

IX - BOTALLACK MINE.

I have little doubt that the less patient among the readers of this narrative have already, while perusing it, asked themselves some such questions as these:--"Is not Cornwall a celebrated mineral country? Why has the author not taken us below the surface yet? Why have we heard nothing all this time about the mines?"

Readers who have questioned thus, may be assured that their impatience to go down a mine, in this book, was fully equalled by our impatience to go down a mine, in the county of which this book treats. Our anxiety, however, when we mentioned it to Cornish friends, was invariably met by the same answer. "Wait"--they all said--"until you have turned your backs on the Land's End; and then go to Botallack. The mine there is the most extraordinary mine in Cornwall; go down that, and you will not want to go down another--wait for Botallack." And we did wait for Botallack, just as the reader has waited for it in these pages. May he derive as much satisfaction from the present description of the mine, as we did from visiting the mine itself!

We left the Land's End, feeling that our homeward journey had now begun from that point; and walking northward, about five miles along the coast, arrived at Botallack. Having heard that there was some disinclination in Cornwall to allow strangers to go down the mines, we had provided ourselves--through the kindness of a friend--with a proper letter of introduction, in case of emergency. We were told to go to the counting-house to present our credentials; and on our road thither, we beheld the buildings and machinery of the mine, literally stretching down the precipitous face of the cliff, from the land at the top, to the sea at the bottom.

This sight was, in its way, as striking and extraordinary as the first view of the Cheese-Wring itself. Here, we beheld a scaffolding perched on a rock that rose out of the waves--there, a steam-pump was at work raising gallons of water from the mine every minute, on a mere ledge of land half way down the steep cliff side. Chains, pipes, conduits, protruded in all directions from the precipice; rotten-looking wooden platforms, running over deep chasms, supported great beams of timber and heavy coils of cable; crazy little boarded houses were built, where gulls' nests might have been found in other places. There did not appear to be a foot of level space anywhere, for any part of the works of the mine to stand upon; and yet, there they were, fulfilling all the purposes for which they had been constructed, as safely and

completely on rocks in the sea, and down precipices in the land, as if they had been cautiously founded on the tracts of smooth solid ground above!

The counting-house was built on a projection of earth about midway between the top of the cliff and the sea. When we got there, the agent, to whom our letter was addressed, was absent; but his place was supplied by two miners who came out to receive us; and to one of them we mentioned our recommendation, and modestly hinted a wish to go down the mine forthwith.

But our new friend was not a person who did anything in a hurry. He was a grave, courteous, and rather melancholy man, of great stature and strength. He looked on us with a benevolent, paternal expression, and appeared to think that we were nothing like strong enough, or cautious enough to be trusted down the mine. "Did we know," he urged, "that it was dangerous work?" "Yes; but we didn't mind danger!"--"Perhaps we were not aware that we should perspire profusely, and be dead tired getting up and down the ladders?" "Very likely; but we didn't mind that, either!"--"Surely we shouldn't like to strip and put on miners' clothes?" "Yes, we should, of all things!" and pulling off coat and waistcoat, on the spot, we stood half-undressed already, just as the big miner was proposing another objection, which, under existing circumstances, he good-naturedly changed into a speech of acquiescence. "Very well, gentlemen," he said, taking up two suits of miners' clothes, "I see you are determined to go down; and so you shall! You'll be wet through with the heat and the work before you come up again; so just put on these things, and keep your own clothes dry."

The clothing consisted of a flannel shirt, flannel drawers, canvas trousers, and a canvas jacket--all stained of a tawny copper colour; but all quite clean. A white night-cap and a round hat, composed of some iron-hard substance, well calculated to protect the head from any loose stones that might fall on it, completed the equipment; to which, three tallow-candles were afterwards added, two to hang at the buttonhole, one to carry in the hand.

My friend was dressed first. He had got a suit which fitted him tolerably, and which, as far as appearances went, made a miner of him at once. Far different was my case.

