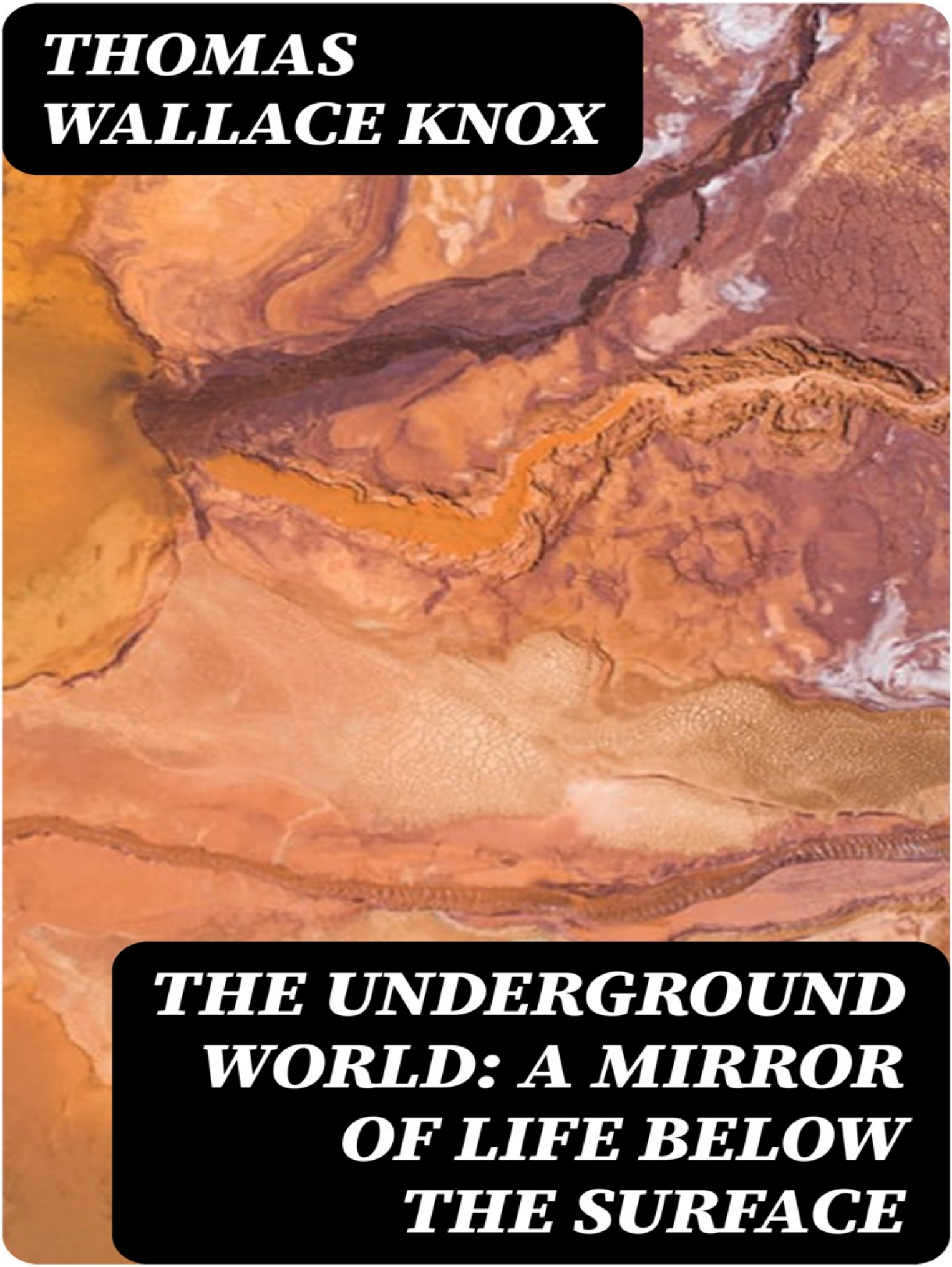

THOMAS WALLACE KNOX
THE UNDERGROUND WORLD: A MIRROR OF LIFE BELOW THE SURFACE

Thomas Wallace Knox

The Underground World: A mirror of life below the surface

EAN 8596547250395

DigiCat, 2022
Contact: DigiCat@okpublishing.info

Table of Contents

ILLUSTRATIONS.

Table of Contents

UNDERGROUND.

