner underground; eats it when he chooses, generally a bit now and then, no regular time is allowed. Water is sent down in kegs. He goes to evening-school (only), when he can, at Stythians Church Town; the payment 3d a week.

He has been working underground about 4 years, and at surface some years before that.

Pulse 72. A strong, well-grown lad.

No. 13 (H. 11) James Stevens, 15½ years old. Examined at Tresavean, March 23, 1841:

Has been down since six A.M. in the 146-fathom level. Has been "rolling", which is his usual work. He has been underground for three years. For the first two years he was in Wheal Harmony at the 50-fathom level; his work there was "rolling." He works only four or five days in the week; never at night. Lives at Redruth, finds the walk tiresome. He goes to bed about seven and rises at four. Sometimes does not get breakfast before he leaves home in the morning, but takes a bit of bread and butter with him. Does not get any dinner till he comes home again, and then not always as much as he can eat. They are nine in family, of whom four are not yet able to work. He goes to Sunday-school sometimes. Can read very little.

He is by no means robust in appearance. Pulse 70.

No. 14 (H.12) William Richards, 18 years old. Examined at Tresavean, March 23, 1841:

Has been underground since six A.M. in the 100-fathom level. Has been employed "hauling tackle"; this is harder work than "boring and shooting" with the men. Has worked underground a year and a half; was at "Consols " before he came here. He worked two "double cores" last week; was very much tired; does not feel tired with his single core. He takes a "crowst" down with him, and has his dinner when he gets home to Carharrack. He worked "to grass" (ie. at surface) at nine years and a half old, at Consols; did not feel that work hard: did not often work overtime. Can scarcely read at all. Can get water underground, when he likes to drink.

A strong and well-grown lad. Pulse 76.

No. 15 (H.13) John Tresidder, 18 years old. Examined at Tresavean, March 23, 1841:

Has been underground since six A.M. in the 146-fathom level; has been "rolling". Has a cold at present. Has been a twelvemonth working underground. Before that time he was employed at a stream-work in Wendron. The hours there were from 7 or 8 till 5; the wages 16s. a month. He has enjoyed good health since he has been here. Works double core about once a week on an average. Takes a "crowst" with him underground, and dines after he gets home. Lives four miles off. Is tired with his walk home. Has been at Sunday-school some time, but cannot read.

A strongly constituted lad. Pulse 75.

These boys were examined as soon as possible after their coming to the surface, on the conclusion of their day's work. The four former were exactly in the state in which they came from underground, as to clothing, wet, and dirt. The three latter had changed their clothes and washed; not very effectually. All of them, excepting the last, had a weak and rather irregular pulse.

No. 16 (F.1) James Stevens, 40 years old. Examined at Tresavean, March 23, 1841:

Worked at surface from about 13, and underground from about 15; at Wheal Harmony most of his time.

When men work overtime, do the boys continue with them as long as they remain underground? The boys do not remain unless they are asked. Has hardly ever worked double cores of late himself; he finds one core quite enough for him. He has been "hurt" four times underground; when a boy he was injured very seriously by the falling

in of ground in Trescorbie; he still feels the effects of the injury in the head then received. Is now tired. Has been working at the 230-fathom level, "stopping".

This man looks much more than 40 years of age, worn, and exhausted. His pulse 60, firm.

No. 17 (F.2) Abraham Harris, 54 years old. Examined at Tresavean, March 23, 1841:

Has been working in the 146-fathom level, "boring" (this is probably the worst air in the mine); has been there perhaps a twelvemonth. He went underground about 11 years of age with his father in North Downs; he did not work "at grass" at all; he was then employed "rolling"; always felt the work quite hard enough. He has four boys working underground; their ages are 19, 15, 14, and 11; they complain of being tired with their work. He had one son killed by his falling from one level into another about three weeks ago.

Formerly, 25 or 30 years ago, the usual time of labour was six hours instead of eight as now he himself only works by day. They always provide something for their children to take down with them, a piece of bread or pasty; they have their regular meal after they come home.

Looks feeble.

No. 18 (H.14) Mary Ann Roscorle, 12½ years old. Examined at Tresavean, March 23, 1841:

Is employed at "picking". About 30 or 40 children work together on the same "floor" with herself. She goes from home at six in the morning to her work, and leaves work at half-past five. She takes a part of what she brings with her for dinner at "crowst" at 10 in the morning, when a quarter of an hour is allowed.

She never works after the regular hour of leaving; sometimes she has a task set her, and leaves work some hours before time.

Half an hour is allowed for dinner; finds she has time enough to eat her dinner with comfort. Does not suffer from cold in the shed at dinner-time.

She learned to read in the workhouse. Her mother was unable to provide for her; she therefore lives with a man called Reed, who boards and lodges her, and to whom she pays what she gets. He treats her kindly.

No. 19 (H.15) Jane Uren. Examined at Tresavean, March 23, 1841:

How old are you? Sixteen.

How do you know your age? I have always known it.

How many children work in the same place with yourself? I can't tell exactly.

She has been employed "cobbing"; has been two or three months at this work. Has been working at the mines "in the six years". Lives a mile and a half off. Very seldom works overtime.

Do you ever leave work before the regular hour of closing? I generally "cob" a barrow and a half (the barrow is about 1½ cwt.), and if this is done often go at five o'clock.

What do you drink with your dinner? Water.

She cannot read; has not gone to school lately. Her father has ten children, five of them employed at the mines; the older ones can read the Bible.

No. 20 (H.16) Mary Johns, 14¼ years old. Examined at Tresavean, March 23, 1841:

She is employed "spalling" and "carring" [sic]; the latter is the hardest work. She has worked here for about a year. Was in service before. She found it hard work at first, but her health has been much better than when in service. She lives at Redruth, two miles and a half distant; feels the walk heavy; she suffers from pain in the back and side, the latter increasing; particularly in carrying. She had pain in the side before she came to the mine, chiefly felt it when sitting; it comes on now about 11 or 12; passes off with further work. She works out in all weathers, and gets wet at times, but does not often take cold.

Was at a day-school in Redruth, and still goes to Sunday-school.

I heard her read, which she did tolerably.

No. 21 (H.17) Elizabeth Karkeek, 18 years old. Examined at Tresavean, March 23, 1841:

Lives at Redruth. Her work is "bucking". She has been five months here, and two and a half years at other mines. She does not feel much fatigue, except a pain in the left arm at the change of the weather, which she imputes to a sudden strain in lifting too heavy a weight. Does not know of any accidents having happened in the mines from carrying or other work at surface. She is now obliged to "buck" eight barrows for a shilling; some months ago the same price was paid for six barrows; when she has earned that sum she usually goes home, often about four o'clock. She went to work first at 14½; before that was at day-school, where she learned sewing. She still goes to Sunday school.

Found that she read tolerably.

"Bucking" is the term applied to the last reduction of the size of the mineral by hand. It is a bruising process, performed on anvils, a series of which are placed along a sort of table, where the girls stand with a rather short hammer, having a piece of iron about 3 inches square, and 2 or 3 pounds in weight, at its striking end. It is used with a half-striking, half-rubbing move-

ment by one hand, the other being engaged in sweeping the stones in upon the anvil. This work is considered to be about the hardest on which females are employed.

The above girls had all of them a healthy appearance. They had just finished their day's work when examined.

No. 22 (H.18) Richard Uren, 11½ years old. Examined at Tresavean, March 23, 1841:

His mother told him his age. Has been two years at work. His work is "washing up". Lives near the mine. Does not complain of anything. Has no father; he died "of a galloping consumption" three years ago.

I heard him read, which he did tolerably.

No. 23 (H.19) Joseph Odgers, 14½ years old. Examined at Tresavean, March 23, 1841:

His work is "jigging". Has been two years at this, and altogether three years at work. He finds his work causes him pain in the "chines", and hears most of the boys complain of this after working some hours. He generally gets wet in the feet, but does not take cold. Lives two miles off. Twice or three times a week he gets away about two o'clock, having finished his task. He will soon go to "griddling". He was four years at John Martin's school at Stythians, and since has been at Sunday-school.

He reads tolerably.

No. 24. (F.3) Elisha Williams, 27 years old. Examined at Tresavean, March 23, 1841:

He went underground at about ten years of age. Was quite well a twelvemonth ago. Felt no ill effects from his labour before that time. He then "caught a hurt" in beating the borer; since which he has not been able to do any hard work.

No. 25. (F.4) John Crougy, 44 years old. Examined at Tresavean, March 23, 1841:

Is employed as "captain over the trammers". Has been underground since he was about 15 years old. Has been 20 years in Tresavean. Has not been healthy these ten years. He received a blow from a waggon (tram) about a month ago in the side; since which he has found an increased pain in the part where he had the inflammation ten years ago (right hypochondrium). He did not suffer before this attack from the ordinary work. Since that he has only been employed at light work.

No. 26 (G.1) Mary Moyle, 51 years old. Examined at Truro, March 10, 1841:

She lives at Gwennap Church Town. Is sextoness. Her husband was killed by falling from the roof of the church. She has 10 children, eight boys and two girls. The *eldest boy* is married: the *second* she now brings to me for advice.

He has symptoms threatening phthisis, after fever. He is not a very robust man; temperament melancholic; complexion rather sallow. Nothing, is at present discoverable by auscultation or percussion.

He is 25. He went to work at surface at the age of 13, at the United Mines. He went underground about 16; worked with "tributers" at the back of the adit. He was employed in throwing back the stuff, holding and turning the borer, &c. He did not feel the work.

She has four other boys at Tresavean, all underground; the youngest went underground about 12. They were at school. Two of them can read, and also write a little; the others did not make any progress. Three of them suffer from shortness of breath whenever they take cold.

No.27 (I.1) Richard Burrows, 26 years old. Examined at Truro, March 10, 1841:

His face is covered with an eruption (eczema impetiginodes), which he attributes to having "poisoned" a small wound in his ear by the introduction of "mundic" (sulphuret of iron) whilst working in Wheal Anna Francis. He is a strongly constituted man. He has worked there about ten months. He went underground first at Consols between 10 and 12 years old. He went to about 80 fathoms from the surface, not deeper at first: he worked with his father. A boy of that age gets 1s a stem, or by the day, or 15s a month usually. He enjoyed good health throughout. He has a brother who works underground in the same mine with himself, who is between 10 and 11. He went to Sunday-school himself, and can read a little.

No. 28 (I.2) Eliza Allen, 20 years old. Examined at Truro, March 10, 60 1841:

Has been at Consols two years. Is employed "sitting down cobbing". She worked with her father before. She suffered from shortness of breath, and "felt her legs go weak, so that she could hardly stand on them" from the first. Her wages are 18s a month, but

she cannot earn half that sum. She finds it difficult to keep her feet dry, and always catches cold when she does not. She never went to school; can scarcely read at all; can sew for her mother a little. She is a rather delicately-constituted girl, and is now labouring under disorder of system, for which she seeks my advice.

No. 29 (I.3) Benjamin Sarah, 23 years old. Examined at Truro, March 10, 1841:

Works at Wheal Unity Wood. He began to work underground at this same mine under 10 years of age; generally worked at no great depth at that time. He has worked at other mines since. He did not suffer in health for several years.

He now labours under pulmonary catarrh, which, he says, is constantly recurrent on fresh exposure to wet and cold.

He had learnt to read before he went underground, and to write a little at the evening school at Chacewater.

No. 30 (I.4) Charles Barnet, 36 years old. Examined at Truro, March 10, 1841:

Is employed at West Wheal Jewell. Has worked there about four years. He overreached himself in his work, after which he brought up blood, which he has done from time to time since. Has not been capable of working underground since, and has an easy place, being employed in looking after the drying of the miners' clothes. He first went underground at about 12 years of age, and worked a year and half "at grass" before. He did not feel any ill effects from his work when young. He learnt to read and write a little before going to the mine.

His complexion is sanguine, pulse hemorrhagic, lungs seriously diseased.

No. 31 (I.5) Charles Oates, 41 years old. Examined at Truro, March 10, 1841:

Is employed at West Wheal Jewell in the "sump". Suffers from ophthalmia, which he attributes to his exposure to cold in the sump. The mine is in granite, which is generally wet in the sump. There is likewise a strong draught of wind there. He has gone underground from 12 years of age; first at Wood Mine. He worked at times two days (12 or 14 hours) in one. Did not suffer from this. Was at school before, and has gone to evening school since he went to work. The boys always work as long as the men. They do so if the work is continued beyond the usual eight hours. The boys take their pasties with them. Six hours of "barrow" work is, however, allowed as eight hours lighter work. No difference as to night or day is made in consideration of the age of the boy.

No. 32 (I.6) Anna Wasley, 20 years old. Examined at Truro, March 10, 1841:

Works at "Ale and Cakes" Mine. She went to work at 13, suffers from shortness of breath on any exertion; has done so for a twelvemonth past. She works ten hours a day; from seven to half-past five, with half an hour for dinner; has done so from the first. Her mother has seven children, five boys and two girls; they have gone to work at seven or eight years old.

No. 33 (I.7) Sally Fall, 19 years old. Examined at Truro, March 17, 1841:

She suffers from pain in the left side, palpitation, and shortness of breath. Has worked among the Gwennap mines; she has of late years been chiefly employed "bucking"; she considers she overstrained herself last Whitsuntide in lifting a heavy weight. She went to work at 11; did not feel it hard till she was laid up with inflammation in the side when about 13 years of age. Did not go to school, and can hardly read. Her mother has six children: one boy is 17, he works at Tresavean, underground; he went underground about nine years old; his father died of cancer; his death has obliged them to go to work early. He reads tolerably in the Bible; enjoys good health; his mother is afraid his slight living may injure him, as he grows fast. A younger boy, who is about 10, has worked at the stamping mills for about a twelvemonth, has not suffered. The other children are younger.

Is stout and florid; but constitutionally disordered.

No. 34 (I.8) Paul Trewartha, 43 years old. Examined at Truro, March 17, 1841:

He enjoyed good health until just before Christmas. when a short tickling cough came on; thinks he took cold. Is exposed to wet and cold in his employment, which is watching the dressing of the ores; works in the United Mines: has been there for the last six months; before that in Consols. He went underground, about the adit level, at nine years of age; was employed "blowing air."

No. 35 (I.9) James Harper, 38 years old. Examined at Truro, March 24, 1841:

Works in Wood Mine; suffers from shortness of breath on exertion; has cough, but not very severe; he has worked till within three weeks. He went, underground about 16. Has

been always employed in the Gwennap mines. Was at surface-work very early, when not more than four or five years old. He learnt to read and write. Has hardly worked "double cores" once a quarter; regards it as an injurious thing. He thinks there is a great lessening of drinking within the last six months, chiefly owing to the teetotalers. He has four girls; if he had fifty he would never allow one to go to a mine; they are exposed to be corrupted by bad conversation. The ladders are usually about five fathoms in length. When out of breath and others were pressing from below, he climbed one ladder and then let his comrades pass him on the platform. The worst air is found in driving the levels; in Wood Mine they are often six or seven feet wide, and as much in height. The tributers are most liable to breathing in dust from the ore in their work. He does not hear the boys complain.