The same mysterious dispensation of fate, which always awards tall wives to short men, decreed that a suit of the big miner's should be reserved for me. He stood six feet two inches--I stand five feet six inches. I put on his flannel shirt--it fell down to my toes, like a bedgown; his drawers--and they flowed

in Turkish luxuriance over my feet. At his trousers I helplessly stopped short, lost in the voluminous recesses of each leg. The big miner, like a good Samaritan as he was, came to my assistance. He put the pocket button through the waist buttonhole, to keep the trousers up in the first instance; then, he pulled steadily at the braces until my waistband was under my armpits; and then he pronounced that I and my trousers fitted each other in great perfection. The cuffs of the jacket were next turned up to my elbows--the white night-cap was dragged over my ears--the round hat was jammed down over my eyes. When I add to all this, that I am so nearsighted as to be obliged to wear spectacles, and that I finished my toilet by putting my spectacles on (knowing that I should see little or nothing without them), nobody, I think, will be astonished to hear that my companion seized his sketch-book, and caricatured me on the spot; and that the grave miner, polite as he was, shook with internal laughter, when I took up my tallow-candles and reported myself ready for a descent into the mine.

We left the counting-house, and ascended the face of the cliff--then, walked a short distance along the edge, descended a little again, and stopped at a wooden platform built across a deep gully. Here, the miner pulled up a trap-door, and disclosed a perpendicular ladder leading down to a black hole, like the opening of a chimney. "This is the shaft; I will go down first, to catch you in case you tumble; follow me and hold tight;" saying this, our friend squeezed himself through the trap-door, and we went after him as we had been bidden.

The black hole, when we entered it, proved to be not quite so dark as it had appeared from above. Rays of light occasionally penetrated it through chinks in the outer rock. But by the time we had got some little way farther down, these rays began to fade. Then, just as we seemed to be lowering ourselves into total darkness, we were desired to stand on a narrow landing-place opposite the ladder, and wait there while the miner went below for a light. He soon reascended to us, bringing, not only the light he had promised, but a large lump of damp clay with it. Having lighted our candles he stuck them against the front of our hats with the clay--in order, as he said, to leave both our hands free to us to use as we liked. Thus strangely accoutred, like Solomon Eagles in the Great Plague, with flame on our heads, we resumed the descent of the shaft; and now at last began to penetrate beneath the surface of the earth in good earnest.

The process of getting down the ladders was not very pleasant. They were all quite perpendicular, the rounds were placed at irregular distances, were many of them much worn away, and were slippery with water and copper-ooze. Add to this, the narrowness of the shaft, the dripping wet rock

shutting you in, as it were, all round your back and sides against the ladder--the fathomless darkness beneath--the light flaring immediately above you, as if your head was on fire--the voice of the miner below, rumbling away in dull echoes lower and lower into the bowels of the earth--the consciousness that if the rounds of the ladder broke, you might fall down a thousand feet or so of narrow tunnel in a moment--imagine all this, and you may easily realize what are the first impressions produced by a descent into a Cornish mine.

By the time we had got down seventy fathoms, or four hundred and twenty feet of perpendicular ladders, we stopped at another landing-place, just broad enough to afford standing room for us three. Here, the miner, pointing to an opening yawning horizontally in the rock at one side of us, said that this was the first gallery from the surface; that we had done with the ladders for the present; and that a little climbing and crawling were now to begin.

Our path was a strange one, as we advanced through the rift. Rough stones of all sizes, holes here, and eminences there, impeded us at every yard. Sometimes, we could walk on in a stooping position--sometimes, we were obliged to crawl on our hands and knees. Occasionally, greater difficulties than these presented themselves. Certain parts of the gallery dipped into black, ugly-looking pits, crossed by thin planks, over which we walked dizzily, a little bewildered by the violent contrast between the flaring light that we carried above us, and the pitch darkness beneath and before us. One of these places terminated in a sudden rising in the rock, hollowed away below, but surmounted by a narrow projecting wooden platform, to which it was necessary to climb by cross-beams arranged at wide distances. My companion ascended to this awkward elevation, without hesitating; but I came to an "awful pause" before it. Fettered as I was by my Brobdingnag jacket and trousers, I felt a humiliating consciousness that any extraordinary gymnastic exertion was altogether out of my power.