I.

Table of Contents

BELOW THE SURFACE.
DIFFUSION OF KNOWLEDGE.—WHAT THE WORLD BELIEVES.—MUNGO PARK IN AFRICA.—WHY THE NATIVES PITIED HIM.—EXTENT OF UNDERGROUND LIFE.—DISTRIBUTION OF THE EARTH'S WEALTH.—VALUE OF MINES.—THEIR EXTENT AND IMPORTANCE.—COAL AND IRON.—MYSTERIES OF MINES.—EXPERIENCE WITH A NOVICE.—CHANGES OF SEASONS TO A MINER.—DANGERS IN MINES.—LIFE IN CAVERNS.—UNDERGROUND IN METAPHOR.—SOCIAL MINING.—OBJECT OF THIS VOLUME.

In these days of fast presses, cheap books and newspapers, lightning telegraphs, and other disseminators of intelligence, there may be those who doubt the correctness of the adage which says, "One half the world does not know how the other half lives." Human nature is inquisitive. We are constantly seeking information regarding the affairs of others, and we generally manage in some way to obtain what we seek. We store our minds with useful and useless knowledge of the manners and customs of people in other lands, and of the private lives and histories of our near neighbors. Very often the material we thus lay aside in our mental store-houses does not particularly concern us, but, like Mrs. Toodles, in her purchase of a door-plate bearing the name of Thompson with a p, we think it will be handy to have at some future day, and so we keep it. With a fair devotion to inquiries, and a well-cultivated memory, a life of threescore and ten years ought, at this day, to acquaint its

possessor with a general knowledge of the how and why of the existence of at least half the inhabitants of the globe.

VARIED TASTES

But it may be set down as an axiom, that one half the world does not live as the other half does. People’s tastes differ, and there are very few who would wish to live exactly like others, especially if those to whom the choice is offered are richer than the others. There are many who would not change places with their wealthy neighbors, and it is more than probable that their wealthy neighbors would not change places with them. The majority of sailors are not happy when on shore, but are constantly sighing for a wet sheet and a flowing sea, while the majority of landsmen have no desire for such hydropathic experience. When Mungo Park travelled in Africa, the natives expressed great pity for him because he had lost his color; they constantly mourned over the unhappy lot of the white man, and would have been quite unwilling to change complexions with him. Mungo received their sympathy with a countenance becomingly solemn, but the chances are more than even that what they regarded as a misfortune was by him considered a blessing. “Give me a bed of ice and a pillow of snow,” said a moribund Laplander in Italy, “and I shall die happy.” A refrigerating couch of this kind would be comfortless in the extreme to a countryman of Pauline Borghese.

A comparatively small portion of the human race lives, or would wish to live, beneath the surface of the globe. Most of us rarely go there voluntarily, and our first visits of any important duration are made after we have shuffled off this mortal coil and invoked the aid of the sexton. Then we are

carried there without protest, and the earth is filled above us in sufficient depth to guard us against ordinary intrusions. We may be certain that none of our friends will come in living flesh to join us, and when death brings them to our side their slumbers will be as long and peaceful as our own. The earth, beneath its surface, is regarded by many, as the dwelling-place of Death, to be contemplated with a shudder, and to be visited only when life has left us.

But have they ever considered how much of life there is which the light of day does not reveal? The plants in our gardens have their roots in the rich soil prepared for their sustenance; remove those roots, and the plants fall and die. The trees of the forest spread their branches and unfold their leaves to sun and storm, but there are other branches spread below which sometimes extend more widely than those above. Through these lower limbs, hidden from the light of the sun and sheltered from the peltings of the pitiless storm, life comes to the trunk and to the upper branches. Lay bare these lower branches, and tear them from the earth, and the tree soon withers and perishes. The grass carpets the meadow, the flowers adorn the hill-sides, wheat and corn grow in the fields, the trees spread their shading limbs and drop their fruits in their season, and without these the world would be desolate. But all have their existence underground, and they cling as tenaciously to the bosom of Mother Earth as the men who walk among or upon them cling to that mysterious element which we call life.

WEALTH UNDERGROUND.