No. 36 (D.1) Mr. George Harris. Examined at Redruth March 20, 1841:

Is collector of rates; has filled that office or that of overseer, or both, since 1830, in the parish of Redruth. There are in this parish about 10,000 inhabitants; about 2000 families rate-payers; by the last census there were about 200 able-bodied miners in the parish above the age of 20. About one quarter or rather less of these live in single rooms; generally there are two or three such rooms in a house; in one instance there are as many as eight tenants, who are either actually miners or were such formerly, living in one house; the rest live in separate houses, occupying generally two rooms, at the rent of £3 or £4 yearly. The rates on these have been about 3s 10d in the year; at our last collection of rates only £1 19s 6d was deficient out of £550. There may, perhaps, be about forty of the miners, heads of families, given to irregular habits. He has noticed a marked difference on the side of improvement within a few months after they have joined the total abstinence society. He has not seen any great deficiency of food and clothing, except where the head of the family is dissolute; he has seen but little disease among the families of the miners, and does not consider that any disease he has witnessed could be fairly attributed to the insufficient food and clothing, of those who are actually employed in mines. When the father is steady the sons frequently continue to live with him up to the age of 20, bringing in to him a part of their wages, equivalent to their board and lodging, after they receive man's pay. If the father is a drinking man the sons go off earlier. The girls seldom go to the mines whilst the father is alive, provided he is an industrious steady man; they generally live at home unless the family is very large. He has noticed a decided improvement in the living of the mining class within these thirty years; much less barley is now used, and more meat. He considers that the young women employed in mines make generally very careful, cleanly wives when they get steady husbands. His opinion is, that with few exceptions, these young women are well conducted; he believes that the instances of young women being pregnant when married are very much less numerous than formerly, and he knows that the number of illegitimate children is greatly lessened since the new Act has come into operation, not one in ten certainly now coming under the notice of the parish officers compared with what there were before. He himself worked underground for six or eight months when 12 or 13 years of age; he had worked "at grass", driving a whim, at seven. He gave up going underground in consequence of accidents befalling his comrades on two occasions when he was standing by. He considers that there is less weight carried by the boys from underground now than formerly. He believes that nine out of ten at least of the boys in Redruth connected with the mines can read, and that almost all can write.

No. 37 (F.5) John Young, 50 years old. Examined at Redruth, Mardi 19, 1841:

Works now at Tincroft in Illogan; his employment is "landing" or putting away the stuff when first brought to the surface; has always been at surface except four years. He went to a mine first at 21, having been a husbandman previously; he went underground first, and worked at Wheal Vor for four years, but finding his breath beginning to fail he then took to surface-work. Has noticed the boys and girls at the mines; has seen very clearly the difference between the boys "at grass" and underground; the latter are much paler. Has seen that young men going underground first at 18 years of age have stood better than those who have begun at an early age. There is not much difference in the rate of pay in different mines.

No. 38 (E. 3) Mr. Thomas Stevens, 45 years old. Examined at Redruth, March 19, 1841:

Is employed at Tincroft as a surface captain; has been there for 15 months; has worked underground in East Crinnis and Lanescot (copper-mines in the Eastern Cornwall District), four years in Beer Ferris Lead Mines (Devonshire), and two years in Charlestown Consols Tin Mines (East Cornwall), before he came here. He considers the average age of going underground to be from 13 to 15; the effects on the health he has observed to have varied in different mines in which he has been, more according to the air being "poor or not than from the kind of ore or mineral". He considers that young men going to work underground at 18 or 20 would not feel so much from poor air as those who went earlier. He has not heard complaints of children not being taken good care of by their parents. He went underground himself at about 13, and has been almost always underground since; he has been on tribute, and considers the tributer is not so much exposed to bad air as the tutworkman. He always observes some improvement in order among the children where there is a Sunday-school established near them.

No. 39. (F.6) William Besanko, 47 years old. Examined at Redruth, March 19, 1841:

Works at the Carnbrea (copper and tin) Mines: has been underground all his time since he was 18; before this he worked "to grass" from about 8 years of age; he did not suffer; he sees no great change in the accommodation for surface labourers since that time; has had good health himself. He thinks that those who have come under his notice who have not worked underground till 17 or 18 have been stronger men, and have lived to a more advanced age, than those who have gone underground much younger. He thinks a great many boys and girls when at grass have work too hard for the food they get. He considers the majority very disorderly in this neighbourhood, more so than in any other part he has known; but thinks there is some more interest felt by parents in the education of their children than there was thirty years ago.

No. 40. (E.4) Mr. Richard Carpenter, 30 years old. Examined at Redruth, March 19, 1841:

Is employed at the Carnbrea Mines in overlooking a party dressing the ores; he has been so engaged for five years, during which he has never been kept from his work by illness, except one day. He has 30 under his charge, of whom only two are girls; on the whole those under his eye have enjoyed good health, but he considers that a great many suffer from want of sufficient nourishment. There is no punishment except "spaling", which is deducting a part of the day in case of negligence; by way of reward they have a job given them to do which may be finished before the regular hour of leaving work.

No. 41. (A.1) Stephen Davey, Esq. Examined at Redruth, March 20, 1841:

Is a county magistrate, but has only lately qualified; is a considerable employer in mines is intimately acquainted with the state of the population of Redruth. The conduct and habits of the younger portion of the lower classes is very far from orderly at present, which he attributes chiefly to the want of an efficient police; this is likely to be remedied in some measure ere long. He has not known of complaints of ill usage being preferred by the young in connexion with their employment at the mines. He considers the degree of disorderly conduct to vary with the rate of pay, increasing with its amount. When the latter is high very early marriages are also very generally contracted, and a miner of 21 or 22 will have a family of three or four children, a burthen from the pressure of which he can seldom rise; has often been astonished that men under circumstances such as these, earning 12s a week, can make that sum support six or more individuals. He has noticed a decided improvement in the comforts of the miners within the last 30 years, particularly with respect to their dwellings. Formerly families occupied often only one room each; now they generally have separate houses. The savings bank established here about 20 years has afforded a facility of which the miners have increasingly availed themselves. He considers that part of the difference in habits of providence observed in favour of the St. Agnes and Illogan miners over those of Redruth has arisen from the latter not having that occupation for their time when not underground which is furnished by the gardens and potato-plots of the former; the town miners lounging about, not knowing what to do with themselves, and consequently falling into bad habits. My brother and myself have been in the practice of granting leases on three lives to the miners, especially in the St. Agnes district, of one, two, or three acres of coarse land, on which they are bound to build a house of a certain description. A small yearly rent (usually about 5s. an acre) is paid, and a sum of £30 and upwards on the setting up a new life. Other landlords have followed extensively a similar system, and a great number of miners are now settled on their own ground, which has tended to make them less inclined to a wandering life. He believes the practice of paying the wages of a considerable number (pairs) by cheques, notes, or gold given to one of them, and requiring to be changed before a division can be made, which must generally be done at the public-house, is injurious to the miners, the younger ones especially; and he thinks a different system might in this particular be adopted. Indeed cheques are much less used than they were; in the Consolidated Mines they are quite given up.

No. 42. (A.2) J. P. Magor, Esq. Examined at Redruth March 20, 1841:

Is a county magistrate; has rather recently qualified; he considers the young people employed on the surface in the mines remarkably healthy and cheerful. He believes the work to be rather too little than too much; does not think the number of hours during which they are employed could be reduced; he thinks that under present circumstances the earnings of the children are barely sufficient for their maintenance, and that the shortening of their day, which must lessen the wages, would leave them too scantily sustained. Believes that the establishment of good schools (a good national school for example) would be of very great advantage; he thinks that the children might attend it before they began to work at the mines, and sometimes in the evening afterwards. He can generally distinguish very readily between the children employed on the surface and those who work underground, the latter looking comparatively sickly; "our women and children are very fine, the men very inferior in physical development".

No. 43 (I. 10) Henry Trevethan, 50 years old. Examined at Truro, March 24, 1841:

Was blown up 26 years ago, and received several severe injuries, and lost an eye; he went to work again in three months; is now suffering from the effects of "poor air." No allowance is made from the mine unless there is a "green wound"; formerly 20s a month was allowed in Consols when damage was received from "poor air". He was injured on another occasion in Wheal Unity, by the ladder falling away with him. He went underground himself at 10 years old, and puts his own children to the same work very early; this is from poverty; one of them is now at work underground who is only 9 years old. He cannot afford to put them to school.

No. 44 (I. 11) James Thomas, 25 years old. Examined at Truro, March 24, 1841:

Is employed at Cook's Kitchen as an engine-man; suffers from sore throat, gumboils, and other symptoms of cachexia. He went underground at 15, but found he could not bear the work; then went to the engine. He went at 9 to surface-work, which he found he could stand very well. Learnt to read and write a little.

A delicately constituted and cachectic man.

No. 45 (I. 12) Eliza Evans, 17 years old. Examined at Truro, March 24, 1841:

Has gone to the mines from time to time, but found even "picking" too hard for her; the stooping hurts her head; suffers from headache. Her mother has six children; one girl older than herself, who is employed at Budnick "racking"; one boy of 15 works underground.

Delicate.

No. 46 (I. 13) Fanny Francis, 17¼ years old. Examined at Truro, March 24, 1841:

Works at the United Mines; suffers from dyspepsia, and has an eruption on the skin; she has worked at the mines about six years; always enjoyed good health till she fell in "carrying", about three months since, when she had fits. She went to day-school before she worked at the mine, and has since attended Sunday-school; she now acts as teacher once in three weeks at the Bryanite chapel. Her mother, Martha Francis, is 50 years old; is a widow; has five children, all miners. Put her eldest son underground at 12, and the second at 15; they did not complain of the work. All of them went to school, but "poor people cannot do all they would."

No. 47 (I. 14) Jane Sandow, 17½ years old. Examined at Truro, March 24, 1841:

Suffers from gastrodynia. She works at Wheel [sic] Gorland. Has three miles to walk to the mine. She found she could not "buckie". Is generally employed "cobbing". Her mother has ten children; all girls but one. The elder ones are employed at the mines. They generally go about ten years old. All go to school, chiefly to Sunday-school. They learn to sew and knit a little at a dame-school.

Tin and Copper Mine (No. I), Trevascus

No. 48 (E. 5) Mr. Thomas Moyle, 37 years old. Examined at Camborne, March 25, 1841:

Is underground agent at Trevascus. The produce is tin and copper. There are about 60 employed underground, of whom five are boys, and nine men, and 45 boys and girls at surface-work. The mine returns about £300 a month. He has been at that mine ever since she has been worked; this is about five years. He went to work at Stamps at the age of about 7½ and went underground at about 14. He has always been in this neigh-hood [sic], except during two years, when he was in the lead-mines in Perran. The depth of Trevascus is 110 fathoms from surface; she is the wettest mine he has ever known; is well ventilated; is in killas. Before she was now worked the mine had been left for 50 years. The former workings had not gone below the 40-fathom level.

Has any change taken place within your recollection in the ages at which children go to work or in the nature of their employment at the mines? I think they did not go to work so early formerly, and that a younger set are employed at the same work. They also seem to me to be smaller of their age, and the men as well are smaller, I think.

What are the hours of work at your mine? From 7 to 5. Half an hour is allowed for dinner, no other time for eating. No difference is made with respect to age in this.

Is there any method practised by winch the hours of labour are reduced? Tasks are sometimes set, but not often, which may be finished before the usual hour of closing.

When this is the case, do the children often make up extra time by working afterwards? Very seldom; not once in a hundred times.

Is work ever done on the surface after the regular hours of closing? No, except by the landers, who are men.

Is any difference made according to age in the time of underground labour? None, except that now and then wheeling a certain quantity of stuff is given the boys as task-work.

How frequently do you think the boys underground work beyond their regular course in your mine? Twice or three times in a month perhaps. Our mine is very wet and they cannot stay so long as in the dry ones. I remember, myself, when about 15, I used to stay once or twice a month, for three 12-hour courses in succession, merely coming to the surface for a short time between each "stem" of 12 hours to take some food; at that time nobody took any down with them, and the feeling of exhaustion was very great, and this was done by many of the same age at that time, in that mine, North Roskear and others. I was so much fatigued at the end of the time, that when I got home to bed I often found it impossible to get to sleep for hours. This is not done in Trevascus, and I do not know that it is done anywhere now.

Is this working overtime entirely at the choice of boys and girls? Yes, they generally have for pocket-money what they earn at these odd hours.

Is there any necessity for this working overtime as regards the welfare of the mine? No; it is done for the purpose of earning more, except now and then on occasion of some accident.

Is any difference made with respect to age between night and day work? None whatever.

Have any changes in any of these particulars been made within your knowledge? About 25 years ago it was usual for the tutworkmen to work only six-hour courses.

Would it be particularly injurious to the interests of the mine to forbid the working of boys underground before they were 16 years of age? It would be too expensive to employ boys of 16 and upwards to do the light work underground.

Would it be practicable to dismiss those under 14 from work an hour earlier than is now done? There would be no particular difficulty in the underground boys leaving work after six hours; the surface boys under 14 being generally employed in preparing work for the older ones. It would not be easy to dismiss them earlier, but it might, no doubt, be very often managed, perhaps twice or three times a-week.

No time is allowed for "crowst" (lunch) in this neighbourhood. All the work is suspended during the dinner-time. They eat it in parties, boys together and maidens together, about the mine. They are not in the habit of washing or changing their dress before dinner.

What is the earliest employment of boys underground, and to what work are they brought in succession? The first is "rolling," that is wheeling the stuff from the place where the men are working; they are afterwards employed in holding, and then in taking a turn at beating the borers; after this they take men's places.

At what work are they first much exposed to "poor air"? When filling the barrow in a dead end in driving a level, they are exposed, but, only for a short time, to "poor air".

Is any superintendence exercised as to the employment of boys who are weakly or very young in unfavourable situations? No; nothing more than a passing remark from the agent if such a thing is observed; there is no authority to interfere.

What is the succession of surface-work at your mine? Boys are not much employed at Trevascus at grass, except at the stamps; picking, cobbing, jigging, spalling, and griddling, are each in order perhaps harder work than that before it.

Sheds are provided for the girls to do much of their work in. He has not found that the underground boys fall off from their work; there has never been a death from accident since the mine has been working, and only one broken limb; no accident has happened to the children.

Good-Friday and Christmas-day are now the only holidays; there used to be many in the year; the practice of keeping their own feasts is also declining.

No. 49 (B. 1) Rev. Hugh Rogers. Examined at Camborne, March 25, 1841:

Held the living of Redruth from 1804 to 1816, and has from that date been rector of Camborne. Has had in both places a very large mining population under his charge; he thinks that some improvement has taken place of late years in the conduct of the young women, so that their being married in a condition in which marriage was the only means of saving their reputation is not now a very frequent occurrence; not so much so certainly as formerly. Very few of the mining boys continue to attend Sunday-school after 15; the girls come till rather older. He thinks that the miners of the lowest class do not send their children to day-school, and not generally to Sunday-school. He does not think that in the course of his experience there has been any deterioration of morals among the mining population which has been under his eye, but the improvement is not in all respects very marked. In this neighbourhood there has been a good deal of rudeness in the demeanour of the young men, especially towards superiors in station. He might perhaps say that, as compared with Redruth, manners here are worse, morals better. Is disposed to attribute an alteration for the worse in regard to respectfulness of behaviour to the bad example in part of the navigators, who worked on the railway close at hand. He thinks that there is on the whole a great deal of domestic harmony among the mining families, the children being very kindly treated and very readily contributing their earnings to the common stock, though he has known instances of sons leaving their widowed mothers, when they obtained man's wages, at 17 or 18 years of age. The young women are more expensive in their dress than is desirable; he has heard of clubs among them for the purpose of procuring more showy articles of dress than they could individually afford to purchase, lots being cast to determine whose property they should be.