Our friend the miner saw my difficulty, and extricated me from it at once, with a promptitude and skill which deserve record. Descending half way by the beams, he clutched with one hand that hinder part of my too voluminous nether garments, which presented the broadest superficies of canvas to his grasp (I hope the delicate reader appreciates my ingenious indirectness of expression, when I touch on the unmentionable subject of trousers!). Grappling me thus, and supporting himself by his free hand, he lifted me up as easily as if I had been a small parcel; then carried me horizontally along the loose boards, like a refractory little boy borne off by the usher to the master's birch; or--considering the candle burning on my hat, and the necessity of elevating my position by as lofty a comparison as I

can make--like a flying Mercury with a star on his head; and finally deposited me safely upon my legs again, on the firm rock pathway beyond. "You are but a light and a little man, my son," says this excellent fellow, snuffing my candle for me before we go on; "only let me lift you about as I like, and you shan't come to any harm while I am with you!"

Speaking thus, the miner leads us forward again. After we have walked a little farther in a crouching position, he calls a halt, makes a seat for us by sticking a piece of old board between the rocky walls of the gallery, and then proceeds to explain the exact subterranean position which we actually occupy.

We are now four hundred yards out, under the bottom of the sea; and twenty fathoms or a hundred and twenty feet below the sea level. Coast-trade vessels are sailing over our heads. Two hundred and forty feet beneath us men are at work, and there are galleries deeper yet, even below that! The extraordinary position down the face of the cliff, of the engines and other works on the surface, at Botallack, is now explained. The mine is not excavated like other mines under the land, but under the sea!

Having communicated these particulars, the miner next tells us to keep strict silence and listen. We obey him, sitting speechless and motionless. If the reader could only have beheld us now, dressed in our copper-coloured garments, huddled close together in a mere cleft of subterranean rock, with flame burning on our heads and darkness enveloping our limbs--he must certainly have imagined, without any violent stretch of fancy, that he was looking down upon a conclave of gnomes.

After listening for a few moments, a distant, unearthly noise becomes faintly audible--a long, low, mysterious moaning, which never changes, which is felt on the ear as well as heard by it--a sound that might proceed from some incalculable distance, from some far invisible height--a sound so unlike anything that is heard on the upper ground, in the free air of heaven; so sublimely mournful and still; so ghostly and impressive when listened to in the subterranean recesses of the earth, that we continue instinctively to hold our peace, as if enchanted by it, and think not of communicating to each other the awe and astonishment which it has inspired in us from the very first.

At last, the miner speaks again, and tells us that what we hear is the sound of the surf, lashing the rocks a hundred and twenty feet above us, and of the waves that are breaking on the beach beyond. The tide is now at the flow, and the sea is in no extraordinary state of agitation: so the sound is low and

distant just at this period. But, when storms are at their height, when the ocean hurls mountain after mountain of water on the cliffs, then the noise is terrific; the roaring heard down here in the mine is so inexpressibly fierce and awful, that the boldest men at work are afraid to continue their labour. All ascend to the surface, to breathe the upper air and stand on the firm earth: dreading, though no such catastrophe has ever happened yet, that the sea will break in on them if they remain in the caverns below.

Hearing this, we get up to look at the rock above us. We are able to stand upright in the position we now occupy; and flaring our candles hither and thither in the darkness, can see the bright pure copper streaking the dark ceiling of the gallery in every direction. Lumps of ooze, of the most lustrous green colour, traversed by a natural network of thin red veins of iron, appear here and there in large irregular patches, over which water is dripping slowly and incessantly in certain places. This is the salt water percolating through invisible crannies in the rock. On stormy days it spirts out furiously in thin, continuous streams. Just over our heads we observe a wooden plug of the thickness of a man's leg; there is a hole here, and the plug is all that we have to keep out the sea.

