MASTER OF THE MINE

By Robert Buchanan.

CHAPTER VII.

Thus began my knowledge of the mine; from that day forth my interest in it deepened, and it haunted me like a passion. Its darkness and perils had a fascination for me, and I was not content till I had explored every cranny and familiarized myself with the mining art or science. I read every book on the subject that I could buy or borrow, and in a short time I could have passed a pretty stiff examination as an engineer.

I must now pass over, at one swift bound, a lapse of eight years. During that time I had exchanged the duties of clerk for that of assistant overseer, and then, on the death of Mr. Redruth, for those of overseer-in-chief. Behold me, then, at twenty-two years of age, the mainstay of the Pendragon household—rough, robust, full of strength, and its rude pride. In my twenty-second year occurred an event which was destined to exercise no little influence over my whole future life.

I was standing one day on the cliffs, close to the mouth of the mine, when I saw two figures coming from the direction of the village. One was my cousin Annie, now a comely young woman; the other was young George Redruth, whom I had scarcely set eyes upon since the time of his father's death.

They were talking earnestly, and did not seem at first to notice me; but presently I saw Annie give a startled look in my direction, and afterward they approached together. He strolled up carelessly, swinging his cane and smoking a cigar.

"Ah, Trelawney," he said, with a nod; "your cousin Annie has been telling me that there are complaints again about the outlying shafts of the mine. So I'm going down to have a look round."

"Very well, sir," I replied, wondering in my own mind why Annie had chosen to make herself the mouthpiece of the men.

"I suppose it's safe enough?" he said, after a moment. "You know, though I am a mine owner, I don't know much about the business; I used to leave all that to the governor."

"It is only right," was my reply, "taht you should judge its safety for yourself. If anything happened, you would be responsible."

"For the men, of course; but it's their living, and no doubt they know how to look after themselves. Be good enough to make all ready, Trelawney, for I'm going down at once."

I walked off toward the office. Looking back over my shoulder, I saw him glance after me, and then, with a contemptuous laugh, say something to Annie. My blood boiled angrily, and my cheeks grew crimson. I could have turned back and struck him in the face. Close to the office I found my uncle, who had just come up from underground. I told him the young master was going down, and he was delighted.

"He's a brave lad, Master Jarge," he cried. "I'll gaw wi' 'un, and shaw 'un where the wall be breaking down."

Presently Redruth came along, and followed be into the office, where several woolen costumes were hanging. He laughed gaily, as he transformed himself into a miner. My uncle led the way down the trap, showing infinite care and tenderness for the young master. The earth soon swallowed us, and the only light we had was the light of the candles stuck in our hats.

From ladder to ladder we went, till we reached the central platform. Then down we crept again, till we reached the lowest galleries, and became conscious of the gname-like figures at work in the submarine darkness. My uncle still led the way, stopping from time to time to pilot Redruth over awkward stones and dangerous trap-holes. Our progress was now very slow. Walking, stooping, crawling, climbing, descending, we proceeded; now crossing black abysses, thinly covered with quaking planks; past wild figures kneeling or lying, and laboring with short pickaxes at the ore; and as we went, the roar which had been in our ears from the beginning deepened, while the solid rocks above us seemed quaking in the act to fall.

"Where are we now?" asked the young master.

"Whar, Master Jarge?" repeated my uncle, with a friendly grin, "right dawn under the sae. Twenty fathoms under the sea level, and three hundred feet, or more, out beyond low water mark."

"Well, where's the damage? It all seems snug enough."

"Come this way, Master Jarge!" said my uncle, crawling forward, until we reached a narrow space with just room for two of us to stand abreast. Suddenly, we found ourselves ankle deep in water, and at the same time thick drops like heavy rain fell from the rocks above us. My uncle reached up with his hands, and touched the roof, which was partially fortified with wood and cement.

"I plugg'd this yar last night, Master Jarge," he explained; "the salt water were streaming in like a fall."

As he spoke, the roar deepened to a crash, and we could distinctly hear the sea grinding on the pebbles, right above our heads. It seemed momently as if the whole fabric of the rock would break in, under the flux and reflux of the rolling waves. I saw Redruth start back and glance toward the gallery down which we had come. But he recovered his sang froid in a moment.