Copper Mine (No. III), EAST WHEAL CROFTY

No. 50 (E. 6) Mr. Nicholas Tredinnick. Examined at Camborne, March 25, 1841:

Is agent at East Wheal Crofty; the produce is copper, and a little tin. He went underground himself at the age of 10¾, at the depth of 80 or 90 fathoms; he worked from that time till he was 27; was with his father, so that he had easy and various work; he did not often work more than six hours at a time. Does not know of any particular changes having taken place in the proportion of children employed, or their ages.

The hours of work for the surface are from 7 to 5 when there is daylight; half an hour is allowed for dinner. Piece-work is very common, perhaps two days in the week on the average; it is not usual for them to work after their task is done, and they often get away on these occasions at dinner-time or soon after.

Is work ever done at surface after the regular hours of closing? About the time of sampling the ores they often continue at work till 8 or 9 in the evening; this may perhaps be done during a week in the month.

Is any difference made in respect of age in the duration of underground labour? The boys often have work set them, and are allowed to go when it is finished.

Nothing is done on the Sunday by boys or girls; no work is usually done from 4 o'clock on Saturday afternoon till 6 on Monday morning; this is the regular practice in mines. Water stamps require to be watched, and may require two boys to each head. We have no furnace on our mine, we very seldom want one, perhaps twice a year, when we borrow the use of one.

The boys and girls employed by the owners are paid once a month. The tributers pay their boys the whole of what is due to them, or a part only, according to their means, out of their subsistence money. The boys and girls employed at grass are all paid in silver the exact sum due to each. The underground boys are hired by the men, but the consent of the agents is required for their adding to or lessening the number. A part of the subsistence money is paid for the boys, and care is taken that this is given them. A considerable number of girls are employed, first in one mine then in another, at sampling time, in this neighbourhood; a great many come to us regularly on the alternate months, when we are sampling, and go to another mine regularly on the months when we do not want them.

There is much more competition among the Gwennap miners for "pitchers" against the old "pair" than here. Further west it is considered quite a crime to cut down an old pair.

No. 51 (E. 7) Mr. Rutter. Examined at East Wheal Crofty, March 26, 1841:

Is employed as an agent at this mine; has been engaged in the Gwennap mines, but chiefly about Hayle; in Wheal Alfred in the first place. There is a great improvement, with regard to decency of language among the miners in this neighbourhood, both old and young; and the girls are much less coarse in their expressions; they take example very much from the agents, and where they hear an agent using oaths they do the same. He takes care to check swearing or bad language in this mine threatening discharge from the mine in case it is repeated; the result is that he hears very little of it. The establishment of good schools would be a great blessing; education is very much needed.

No. 52 (H. 20) Thomas Fidock, 13 years old. Examined at East Wheal Crotty, March 26, 1841:

Is employed buddling. Went first to work at Stray Park. at 9 years of age. He comes to work at 7, and goes at 5. Has task-work once a month perhaps. He went to day school before going to work at the mines, and since that has attended the Sunday-school at Penponds (Wesleyan Methodist).

I heard him read in the Testament; he read tolerably well, but could not explain the meaning of the word multitude, nor say how many apostles there were.

No. 53 (H. 21) John Richards, 13 years old. Examined at East Wheal Crofty, March 26, 1841:

Has been here for three years; is employed buddling; it is easy work. Gets up at half-past five in the morning. Has a task set him about once a fortnight, and can then leave work about two.

This boy wrote a little, and read. I also gave him some arithmetical questions, which he calculated mentally very well.

No. 54 (F. 7) Henry Warren, 60 years old. Examined at Camborne, March 25, 1841:

Went underground first when about 15, at Dolcoath about the adit level; was employed "rolling". He works now in North Roskear, at the 54-fathom level; has been in that mine for 17 years.

Do the boys always remain with you as long as you are at work? Yes; the boys are chiefly employed by tutworkmen, and work with one pair or another according as they are wanted; but they are not so much employed as formerly. He thinks that 15 or 16 is quite early enough for a youngster to go underground. He does not work himself "double

stem". Used not to take anything to eat underground with him, and then often felt unable to eat after his return, from faintness. Thinks the taking food underground a great improvement.

Has himself suffered from fast climbing. The labour of "tramping" is nothing compared with that of "rolling". Has never known of boys being obliged to cease from work of any kind from sudden illness.

Have you known of any accidents happening to boys underground?—I knew one about 16 fall away in climbing. This is the only accident to a boy I have known.

No. 55 (F. 8) George Bailey, 40 years old. Examined at Camborne, March 25, 1841:

Works at Dolcoath; has been there for 21 years with the exception of four months. Has remarked that those who have gone underground to work when very young have often been stunted in their growth, and have not made strong men. Considers that there is as much work done now for £1 as there used to be for 30s. He went underground himself at 15. Had worked at grass before. He has always found climbing the ladders fast the hardest work and that which did most hurt. When boys are "rolling" (wheeling stuff) together, if a stronger boy fills the barrow heavily, the younger ones will cry out. It would be a blessing if a school were provided for the children after they leave work. He has not known of sudden illness, nor of accidents happening to boys underground.

No. 56 (C. 1) Richard Lanyon, Esq., Surgeon. Examined at Camborne, March 26, 1841:

How long have you been professionally engaged in this neighbourhood? Ten years in practice, and five previously as an apprentice.

Your father had practised here for many years before? He has practised here for 45 years.

Can you give me an estimate of the average number of adult miners to whom you and your partners have annually contracted to give surgical attendance during the last ten years? I cannot say at all precisely, but between two and three thousand.

In what proportion have you attended the families of these miners? We never contract for attendance on the families, but we have had very extensive opportunities of observing the families while in attendance on the fathers. The females and boys have been also very largely attended by us under contract.

You have devoted particular attention to the extent and causes of ill-health among miners, and to their positive and comparative physical condition, and you have, I believe, received from the Cornwall Polytechnic Society three premiums for essays on those subjects, which are published in their reports? Two of the essays to which you refer are so published; my attention has been more specially directed to the condition of the adult miner.

Have you been led to modify in any way your published opinions? Not in any single point that I am aware of; they have been rather confirmed than otherwise. I have not collected any additional information or documentary evidence.

What do you consider to be the usual age at which boys begin to work underground? From 8 to 12.

Have you known many as early as 8? Not very many; from 10 to 12 is the most frequent age.

At what age is it usual for the children to begin to work at surface? About 7 very commonly; girls begin at the same age.

Have you noticed any change in the practice in these particulars? My impression is that they are put to work at an earlier age than they were formerly.

He has not seen disease distinctly caused by working overtime. Has not seen distinct disorder from the employment of any class of young persons. He considers that no females are more healthy as a class than those employed at mines.

Do you, judging from your experience, consider that accidents happen to boys underground from their weakness or natural carelessness, owing to their being employed at too early an age? I do not know that any arise from weakness. From carelessness some certainly do arise, but not more in proportion than among adults, to whom carelessness is a more frequent cause of accidents than any other.

Have you known any accidents occur from defects of strength in different ways, or other cause which might have been obviated by care on the part of the employers? None at all.

Is there any difference in kind in the accidents occurring to boys and those which befall [sic] adults? Perhaps a greater number of accidents from falling away happen to boys, but this is to be attributed to their being more employed in wheeling barrows, and thus getting too near the edge of the shaft or winze.

Do you know of any difference of frequency of accidents now and formerly? The difference is great in respect to those from blasting.

To what do you attribute this difference? To the introduction of safety fuse.

Have you noticed any particular consequences from the working of children at a very early age underground? They are often pale and stunted in their growth and various forms of scrofulous disease appear among them, affections of the eyes for instance; though extreme cases are rare.

The men employing boys are not, I believe, much interfered with in their treatment of them; do you consider time boys exposed to ill-usage in consequence? They are not at all oppressed.

Do you consider the children and young persons employed in the mines in your neigh-hood [sic] better or worse in physical condition than others in the same grade? Those employed at the surface are to the full as healthy as those belonging to any class of labourers. Those underground do not look so well, but I am not aware that they are very distinctly less healthy. It is probable, however, that the seeds of disease are often sown at a very early age when they go underground. The atmosphere which they breathe is the most influential cause of mischief, the deprivation of light, the nature and duration of the labour, and its interfering with the natural hours of rest, contributing to the injurious result. There is a manufactory of safety fuse, near Camborne, at which young females are employed; he finds their health by no means so good as that of the girls at the mines. There is, on the whole, a remarkable exemption from deformity among all classes of mine labourers. Hernia is not at all more frequent among the adults than usual, it is very rare among the boys, and almost unknown to himself among the females.

He has only known two epidemics of fever since he has been in practice. No peculiar prevalence of the disease among the mining class was noticeable.

He thinks he has observed distinctly a debility of constitution among those who have gone underground very early; say from 10 years of age; so that they have been inferior in vigour to the average at the age of 17 or 18. He does not think that any mischief, distinct from what would happen to adults under similar circumstances, occurs to boys who go underground first at 14 and upwards. No other disease is occasioned but phthisis, except that affections of the stomach are frequent before the age of 30. From 25 to 35 the miner enjoys very generally in this neighbourhood an almost entire immunity from disease; afterwards the affection of the chest creeps on insidiously. He has not observed in his practice that there is any prevalence of acute phthisis between 18 and 25. Hoemoptysis among young miners has been a rare occurrence in his experience. He thinks there is a comparative immunity from diseases of the skin.

The very slight knowledge of culinary work possessed by the young women leads to a crude and coarse preparation of the food of the miner, which is one cause of the disorders of the stomach. There is considerably less drinking than formerly. The practice of smoking and chewing tobacco is still prevalent. He has known several cases of stomach disorder relieved by the discontinuance of this practice. The younger boys do not usually follow it.

No. 57 (I. 15) *Michael Loam Allen Nicholls*, 11½ years old. Examined at Truro, March 31, 1841:

Is employed as engine-boy at the United Mines. Has been there these eight months. He received a blow from the handle of the engine whilst brushing out the place. Boys are not usually employed so young about the engine.

No. 58. (I. 16) *William Bennett*. Examined at Truro, March 31, 1841:

Works at Wheal Kitty in St. Agnes, in the 12-fathom level. He went under-ground when 11 years of age in Polgooth; worked at the 30-fathom level. Was chiefly employed in wheeling stuff (rolling). Went to work "at grass" at nine. Had good health. Was employed watching the stamps, in which he was exposed to the wet; being 13 hours at night, from five in the evening to seven on the following morning, two weeks out of three, thus engaged; taking it in turns with a comrade to watch, and lying down about the boilers or some warm place to sleep every three or six hours. But he did not suffer from this. Had worked underground about six months at Wheal Kitty when he was taken bringing up blood. This happened about 10 months ago; he was relieved by treatment. and has continued to work underground, but has had one attack since, besides that for which he now applies for advice.

No. 59 (I. 17) *Henry Roberts*, 36 years old. Examined at Truro, March 31, 1841:

Works in Wheal Coates Tin Mine, St. Agnes, at 75 fathoms from surface. He went underground when about 13; was two years at grass before that. Has worked in the St. Agnes mines for the last seven years; before that in Gwennap. When young he worked about 60 or 70 fathoms under the adit. He only suffered once, which was from going through cold water. Has been driving an end where the air is close. Has thought the mine unhealthy. Finds it cold. The water is very cold. Most of the men complain of having colds, and the boys the same. He works only in the day; this is the case with almost all the "pairs". Has a tumour in the neck, and feels pains about the side.

No. 60 (I. 18) *Christiana Morcom*, 53 years old. Examined at Truro, March 31, 1841:

She first went to work at about 10 years of age, in the Gwennap mines. She did not suffer much until about 20 years ago, when she was seized with lumbago, which she imputed to the hardness of the work. She has been affected with this and other pains more or less ever since.

No. 61 (I. 19) *Jane Jewell*, 21 years old. Examined at Truro, March 27, 1841:

Worked a fortnight at Consols, but found she could not continue. She has always found that the "ball" (mine) disagreed with her, which she attributes chiefly to the mundic

water. The smell made her sick when the water was warm. Her father is a miner at Consols; is in a declining state; about 50 years of age.

Tin Mine (No. 1), CARNON

No. 62 (E. 8) Mr. Nicholas Sampson Cloak, 31 years old. Examined at Carnon Consols Mine, March 30, 1841:

Is clerk of the mine. Has been here six years in the same capacity. Was previously for about ten years in the same way connected with different copper-mines. This mine is a sort of underground stream-work; the over-burden was too thick to be removed; it was therefore determined to drive underneath it, and the bed of tin stuff is removed altogether, and after being brought to the surface is treated in the same way as other stream tin. No change has taken place within his recollection in the ages of the young people employed, or in the kind of work to which they are put.

Is there any method used by which the time of their labour is shortened? No; our hours for surface labourers are from seven in the morning to half-past four in the evening. In winter they do not work when the light is not good; the stuff is too valuable.

Is any work done at any other hours on the surface? They often work out of hours in picking any stones of tin (shode) from the rubbish, especially after spring tides, when the heaps being washed by the sea the stones containing tin can be better seen: they have for these 1s 6d a barrow for small, about the size of a potato, and 9d for large; this the boys have for themselves. Last month they obtained among 24 boys 16 barrows at 1s 6d, and seven at 9d, which is about the usual quantity. This is chiefly done at dinner-time; they almost always run away home when the bell rings at half-past four.

Is any difference made according to age in the time of underground labour? No; men and boys work alike six hours at a time. The 24 hours are divided into four courses, and the day and night "cores" are taken by all in succession, changing every week. The boys always continue at work the same time as the men. They never work more than the six hours, except in case of accident, which is very rare, as we keep a man who has nothing else to do but to see that the wood-work is in proper repair.

What time is allowed for meals? Half an hour at noon is allowed for dinner at all seasons. There is no time for "crowst" (lunch). I do not remember to have met with any such practice; it is, I believe, very unusual. No work is carried on here at dinner-time.

If they eat their dinner on the mine is any accommodation provided for their doing so in comfort? They have the use of a couple of small houses to eat their dinners in, and there is an oven connected with the furnace for them to warm their pasties; they are also allowed conveniences for getting hot water and making tea, which many of them make with herbs. I have observed their pasties; they are usually well provided with meat: the hoggans are comparatively few.

Is any superintendence exercised to guard against the employment of boys underground who are too young or too weakly for that work? None; but it is needless because, the tributer being only allowed one boy, it is his interest to employ a strong boy. In this mine the tin-stuff is very nearly of the same richness in one part as in another, and the wages of the boy can be calculated accurately in "setting the pitches". This was done last time for twelve months. The term for which they were set before was usually two months.

Is there any distinction between the employments of boys and girls? In this mine there are very few girls; only four altogether; they are all employed in "racking."

There are no acknowledged holidays besides Good Friday and Christmas-day; but Whitsun Monday is generally very nearly a holiday. The parish feasts are kept, but no time is usually lost.

The health of the boys and girls has been on the whole very good; much better than in any other mine which he is acquainted with.

The under-ground boys pay 6d a month, 3d for the doctor, and 3d for the club, for which they are allowed 15s a month in cases of accident.

Thinks that 2d a week could be afforded out of the wages of the children for their education.

No. 63 (H. 22) Charles Manuel, 16½ years old. Examined at Carnon, March, 30, 1841.