Immense wealth of metal is contained in the roof of this gallery, throughout its whole length; but it remains, and will always remain, untouched. The miners dare not take it, for it is part, and a great part, of the rock which forms their only protection against the sea; and which has been so far worked away here, that its thickness is limited to an average of three feet only between the water and the gallery in which we now stand. No one knows what might be the consequence of another day's labour with the pickaxe on any part of it.

This information is rather startling when communicated at a depth of four hundred and twenty feet under ground. We should decidedly have preferred to receive it in the counting-house! It makes us pause for an instant, to the miner's infinite amusement, in the very act of knocking away a tiny morsel of ore from the rock, as a memento of Botallack. Having, however, ventured on reflection to assume the responsibility of weakening our defence against the sea, by the length and breadth of an inch, we secure our piece of copper, and next proceed to discuss the propriety of descending two hundred and forty feet more of ladders, for the sake of visiting that part of the mine where the men are at work.

Two or three causes concur to make us doubt the wisdom of going lower. There is a hot, moist, sickly vapour floating about us, which becomes more oppressive every moment; we are already perspiring at every pore, as we

were told we should; and our hands, faces, jackets, and trousers are all more or less covered with a mixture of mud, tallow, and iron-drippings, which we can feel and smell much more acutely than is exactly desirable. We ask the miner what there is to see lower down. He replies, nothing but men breaking ore with pickaxes; the galleries of the mine are alike, however deep they may go; when you have seen one you have seen all.

The answer decides us--we determine to get back to the surface.

We returned along the gallery, just as we had advanced, with the same large allowance of scrambling, creeping, and stumbling on our way. I was charitably carried along and down the platform over the pit, by my trousers, as before; our order of procession only changing when we gained the ladders again. Then, our friend the miner went last instead of first, upon the same principle of being ready to catch us if we fell, which led him to precede us on our descent. Except that one of the rounds cracked under his weight as we went up, we ascended without casualties of any kind. As we neared the mouth of the shaft, the daylight atmosphere looked dazzlingly white, after the darkness in which we had been groping so long; and when we once more stood out on the cliff, we felt a cold, health-giving purity in the sea breeze, and, at the same time, a sense of recovered freedom in the power that we now enjoyed of running, jumping, and stretching our limbs in perfect security, and with full space for action, which it was almost a new sensation to experience. Habit teaches us to think little of the light and air that we live and breathe in, or, at most, to view them only as the ordinary conditions of our being. To find out that they are more than this, that they are a luxury as well as a necessity of life, go down into a mine, and compare what you can exist in there, with what you do exist in, on upper earth!

On re-entering the counting-house, we were greeted by the welcome appearance of two large tubs of water, with soap and flannel placed invitingly by their sides. Copious ablutions and clean clothes are potent restorers of muscular energy. These, and a half hour of repose, enabled us to resume our knapsacks as briskly as ever, and walk on fifteen miles to the town of St. Ives--our resting place for the night.

* * * * *

While we were sitting in the counting-house, we had some talk with our good-humoured and intelligent guide, on the subject of miners and mining at Botallack. Some of the local information that he gave us, may interest the reader--to whom I do not pretend to offer more here than a simple record of a half hour's gossip. I could only write elaborately about the Cornish mines,

by swelling my pages with extracts on the subject from Encyclopædias and Itineraries which are within easy reach of every one, and on the province of which, it is neither my business nor my desire to intrude.