"How thick is the ceiling here, Trelawney?" he asked.

"Six feet at the thickest, sir; at the thinnest, where you see the wooden plug, not more than three."

Young Redruth looked up again, and taking a candle from his person, examined the rock. It was actually percolated with sea water oozing through the solid granitic mass, but through all the dampness and sliminess the stripes of pure copper ran in rich bars, forming part of the finest and most precious lode in the whole mine.

"Why, it's almost solid ore," he said.

"Iss, Master Jarge," returned my uncle, "but us can't go no further this ways without flooding the shaft. It would be warth thousands o' pounds to gaw on, and 'twill cost a heap to keep tight and safe as it be."

The young master made no further remark just then, but continued his examination of the other parts of the mine. In several other places the roof was dangerous. My uncle pointed out the various unsafe portions.

At last we re-ascended to the sunshine. How bright and dazzling all seemed after that subaqueous darkness! Redruth seemed in a brown study. Not until he had washed himself any reassumed his ordinary attire, did he find his tongue. By this time, my uncle had returned to his labors down below.

"Is there anything else you wish to report?" asked Redruth, sharply, as we stood together at the office door.

"Nothing more than I have already reported in writing. The whole mine wants repair. Putting aside the outlying galleries, where the sea may enter at any minute, the engines and machinery need replacing, the ladders are rotten; in fact, verything is in the last stage of decay; and no wonder, seeing that scarcely a penny has been spent on it within my memory."

"You are a pretty fellow, a very pretty fellow. You want to ruin me, eh?"

"At any rate, sir," I returned, following him, "you will have the outer galleries filled up, at once? If you don't I'll not answer for the consequences."

"Who asked! you?" he cried. "Your place is to report, not to advise. As to ceasing to work the outer galleries, I suppose you know that the richest lode of ore runs there, and that the inner portion of the mine is almost barren? You seem to prefer mutiny and disaffection to study of your employer's interests. I tell you flatly, I don't intend to listen to such nonsense. Thanks to you, the mine at present yields little or no profit, and I am in a fair way to become a beggar."

"Then you will do nothing?"

"I will do nothing under your advice, for I don't trust you. A gentleman in whom I have the utmost confidence will be here to-morrow morning. You will accompany him down the mine, and you will show him what you have shown me. I shall then be guided by his advice, not by yours."

Soon after sunrise the next morning, as I sat in the office, I was visited by the person to whom young Redruth had alluded. He was a thin, spare, sandy-haired young man of about thirty, with a mean type of countenance, and an accent which was a curious compound of Cockneyisms and Americanisms. He had been born within the sound of Bow Bells; but having spent a portion of his manhood in the United States, he affected the free and easy manners of a Yankee citizen, telling me his name was Ephraim Johnson, a civil engineer, from New York. He informed me that he had been instructed by Mr. George Redruth to go down the mine, and report on its prospects and conditions.

I treated him as civilly as possible, and we made the tour of inspection together. When we came to the outlying gallery, above which the sea was thundering, he trembled a good deal and gave other signs of agitation, and he did not recover himself until he had regained the open air. Curious to know what he would say to his employer, I questioned him:

"Well, Mr. Johnson? Did I exaggerate when I said that the mine was unsafe?"

He answered me sharply and impudently, but averting his small, keen eyes from mine.

"Excuse me, young man, I shall report my opinion to Mr. George Redruth, not to you. I don't mind saying, however, that I guess you did exaggerate, on the whole."

"You didn't seem to express that opinion when you were down below!"

"What do you mean?" he cried, turning crimson.

"I mean that you seemed rather in a hurry to get back to the terra firma, up here!"

He did not reply, but gave me a look full of malignity and dislike. Then he walked out of the office, but the next minute he put his head in again at the door.

"You think yourself smart," he said; "but you'll have to get up early before you're as smart as me. I mean to do my duty, young man, and so you'll find afore very long."