Has been here about five years. After being two years at surface-work which was light, he went under-ground. He did not suffer from the work at grass. Underground he was employed "rolling" (wheeling barrows). He soon began to feel a pain in the breast, which he attributed to the air and the damp chiefly. He continued to work for nearly two years, when he was obliged to be put into the hands of the doctor; was ill then for three weeks; after this he returned to work, but was obliged to give up again in a week, and was confined a fortnight. After this he worked at the surface only, and has scarcely lost any time since. When working under-ground he was forced to go into the end of the level for the stuff, when he drew in the "poor air"; afterwards he would spit black stuff; many of his companions did so. He met with one accident from the falling of a stone from the side of the level on his arm. He only worked overtime three times whilst he went underground. Other boys did so more frequently. He knew of a boy working five double stems out of six days last week.

He has gone to an evening school during the winter months. Paid 3d a week. He learnt reading and writing. The Bible and Testament were the books used. No instruction by questioning was given. He did not find that he was tired by his work so as not to be able to attend to his schooling. He went to school at half-past six and stayed till half-past eight. Got to bed about ten, Gives his wages to his father.

He reads pretty well.

No. 64 (D. 2) Mr. Phillips. Examined at Camborne, April 23, 1841:

Has kept a day and an evening school at Tuckingmill for about a year; was previously engaged in the same way at St. Ives. Has instructed a great number of boys belonging to the mining class. Has paid much attention to mechanical contrivances as adapted to facilitate mining operations. Has obtained several premiums from the Polytechnic Society for inventions of that kind. Has about 40 boys in the day-school and 12 in the evening-school. The day boys pay £2 or £3 a year; the evening scholars 5s a quarter. This payment is not remunerative, but intended as an inducement to attendance. The school is opened about seven in the evening four days in the week. The boys are allowed to stay till about 10 o'clock if they choose. He does not find that they are at all incapacitated for schooling by having worked during the day. He even considers that more progress is made in an equal time by those who work than by the unemployed.

Mr. P. examined some of his day boys, who were in attendance at the evening school, for my satisfaction. They worked questions in mensuration, geometry, dynamics, some of them of considerable difficulty, very quickly and correctly. The evening-school boys had not been long enough with him to be perfect in their subjects. They looked well and quite fresh at their work. Two or three of them were youths, working underground a few hours before; two others employed at the surface, and had only changed their clothes since they left work; these were not in the habit of getting their evening meal till they returned from the school, which would bring their bedtime to 10 or later; and they must rise before 6 in the morning. The underground lads could only attend on alternate weeks, as they worked at night "in course". The other boys were either smiths in the foundry, or the sons of persons in rather better circumstances. All were in different parts of arithmetic, mensuration, &c. Mr. P. occasionally shows them a few experiments in physics, and was about to secure the attendance of a lecturer on chemistry.

No. 65 (B. 2) Rev. Samuel Dunn. Examined at Camborne, April 23, 1841:

Is a Wesleyan minister. Has been here nearly three years. Was previously employed as a minister in Edinburgh, in Manchester, and in a rural district in Yorkshire. Was familiarly acquainted with the condition of the labouring classes in those several places. He thinks the miner better provided than the average of labourers in either of those localities. He considers the irregularity of the miner's hours of coming home a material occasion of the defect of domestic comfort. Is rather fearful that there has been a declining condition of morality and religion during the last year. More lads and youths, as appears to him, are lounging and playing about the country on the Sunday. Sometimes they will play at ball in the neighbourhood of the Sunday-schools, giving a very bad example to the children as they come out of school. This class of young miners is by far the most audacious. He expects much benefit from the police just established. He does not think that there is any great extravagance in dress among the young women, speaking specially of those who belong to his own congregation, who are very numerous. Has heard of the existence of clubs among them for the purchase of garments, but believes they are rare. Want of means for dressing their children as well as their neighbours do theirs is the reason commonly assigned by the mothers for keeping them from Sunday-school. He thinks that there is not so much family union as among the rural population, which he chiefly attributes to the knowledge possessed by the boys of the amount of their earnings; so that they feel independent at an early age, and often act accordingly. He believes if it were not for the moral influence of the Sunday-schools it would be scarcely possible to live among them, looking to the characters of those young men before mentioned.

Copper and Tin Mine (No. II), Dolcoath

No. 66 (E. 9) Mr. William Petherick. Examined at Camborne, April 23, 1841:

Is one of the principal managers at Dolcoath.

There is, I believe, a peculiarity in the arrangements of your mine, in the provision of some warm nourishment for the men and boys on their coming to the surface; be so good as to describe its nature and effects? We have for the last five years provided hot soup for the men and boys on their coming up. It is given out in a place adjoining the blacksmith's shop, into which the footways open. It is continued as late in the spring as the men wish it, but is chiefly taken in the winter months. It does not cost I believe more than 40s a month. Four persons are employed to give it out; two by day and two by night, which is a greater expense than the soup itself; our men being coming up at all hours of the day and night, this arrangement is necessary. Two places for giving it out were also required because of the distance of the different parts of the mine from one another. In the first place there was only one delivery, and it was found that men who came

to the surface at the other end of the mine were not disposed to walk so far out of their way as they were obliged to do to get some soup. Two stations, one east and the other west, were therefore established. The houghs and faces of beef are stewed down in a digester to make the soup. The men say they never feel cold when they take it. We conceive that there have been much fewer cases of consumption on the club since this practice has been adopted.

You mention cases of consumption in connexion with the club; it is, I believe, unusual to relieve the sufferers from its funds? It is so; but it is our practice to do so. Our club is comparatively rich. having a fund of £1500, and our contributions are larger than usual, being 6d in the pound of the gettings; 1d in the pound is also deducted from tradesmen's bills for the benefit of the club. We do not give assistance in cases of fever or other acute illness, except under circumstances of poverty. The agents have also the power of assisting from the funds of the club any miner who is known by them to be straitened: they are often informed by a man's partners that his meat is not good, or that it is insufficient, or that he has none. Widows and mothers are often assisted long after the death of the husband or son. Some have received altogether £100 or more.

The ventilation in Dolcoath is particularly good; and the men are healthier than in most other mines: there are more old miners.

A great many of our miners get houses and little plots of their own. Some raise the stone requisite for their own houses in the first place, and sell as much more to a mason as he will agree to build their houses in return for. Then they will mortgage the house at Hayle for timber, iron, and so forth. Some again will build, roof, plaster, and do the carpentering themselves with very little assistance. Those who have been fortunate and have saved money may buy a place ready built, with some land already brought into cultivation. The land is let on three lives, at a rent proportioned to its quality and other circumstances, varying from 5s. to £3 an acre. We tried the plan of not giving pay from the club in cases of slight accident, till the "taking" (contract) had expired, with the view of avoiding the inducement to deception; but the partners complained of this, and now the pay is given; though sometimes, when the take is poor, the hurt is made the most of. There is a general combination to deceive the agent as to the hardness of the ground, and other points. so that the most advantageous terms may be obtained. Our ladders are about 2½ fathoms in length, generally, with staves one foot apart. We use oak staves; old ship oak we find the best. We formerly used the hafts of the picks and other tools, but found these unsafe, the wood being sleepy and flawed, and sometimes breaking off in a moment, without having shown any outward sign of unsoundness. Iron staves, besides being at times very slippery when acted on by the copper water, are apt to be corroded, so as at times to cut the hand. We have had no accident on our footways for a long time. A great subsidence of the ground took place in the mine some years ago, where it had been hollowed by the old workings. It reached to within a short distance of the surface. A million and a half of tons are calculated to have fallen in. We filled in half a million tons at the cost of £10,000. Fortunately the men who would have been endangered were on the surface, and no lives were lost. Very few accidents now arise from explosions. Now and then there is a delay in the communication of the fire, even with the safety-fuse; and the men, being impatient, go too soon to the spot, and the charge is fired before they have time to retreat. This used to happen frequently; sometimes apparently from too tight tamping.

I went round the mine with Captain Petherick. The rooms in which the soup is given out communicate with the smiths' shops, and are situated at two distant parts of the mine. It is prepared at only one of these stations, in two or three digesters, which are cleaned out about twice in the week; the meat is then found to be almost entirely dissolved. Some Swedish turnip cut into small squares is the only vegetable addition. I tasted it, and found it very palatable, though the quantity of pepper had been reduced; salt was at hand for those who liked to add more. I saw several men and boys who had just come from their work below take their allowances of soup on benches around the room; half a pint was given to each in a tin can, at a temperature little short of boiling; they said they found it very restorative. The changing places are galleries around the shop; a chimney, formed by a large iron tube a foot and a half or more in diameter, is conducted along this gallery, and, conveying the warm air and smoke, is sufficiently heated to dry the clothes which are hung around. Near at hand are chests for their stores, tools, &c.

I saw in the shop two old men, whom I questioned. The one was 71 years of age, and had been a miner all his days, for 60 years. He had generally worked in this mine, having only left it during a period of 10 years, when it was suspended; at this interval he went into the mines of Wales, Devonshire, and other parts. He said he had suffered very little ill health at any time or in any place. The other, who was within a few months of 80, had been chiefly employed in husbandry, and had been very little underground. For the first 30 years of his life he had hardly known what it was to be well. There was very little apparent difference of age between these two men. Both were employed, or rather amusing themselves, with some light work. C. B.

Copper and Tin Mine (No. III)

No. 67 (E. 10) *Mr. Joseph Vivian*. Examined at North Roskear Mine, April 24, 1841:

Is principal manager of this mine. He thinks that the arrangements for drying the men's and boys' clothes, and for enabling them to wash freely in warm water, have preserved them

from colds. With respect to mine-clubs, he is not an advocate for deductions from the wages of the miners for the purpose of forming a fund for their relief in cases of accident, as is commonly practised; for, if the mine should fail, the money is lost to the contributors, if they have not met with any accident before. He encourages them to join benefit societies, and believes that there is scarcely a man in the mine who is not a member of one of these at least; many belong to two or more. He tells them that if they do not assist themselves in this way they shall have no help from the mine. The men and boys employ their leisure hours in the cultivation of their gardens and the potato-plots, which they get from the farmers in return for the dressing. We prefer men who have no more land than these plots to those who have some acres. The latter do not give their attention so fully to their work at the mine, and are besides constantly in want, of different little matters for their farm; a few nails, a bit of iron, timber, and so forth. Part of their spare time is spent by the miners in mending their shoes. A man would think it a disgrace not to be able to do this. They do it as well as a cobbler; the father teaching his boys. In the way of tailoring they have no great skill. Many men here take away £8 or £10 monthly, having their children employed. When they have had good "takes" the more prudent invest their money in some way, often in building houses. The savings bank at Redruth is at an inconvenient distance; much more would be deposited if it were near at hand. We use no cheques for the payment of any of our people; a large proportion of what is due is paid in gold and silver, and the bank being at hand the notes can be readily changed. The paying of all is completed about one o'clock on Saturday; once a month for the surface labourers, and every other month for those under-ground; but a certain amount is allowed for "subsistence" to the latter, and for the payment of the boys. Here we generally give £2 for "subsist"; and we are not particular as to the value of the work done being more than equal to what is allowed, provided we consider the men "a good pair". Some will have in this way £20 in advance before their "pitch" turns out profitable enough for them to live on their gettings. We have no drinking bouts after pay-day; all come to their work on the Monday as usual: if they did not they would be soon discharged. We never allow a man to leave his place without leave; if he wants a day he is to ask his captain, and there is generally no objection. Smoking is not nearly so prevalent as it was: it is hardly ever practised by the boys. I have never any trouble with any class of persons employed here; they are very orderly and well-conducted. We have had a few cases of dishonesty, chiefly the stealing of candles. Some time ago we offered a reward of £5 for the detection of the thief, and a man was caught in the act by two others who were watching for him; but they foolishly let him get out of their sight, and he absconded, and has not since been heard of. The men now contribute 1d a month each towards the British School at Camborne, and have the privilege of sending one of their children to the school without further payment, and their other children on paying 1d a month with each.

The arrangements for drying the clothes, and supplying warm water for washing, are in this mine particularly excellent. The smith's shop, in which the first object is effected, is very roomy, and a convenient method for placing the clothes which are more than commonly wet, near the forges, has been contrived so as to avoid all risk of burning. The galleries in which the changing of clothes takes place are likewise spacious. These are in the smith's shop, and entering from it is the room in which the miners wash. This is of considerable length, but only wide enough to admit of convenient standing space between benches placed against the walls and the bath, which extends from end to end, divided at distances of 4 or 5 feet into separate compartments. I saw a number of the men and boys making use of these accommodations just after they had come to the surface. They stood for the most part on the thwarts which separate the baths, and stooped forwards to wash their arms and legs; but I was told by Captain Vivian that they frequently get into the baths, which are about 20 inches deep, and give the whole body a thorough washing. Men and boys spoke of the arrangements as very conducive to their comfort. The water is of a pleasant temperature, from 80o to 90o Fahrenheit. After these ablutions they proceed into the smith's shop and put on their ordinary dress. C. B.

No. 68 (F. 9) *Richard Trezona*, 52 years old. Examined at North Roskear Mine, May 1, 1841:

Has been at this mine 4 years. Went underground first in Cook's Kitchen, at the age of 13. Has always worked in this neighbourhood. Has been on tribute 25 years and upwards. Has worked in "poor air" a great deal. Was once insensible for some time from "poor air". Has found advantage from the coming up into the smith's shop. Has heard the men speak of the good effects of the soup at Dolcoath. Would rather have warm water himself to wash in than cold, a great deal. Has seen little of meeting for carousing of late years. They call it here "going to have a pint"; it used to be the custom "to go to have a pint" on Saturday evening, when they had beef and drink at the public-house. He has got three acres of coarse ground at 17s 6d rent for the whole. The charge for putting up a fresh life would be about £20. He has seven girls and one boy; has had 12 children. Is himself the fourteenth child. His father died about 77; was a miner all his days; he worked underground till he was 75. His girls all go to work, when they can get it; the boy is younger, and puny. The girls have all learnt to read, and the eldest can write a little; they all continue to attend Sunday-school.

No. 69 (F. 10) *William Richards*, 46 years old. Examined at North Roskear, May 1, 1841:

He went underground first at Dolcoath, at about 10 years old; worked then 15 fathoms under the adit. Has worked underground ever since; always in this neighbourhood. Has never been the worse for "poor air". He worked for three years in the 201-fathom level at

Dolcoath. Has been here a dozen years. He thinks the coming up into warm air, and the washing in warm water great improvements on the old system. He thinks the men much more orderly than they were five years ago. The change is greater within the last five years than before. He has had 21 children, and has 12 alive. He does not know any great difference between iron and wood staves; has never known the iron hurt the hands.

No. 70 (F. 11) *Simon Vivian*, 88 years old. Examined at North Roskear May 1, 1841:

Has been always a smith. He went to work at 11 and left work at about 63. Since that has been a foreman smith, keeping accounts and looking after stores. He does not think there is so much drinking now as formerly.

I saw this old man performing his duties as clerk very efficiently. His hearing was very dull, but he appeared otherwise in full possession of his faculties, and very healthy, his habit of taking a glass of rum and water notwithstanding. C. B.

No. 71 (I. 20) *Jacob Turner*, 17¼ years old. Examined at Truro, April 21, 1841:

He works at the Carnbrea mines. He went under ground about nine months since: worked at the 70 and 80 fathom levels. Was very well till he changed to the 50-fathom about four months ago. It is very cold: the air was very bad for a fortnight. Considers he caught cold. Has a cough, with expectoration. "My heart seems as if he would jump out of my body". "I could go down pretty well, and work pretty well, but when I came to climb the ladders that was the hardest work". "I bleed to the nose when I have a rage of cough." He worked at the stamps, and other surface-work, and at husbandry, for many years before he went under-ground.