A great portion of the wealth of the globe lies beneath its surface. Gold and

silver form the circulating medium of all civilized and many savage people. Their possession is wealth, as the lack of them is poverty; their coming brings happiness, and their departure leaves misery. From the earth they are taken, and in their pursuit men undergo many privations and suffer many hardships. The diamond that sparkles on delicate fingers has been washed from the accumulations which many centuries had piled above it. Iron, copper, tin, and other metals are sought by the light of the miner's lamp, far away from the rays of the sun, and sometimes in long tunnels pushed beneath the ever-restless ocean. Ages and ages ago the hand of Nature deposited beds of coal in every quarter of the globe, and to-day they afford light and heat to millions of the human race. Down, down, hundreds and thousands of feet below the surface of the earth these coal-beds are spread, sometimes over areas many miles in extent, and promising a supply of fuel for many centuries to come. Thousands of men find profitable employment in these mines; and but for their labors, those of us who live above the surface would often suffer the pangs of cold.

VALUE OF COAL AND IRON.

As the coal burns brightly in our grates and fills our rooms with heat, do we think of the many centuries it has been awaiting our use, and of the toil that has placed it in our control? As we look at the great network of railways, spreading over our continent, bringing north and south, east and west, nearer together, annihilating time and space (and sometimes annihilating people), do we think that but for the mines of coal and iron our country to-day would be little better than it

was half a century ago, and much of its area, now rich in commercial and agricultural prosperity, would be little else than a wilderness? To coal and iron the world owes much of its present advancement, and both these substances come from beneath the surface of the earth.

The most valuable minerals, and those which employ the greatest amount of capital, are of comparatively recent exploitation. Iron has done more good to the world than gold, and is many times more valuable; but gold was known and used long before iron was discovered. Coal is more valuable than copper, and gold, and diamonds; the world could go on without these last, as other minerals could take their places, but nothing now known could take the place of coal. From many parts of the globe the forest primeval has been removed, and countries that a few hundred years ago were thickly wooded are now almost denuded of timber. Should the working of coal mines cease to-day, there would speedily ensue a scarcity of fuel, and, if prolonged, this scarcity would result in much suffering and death. The exploitation of coal is one of the great interests of the British Isles, and is of no inconsiderable importance in the United States. More than two thirds of the mining enterprise of the world is devoted to it; yet this substance, possessing no beauty, and to a casual observer devoid of all merit, is included among the most recently discovered minerals. “Time’s noblest offspring is its last.”

FUNNY EXPERIENCE OF A NOVICE.

To most people the underground life of the miner is a mystery. Comparatively few of those who walk the earth to-day have ever been farther within it than to the

bottom of a cellar; and in many localities even this experience has been denied to the inhabitants, for the reason that no cellars are found there. If an enumeration were made to-day of all persons in the United States who have ever been underground more than fifty feet from the surface, and more than one hour at a time, the number would be found surprisingly small. I once accompanied a gentleman from Boston in a descent into a mine a hundred feet in depth, and having a single gallery about eighty feet long, leading from the foot of the shaft. It was an old story to me, but a new one to my Boston friend, who clung to the rope of our bucket as convulsively as a drowning man would clutch a life buoy. When we reached the bottom, and crept along the low gallery, his heart beat violently, and he several times wished himself safe above ground. When we finished our exploration, and returned to the upper air, I asked him what he thought of the mine.

“Most wonderful thing I ever saw,” he replied. “I never knew much about mines, and didn’t suppose they were so deep. Wonderful, certainly.”

“What would you think,” I asked, “if I should take you into a mine twenty times as deep as this, and having miles of galleries underground, where you could walk a whole day without going through all of them?”

His face assumed the most puzzled expression I ever saw on a human being, and he was speechless for a full minute. When he regained his voice, he said,—

“You might tell me of such a mine, and I should be obliged to believe you, though I can hardly conceive one could be made so large. But as for taking me into such a

place, you could never do it without tying me and carrying me there. Catch me in such a place as that, never."

I told him the story of the boy who went from home for the first time in his life to accompany his father to a grist-mill, about three miles away. When the boy returned, he was thoughtful for a long time, and finally remarked that he never supposed the world was so large.

