

Were you to rest the head of a pick-axe upon the ground, holding its handle upright, you would have a tolerable idea of the real shape of a coal-pit; only the pit is not solid, but hollow. The handle of the pick would represent the shaft or descending cavity, and the iron pick would represent the long excavation below. The shaft of the Foord pit is 900 feet deep. You will find it difficult to realise this depth unless you make use of some field or steeple, the length or height of which you know, in order to help your ideas. The steeple of my church is very high, but this shaft is eight times as high. This pit is nearly one-fifth of a mile deep. It is as deep as the highest of the Cobequid Mountains is high. Fancy the labor and risk of digging such a deep hole down through the hardest rocks into the solid globe. Sinkers work with gunpowder. The powder is inserted, the match lighted, and then the workman is hoisted up the shaft a safe distance till the explosion takes place. As this is very dangerous work, accidents often occur. As the miners descend, the pit is carefully lined with strong timbers and squared of one uniform size, so that an iron cage can run up and down as smooth and exact as possible. In addition to this, another pit of the same size and depth must be sunk at a little distance for a current of air, and for pumping out water. And then think of the tremendous machinery required to pump up water 900 feet. The machinery of the Foord pit is probably the largest in North America. The whole has probably cost seventy thousand pounds, (£70,000.) This may give you a slight notion of the skill, labor, danger, and expense with which our comfortable fires are lighted—brightening up the happy faces of those who seldom think of what has been done and endured to supply such blessings.

One day last week, on passing this great work, I turned aside to look on a little at the long wire rope with the iron cage attached to it, running up and down so smoothly and regularly, when the manager of the works, James Hudson, Esq., kindly asked me if I would like to go down. I said I would, if he would go with me—which he courteously consented to do. Before descending, he showed me the engines by which the cage is driven up and down the shaft. There are two high pressure engines, working with horizontal cylinders of great power. The two engineers that manage them stand with their faces turned to the mouth of the shaft, which they can at all times see. Besides this they can see a small black miniature cage moving up and down the wall of the engine room at the same ratio of distance as the cage in the pit, and shewing how far it is up or down. The signal to start the engine is given from below by two loud knocks. Mark how much care is taken in these arrangements for safety, and how responsible a situation is that of the engineers. They would need to be sober, steady men. They dare not move from their post for an instant. In all such works, however, the guiding mind is the most anxious. A servant has a certain duty assigned him. He may not have to *think*, or, if he has to think, it is only about one or two things: but the manager has to think about everything—he is accountable for everything, and praise or blame falls to his lot. Then, you know, the mind can work far harder than the body. Moderate action may be good for the mind, but not anxiety, in which the feelings are enlisted. The managing engineers of a coal-pit have the property of their employers and the lives of their men in charge—on the one hand, those who employ them, and on the other hand, those whom they employ, look to them. The one class look to them for dividends, and the other look to them for wages and safety. Their positions between these two interests, not always harmonious, cannot be very easy or agreeable.

Meantime the iron cage rises out of darkness to the level of the pit's mouth, and we place ourselves in it. It is an iron frame that fits the shaft and slips up and down like a piston in a cylinder, or a ramrod in a gun. The coal boxes are run *into* it below, and *out* of it above. The signal was given, and in a moment all was dark. Down we went slowly at first, and then so fast that our journey took