His mother, who brought him for advice, says that his father died of consumption at the age of 48; and that two of his sons, one 23 and the other 24, who were miners, and a daughter who was in service, had been carried off by the same disease; the latter at the age of 29. She has two at home; a boy and a girl, who are twins; they work at the mine. "Poor air, I believe, done for both the young men, and their father before them. Coming up the ladders their hearts was bursting".

This boy is phthisical. C. B.

No. 72 (I. 21) *John Cobbledick*, 37 years old. Examined at Truro, April 21, 1841:

Has worked underground about 16 years; chiefly in the northern mines. The air in them is generally good. Has been laid up for six weeks with a bowel complaint (diarrhoea mucosa). Went about a week before he was taken into the bottom of the mine, where a candle would not burn. Worked then in the Cornubian Lead Mine. Has good health generally.

No. 73 (I. 22) *Richard Williams*, 45 years old. Examined at Truro, April 23, 1841:

Works in Wheal Jewell. He went under ground about 11 years of age, and has continued ever since. He never had any illness worth notice till about Christmas last, when he went to work in 56-fathom level, driving towards Wheal Gorland. The end was 170 fathoms from any draught of air. The air was so bad that you could not burn a candle for four hours together. He "felt the air scalding down his throat; burning as though it had been hot water in his stomach". He stood it for five weeks, on account of his four children being employed in the mine, and his being afraid of their being turned off if he did not continue. None of his comrades stood the work more than a fortnight: the party was changed three times in the month, excepting himself. Has brought up blood since, and now suffers from cough and weakness. He has expectorated black and slate-coloured stuff.

Copper and Tin Mine (No. IV)

No. 74 (E. 11) *Mr. Ellery*, 45 years old. Examined at Wheal Friendship, St. Hilary, April 17, 1841:

Is employed as under-ground agent. Has been in this mine for three years. Has been in this neighbourhood at Wheal Fortune, as an agent. He first went under ground at 25 years of age. Was previously at sea, in the packet service. The greatest depth at which this mine is worked is 100 fathoms from surface. The ores are worked by tributers, and dressed by the adventurers. We raise about 200 tons a month of copper-ore, five or six tons of tin, and a small quantity of lead. The mine is in Killas. In some of the western parts of the mine the air is not very good. She is not very wet. Boys are employed in wheeling the stuff under ground; there are no trams. No accidents have happened to children. The hours for surface-work are from 7 to 6, and from 12 to 1 for dinner. There is pretty much task-work. Does not know how they manage with their parents as to the pay they receive for extra time. Underground they work three "cores". The boys generally work by day, the stuff not being required to be immediately removed. There are crushers on the mine. The boys and girls are all paid monthly by the adventurers. "Hoggans" are rather more common here than

pasties. Those who live near have them and stews very often brought to them warm by their friends. Capt. Ellery has not found any difference in his health in consequence of his change from a sea-faring to a mining life.

Tin Mine (No. II.)

No. 75. (E.12.) Mr. Reed. Examined at Wheal Vor, April 80, 1841:

Is one of the principal agents managing the mine. We have 600 or 700 employed under 18. The successive employments are: 1st. Packing, which is done under the shed; 2nd. Trunking, buddling, and wheeling slime. A great many girls of different ages are employed "framing". Very often at the age when the boys cease to find employment on the floors, as they are not equal to the under-ground work in this mine, they go off to shallower mines. We encourage able men; it being more for our advantage to do a good amount of work. We have not a score under 18 underground. This is owing to our having little or no work at shallow levels. We are only working the lode from the 214 to 236 fathom from adit. The adit is 25 fathoms from the surface. The work under-ground is done in four six-hour courses. They relieve each other "in place". They are very attentive in not leaving their work till relieved by the next pair. The hours on the surface are from 7 to 6; in winter, daylight. An hour is allowed for dinner usually; in winter, half an hour. There are some few tasks; not probably once a month to each individual. They scarce ever stay after six. On Saturdays they leave work at half-past four. Good Friday and Christmas-day are the only holidays. Our first-class girls, who are employed "framing", are allowed 1s a month premium for working the whole month, without losing any time, and the second class at the same work 6d. The girls meet together to eat their dinners; they generally get them warmed; and very many get a cup of tea, or hot water. Those who live within a mile or mile and a half often have stews and other things sent them warm, and a family party meet together. Barley is very much less used than formerly. We have had one death, and a leg broken from the undermining of a slime-heap by the boys themselves.

The tin is smelted on the mine. From the calciners, of which there are two, a flue is carried for about 130 fathoms horizontally, and in this the arsenic is collected: to the top of the stack in which it terminates it is 300 yards in length. Formerly the fumes were discharged in the midst of the mine, and great harm was done; bowel complaints especially were very frequent; the whole place was often filled with a suffocating fume at that time. The boys and girls go to the parish feasts. They often manage to obtain some liberty, by arrangement with the captain of the dressers, without losing time, but they will rather lose time than not go, if they are allowed. They are employed essentially by the owners. They are paid on the evening of the last Friday in every month, in small change. The men are paid on the Saturday morning following in £5 notes with a certain proportion of change. They are obliged to have recourse to shops, public-houses, and the market, to procure change of the notes; which is only to be done at the price of some deduction. The young people do not earn anything for themselves. We have had very few complaints of the tributer not paying "his pair". We have here always a month's tin-stuff belonging to him in hand, so that he would be a loser were he to leave the boys unpaid and to quit the neighbourhood. We very seldom have complaints from the parents of their children keeping back any of the money. No one, except tributers and tutworkmen, can leave the mine without giving a month's notice.

Do you consider the children and young persons employed on the surface in your mine better or worse in physical condition than others of the same age and class in the neighbourhood who are otherwise employed? There is no great opportunity of comparison in the immediate neighbourhood, for almost all the young people are employed here or at other mines it is indeed difficult to obtain the services of boys for other purposes, but I consider them to be much better off than others, being free from coercion, and having regular hours of closing work.

What has been your general experience of their moral character in your mine? There have been very few cases of dishonesty, and very little swearing. There is a line imposed on those who are guilty of drunkenness, swearing, or fighting.

Is much coarseness of language observable among the females? There is room for improvement in that respect.

Do they marry at a very early age? The women not so much so as the men.

Do they prove domestic wives and capable of doing all that a labourer's wife in the neighbourhood usually understands? They are very deficient in domestic knowledge; very little attention is paid to anything but dress after their work is over. They are pretty steady at home. We had a man married a few days ago without bed or board being provided, but that is not usual among them. The old system of "keeping company" is followed very commonly. There have been a great many cases of desertion among the miners, and there is reason to fear that there is not a very strong feeling prevalent among the body at large of the dishonourable character of such conduct. One of our miners has had two natural children by two different women within six months.

He went under-ground himself about 12 years of age in St. Agnes. When about, 14 he worked in "poor air" and became affected with shortness of breath and other symptoms usually threatening consumption, so that the surgeon told his father there was no chance for

him; but he had a strong impression on his mind that a physician who then attended the Cornwall Infirmary could cure him, and he in fact recovered under treatment there. After this he continued to work under-ground till he was 24, often 16 hours together, and in the worst places for the sake of higher gettings; he always, however, avoided "poor air", and since he has been an agent he has been cautious not to stay longer than business required where the air was bad. He was employed as agent in some large mines in county Cork: he found the Irish, of whom they employed about 700, very tractable. Some Cornishmen whom they had over when the ground was soft were very unmanageable; it was found necessary to make a rule that going to a public-house should be punished by dismissal; this checked their misconduct. The Irish did not begin to work till they were 17 or 18 years old; they did not seem to feel the effects of working in "poor air" in these mines nearly as much as our Cornish miners did.

When he came to Wheal Vor, two years ago, the men were in the habit of spending the Monday following their pay-day, and sometimes a day or two besides, in drunken rioting, so that it went by the name of "Bad Monday". He told them that if they did not keep to their work he should send them about their business, and get those who would. This kept them pretty steady; but a short time since, on his being called to some distance, they took advantage of his absence, and returned to their old practices; when he discovered this he fined them a guinea a man. These measures seem nearly to have put a stop to the custom. He considers the miners at Wheal Vor to be less steady and industrious, out of work-hours, than those to the eastward. The neglect of the Sabbath-day is greater than anywhere else that he knows. There is a good deal of small pilfering from the mine, and poultry stealing; some who are well known as depredators are not informed against. He thinks it would be very difficult to obtain from them any account of their household expenditure. A gentleman of great influence in the mine tried to make inquiries of that sort among them without effect. Thinks they would object to any charge for education.

We have within the last three months, established a forge at 245 fathoms from the surface. We keep three smiths and a boy with each employed at it, working 12 hours in 36. We find that for every hundredweight of coal carried down we save the drawing up of two tons of tools and other articles, besides saving much time. The smoke is carried off through the old workings, so that it cannot be perceived in any part of the mine; the smith remarked it was the most airy forge he ever worked in. The men are much pleased with their forge, their tools being sharpened on the spot, and their time and labour thus economised. I had seen these under-ground forges at the Irish mines in successful operation, which led to my recommending their introduction here.

Many of our boys and girls come from a considerable distance, frequently not less than three or four miles.

No.76 (E. 13) Mr. Wood, one of the clerks of the mine, who has paid much attention to the condition of those employed, examined at Wheal Vor, April 30, 1841, states:

That amorrhoea and chlorosis are very frequent here, and are commonly severe, and sometimes fatal. He has been disposed to attribute this to the exposure of the young women to the steam of warm water, especially in "framing," which is the employment of a great number. The water used on the surface in this mine is all warm, having been used for condensing, and is as much economised as possible, being all obtained artificially. He says there is a great deficiency of education; there was a school connected with the mine some time ago, but it has ceased to be so, and it is not now very much frequented by the miners' children. There is no evening-school of any value in the neighbourhood; he had never seen any school successful in which the instruction was quite gratuitous, except one at Crowan, in which rewards were distributed, according to the taste of the children, with great profusion, by the late Sir John St. Aubyn. A school now kept by his brother in a village not far distant succeeds much better in consequence of his charging a penny a week, than it did when kept by his father, who charged nothing; it is an endowed school, but the parents think that they pay for their children's schooling now. He is of opinion that the number of illegitimate children in this neighbourhood has by no means lessened since the new law has come into operation, but many children are kept at the friends' houses, and not made chargeable; the thoughtlessness of the girls is the general cause of the misfortune; marriage is almost universally their expectation.

No. 77 (E. 14) Mr. Oates, another agent at Wheal Vor, said:

That he thought the air was more hurtful in granite than in killas (slate); he had himself been much affected; his breath had become so short that he could not walk many steps up-hill without panting. This was when he worked in mines in granite, and he had consequently quitted the granite, and come to work in the killas, since which he had felt nothing amiss. The staves of the ladders are in this mine a foot apart; he prefers short ladders to long ones for climbing.

Lead Mine (No. 1)

No.78 (E. 15) *Mr. Middleton*. Examined at East Wheal Rose Lead Mine, April 27, 1841:

Is a principal agent managing the mine. The greatest depth at which the mine is worked is 76 fathoms from surface. There is a great deal of water, and the consumption of timber is very large.

No change has taken place within his recollection in the ages of the children employed in these mines, or in the nature of their employment. The hours of work on the surface are from 7 to 5; from 12 to 1 is allowed for dinner, and a few minutes for "crowst" when they like. They very often have tasks set, by which the duration of the labour is shortened; this happens once or twice a-week, probably, on the average. They get away at two, three, or four o'clock, sometimes earlier. The elder girls will at times continue to work on their own account. Now and then at sampling they continue to work after the regular hour of closing; when this is the case they remain one and all, and the time is allowed another day.

Mr. Edward Michell, the purser of the mine, said that the men in the neighbourhood were by no means a good set, and that constant inspection was requisite to prevent thefts.

No.79 (H.22) *Richard Bishop*, 16 years old. Examined at East Wheal Rose, April 27, 1841:

Has worked here a twelvemonth at the 30-fathom level. He worked before at Gonavern [sic] and Wheal Elizabeth (lead-mines). He went under ground first at about 14; had worked at surface from about seven years old in the old workings of this mine. He went to a day-school before he went to work, and afterwards attended an evening-school for three months at Zelah (a neighbouring village). The school was given up from the master going to prison for debt. He did not learn to cipher; the school was open five evenings in the week; he paid 3d a week. He works six-hour courses, changing once a week; he is employed rolling (wheeling barrows); they are 40 fathoms from the shaft to which they roll, and six fathoms from the winze. The air is pretty good; the place is very wet; he has not suffered in any way from his work, either to grass or under ground; they do not work overtime. He takes a crust down with him, and gets his meals after he comes up. He lives two miles and a half from the mine. Would be very glad to go to evening-school if he could. He works sometimes at tilling potatoes for his father, on a small allotment.

No. 80 (H. 23) *Joseph Roberts*, aged 14 years and 9 months. Examined at East Wheal Rose, April 27, 1841:

Has been down since seven o'clock (now half-past three); generally comes up about three. He works with a tutworkman, who is driving an end upon the course of the lode; his work is rolling stuff; his wages are 24s a month; is in a dry place; it is about 30 fathoms from shaft or winze, and after working three or four hours the air becomes dead; he feels sometimes that he cannot draw his breath; he spits black stuff, sometimes with cough; does not feel pain in the breast. There is a good deal of powder-smoke, as the ground must all be removed by shooting (blasting); He has worked under ground for about six months; before that three years "to grass"; was very well at both employments. He takes down his dinner with him, generally pasty; they do not send down any water in this mine; he does without it; is very thirsty sometimes.

No. 81 (H. 24) *Edward Mitchell*, 16 years and a month old. Examined at East Wheal Rose, April 27, 1841:

Has worked under ground here for a year; previously at the Cornubian and other mines for three or four years. Has felt nothing from his underground work at any time; does not work at night; generally goes down about eight in the morning; works with one man; is working at the 20-fathom level, "rolling". He takes his pasty down with him; it is generally made with some pork in it; does not feel thirsty, though there is no water to be had. He learnt to write at a day-school kept by the parish-clerk at Penanzabuloe [sic] Churchtown; He has lately begun an evening-school, for which he charges 1s 6d a quarter; he has not gone to this, because his father is ill, in a decline, and he has to till potatoes and other things. Has a little cold.

This boy's appearance indicated predisposition to phthisis. His voice was hoarse.

No.82 (H. 25) *Thomas Chapman*, 15 years old. Examined at East Wheal Rose, April 27, 1841:

Has been under ground since eight in the morning; comes up about two P.M.; works with a tributer; has been at the 30-fathom level, "rolling". His wages are 30s a month; he has been underground about 14 months; only worked two or three months at grass. Takes down his dinner with him; does not get any drink. The air is good where he works; he spits a little sometimes; does not feel any tightness of breathing; finds it suit him as well as grass-work. He does not often work at night.

No.83 (F. I 2) Thomas Trebilcock, 44½ years old. Examined at East Wheal Rose, April 27, 1841;

He is employed in sump and pit-work (looking to and repairing timber-work). Has worked here above four years; has worked in lead-mines nearly all his time. He went underground first at about 17 years of age; has never suffered from any illness: the air has been generally good; the water in this mine is neither cold nor hot; he thinks both men and boys are generally very healthy here. Our ladders are about three fathoms in length, with a platform at the end of each; they are inclined about one foot in the fathom; the staves are 12 inches apart. The men here very seldom work double cores.