The miner's life is one of vicissitudes and dangers. He is shut out from the light of day, and depends upon his lamp or candle, instead of the sun and moon. Shut up in the earth, all is night to him; and whether the sun shines or is obscured by clouds, whether the moon is in the heavens, surrounded by twinkling stars, or the whole dome above is wrapped in darkness, makes little difference to him. All is night, and without his artificial light, all is blackest darkness. The changes that follow the earth's daily revolutions are unknown to the miner as he performs his work, and if he remained continually below, the seasons might come and go without his knowledge. Summer's heat and winter's frost do not reach him; there is for him but one season—the season that has endured for millions of years, and may endure for millions of years to come. The temperature of the surrounding earth, unless varied by that of the air driven to him by the machinery of his mine, or by the heat of his lamp, is the temperature in which he performs his labors. Day and night, spring and autumn, new moon and full moon, may come and go, but they extend not their influence to the depths of the mine.

DANGERS UNDERGROUND.

There are dangers from falls of rock and earth, which may cause immediate death,

or enclose their victims in a living tomb.

There are dangers from water, which may enter suddenly, flood the mine, and drown all who cannot reach the opening in time to escape. There are dangers from the atmosphere, which may become foul, and leave him who breathes it lying dead, far away from those who would gladly assist him, but would lose their lives should they go to his rescue. His light grows dim, and warns him of his peril; as he starts for a place of safety the light goes out, and in blackest darkness he falls and dies, unless speedily rescued. There are dangers from fire, where the atmosphere becomes charged with inflammable gas; it is lighted by an accident, and an explosion follows, in which dozens and sometimes hundreds of men are killed. There are dangers from fire outside the mine, as in the horrible affair of Avondale. There are dangers from the breaking of ropes, and the derangement of machinery, from the carelessness of those whose duty it is to exercise the utmost caution, and from other causes to be hereafter enumerated. And yet with all these perils there is no lack of men ready to meet them, as there is no lack of men ready to meet the perils and dangers of all branches of industry. Laborers can always be found for any honest employment, and too often for employment quite outside the bounds of honesty.

EARLY LIFE UNDERGROUND.

The earliest life underground was in caves of natural formation. All over the globe there are caverns where men have lived, sometimes under concealment, sometimes for sanitary reasons, and sometimes because they saved the labor of constructing houses. Some of these

caverns are of great dimensions, and could furnish shelter for thousands of men, while others are adapted to the wants of only a few persons. Many caverns and caves are not available as dwelling-places, but are visited only from motives of curiosity on the part of travellers, or from a desire for gain on the part of those who seek whatever may be valuable. Many caves have histories romantic or tragic, and some of them combine romance and tragedy in about equal proportions. Tales of love and war, of fidelity and treachery, and of all the contending passions and experiences of human nature, can be found in the histories of these excavations which have been made by no mortal hands.

Metaphorically, there is a great deal of underground life above the surface of the earth. Men devote time, and patience, and study to the acquisition of wealth by measures that are as far removed from the light of honesty as the tunnel the miner drives beneath the mountain is removed from the light of the sun. One builds a reputation which another burrows beneath and destroys, as the engineers at Hell Gate undertook to destroy the rocky reef which sunk the ships of many a navigator, from the days of Hendrick Hudson to Gen. Newton. Hope springs eternal in the human breast, but it is not always hope for better things.