He left me with this curious valedictionI saw neither Redruth nor Johnson for some days. Then I heard casually that the latter had gone back to London. About a week after his departure, I saw it publicly announced that arrangements had been made with George Redruth, Esq., the proprietor, to turn St. Gurlott's copper mine into a joint stock company, the said George Redruth, Esq., receiving half the purchase money and retaining the other half in fully paid-up shares. Nothing was said about the precise amount of commission money which went into the pocket of Mr. E. S. Johnson, but the name of that worthy was down on the prospectus as surveyor and inspecting engineer, and I had no doubt whatever in my own mind that he had made a very excellent bargain.

CHAPTER VIII.

A little after the establishment of the London company, Johnson came down to St. Gurlott's and took lodgings in a farm house in the neighborhood. Although the stranger was formally installed as resident inspector and supervisor, no attempt was made as yet to remove me from my former position. I soon saw that Johnson was completely in young Redruth's confidence. Under his advice, nothing whatever was done to amend the condition of affairs in the mine, the fittings and machinery of which remained as dilapidated as ever. On my own responsibility, however, I closed up the dangerous outer galleries, and forbade the men, on pain of dismissal, from working the ore in that direction. Although Johnson heard of this, and doubtless reported it to his superior, neither of them made any communication to me on the subject—just then.

I had noticed for several weeks that some important secret communion was going on between my uncle and aunt. What it was all about I couldn't guess, but it was evidently connected in some way with myself. I often caught them looking at me, and, when detected, exchanging glances of infinite meaning. I was beginning to think of asking for an explanation, when accident made me acquainted with the whole mystery.

I had returned home one evening too late for the ordinary tea, and was sitting taking mine alone, waited on by Annie, as I had to return to the office again that night, and might probably have to go down the mine. The meal over, I got up and wished them all good-night.

"Don't sit up for me!" I said, "I shall be late to-night."

"Where are you going to, Hugh?" asked Annie, carelessly.

"Back to the office. I've got to go down the mine again, too."

I put my arm around her shoulders—gave her a kiss—at which my aunt and uncle laughed delightedly.

I had gone only a little way, when I suddenly remembered that certain account books which I should need that night were in my room at the cottage. I turned back to get them. When I reached the cottage it was quite dark. I paused before the kitchen window, which was open, for the night was sultry, and looked in.

My aunt and uncle still sat in much the same position they had ocupied when I left them, but Annie was gone. I was about to put my head in at the window, and acquaint them with my return, when I heard the mention of my own name.

"Yes," said my aunt, nodding her head, "I ha' watched 'em, and I know Annie favors Hugh, if ever any lass favored a lad."

"Well, I do hope you'm right, Martha," my uncle returned. "He be a good lad, and I shall be glad to call him my son."

I heard no more—I felt like a man who had received a knock-down blow, and I staggered under it a bit. Annie love me?—the old people planning our marriage? It was all so new it took me a time to recover. But was it true? Were they right? Did my cousin really care for me? I glanced back on all the years we had been together, and I concluded that after all it might be possible. But then of late she had sorely changed. I had noticed that, and wondered a bit; now the meaning of it seemed clear. Annie, my little cousin Annie, whom I had ever regarded as a sister and a child, had developed into a woman and was capable of feeling a woman's love.

I began to analyze my own feelings, and to pronounce upon them. My affection for her was of that strong, deep nature that I might have mistaken it for love, if that one all-absorbing episode of my school days had never been. Even after a lapse of years, the thought of Madeline made my blood tingle in my veins, and my heart beat painfully. Of all this the old people knew nothing; they had evidently made up their minds that Annie and I were exactly suited to one another, and ought to be man and wife. Before I had time to think very deeply on the subject, the kitchen door opened, and Annie herself appeared on the threshold. She wore a long black cloak, which she folded tightly around her shoulders; its hood covered her head.

"I am going down to the village. I shan't be long," I heard her say, in answer to her mother's question.

(To be continued.)

TWO GREAT CITIES.

How London and New York Differ—Good and Bad Points of Each.

New York has a great initial advantage over London. It puts its best face forward to the visitor. Approached from the sea, it is unrivaled. A few yards from the landing stage and you are among its stupendous buildings, in the rush of its busy life. If New York is entered by the New York Central the first impression is equally favorable, as the visitor is put down in the very heart of the city, close alike to the business center and the residential quarters.