Lead Mine (No. II)**No.84 (E. 16) The Captain of the Dressers, examined at the Cornubian Lead Mine, April 27, 1841, stated:**

That the boys on the surface had been very badly behaved when he came there a twelvemonth since; they were constantly pelting and splashing each other, and hooting passers-by. He told them he would discharge the first offender, and it was soon put a stop to. They have become very much more quiet of late, and for the last three months they have held a meeting at dinner-time among themselves, at which they sing hymns and have prayers; five of them also meet for mutual instruction in the chapel in the evenings on which it is not used for worship. Two young men are talking of teaching writing gratuitously. They mostly go three miles to their homes; they would be very glad to avail themselves of an evening school, were there one within reach.

The surface-boys and girls are allowed 10 minutes for "crowst" at 10 o'clock. The girls are very well behaved; he thinks the boys have been more diligent since they have held their meeting. The dressing is done on the owners' account; the "buckers" are paid by the barrow, 3½d for each; they can break about three in the day. The lead requires to be bruised to a much finer size than the copper-ore. The "cobbers" are paid by the day. The underground work is done by eight hours course, except in wet places; he first went underground himself at 11 years of age, in Wheal Gowland [sic], at the 45-fathom level, and stayed there two years; he did not suffer; the first notice he had of his being affected by "poor air" was feeling one day quite tipsy after drinking a pint of beer; he could before have drunk a pint of spirits without being intoxicated. He has chiefly worked in lead-mines, and generally on the surface. Is 44 years old; is not aware of any mischief arising from the lead; there are no sores of the feet.

Copper Mine (No. IV)**No.85 (E. 18) Mr. John Richards. Examined at the Consolidated Mines, Gwennap, May 15, 1841:**

Is one of the principal agents in this mine. Has been here 11 years. The depth is now above 300 fathoms from the surface. The levels are about seven feet high, and the ventilation is good, the depth considered; it is effected by shafts and winzes, without the use of air-machines. The temperature varies from 70° to 90° in the lower levels. The mine is in Killas. The produce copper, and a little tin. About 200 tons of the former are raised monthly.

The ladders are generally about four fathoms in length, and are inclined on the average about two feet three inches in the fathom, following the inclination of the lode. The staves are generally 12 inches apart, not more than 50 fathoms in the whole mine being furnished with 10-inch staves. The quantity of powder-smoke is not so great in this mine as in many. A great part of the lode can be worked by the men with very little blasting. Our consumption of gunpowder is about two tons a month. The lode is worked by tributers. They generally go down about eight in the morning and come up about six in the evening. It would take about 40 minutes to go down, and double that time to come up from the lower levels, so that they are about eight hours at their pitch. The tutworkmen work eight-hour cores, night and day. They are eight hours absent from surface; from six to seven at work. The climbing is generally steady here, not very fast. It is very seldom that the tut-workmen stay overtime, the tributers never. We have some men above 40 under the 200 fathom level, but in general as they get older they seek shallower levels. Men about 30 are the best miners, having strength and judgment as well. Very few of them are given to drink, so as to lose any time. They do not absent themselves from their pitches after the pay-day. Does not think the boys under-ground are taken into concern as men till they are 18 or 19 on the average. There have been very few accidents from blasting; in the mine; several lately from falling away. Two have been killed within the last fortnight. It does not often happen that they fall off the ladders, but sometimes the stages on which they are working-may give way; sometimes, being in the dark, they may fall into a shaft or winze. Another man was injured last week by a piece of iron falling on his head, while he was filling the kibble but he is likely to recover. The regular hours for surface-work are from seven A. M. to half-past five

P.M.. Some stay longer, but not the greater part. Sometimes, as is the case at present, when there is a large quantity of ore raised in one part of the mine, it is necessary to employ the dressers beyond the regular hours. There would not be accommodation for a greater number of hands. Three-fourths of the men and boys are permanently employed at the mine and stay here constantly. The steady men generally remain in one mine. The girls are less constantly engaged. A great many live as far as Redruth. "Three miles is a fair distance". The surface-people are paid once a-month; generally five together, in such sums, and with sufficient small change, to enable them to divide what is due to each without going to a shop or the public-house.

No.80 (H. 30) *Martha Buckingham*, 14 years and one month old. Examined at the Consolidated Mines, May 15, 1841:

Has been at work about four years; always at this mine. Has been employed "picking" all the time, except "carrying" now and then, and "griddling" or "spalling" once in a way to help "the pair" when they are busy. "Carrying" is the hardest work; this gives her sometimes a pain in the back. Now and then she does this for the whole day. She gets wet sometime, in the winter, the wind and rain driving under the shed. Catches cold sometimes; most of the girls do. Has been kept at home a fortnight together by cold, caught chiefly by getting her feet wet in coming and going. The girls cannot get a pair of shoes to change when they come to the mine; it is hard enough to get one pair to wear. She also "overheated her blood" by carrying and working hard, and has had a breaking out since. She usually comes to work at seven in the morning, and goes home at half-past five, but at sampling, which occurs about once a month, they come at six and stay till eight. They do this for a week sometimes, and sometimes for a fortnight. This is the case now. She lives at Bissoe Bridge (three miles distant). Gets her supper after she goes home, and goes to bed as soon as she can; at half-past nine or ten. She gets up at four. Are seven in family. Has no father; he died in Scotland about eight years ago. Was a miner. All are older than herself, except one. All work to the mines, except the youngest. One brother is ill; he was working at Poldice in a hot place, and then had to fill the kibble in cold water. She gets her breakfast before leaving in the morning. No time is allowed for "crowst." (lunch), but about nine or ten they take a bit of pasty when the agent is not looking, holding it with one hand and working with the other. When they work overtime time they are allowed to stay at home a day when the sampling is over; they are not paid anything more than the regular wages. There is not regular work for all in the summer; but in the winter all come or very nearly all. They are allowed half an hour for dinner. They warm the pasties and hobbans at the "dry" when the weather is cold. They take their dinners under a shed; the girls all together. An anker (small barrel) of cold water is brought for them to drink. No water is to be had except for a long way off. She feels very tired to walk home. No tasks are given; they always work till half-past five. When they work late on the other days they leave work at half-past five on Saturdays. She goes to Sunday-school with the Methodists. Learns to read and spell, with the Catechism.

She reads pretty well. Has cough, and a papulous eruption; but has the appearance of being generally healthy.

No.87 (H. 31) *Mary Verran*, 14 years and 10 months old. Examined at the Consolidated Mines, May 15, 1841:

Has been working four years; always here. Her employment has been "picking". Carrying and other work at sampling time just every day. She feels pain in the back and side, chiefly about the middle part of the day; feels it after she lies down at night. She lives about a mile off. Gets up about half-past four or five o'clock. Her father was a miner, but now goes with the train-waggon on the railway; the wages are better than at the mine. She hears most of the girls complain of pain in the back from "carrying". They do not complain much except of the carrying. She finds the half-hour rather short for dinner. They are allowed half a day at Whitsuntide, two hours at Midsummer, and two hours on Christmas-eve, and all Christmas-day and Good Friday. The girls bring hobbans; plum and potato, more than pasties. Not many bring bread and butter. A hobban is not so good as a pasty. Some are made with barley. She gets for supper fish and potatoes; sometimes stew, roast potatoes, or broth. Sometimes, but very seldom, the girls are obliged to give up their work from being sick or faint; two or three months ago three or four were obliged to be led home; they were employed at out-door work, griddling or spalling. She went to day-school before she came to work, and goes to Sunday-school twice in the day.

She reads pretty well. Thought John the Baptist had written the Gospel. Had never heard of the Saddueees. She is rather robust in her appearance.

No. 88 (H. 32) *Elizabeth Curnow*, 24 years old. Examined at the Consolidated Mines, May 15, 1841:

Has been about eight years coming to the mines. Has only worked these two last days for two months. Is taken with a gradual loss of strength and appetite once or twice a year, and finds the harder she works the less she can eat. Sometimes she comes to the mine, and sometimes she goes into service, when her health is more established. Does not find much difference as to her health between these two occupations; the work at the mine is harder for the time, but when one leaves work, there is nothing more to do. She comes at seven in the

morning and stays till eight in the evening at sampling. This is once a month, and lasts for a week or a fortnight, more often a fortnight. She is generally employed "cobbing". They are paid by the barrow, 8d for six barrows. The half-hour is not long enough for dinner, especially for those who have bad teeth. They can always warm their dinners if they like. She lives about two miles from the mine. It was always usual to stay till eight here. She gets very cold about the legs with the broken stones in the winter; and the house runs with water; most complain of it. The older girls generally have pasties.

Complexion rather sallow.

No.89 (H. 33) *Christiana Pascoe*, 17 years and 4 months old. Examined at the Consolidated Mines, May 15, 1841:

Has come to work about five years, or rather more. Has always been at these mines. She was for two years employed "picking", then she went to the floors, "spalling" and "carrying"; and she has now been "cobbing" for seven months. This work is not so trying to the body as working out of doors. She was let in because she was not able to continue work out. She had pains in her back. and was falling into a decline by it, her breath getting very short, till she took medicine for it. Cobbing is very cold for the legs. The feet get wet with water coming in; and the stones are wet when there is rain. Can "cobbie" six harrows a day, for which 8d. is paid. That is all they are allowed to get when they do not stay till eight. She could not do more well; the work is very hard. Can cobbie a barrow and sometimes two in the overtime. She has still shortness of breath at all times; and pain in the back after working a good many hours. She lives a mile off. Gets up at six; does not get to bed till from 10 to 11; her mother being a widow, and there being household and needle-work to be done after she gets home. Her father was hurt in the mine (Wood Mine), and brought up blood and fell into a consumption, and died eight months ago.

Complexion indicating venous congestion.

No. 90 (H. 34) *William Trethewy*, 13 years old. Examined at the Consolidated Mines, May 15th, 1841:

Has been working three or four years at the mine. Has been "rolling" and "jigging". He worked under-ground for a month or two, three months since, at the 110-fathom level; was employed turning the borer. Was very well then. Caught cold a few days ago, when he stayed up all night "jigging." This was the only time he had worked at night. It was fine weather. but all the boys caught cold; ten of them. Has had very good health generally. He stays from six to eight about a week or a fortnight in the month. Feels his arms and legs pain him sometimes; but is as well as ever after he gets into bed. They are allowed a day or so over their regular pay for this extra work. They take a bit of something about 10 o'clock in the morning; there is no regular time allowed. He got on very well climbing when underground, and would be glad to go down again if he could. Felt nothing from the powder-smoke or poor air. Did not spit black stuff: "Rolling" is the hardest work at surface, and "jigging" in a sieve. Only two of the boys, myself and another, can do it. There are only two boys older than myself on the floors. He never went to day-school except when a little boy. Goes to the church Sunday-school at St. Day where he began to learn to write a week ago. He lives at St. Day (one mile distant). Generally brings potato hobban for dinner. His wages are 12s a month.

He reads fairly. He is now hoarse and suffers from catarrh, but is a fine boy.

No.91 (H.35) *Elisha Morcom*, 13 years and 6 months old. Examined at the Consolidated Mines, May 14th, 1841:

Has been kept at home before to-day for two days, in consequence of having received a blow in the bowels from a stone which a boy threw at him wantonly. He has been ill from time to time, with pain in the bowels, sides, &c. Has been kept at home by sickness a month or two in four years. His general work is "jigging". Has been "rolling" this afternoon. He has been working at grass four years and a half. Always at this mine, with the exception of two or three months. Has been "jigging" a month. His wages are 10s 6d a month. He lives two miles off. Generally gets up at four o'clock or soon after. Brings potato hobban for dinner mostly. Generally, not always, leaves work at half-past five on Saturdays. Went to day-school, and learnt to read, and to write a little.

Reads tolerably.

No.92 (H. 36) *Richard Jeffery*, 9 years and 1 month old. Examined at the Consolidated Mines, May 14th, 1841:

He belongs at the "boxes" (picking tables). Gets 6s a month. Has been eight months here. Has had very good health. His hands get sore when he is long at the "shambles" (the heap to which the stones rejected by the pickers are taken). He stays till eight o'clock now. Is tired with his day's work. Lives two miles and a half off. His father died out at Mexico with the cholera. His mother was left with four, three girls and himself. He is the youngest. Does not go to school. Has never gone yet. His mother cannot afford to give him clothes to go in. Two of his sisters work at this mine; the other is a dressmaker. He cannot read.

II. CORNWALL. WESTERN DISTRICT.

Tin Mine (No. III)

No.93 (E. 16) Mr. Edward Carthew. Examined at Balleswidden Mine, April 16th, 1841:

Is agent for the surface-work. Has been here for about two years. Previously for five years he had lived on a small farm in Illogan, Before that he was for four years and seven months in Columbia, under the Columbian Mining Association. Prior to this he had been surface agent at a mine in Camborne parish, between which and his going to Columbia he had stamps of his own. He went underground first, when about 13, at Wheal Fanny (Carnbrea Mines), and continued to do so for about seven years. Working on tribute. and not being much exposed to wet, poor air, or to climbing from great depths, he did not suffer. Does not remember that the boys complained of the effects of working under-ground. Does not know, and had not heard it remarked, that those who went underground at a very early age died earlier than those who did not. His experience in deep mines is not considerable. Thinks he has remarked that the men in general have a healthier appearance in this neighbourhood than in Illogan and that district. Considers that the families of miners are, as a class, in better condition than those of labourers in husbandry. A great portion of the miners here live on little plots of their own.

Has any arrangement different from the system usually followed in tin-mines been introduced here with respect to the employment of the boys and girls? Some new stamps were set up in October last, and the number of surface boys and girls has been increasing since. When he went to Columbia he found the method of washing the gold-ore caused the loss of a considerable quantity, which was carried away with the refuse. He was desired to make some improvement in this, and he set up some "tyes" in the place of the "buddles" adjoining the stamps. These were found to answer, and he has introduced them here. The consequence is that, the work being lighter, boys at 15s a month can do the work which would have required boys at 25s for the buddles.

What are your hours of work for the boys and girls at surface? From seven A.M. to six P.M. in summer, and from twelve to one for dinner. In winter they work whilst there is daylight, and are allowed about 40 minutes for dinner. On Saturday they leave work at four P.M. in summer, and at three in winter.

Is work ever done on the surface after the regular hours of closing? Scarce ever except at the calcining dressing, which does not employ half a dozen. No work is done on Sunday; the hours of work are seldom shortened by tasks, or in any other way; there are only 15 under ground under the age of 18; working overtime is entirely at their own choice.

Have you observed what is given to the boys and girls for their dinners? More than half of them have fish and potatoes, or stew with a little meat in it; the rest bring pasties or "fuggans" A great many have their dinners brought to them warm by their friends from their homes.

What is the employment of the youngest boys underground? They are employed tending the pair (adult labourers), breaking stuff for "tamping", and other light jobs.

Is any superintendence exercised to guard against the employment of very young or weakly boys in unfavourable situations? No, the boys are chiefly with their fathers or brothers, and are taken care of by them.

Are there any holidays allowed? Only Christmas-day and Good Friday.

Are the children employed by the tributers, or by the owners? They are employed by the dresser who pays them separately. The agreements are made by the children themselves. There is no complaint whatever with respect to the payment of wages either on the part of children or parents.

Is any check exercised on the tributer as to his spaling (fining) the boys under him? The only spaling practised here is in case of their not coming in time to their work, which is a rare occurrence.

Have you discovered, or had reason to suspect dishonesty in many instances? We have had no reason to complain in this respect.

There would probably be no difficulty in arranging the hours for the children's leaving work so that they might attend evening-school.

