CHAPTER II. ON THE ROAD

THE course of James Starr's ideas was abruptly stopped, when he got this second letter contradicting the first.

"What does this mean?" said he to himself. He took up the torn envelope, and examined it. Like the other, it bore the Aberfoyle postmark. It had therefore come from the same part of the county of Stirling. The old miner had evidently not written it. But, no less evidently, the author of this second letter knew the overman's secret, since it expressly contradicted the invitation to the engineer to go to the Yarrow shaft.

Was it really true that the first communication was now without object? Did someone wish to prevent James Starr from troubling himself either uselessly or otherwise? Might there not be rather a malevolent intention to thwart Ford's plans?

This was the conclusion at which James Starr arrived, after mature reflection. The contradiction which existed between the two letters only wrought in him a more keen desire to visit the Dochart pit. And besides, if after all it was a hoax, it was well worth while to prove it. Starr also thought it wiser to give more credence to the first letter than to the second; that is to say, to the request of such a man as Simon Ford, rather than to the warning of his anonymous contradictor.

"Indeed," said he, "the fact of anyone endeavoring to influence my resolution, shows that Ford's communication must be of great importance. To-morrow, at the appointed time, I shall be at the rendezvous."

In the evening, Starr made his preparations for departure. As it might happen that his absence would be prolonged for some days, he wrote to Sir W. Elphiston, President of the Royal Institution, that he should be unable to be present at the next meeting of the Society. He also wrote to excuse himself from two or three engagements which he had made for the week. Then, having ordered his servant to pack a traveling bag, he went to bed, more excited than the affair perhaps warranted.

The next day, at five o'clock, James Starr jumped out of bed, dressed himself warmly, for a cold rain was falling, and left his house in the Canongate, to go to Granton Pier to catch the steamer, which in three hours would take him up the Forth as far as Stirling.

For the first time in his life, perhaps, in passing along the Canongate, he did NOT TURN TO LOOK AT HOLYROOD, the palace of the former sovereigns of Scotland. He did not notice the sentinels who stood before its gateways, dressed in the uniform of their Highland regiment, tartan kilt, plaid and sporran complete. His whole thought was to reach Callander where Harry Ford was supposedly awaiting him.

The better to understand this narrative, it will be as well to hear a few words on the origin of coal. During the geological epoch, when

the terrestrial spheroid was still in course of formation, a thick atmosphere surrounded it, saturated with watery vapors, and copiously impregnated with carbonic acid. The vapors gradually condensed in diluvial rains, which fell as if they had leapt from the necks of thousands of millions of seltzer water bottles. This liquid, loaded with carbonic acid, rushed in torrents over a deep soft soil, subject to sudden or slow alterations of form, and maintained in its semi-fluid state as much by the heat of the sun as by the fires of the interior mass. The internal heat had not as yet been collected in the center of the globe. The terrestrial crust, thin and incompletely hardened, allowed it to spread through its pores. This caused a peculiar form of vegetation, such as is probably produced on the surface of the inferior planets, Venus or Mercury, which revolve nearer than our earth around the radiant sun of our system.

The soil of the continents was covered with immense forests. Carbonic acid, so suitable for the development of the vegetable kingdom, abounded. The feet of these trees were drowned in a sort of immense lagoon, kept continually full by currents of fresh and salt waters. They eagerly assimilated to themselves the carbon which they, little by little, extracted from the atmosphere, as yet unfit for the function of life, and it may be said that they were destined to store it, in the form of coal, in the very bowels of the earth.

It was the earthquake period, caused by internal convulsions, which suddenly modified the unsettled features of the terrestrial surface.

Here, an intumescence which was to become a mountain, there, an abyss which was to be filled with an ocean or a sea. There, whole forests sunk through the earth's crust, below the unfixed strata, either until they found a resting-place, such as the primitive bed of granitic rock, or, settling together in a heap, they formed a solid mass.

As the waters were contained in no bed, and were spread over every part of the globe, they rushed where they liked, tearing from the scarcely-formed rocks material with which to compose schists, sandstones, and limestones. This the roving waves bore over the submerged and now peaty forests, and deposited above them the elements of rocks which were to superpose the coal strata. In course of time, periods of which include millions of years, these earths hardened in layers, and enclosed under a thick carapace of pudding-stone, schist, compact or friable sandstone, gravel and stones, the whole of the massive forests.