But London, unlike the other great capitals of the world, puts its worst face forward. Whether you come to it from Liverpool to Euston, or from Southampton to Waterloo, London has a forbidding aspect. The few who arrive by the Thames may be impressed by the immensity of the shipping and the activity in the docks, but the subsequent railway journey is over the tops of little gloomy houses inhabited by the poorest. In East London there are miles and miles of these mean streets of little brick houses, with tiny courtyards, sometimes relieved by blocks of model tenement dwellings; and standing high up above the dead level are the board schools and the churches, as beacons of light and leading in a region of depressing gloom.

London, unlike New York or Paris, or Berlin, or almost any other great city, does not confine its poor to one quarter or try to hide its misery. There are quick transitions between the poor quarters and the wealthy and business districts. The cheerless dark brick houses, the slatternly women standing by the doors, tramps lolling about the street corners, all contribute to the first bad impression. But the great city province improves on acquaintance. Soon the visitor finds much that is picturesque and beautiful among the streets, but he has to find it. And he will learn that there is much refinement and luxury behind the dismal looking exteriors of the mid-century grim brick houses in the west central squares and streets.

New York rebuilds itself at a rapid rate. The system of land tenure in London deters rebuilding until the end of long periods of forty or more years, when large areas are reconstructed. This is happening at present in the streets between the Strand and the Thames, a property belonging to Mr. Astor, and in Bloomsbury, which is being covered with high class apartment houses. The only similarity between houses in London and in New York is in apartment houses and in suburban residences, and in these cases styles differ.—The Outlook.

Great Praise.

"I have always heard it said that your wife is a woman of her word," said Gazzam to Bickers.

"That's quite right," added Bickers, "quite right. She is not only a woman of her word, but a woman of a good many words."

The Benefits.

Opdyke—What's the use of arguing with a woman? You can never convince her.

Depeyster—True—But think of the pleasure it gives the woman.—Town and Country.

On many railways cement ties are displacing wooden ties.

New Conditions for Farmers.

One day, late in the autumn, a half dozen farmers, coming fifteen miles, drove into a prairie village with heavy loads of corn. They went to the principal elevators and asked the price.

"Thirty cents a bushel to-day."

"We will go to the buyer at the other end of the town," said the spokesman.

"It will do you no good," was the reply, "as all the buyers pay the same price here."

"Very well; we will go home and send our corn to market on foot."

They drove back fifteen miles and unloaded the corn into their own granaries, to be shipped later in the form of fat cattle.

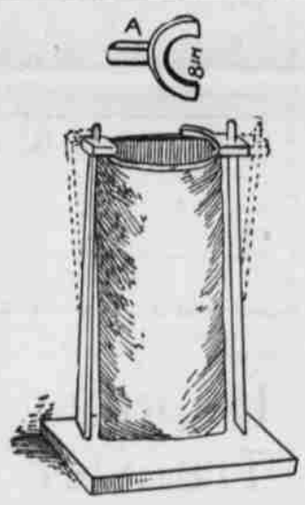
Such an incident would have been impossible ten years ago, when the average farmer was compelled to take what was offered for his crop. But two things have worked a transformation in the grain-growing portion of the West; the farmers have become conservative with prosperity, and the railroads have widened the markets.

Five years of good crops in the West have not only paid the debts, but have also made the farmer capable of employing business methods. A few years ago a settler visited town only once a fortnight or once a month. He took home with him the county papers, the few magazines that he received and a large bundle of groceries and dry goods. With rural delivery and rural telephone all that is passed.

Under these conditions the Western farmer has developed an independence in the movement of crops disconcerting to the market manipulators.—C. M. Harger, in the World's Work.

Bag Holder.

A convenient bag holder is made as follows: Procure a piece of two-inch plank thirty inches long and as wide as you can get. Bore two one and a quarter inch holes in the plank twenty-four inches apart. Then get two sticks three feet nine inches long of some tough wood. Shave these sticks to fit tightly into a three-quarter inch hole. Now take two blocks of hard wood four and one-half inches long like A in illustration. These circular pieces should be one inch thick each way



CONVENIENT BAG HOLDER.

and they should have about three small lath nails sticking out one-quarter of an inch to keep the bag from slipping off. It is the spring of the two long sticks that holds the bag tight. The blocks can be slipped up or down on the side strips to suit the length of the bags.—F. A. Franklin in Iowa Homestead.