There is a fund in this mine raised by the payment of 8d a month by the men, from which 5s a week is allowed in case of sickness or injury. It has been always solvent, and has had a balance in hand. In cases of consumption it is left to the miners to decide how long the payment shall be continued; he has never known persons rely on the fund for more than a month or six weeks. Sixpence a. month is paid to the surgeon, for which he provides attendance to the whole family in sickness as well as injury.

No.94 (F. 13) One of the tributers, adult. Examined at Balleswidden Mine, April 16th, 1841:

Has worked here for two years; his wife and child live at Newlyn (six or seven miles distant), and he comes out on Monday, and returns on Friday or Saturday, when his week is finished, lodging in the neighbourhood of the mine: his wife carries on a little trade in fish; he is a native of St. Just, and first went. underground, at Balleswidden, when seven years and a half old; his father was a needy man, which occasioned his going down so young; afterwards he worked in Wheal Busy, and lived at Chacewater (central district);

was sump-man for 10 years; he did not suffer as a boy, nor afterwards, until he was sent to clean the adit (from stalactitic incrustations) after a fall of snow, when there was so much water, that they were immersed to the breast, often to the chin; the stream was so powerful, that they were not able to make head against it, so as to return in the same direction in which they entered, but were forced to go along the adit with the stream into another mine; so that they were altogether six hours in this icy cold water; and when they got to the surface they had to walk two miles back to their own mine before they could get their dry clothes. His comrade, who was a stronger man than himself, took to his bed and died; and he himself has ever since been subject to an asthmatic affection, which he cannot throw off. There is nothing objectionable in Balleswidden, except that there is a great deal of powder-smoke. "Though this is my own country, (St. Just) I think there is a great difference in the principle of the men from what there is farther east; I received more kindness there than I ever did here; they lived better there; here there is nothing but fish and potatoes". "I earned only 11s 6d last month, and had to pay 15s for my bread and lodging; and the month before I got nothing at all; the 'pitch' is now better. If I could raise a sufficient sum to buy a horse, I would travel and sell fish, and give up mining altogether."

This man's voice was hoarse, and he laboured under a degree of dyspnoea.

Copper and Tin Mine (No. V)

No.95 (E. 17) Mr. John Nancarvis, 36 years old. Examined at the Levant Mine, April 16th, 1841:

Is employed as captain of the dressers; he overlooks the whole of the dressing the ores of copper; has been five years in that situation; before that worked underground; has been nearly 20 years under the same adventurers, and chiefly in this mine; he has 45 boys and girls under him. The hours for surface-work here are from seven in the morning till 12, then dinner till one, and work till five; in the winter as long as they can see; underground they work six-hour "cores." The mine is hot and deep, and it is considered that six hours will work a man down". The friends commonly bring their dinners to them, fish and potatoes and stew chiefly. They have six holidays in the year: this is an old-established custom in the mine; they are not paid for those days; they leave work rather earlier on Saturdays than on other days; no work is done on Sundays except tending the engine; no boys or girls are employed on that day. Those who go to work underground very early; and it is more common here at 10 years of age than later; lose their colour; they often spit black stuff, and he thinks they grow up more weakly, and probably fail sooner. than those who have begun later; parents would not send them so early except from their necessities. The ladders here are in some cases perpendicular, in others inclined but 10 fathoms in length; some "ends" may be 50 or 60 fathoms, or even more, from any draught. The boys underground are employed in wheeling stuff and tending the men; they are employed by the tributers and tutworkmen, and no interference would be exercised, except in extreme cases; they have been sometimes so young as to be carried on the ladders. Accidents have happened to children from their carelessness.

Do you find that complaints are made of irregular payment of wages by the men who employ children, or by the parents that the children do not bring home their wages? Now and then complaints are made, but seldom of irregularity of pay. The boys, and still more the girls, will sometimes conceal from their parents the amount they have received at the mine, and will request me not to tell them what it was.

Up to what age is it usual with the young people to take in their whole earnings to their parents? When the boys and girls come to be about 19 or 20, and the boys earlier if they take a man's place, they often arrange to pay a certain sum, commonly about 14s a month, to their parents for board and lodging.

In what sums are the wages paid? Five or six are paid together, perhaps with silver, and a £5 note among them; this they change at the shops where they deal.

Is it common for the men to fine the boys employed by them? There is no spaling (fining) by the tributers, except in case of a boy's absence from his place, when another must be procured in his stead, at his expense.

Do you consider that the boys and girls employed here are better or worse in condition than those who are otherwise employed? On the surface they are fully as well off, and in as good condition; not underground.

What has been your general experience of the moral character of the children and young persons employed in your mine? On the whole it is good. Some, generally according to the character of the parents, are bad and ungoverned.

Have you found dishonesty at all frequent? It has very seldom occurred; a pretty-good watch is kept. Cases of "kitting" (exchanging ores at different tributes) happen at times. Two men were committed to gaol for this only a few days ago.

Is coarseness of language common among the girls? I think they are pretty well spoken here generally.

Do they get married early? Some as early as 17 or 18.

Do they make good housewives? They get on pretty well; hardly so well as those who I have been reared at home entirely.

Would a parent, who was much concerned as to the religious and moral principles of his daughters, be willing that they should work at these mines? Yes, he would not object.

Is marriage frequently deferred till it is rendered necessary by the condition of the young woman to save her reputation, and in similar cases is desertion common? More, I think of those who have been married from this mine, have proved to have been in the family-way when married than not. There has, I believe, been only one case of desertion by the man, during the last five years. The young men often marry at 18, 19, or 20.

No. 96 (B. 4) Rev. Thomas Jewell. Examined at St. Just, April 16th, 1841:

Has been here for about a year as Wesleyan Methodist minister; was previously stationed at another mining district, at St. Agnes. We have, during the last year, had a system in operation of sending pupils gratuitously, by means of private subscriptions, to the schools already existing in the several villages in the parish; last year we sent 36. I have a Bible class of about 30 girls and 20 boys, whom I examine for an hour and a half or two hours on one evening in the week, hearing them read the scriptures, and then questioning them colloquially on what they have read, and on general matters connected with their ordinary life. I was for three years at St. Agnes, and consider the St. Just district on the whole in advance of the others: there is more respect for the Sabbath, more estimation of the Sunday-schools, and also of the value of secular instruction. In making visits last winter among some of the poorer families, with a view to distributing a benefaction of coal, I found several who were evidently necessitous, but who declined accepting a donation. There was a national school here, which was discontinued five or six years ago. The master was not suitable; and the being obliged to attend church seems to have operated against its success. What are the results of your observation as to the domestic habits and skill of the wives of the miners, positively and comparatively? I have visited at least a thousand houses of miners at St. Agnes and here, and I find the females taken from the mines very deficient in skill in domestic work; unable to make and mend; they are not much inclined to stay at home. In this neighbourhood the girls are not so much employed at mines as at St. Agnes.

Have you noticed any particulars in their domestic arrangements calculated to operate unfavourably on the characters of the young women? The habits of the miners are not calculated to promote domestic regularity. I may mention particularly the uncertainty of their hours of meals and sleep, and their making little or no distinction between day and night. The houses are too small to admit of a proper separation of sleeping-rooms; and it often happens in a thriving mining district, such as this, that men come from a distance and lodge with families; in which case they frequently sleep in the same room with the females, and the father of the family may be called away to his work during the night.

What opinion have you formed as to the general physical condition of the labouring classes in this neighbourhood, compared with that in other parts in which you have had opportunities of observation? I have seen a great deal of Devonshire, and the poor of the Isle of Man, and I consider the condition of the miner very superior. As agricultural labourers I have never known men so well off as those in the deanery of Buryan (three parishes adjoining St. Just), where they have "part of a cow", sometimes one to themselves, a pig, and so forth. All classes make a great use of fish, of which the supply is on the whole abundant; they eat it in various ways with potatoes which are particularly good in this neighbourhood. The larger fish, as conger, are preferred to the pilchard. Several miners have shares in fishing-boats, perhaps one in ten of the fathers of families; the boats are small, and are shared among six or eight; they are not of any important pecuniary advantage to the miner. Barley bread is much used here; more than in the eastern mining districts.

Could you distinguish the children who work underground from others, when dressed in their Sunday clothes? I think I should know them very readily in the Sunday-school, by their greater sallowness.

No. 97 (A. 3) Joseph Came, Esq. Examined at Penzance, April 15th, 1841:

Have you as a magistrate had cases brought, before you arising out of the contract system usual in our mines? At petty sessions we have a few summonses in consequence of disagreement as to the amount due; six to one more frequently against the agents than against the men. These have been less frequent since we recommended the signing the agreements by the takers of pitches (contracts).

Do you consider the usual system of putting up the work at auction advantageous to the miner, or otherwise? It does not seem to me to foster habits of prudence and economy, the wages being very uncertain in amount; and sometimes the smallness of the gains leads to a good deal of difficulty in providing for a family. This happens chiefly to heedless men. I have hardly ever known a good miner, a prudent man of good common sense, a loser by a pitch. A great deal of calculation is needed before the miner can form a just estimate of the returns likely to be made to him by a particular piece of contract-work. He must take into consideration the hardness of the ground, and how much of it he will be able to remove in a given time; what it will cost to break and dress it when brought to the surface; the expense of powder, candles, tools, and other materials; the probable amount of ore contained, and its richness; and lastly, the standard or price of the ore in the market when it is brought to sale. The clever and experienced miner will reckon up all these items with great accuracy, though commonly without any technical knowledge of arithmetic. But, on the whole, I think it would be better to set the pitches at a fixed standard, and to pay the tributers once a month.

You have been acquainted with the mining population in this county for a great many years: allow me to ask your opinion as to its positive and relative progress in social and individual improvement? It seems to me that the advance in the civilization of the miners has gone on at about an equal rate with that of society generally. The difference in the conduct of the miners, as respects morals and decency of behaviour, is not perhaps very distinctly marked; but a very great improvement has taken place in the character of the agents, and this eventually influences very much the conduct of the men. As to mental cultivation, observation and common sense continue still, as they have been, more remarkably their characteristics than school education.

Do you consider the wages earned by the children and young persons employed in our mines more than sufficient to provide what is commonly furnished to them by their parents? Certainly, in a large proportion of cases; 6d a day would, I conceive, provide sustenance and perhaps clothing.

Do you look upon the style of dress of the miners' children as extravagant, judging from their appearance at the Sunday-schools? The clothing of the children at the Sunday-schools is decent, not fine.

To revert to charges brought before you as a magistrate, have the children and young persons been often convicted of dishonesty? I have known very few or no charges of dishonesty against the children and young persons in our mines.

III. CORNWALL. EASTERN DISTRICT Tin Mine (No. IV)

No.98. (E. 18.) Mr. Francis Barrett. Examined at the Charlestown United Mines, April 6th, 1841:

Is one of the principal agents managing these mines. Almost all the underground work here is done by tutwork. The men can earn from £2 18s to £3 a month, after deducting every charge. We have never had an accident arising from our footways. About 10 or 15 of our boys work one night in a month. Christmas-day and Good Friday, and St. Austle Feast, are the holidays. Those engaged on monthly wages are allowed the latter without deduction. 50 or 60 of the surface boys and girls are employed by a tributer. They are paid by him; but care is taken that this is regularly done. They often are all paid separately. When they get 30s a month, they are allowed 10s for subsistence (in advance). A few may get a shilling or two in the month by working after time. The tributer has the power of spaling (fining), but it is rarely exercised; if severely, the parent complains, and he gives the case a hearing. "Cases of gross misconduct out of hours and not occurring in the mine would in all probability be brought under my notice; and in such cases hitherto by application to the parents, by threatening fine in case of repetition of offence, and similar means, I have usually found that sufficient control could be established. Dismissal is the final punishment, but it has not been required in more than three or four instances."

Do you consider the children and young persons employed in your mines better or worse in physical condition than those otherwise employed in your neighbourhood? Rather better than agricultural children. I see them better dressed on the Sunday. The surface boys and girls have a very healthy appearance.

Is there a decided difference to the disadvantage of those working underground? I should say, judging from my own experience, the difference is very distinct. They do not look so healthy.

Do you consider that anything in their domestic circumstances contributes to render them less healthy? Not in this district.

You have noticed the food brought to the mine by time boys and girls; what does it usually consist of? Generally potato pasty, with a little meat for the most part, as often mutton as pork, not much beef. It is, I should say, amply sufficient in quantity.

Is any clothing provided by the mine? Only to sump and timber men.

Do the boys and girls make any change between summer and winter? The boys have generally an additional blanket coat for the winter; in the dress of the girls there is not much apparent difference, but they are no doubt more warmly clad.

What has been your general experience of the honesty and veracity of the young people employed in your mines? They are generally honest, and perhaps 60 per cent of them may be relied on with confidence for veracity.

Is pregnancy at the time of marriage known to be very frequent, and have many instances of desertion occurred? Being pregnant before marriage is very common. Subsequent marriage, so as to legitimize the child, is the rule. Some few cases of desertion occur, not one in three of those in the agricultural districts. The public opinion of the miners here would be strong against it, so as probably to drive a man away from the neighbourhood.

Are marriages contracted very early in life? By women commonly from 18 to 21, and under 25 by the men. I think the early marriage of the men is rather less frequent.

Do you consider this to arise from increased profligacy or increased prudence? Rather I fear from increased profligacy.

Do the girls prove good housewives? They are not economical or good managers chiefly from ignorance. But I think there is an improvement during the last 15 or 20 years.

Would a religious parent be willing that his daughters should work at a mine? Yes,

there is less corruption now than formerly; coarseness and swearing are getting unpopular among the labourers themselves.

Do you think a sum varying from 1d to 3d a week according to the age could be afforded out of the earnings of the boys and girls for their education? I think 1d a week might be afforded.

Do you think that the duration or severity of the work would prevent their bestowing time or attention on the subjects in which they might be instructed? The amount of labour does not incapacitate them otherwise than occupying their time. I think evening-schools would be very beneficial.

Do you see any material difficulty in shortening the duration of the labour of the younger children? I think no benefit would arise from shortening their labour, as their work is very light and easy.

Would there be any material difficulty in forbidding the employment of boys under 14 years of age underground? There is no advantage in these mines in employing boys below that age.

No.99 (F. 14) Richard Thomas, 55 years old. Examined at the Charlestown Mines, April 5th 1841:

Went to work at surface at 10 years of age, and went underground almost immediately. Was employed blowing the air-machine, which he did for a great part of a twelvemonth. This was in Wheal Damsel in Gwennap. It was not usual at that time for boys to go underground at so early an age, but he had an uncle who was a captain in the mine, and who put him into the place. He considered it a favour to go underground, as he got 5s. a-week there, while he only had 1s 3d at grass. He has continued to work underground as his regular calling from that time to the present. He has not been aware that he has suffered from bad air, except feeling a pain and tightness across the forehead, though he has worked in as bad air as possible; so bad that the man who was with him has fallen off the place where he was sitting at his work, and would have died had he not removed him from the spot. The worst air he has known was in the old Wheal Jewell, a "granite" air, which is ten times worse than the Killas. He worked in a mine in this neighbourhood which was carried under the sea, where there was a bed of mud and sand (alluvium), and the air would take fire at times and scorch their clothes; he set fire to it twice himself. He believes that the boys in his early days did not generally work underground so young as they do now. There has no change taken place, so far as he is aware, in the hours of work since he was a boy. There were three "cores" a day, and the work at night was the same as at present. They went to work at grass (surface) at that time at six in the morning, and left work at six in the evening; but two hours were allowed for dinner; this was in the summer. At that time it was usual to relieve "up" (at surface) instead of "down" (underground), as is now done, in the eight-hour cores, so that he thinks the work-hours were not really so long as at present. Did not, and does not, work overtime himself often. Has known hundreds, he believes, drop from "poor air," and die of decline. He believes that in many cases life might have been preserved had the occupation been changed in the beginning; but poverty compelled men to continue. He knew a man in Wheal Jewell who was laid up for five years from the effects of "poor air", and was afterwards restored by being allowed a quantity of beef and beer daily by the adventurers; he being sent to the inn to eat it, as it was known that if he took it to his own house he would share it with his family. He thinks the half-hour for dinner is rather short, as the pasty is hard; and he would like to have his pipe afterwards. He has eight children himself. Three of them are married. One boy about 19 is now working with him. He has been underground for two years; is in good health.