Botallack mine is a copper mine; but tin, and occasionally iron, are found in it as well. It is situated at the western extremity of the great strata of copper, tin, and lead, running eastward through Cornwall, as far as the Dartmoor Hills. According to the statement of my informant in the counting-house, it has been worked for more than a century. In former times, it produced enormous profits to the speculators; but now the case is altered. The price of copper has fallen of late years; the lodes have proved neither so rich nor so extensive, as at past periods; and the mine, when we visited Cornwall, had failed to pay the expenses of working it.

The organization of labour at Botallack, and in all other mines throughout the county, is thus managed:--The men work eight hours underground, out of the twenty-four; taking their turn of night duty (for labour proceeds in the mines by night as well as by day), in regular rotation. The different methods on which their work is undertaken, and the rates of remuneration that they receive, have been already touched on, in the chapter on the "Cornish People." It will be found that ordinary wages for mine labour, are there stated as ranging from forty to fifty shillings a month--mention being made at the same time, of the larger remuneration which may be obtained by working "on tribute," or, in other words, by agreeing to excavate the lodes of metal for a per-centage which varies with the varying value of the mineral raised. It is, however, necessary to add here, that, although men who labour on this latter plan, occasionally make as much as six or ten pounds each, in a month, they are on the other hand liable to heavy losses from the speculative character of the work in which they engage. The lode may, for instance, be poor when they begin to work it, and may continue poor as they proceed farther and farther. Under these circumstances, the low value of the mineral they have raised, realizes a correspondingly low rate of per-centage; and when this happens, the best workmen cannot make more than twenty shillings a month.

Another system on which the men are employed, is the system of "contract." A certain quantity of ore in the rock is mapped out by the captain of the mine; and put up to auction among the miners thus:--One man mentions a sum for which he is willing to undertake excavating the ore, upon the understanding that he is himself to pay for the assistance, candles, &c., out of the price he asks. Another man, who is also anxious to get the contract, then offers to accept it on lower terms; a third man's demand is smaller still; and so they proceed until the piece of work is knocked down to the lowest

bidder. By this sort of labour the contracting workman--after he has paid his expenses for assistance--seldom clears more than twelve shillings a week.

Upon the whole, setting his successful and his disastrous speculations fairly against each other, the Cornish miner's average gains, year by year, may be fairly estimated at about ten shillings a week. "It's hard work we have to do, sir," said my informant, summing up, when we parted, the proportions of good and evil in the social positions of his brethren and himself--"harder work than people think, down in the heat and darkness under ground. We may get a good deal at one time, but we get little enough at another; sometimes mines are shut up, and then we are thrown out altogether--but, good work or bad work, or no work at all, what with our bits of ground for potatoes and greens, and what with cheap living, somehow we and our families make it do. We contrive to keep our good cloth coat for Sundays, and go to chapel in the morning--for we're most of us Wesleyans--and then to church in the afternoon; so as to give 'em both their turn like! We never go near the mine on Sundays, except to look after the steam-pump: our rest, and our walk in the evening once a week, is a good deal to us. That's how we live, sir; whatever happens, we manage to work through, and don't complain!"

Although the occupation of smelting the copper above ground is, as may well be imagined, unhealthy enough, the labour of getting it from the mine (by blasting the subterranean rock in the first place, and then hewing and breaking the ore out of the fragments), seems to be attended with no bad effect on the constitution. The miners are a fine-looking race of men--strong and well-proportioned. The fact appears to be, that they gain more, physically, by the pure air of the cliffs and moors on which their cottages are built, and the temperance of their lives (many of them are "teetotallers"), than they lose by their hardest exertions in the underground atmosphere in which they work.

Serious accidents are rare in the mines of Cornwall. From the horrors of such explosions as take place in coal mines, they are by their nature entirely free. The casualties that oftenest occur are serious falls, generally produced by the carelessness of inexperienced or foolhardy people. Of these, and of extraordinary escapes from death with which they are associated, many anecdotes are told in mining districts, which would appear to the reader exaggerated, or positively untrue, if I related them on mere hearsay evidence. There was, however, one instance of a fall down the shaft of a mine, unattended with fatal consequences, which occurred while I was in Cornwall; and which I may safely adduce, for I can state some of the facts

connected with the affair as an eyewitness. I attended an examination of the sufferer by a medical man, and heard the story of the accident from the parents of the patient.