As to Farm Poultry.

It is very hard to make farmers understand how great their advantages are in poultry raising. They will say the work does not pay, for it takes their time from crops that bring more money. There is something in this if one has a crop which is profitable and which is brought to the marketing point at small expense. It would be folly to advocate that anyone drop a paying crop to take up something they are doubtful about, but where there are diversified interests on the farm poultry can be made to pay more than it does.

The writer knows a man who has one acre in a small town devoted to poultry. He goes to a nearby city and buys live poultry of wholesale commission men at the market price, ships them home, fattens them and markets them dressed in the towns near him. Nine-tenths of the food consumed by the fowls must be bought, and yet this man makes a comfortable living out of the work. This is one case of many, and if this can be done it is certainly reasonable to claim that the farmer, who can raise the chickens from eggs and also the food consumed by them, can turn the result on to the market at a profit.

The one cause of failure is not understanding the needs of the fowls and how to feed them to advantage. Learn this by experience, and poultry raising will be found one of the most profitable ventures in which the farmer can engage.—Indianapolis News.

Profits of a Small Dairy.

Having seen several records of dairy farming by some of your readers, I will let you know what we have done the past year, from January 1, 1903, to January 1, 1904. We started with four cows the first six months, and five cows the balance of the year, one a heifer coming fresh last of June. Delivered at creamery 28,155 pounds of milk which made 1,225 pounds of butter. Total sales for the year as follows:

1,225 pounds butter	$300 75
16 head of hogs	129 64
988 dozen eggs	170 46
2 yearling heifers	21 00
Poultry and calves	22 85
Total	$644 70
Bought oatmeal, bran, shorts, etc	157 00
Balance, net	$487 70

I don't think this is a bad showing for a place that some of the neighbors said, four years ago, when we came here, "You can't raise anything on that old place."—C. E. Ringer.

Fodder Rye.

The first crop to be of service in the spring is rye, which is sometimes ready for feeding the last week in April, and may be continued through the first half of May. It matures very rapidly after the heads appear, and can be successfully used for a period of from ten to fourteen days if seeded at different times, and cutting is begun before it comes in head. Where it is not practicable to practice soiling the crops may be pastured. This method, while more wasteful, is less expensive than soiling. It is very important to have a pasture crop at that season, because coming before meadow pastures are ready. The crop yields well on medium soils, though it responds profitably to good treatment. It is recommended that it be seeded thicker than when the crop is used for grain. From two to two and one-half bushels of seed may be used with advantage on good soils. The fertilizers should be rich in available phosphoric acid. A fertilizer containing nitrogen 3 per cent, phosphoric acid 8 per cent, potash 5 per cent, may be applied at time of seeding at the rate of 200 to 300 pounds per acre. A top dressing of nitrate of soda in the spring at the rate of 100 to 150 pounds per acre is excellent.

Some Big Texas Ranches.

The cattle industry of the Southwestern range country is to-day representative of an investment of almost $200,000,000, exclusive of the land and improvements. Some of the ranches cover 1,500,000 acres, and are worth about $5 an acre. The vast majority of ranches in the Southwest to-day cover less than 500,000 acres. There are only three ranches in the Southwest that extend over 1,000,000 acres. The X I T ranch in the Texas Panhandle covers 1,500,000 acres, the J. A. ranch in the same community a like number, and the ranch owned by Mrs. King in Southern Texas, near Corpus Christi, is another immense ranch of over 1,000,000 acres. Colonel C. C. Slaughter, of Dallas, owns three ranches, in all over 1,500,000 acres, and Major G. W. Littlefield, of Roswell, N. M., holds several ranches in the Southwest country.

Vegetable Oddities.

The Department of Agriculture is endeavoring to secure the introduction of wasabi, the Japanese horse-radish, into the United States. The Japanese wasabi is not white, like ordinary horse-radish, but is a delicate shade of green. In Japan it is grated and served with the raw fish and forms a most important part of the meal. It has a fresh sharpness unknown to that grown in this country. Another novelty is the black winter radish, which is quite prominent in Western markets. The vegetable is shaped like a carrot. Germans are very fond of the black radish. They peel it and eat with salt as one would a cucumber. They are of peppery taste, but make a fine relish.