No. 100 (F. 15) Henry George, 50 years old. Examined at the Charlestown Mines, April 5th, 1841:

Is employed as timberman in this mine. Has been 30 years with the present adventurers. Was born at Blackwater (Kenwyn), and went to work at grass at about 10 years old, and underground before he was 12, at Trescurbie in that neighbourhood. He has continued to work underground ever since; but has been timberman for 20 years. He was often taken down on his father's back, when he was not eight years old, to a depth of 70 fathoms, and would stay down till his father went up again. He does not remember to have had a day's sickness before he was 20 years old. After this he had a fall in the mine, which was followed by typhus fever, which came on afterwards for seven years in succession about Midsummer-day. Was exposed when a boy to "poor air", and would spit black stuff; but did not suffer from shortness of breathing or otherwise from it. In the general way they worked six-hour courses at that time, but the levels were much more contracted than they now are. There have been very few accidents in this mine, or in East Crinnis, where he worked before as timberman, and where the ladders were short, and inclined about one foot per fathom. He has made an improvement in the construction by providing platforms and penthouses about every four fathoms, so that neither men nor tools can fall a greater distance than that; and the passage to the ladder below being under the penthouse, nothing can fall from one ladder upon those below it. This mine is the driest he ever saw in his life; the cold is complained of more than any heats. He has three sons and four daughters. The two eldest are grown men, one in Scotland, the other near Bodmin, mining. The other boy, who is near 14 years of age, is at surface-work at Lanescot (Fowey Consols). He paid 6d a week for each of his boys to attend evening-school for several winters. He has not sent any of his girls to the mine, but would not object to doing so. In this country there is a difficulty in finding other work. One of his girls is married, and another about to be so; the youngest is at school, the other a milliner. He has had nothing but his pay. He

has not himself observed a difference in the health of those who have begun to go under ground very early and others. He has seen a great number drop from consumption. Does not impute this more to imprudence of their own than to the bad effects of poor air, colds and so forth. The greater size of the levels is a very great improvement. He thinks the men in these mines have been much more healthy than those working in the deep mines. Those employed at the "Crushers", where the ore is ground small, spit stuff almost as black as ink. In working under the sea near Par, the air was very bad. They would see a blue flame issuing from the back of the level, which would singe their jackets.

No.101 (H. 26) Harry Thomas, 10 years and 11 months old. Examined at the Charlestown Mines, April 1st, 1841:

Has been here only 12 days. Is employed in serving the "buddle." Finds it rather hard as yet. Was at day-school, and goes to Sunday-school.

Healthy boy. He reads very badly. Cannot write.

No.102 (H. 27) William Rowett, 13 years old. Examined at the Charlestown Mines, April 1st, 1841:

Has been four years on the mine. Has been always employed tending the buddle. Another boy of his own age works with him. Comes to the mine at seven in the morning, and leaves work at half-past five in the evening.

How often do you work after half-past five? Once or twice a month we work as long as we can see, and then go to supper; we are allowed an hour to supper; then we work by candlelight till 12, we are then allowed till one, and we eat some pasty, do not go home. After this we work till two in the afternoon. I am paid for this a day and a half. I put this into my own pocket. Sometimes I feel sleepy, sometimes very well. His father is a timberman at this mine. Has nine children, eight boys and one girl; six of them are at this mine with his father. He was at day-school a year and a half before came to the mine, and then at Sunday-school till a year and a half ago (at Mount Charles Wesleyan Meeting), but has forgotten what he learnt. Cannot read. Did not give his thoughts to it. Has not clothes to go to Sunday-school. He works with his father after he leaves work at the mine. Does not feel tired. Has been quite well.

No.103 (H. 28) Elizabeth Hockin, 17½ years old. Examined at the Charlestown Mines, April 1st, 1841:

Her work is spalling. She has been here four years. Has been spalling three years; was recking before. She found the spalling much the harder work; still finds it hard; feels pain in her limbs, sometimes in her back; does not always get rid of it on lying down. She stays up till nine or ten, and gets up at half-past five. She works an hour or an hour and a half overtime about once a month. She gives her mother all her wages, and what she can of extra pay.

A strong and ruddy girl.

No.104 (H. 29) Elizabeth Davey, 17 years old. Examined at the Charlestown Mines, April 1st, 1841:

Has been here a year and a half. Is employed recking. She was in service before she came to the mine. Finds this employment agree with her better than service; but is liable to take cold.

Has a good colour, but looks rather delicate.

Copper Mine (No. V)

No.105 (H.37) Jacob Waters, 17 years and 10 months old. Examined at the Fowey Consols Mines, April 2nd, 1841:

Is employed at the 67-fathom level, beating the borer and turning it. Has been 16 months underground steadily. Before that worked underground for a very short time, when he was between 15 and 16. The air is poor where he is now. He has been there about four months, driving a level. He feels a pain in the head after working some time, which lasts for some hours after he is come to the surface. Almost every morning he has a cough, and brings up some stuff as black as ink. Sometimes he feels a pain in the breast. He is employed at tutwork. They work regularly eight-hour courses; always from six A.M. to two P.M. They "shoot" (blast) three or four times a day, after which they cannot go into the end for half an hour, as it is full of smoke. He then eats his pasty in the level, where there is better air. He went to work at "grass" at 12 years old. Worked two years at "jigging", and before that at the stamps. He can do his work very well. He does nothing after he comes up from underground. He cannot generally get water underground. Sometimes it is brought to the same level. He sweats a great deal and is very thirsty. When he worked at night, he only worked double stem once. He worked double stem yesterday,—from 6 A.M. to 11 P.M., coining up in the mean time for an hour. He changes in a cold place. There is no warm water. In winter-time the shoes are sometimes frozen up in the chest. Has known several accidents happen to boys underground; some from falling away. His father was a miner, and had his leg broke [sic] by a piece of timber falling on him in the shaft. He went to day-school till he was 12, and afterwards to Sunday-school for a year and a half. He has since gone to an evening-school, where he learnt ciphering as far as compound division. The charge was 3d a week if candle was brought by the boy, and 3½d otherwise.

Reads well, and can write.

No.106 (H. 38) William Blewett, 16 years and 4 months old. Examined at the Fowey Consols Mines, April 2nd, 1841:

Works at the 55-fathom level. He went underground first about, nine years of age. He then worked a month or two at a time, blowing air. The deepest place he was then in was the 150-fathom level. Afterwards, at 11, he worked for a year at a time. At less than 12 years of age he was taken into concern with his father; was employed beating the borer, &c. He took his night "core" regularly then. He worked in "poor air" for nine months before the last two months. He felt noises in the head, and his legs would feel so weak that he was forced to stop at every ladder. Was very much affected with cough when working in the "poor air", and would bring up black stuff. When a little boy, he felt but little inconvenience when blowing air; but sometimes found the air so bad that he would be sick at the same time. At present he never works double stem; nor after 12 at night; except the other night when waiting on the trammer. He went to school for a twelvemonth before he came to work at surface, which he did at seven years of age. Since that has gone, till lately, to Tywardreath Sunday-school. They are very seldom asked questions on what they read. He can write very little. Never did any ciphering.

Reads pretty well.

No.107 (H. 39) James Collins, 14 years and 5 months old. Examined at the Fowey Consols Mines, April 2nd, 1841:

Has been underground about seven months. Was before about three years "to grass". He works now at the 80-fathom level, at the blowing-machine. Finds it rather hard work. When he goes into the end, when they want him, his head aches from the poor air, after he comes out." Does not get sick, but cannot eat his meat there. Very seldom eats the pasty he takes underground, but eats his meal heartily at home after he comes up. Can hardly climb sometimes from weakness in the legs. They carry water down themselves. Nobody is employed in this mine to carry water underground. He did not suffer "at grass" except sometimes from cold or getting wet, when "buddling". He is better now than when he went underground. Can eat his meat better. He is not in much smoke, and does not cough up the black sputa. He went to day-school "to a lot of places" before he came to the mine at all. Learnt nothing but reading has nearly forgotten what he learnt. Has not been to Sunday-school these nine months, for want of clothes. His father was a miner. "He went underground and took pain in his bowels, and died." This was nine years ago. His mother was left with four children. They are all employed at the mine. They can read. He worked last week three double stems, to keep the place for a comrade who met with an accident. "His candle went out, and he walked right into a winze." Once this week he has worked double stem for himself. He takes the night core with the men. He likes working underground better than "at grass", because the time is shorter. After he gets home he fetches water, works in the garden and so forth.

He has quite forgotten his reading, even in the Bible. Is hoarse, and says he has been so ever since he went underground.

No.108 (H. 40) John Rundle, 14 years old. Examined at the Fowey Consols Mines, April 2nd 1841:

Has been two years underground; works now at the 120-fathom level; he worked "to grass" before, for about three years and a half; his employment now is at the blowing-machine, and "haling [sic] tackle". The air is very bad; he cannot eat his pasty much; "he feels in his stomach all urging; was well when at grass, except colds; worked then at "buddling"; and "trunking"; was often wet; got his things dried at night when he went to bed; he finds it hard to climb the ladders; "likes underground better than to grass"; takes his night core in regular succession. His father is dead: "he was hurted", and went to work too soon afterwards; he left four children; one sister is married, and his two brothers work here. He went to day-school for three years and a half; learned to write pretty well, but has forgotten it since; goes to the Methodist Sunday-school; learns nothing but reading and spelling.

Reads badly.

No.109 (H. 41) William Cullis, 17 years old. Examined at the Fowey Consols Mines, April 2nd, 1841:

Is employed "jigging" at the floors; he worked before at the "crushers", (grinder) but found it disagree [sic] with his stomach; he was laid up three times; found his breathing short; lost his appetite, and brought up "old black trade"; hears other boys complain of this sometimes; he has been five years at the mine; was three years at the jigging-machine; found his back ache [sic] sometimes; when at the grinder he used to work sometimes (four times in six months) day and night, from seven in the evening to five next morning; he has been healthy at the other work. He went to day-school for two years; learnt to write a little, but has forgotten it. He went to Sunday-school, Tywardreath Church-school, till about a year ago; only learnt reading and spelling.

Reads pretty well.

No.110 (H. 42) John Tillum, 14 years and 5 months old. Examined at the Fowey Consols Mines, April 2nd, 1841:

Has worked underground most of his time for about four years past; works at the 170-fathom level, at the blowing-machine; it is very hot in the place; he can eat his pasty

there; is hoarse now, has been so about three weeks; he very seldom works double stem. His father is a miner; has five children, all younger than himself. He went 10 day-school; learnt a little ciphering, which he has forgotten; can write a little. Goes to Sunday-school (Methodist) still; they only learn reading and spelling.

He reads pretty well.

No.111 (H. 43) *John Spargoe*, 11 years and 4 months old. Examined at the Fowey Consols Mines, April 2nd, 1841:

Has been two years at the mine; is employed "jigging"; finds his back ache a little, but can play about afterwards; has a task once or twice a week, and can get away at two or three o'clock; works for himself afterwards when he can; never works at night. He went to day-school about a year before he came here; can read in the Testament; goes to Sunday-school.

Reads badly. A healthy boy.

No.112 (H. 44) *Mary Buller*, 15 years and 10 months old. Examined at the Fowey Consols Mines, April 2nd, 1841:

Has been working here about six years; generally "spalling" and "cobbing"; has generally had pretty good health; does not feel the work; leaves at five in the evening, never stays later, except once last month; perhaps once a week has a task, and can get away at three or half-past three. "Most of the girls whom I know of, and I know a pretty deal of them in the mine, are strong and hearty." One of them (whose name she mentioned) "is terrible weakly, and looks very earthy, though she is 18"; she went to day-school for three years, and learnt to read, and sew, and knit; has forgotten her reading; has not had clothes to go to Sunday-school; her mother is a widow, and could not afford to keep them at school.

No.113 (H 45) *Caroline Coom*, 11 years old. Examined at the Fowey Consols Mines, April 2nd, 1841:

Has been working here about two years; is employed "picking"; finds it easy and pleasant work; does not feel tired at the end of the day; none of the girls picking complain of anything; they get colds sometimes; she has no task; does not leave before five; has had a fever since she has been working at the mine; does not know how long ago. She goes to Sunday-school; reads the Testament there.

Reads a little.

No.114 (H 46) *Absalom George*, 13 years old. Examined at the Fowey Consols Mines, April 2nd, 1841:

He has worked underground about 13 months; is at the 45-fathom level; goes with his father instead of a man; gets wages as "part of a man"; he worked "to grass" for two years before. He went underground some time ago, and "blowed the machine" for about a fortnight; "the air was rather dead, and I was laid up, and was turned out from there." He mostly spits up, when he comes up from work, "nasty black trade"; he brings up some borers and other weights sometimes, "which makes him pant a good deal." Does not work at night, nor double stem; he likes it better than to grass, because the days are shorter, but he works hard when he gets home, and would be obliged to do so if at grass. His father has a little farm; he has seven children; two of them are younger than himself, and do nothing; the rest are employed. He went to day-school from about six years old, and about 10 "went to ball" (the mine). He learnt to write a little; can write his name.

Goes to Sunday-school; can read pretty well.

No.115 (F. 14) *John Penhall*, 50 years old. Examined at Biscovay, St. Blazey, April 3rd, 1841:

Has been a miner from a boy; went underground at 15 or 16; he works now in the Fowey Consols; has nine children, whom he has had taught to read and write; he has paid 5s 6d a quarter for the day-school, and 3d a week for the evening-school; this is only open in the winter months. One of his boys he took underground at Fowey Consols about Christmas; he was 12 years old, a very fine and strong boy of his age. In about five weeks afterwards his boy was taken home on a shutter, with a broken leg and collar-bone; he fell off the ladder; could give no account of his fall, was not carrying anything; he was working himself in a distant part of the mine at the time. "When I was told what had happened, I travelled as fast as I could to the place; and I seemed to see, every few fathoms as I went, the body of my poor boy all crushed together: it was so clear that I stopped and rubbed my eyes, and asked myself whether I was in my right mind or no. When I got to the place, the boy was sitting upon a man's knee, looking up quite cheerful, only crying a little. He has found, when working in "poor air", that the pain in the forehead would often be very severe, and it was aggravated to an intense degree on stooping; so that he would dread to stoop to pick up a tool if he let one fall. The changes from heat to cold were at times very sudden; he might be working at a place, to get at which he would be obliged to wade for a considerable distance up to his breast in cold water; at other times he might work in a very hot place, from which they were obliged to retreat very frequently, as the water gained upon them, into the level, where they would all get huddled together as closely as possible, "creaming [sic] with cold;" then, when the water was in fork" (removed), they would in again, and drive at their work as hard as they could.