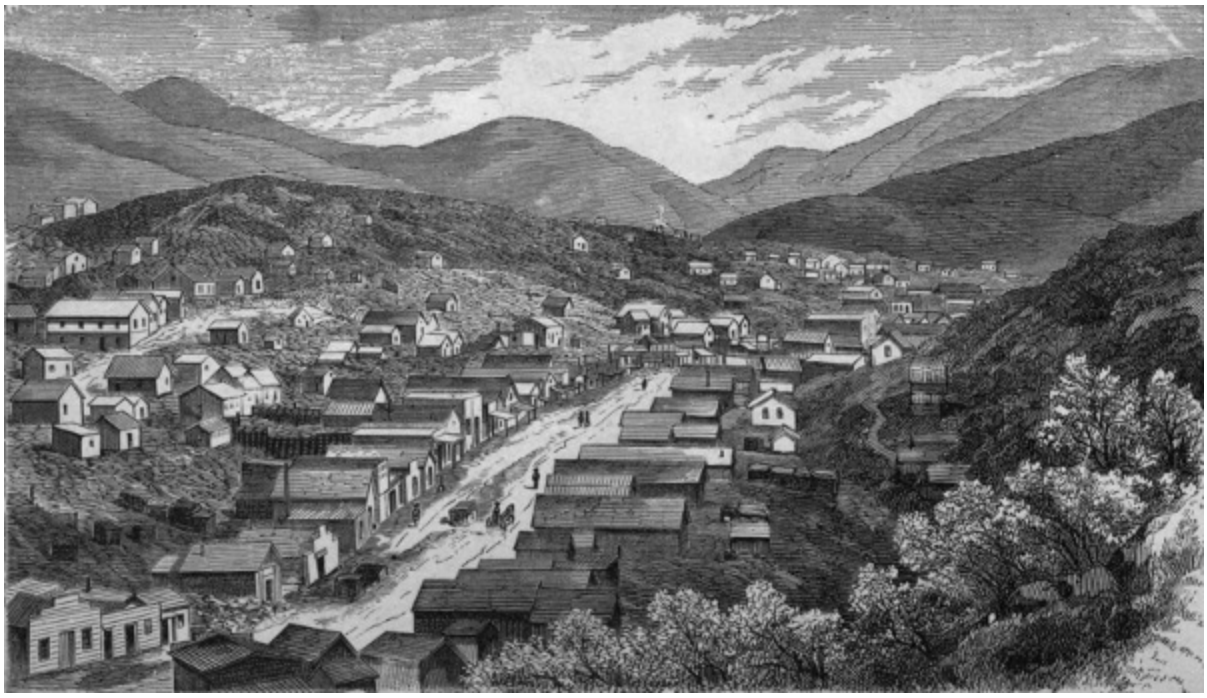
MINING IN METAPHOR.

Dishonest men hope for wealth, they care not how obtained, and in its pursuit they frequently imitate the labors of the miner. Shafts are sunk and tunnels are driven; the pick, the drill, and the powder-blast perform their work; operations

are silently and secretly conducted, and all unknown to the outer world; dangers of falls of earth, of floods of water, of choke-damp, and fire-damp, are unheeded, and by and by the prize may be obtained. A great city, in its moral or immoral life, is cut and seamed with subterranean excavations more extensive than those of the richest coal-fields of England or Belgium. Wall Street is a mining centre greater than the whole of Pennsylvania, and to one who knows it intimately it reveals daily more shafts and tunnels than can be found in Nevada or Colorado. The career of a politician is not unlike that of the miner, though it is frequently much more difficult to follow. The miner may be tracked and found, but there is many a politician whose devious windings would baffle the keenest detective that ever lived.

To describe underground life in its many phases is the object of this volume. The experience of the miner is full of adventures of an exciting character; so exciting, indeed, that there is no occasion to use fiction in place of fact. The hardships, the difficulties, and the dangers that surround him who labors beneath the earth’s surface might form the basis of a story more interesting than the most skilfully constructed romance ever printed. It is an old adage, that Truth is stranger than Fiction: the experience of the miner affords better illustrations of the correctness of this adage than does that of any other laborer. Especially is this the case if we consider Underground Life in its metaphoric as well as in its literal sense, and note the devious and hidden

ways in which many of our fellow-men pass the greater part of their existence.



AUSTIN, NEVADA, SIX THOUSAND FEET ABOVE THE SEA. THE METROPOLIS OF THE REESE RIVER DISTRICT. SILVER FIRST DISCOVERED AT THIS POINT IN JULY, 1862.

II.

Table of Contents

DISCOVERY OF COAL.
SAVAGE THEORIES ABOUT COAL.—EXPERIENCE OF A SIBERIAN EXPLORING PARTY.—BURNING BLACK STONES.—MINERAL FUEL AMONG THE ANCIENTS.—THEIR MOTIVE POWER.—CHINESE TRADITIONS.—CHINESE GAS WELLS.—HISTORY OF COAL IN ENGLAND.—A ROYAL EDICT.—CURIOUS STORY OF THE MINER OF PLENEVAUX.—EXTENT OF COAL FIELDS THROUGHOUT THE GLOBE.—THE QUAKER AND THE YANKEE PEDLER.—THE FIRST ANTHRACITE.—BELLINGHAM BAY AND THE CHINOOKS.—HOW COAL WAS FORMED.—INTERVIEWING A REPTILE.—THEORIES OF THE ANCIENTS.—RIVERS OF OIL OF VITRIOL.—ANCIENT AND MODERN FIRE WORSHIPPERS.