On the 7th of August 1850, a boy fourteen years of age, the son of a miner, slipped into the shaft of Boscawell Down Mine, in the neighbourhood of Penzance. He fell to the depth of thirteen fathoms, or seventy-eight feet. Fifty-eight feet down, he struck his left side against a board placed across the shaft, snapped it in two, and then falling twenty feet more, pitched on his head. He was of course taken up insensible; the doctor was sent for; and on examining him, found, to his amazement, that there was actually a chance of the boy's recovery after this tremendous fall!

Not a bone in his body was broken. He was bruised and scratched all over, and there were three cuts--none of them serious--on his head. The board stretched across the shaft, twenty feet from the bottom, had saved him from being dashed to pieces; but had inflicted at the same time, where his left side had struck it, the only injury that appeared dangerous to the medical man--a large, hard lump that could be felt under the bruised skin. The boy showed no symptoms of fever; his pulse, day after day, was found never varying from eighty-two to the minute; his appetite was voracious; and the internal functions of his body only required a little ordinary medicine to keep them properly at work. In short, nothing was to be dreaded but the chance of the formation of an abscess in his left side, between the hip and ribs. He had been under medical care exactly one week, when I accompanied the doctor on a visit to him.

The cottage where he lived with his parents, though small, was neat and comfortable. We found him lying in bed, awake. He looked languid and lethargic; but his skin was moist and cool; his face displayed no paleness, and no injury of any kind. He had just eaten a good dinner of rabbit-pie, and was anxious to be allowed to sit up in a chair, and amuse himself by looking out of the window. His left side was first examined. A great circular bruise discoloured the skin, over the whole space between the hip and ribs; but on touching it, the doctor discovered that the lump beneath had considerably decreased in size, and was much less hard than it had felt during previous visits. Next we looked at his back and arms--they were scratched and bruised all over; but nowhere seriously. Lastly, the dressings were taken off his head, and three cuts were disclosed, which even a non-medical eye could easily perceive to be of no great importance. Such were all the results of a fall of seventy-eight feet.

The boy's father reiterated to me the account of the accident, just as I had

already heard it from the doctor. How it happened, he said, could only be guessed, for his son had completely forgotten all the circumstances immediately preceding the fall; neither could he communicate any of the sensations which must have attended it. Most probably, he had been sitting dangling his legs idly over the mouth of the shaft, and had so slipped in. But however the accident really happened, there the sufferer was before us--less seriously hurt than many a lad who has trodden on a piece of orange peel as he was walking along the street.

We left him (humanly speaking) certain of recovery, now that the dangerous lump in his side had begun to decrease. I heard afterwards from his medical attendant, that in two months from the date of the accident, he was at work again as usual in the mine; at that very part of it, too, where his fall had taken place!

It was not the least interesting part of my visit to the cottage where he lay ill, to observe the anxious affection displayed towards him by both his parents. His mother left her work in the kitchen to hold him in her arms, while the old dressings were being taken off and the new ones applied--sighing bitterly, poor creature, every time he winced or cried out under the pain of the operation. The father put several questions to the doctor, which were always perfectly to the point; and did the honours of his little abode to his stranger visitor, with a natural politeness and a simple cordiality of manner which showed that he really meant the welcome that he spoke. Nor was he any exception to the rest of his brother-workmen with whom I met. As a body of men, they are industrious and intelligent; sober and orderly; neither soured by hard work, nor easily depressed by harder privations. No description of personal experiences in the Cornish mines can be fairly concluded, without a collateral testimony to the merits of the Cornish miners--a testimony which I am happy to accord here; and to which my readers would cheerfully add their voices, if they ever felt inclined to test its impartiality by their own experience.