Farm Chat.

Overloading the teams is a bad idea. It will start horses to balking quicker than anything else.

An egg broken in the feed of horses is very beneficial to them in clearing up the skin and hair.

A small flock of sheep well cared for is more profitable than a large one allowed to pick its own living.

A good judge in farm crop statistics says it will take three bumper corn crops to create a surplus of that product. That means three years of hustling.

In testing seed corn we often feel that a seed will be good that is much slower "coming" than the rest of them. It will produce a weak stalk and either no ear or a nubbin. It will not pay to select such seed. It should be discarded as doubtful.

With all crops it is the early cultivation that is the most important. Keep the soil clean and in a little while the plants are young and tender, giving them every opportunity to make a good start to grow and it will be a much easier matter to maintain a good growth until maturity.

Canadian bee keepers report an unusually severe winter with serious losses. Most bees wintered out of doors unprotected show a very high per cent of loss, ranging from practically a total loss to forty per cent. Bees which were protected range, according to the dozen or more reports received, from twelve to fifty per cent.

Don't forget that little memorandum book. At no time will it be found so handy as now. Keep it in the pocket and put down everything that needs attention, and then one can look it over occasionally and do that which needs being done the worst without delay. Much loss is prevented in this manner. I have sorted potatoes when I should have been sowing grass seed, and a sudden shower came and some other work had to be hunted up. The little "want book" revealed what should be done.

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PETRIFIED MILK.

It Is One of the Achievements of Modern Chemistry.

"Chemistry is incessantly at work to create new industrial values from substances heretofore considered valueless," says Consul General Guenther at Frankfort in a report to the newly invented "milk stone," or petrified milk.

"It is a well known fact," said he, quoting expert authority, "that the success of a creamery, where the chief source of profit is, of course, butter, does not depend so much upon the cost of production and the selling price of butter as on the profits derived from the skimmed milk. The right market for the milk skimmed for the purpose of butter making is really the vital question of the milk industry. Skimmed milk has been used for various purposes—for the manufacture of sugar of milk, as food for animals and for milk champagne, which is skimmed milk mixed with fruit juices and impregnated with carbonic acid. A rather large percentage of skimmed milk is also separated into its component parts, which are then worked up. The casein serves for the manufacture of cheese; also for glue, putty and isolating substances.

"But all these different uses of skimmed milk did not solve the question most favorably. This, however is now expected from the newly invented petrified milk. It is manufactured in the following manner:

"By a chemical process the casein is precipitated as a yellowish-brown powder, which is mixed with formaline. Thereby a hornlike product is formed, called milk stone. This substance, with various admixtures, forms a substitute for horn, turtle shell, ivory, celluloid, marble, amber and hard rubber. Handles for knives and forks, paper cutters, crayons, pipes, cigar holders, seals, marbles, stone ornaments and billiard balls are now made of skimmed milk. The insolubility of galalith, its easy working, elasticity and proof against fire make it very desirable. Already 20,000 quarts of skimmed milk are daily used for this purpose in Austria."

To be a successful wife, to retain the love and admiration of her husband should be a woman's constant study. If she would be all that she may, she must guard well against the signs of ill health. Mrs. Brown tells her story for the benefit of all wives and mothers.

"DEAR MRS. PINKHAM:—**Lydia E. Pinkham's Vegetable Compound** will make every mother well, strong, healthy and happy. I dragged through nine years of migerable existence, worn out with pain and weariness. I then noticed a statement of a woman troubled as I was; and the wonderful results she had had from your Vegetable Compound, and decided to try what it would do for me, and used it for three months. At the end of that time, I was a different woman, the neighbors remarked it, and my husband fell in love with me all over again. It seemed like a new existence. I had been suffering with inflammation and falling of the womb, but your medicine cured that, and built up my entire system, till I was indeed like a new woman.—Sincerely yours, MRS. CHAS. F. BROWN, 21 Cedar Terrace, Hot Springs, Ark., Vice President Mothers Club.—*$5000 forfeit if original of above letter proving genuineness cannot be produced.*

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