In the autumn of 1865, a small party connected with the survey of a telegraph route through North-eastern Asia, was landed at the mouth of the Anadyr River, near Behring’s Straits. Another party was landed in Kamchatka, and proceeded over land towards the north. They made constant inquiries about the Anadyr party, and at last learned from a band of wandering aboriginals that some white men had been left by a fire ship (steamer) near the mouth of the river, and were living in a small house which they had constructed partly of boards, partly of bushes, and partly of earth. The savages described them as the most wonderful white men they had ever seen. “They have,” said one of the savages, “an iron box, and they burn black stones in it to make a fire.” These savages had never seen a stove, and

they had never seen coal. To their untutored minds the work of the white men was something wonderful.

It is probable that the comparatively recent discovery of mineral coal is due in a great measure to its close resemblance to stone. A savage or civilized man knows that an ordinary stone, whether white, red, blue, green, or gray, will not burn; then why should he suppose that a black stone will burn? Until a comparatively recent date there has been no great demand for coal as fuel. Many parts of the world at the present day are covered with immense forests, and for a hundred and perhaps thousands of years there will be no occasion in these localities to make use of the mineral fuel.

COAL AMONG THE ANCIENTS.

It is supposed that the Greeks and Romans had some knowledge of fossil fuel, but they made very little use of it, partly for the reason that they did not know the proper way to burn it, and partly because the forests in those days furnished all the fuel needed for industrial purposes. There were no manufactories and smelting establishments, and the working of metals was carried on in a very primitive way. Wood and charcoal were the only fuel, and most of the countries inhabited at that early day were favored with a warm climate, that for the most part of the year was comfortable enough by day, while blankets and other bed-clothing gave sufficient warmth by night. The laws of heat were not known; the pressure of vapor was not even thought of, or suspected; and mechanical force was derived from wind, from water, and from animated beings.

When the winds did not blow the galleys were rowed by convicts, and in the absence of a stream of water, animals, and sometimes men, turned the mill.

Occasionally in building aqueducts, large beds of coal were laid bare, but no attention was paid to them. In making one aqueduct, a branch of a canal was cut through a bed of rock, and at the bottom of that bed a valuable seam of coal was found, but nobody appears to have troubled his head about it. It is supposed by most writers that the discovery of coal occurred in the East. The Chinese have been credited with the discovery and invention of nearly everything in the world except the discovery of America and the invention of the electric telegraph. It is pretty certain that they were acquainted with mineral fuel from a very remote antiquity. They knew how to work it, and apply it to industrial uses, such as baking porcelain, drying tea, and the like. The Chinese, for hundreds of years, used to bake porcelain with mineral coal. It is only recently that mineral coal has been substituted for charcoal for this very same purpose in France, and it has been found to be quite economical.

CHINESE FIRE WELLS.

The Chinese knew how to collect the gases which came from coal, and they used them for illuminating. The accounts of the early missionaries state that from time immemorial the Chinese used to bore into the earth in search of gas, and when they found it they conveyed it in pipes to the places where it was wanted. Gas was not used for illuminating in Europe until quite recently.

Historians also say that for many centuries mines of coal have been worked in the Celestial Empire, but that the

working was in a very barbarous fashion. Many of their coal mines consist of open cuttings; when they went underground they took but little care to construct drains or support the subterranean ways, and they took no precaution whatever against explosions of fire-damp, which often proved fatal. Their working of mines to-day is in the same barbarous fashion of centuries ago, and one might be pardoned for thinking, like the boy who was trying to learn the alphabet, that it was hardly worth while to go through so much to accomplish so little.

In England there are evidences to show that coal was known to the Romans, and possibly to the Britons before the Roman invasion; but it was only worked at the outcrops of the coal seams. No mention is made of coal until the time of Henry II. In 1259 a charter was granted to the Freemen of Newcastle, giving them the liberty “to dig for cole,” and a few years later coal was carried to London.

In 1306 Parliament petitioned the king to prevent the importation of coal, and Edward I. issued a proclamation forbidding the use of mineral fuel. Coal was worked to some extent in the thirteenth, fourteenth, fifteenth, and sixteenth centuries, and by the beginning of the seventeenth century the English coal mines were in full operation. In 1615 four thousand English ships were employed in the coal trade. The coal mines of Belgium were opened about the same time as those of England. The Belgian coal miners tell a curious story of the discovery of coal, in the twelfth century, at the village of Plenevaux, near Liège. One of the old chroniclers gives the account as follows:—