And what went on in this gigantic crucible, where all this vegetable matter had accumulated, sunk to various depths? A regular chemical operation, a sort of distillation. All the carbon contained in these vegetables had agglomerated, and little by little coal was forming under the double influence of enormous pressure and the high temperature maintained by the internal fires, at this time so close to it.

Thus there was one kingdom substituted for another in this slow but irresistible reaction. The vegetable was transformed into a mineral.

Plants which had lived the vegetative life in all the vigor of first creation became petrified. Some of the substances enclosed in this vast herbal left their impression on the other more rapidly mineralized products, which pressed them as an hydraulic press of incalculable power would have done.

Thus also shells, zoophytes, star-fish, polypi, spirifores, even fish and lizards brought by the water, left on the yet soft coal their exact likeness, "admirably taken off."

Pressure seems to have played a considerable part in the formation of carboniferous strata. In fact, it is to its degree of power that are due the different sorts of coal, of which industry makes use. Thus in the lowest layers of the coal ground appears the anthracite, which, being almost destitute of volatile matter, contains the greatest quantity of carbon. In the higher beds are found, on the contrary, lignite and fossil wood, substances in which the quantity of carbon is infinitely less. Between these two beds, according to the degree of pressure to which they have been subjected, are found veins of graphite and rich or poor coal. It may be asserted that it is for want of sufficient pressure that beds of peaty bog have not been completely changed into coal. So then, the origin of coal mines, in whatever part of the globe they have been discovered, is this: the absorption through the terrestrial crust of the great forests of the geological period; then, the mineralization of the vegetables obtained in the course of time, under the influence of pressure and heat, and under the action of carbonic acid.

Now, at the time when the events related in this story took place, some of the most important mines of the Scottish coal beds had been exhausted by too rapid working. In the region which extends between Edinburgh and Glasgow, for a distance of ten or twelve miles, lay the Aberfoyle colliery, of which the engineer, James Starr, had so long directed the works. For ten years these mines had been abandoned. No new seams had been discovered, although the soundings had been carried to a depth of fifteen hundred or even of two thousand feet, and when James Starr had retired, it was with the full conviction that even the smallest vein had been completely exhausted.

Under these circumstances, it was plain that the discovery of a new seam of coal would be an important event. Could Simon Ford's communication relate to a fact of this nature? This question James Starr could not cease asking himself. Was he called to make conquest of another corner of these rich treasure fields? Fain would he hope it was so.

The second letter had for an instant checked his speculations on this subject, but now he thought of that letter no longer. Besides, the son of the old overman was there, waiting at the appointed rendezvous. The anonymous letter was therefore worth nothing.

The moment the engineer set foot on the platform at the end of his journey, the young man advanced towards him.

"Are you Harry Ford?" asked the engineer quickly.

"Yes, Mr. Starr."

"I should not have known you, my lad. Of course in ten years you have become a man!"

"I knew you directly, sir," replied the young miner, cap in hand. "You have not changed. You look just as you did when you bade us good-by in the Dochart pit. I haven't forgotten that day."

"Put on your cap, Harry," said the engineer. "It's pouring, and politeness needn't make you catch cold."

"Shall we take shelter anywhere, Mr. Starr?" asked young Ford.

"No, Harry. The weather is settled. It will rain all day, and I am in a hurry. Let us go on."

"I am at your orders," replied Harry.

"Tell me, Harry, is your father well?"

"Very well, Mr. Starr."

"And your mother?"

"She is well, too."

"Was it your father who wrote telling me to come to the Yarrow shaft?"

"No, it was I."

"Then did Simon Ford send me a second letter to contradict the first?" asked the engineer quickly.

"No, Mr. Starr," answered the young miner.

"Very well," said Starr, without speaking of the anonymous letter. Then, continuing, "And can you tell me what you father wants with me?"

"Mr. Starr, my father wishes to tell you himself."

"But you know what it is?"

"I do, sir."

"Well, Harry, I will not ask you more. But let us get on, for I'm anxious to see Simon Ford. By-the-bye, where does he live?"

"In the mine."

"What! In the Dochart pit?"

"Yes, Mr. Starr," replied Harry.

"Really! has your family never left the old mine since the cessation of the works?"

"Not a day, Mr. Starr. You know my father. It is there he was born, it is there he means to die!"

"I can understand that, Harry. I can understand that! His native mine! He did not like to abandon it! And are you happy there?"

"Yes, Mr. Starr," replied the young miner, "for we love one another, and we have but few wants."

"Well, Harry," said the engineer, "lead the way."

And walking rapidly through the streets of Callander, in a few minutes they had left the town behind them.