

AMYAS LEIGH.

Shed the life's word, and ended all his roaming,
Ah, never, never more
We see the white crests of the breakers foaming
On Devon's rugged shore.
Never again to see the tall ships flying
On wings of snow,
Never to hear the eager voices crying
"Tis westward ho!"

Gone like a dream the wild old days forever,
The struggle and the fight;
And the long march of steadfast, stern endeavor
Through tropic day and night.
Gone the mad lust to see the Spaniard lying
Slain by his hand,
To pay the debt of that dear brother dying
In foreign land.

No peace has come after the struggle dreary,
The right has conquered wrong,
And falls like balm on mind and soul a-weary
Ayacapan's song.
His wife forever—never to be parted—
Sorrow is dumb
And Hate and Pride have evermore departed
When Love is come.

—Boston Transcript.

THE MINE EXPERT

"THAT is all, I believe," said Battlesea, as he rose and buttoned his coat across his breast. "I saw the Englishman in New York, and he will be on here next week. Have the report made specific, this and that vein outcropping at the surface, so much to the ton, and so many tons excavated with but a minimum of expense. He has unlimited money to squander, and is wild to throw it into mine holes; but he likes details. Give it to him in the way of veins and promising indications and computations. And, oh, yes, while about it, you might take a peep into Faxon's mine, adjoining. Make a few golden notes about that, also. After purchasing from me, the Englishman may as well buy out Faxon. The two mines could be operated as one. We will impress that on him—after we have sold. Old Faxon can't afford to hire a mine expert himself, and I shall be glad to help him a little. Make the reports all

However, there's a rumor of a big syndicate's buyer approaching, and any of us will sell if we can get our price. Say, two, sharp, and I will be there to go through with you."

"Very well. You may look for me." As the runabout whirled away, Clara Faxon's eyes flashed him a kindly glance over her shoulder. Of late he had thought her manner a shade more friendly. Perhaps even Battlesea and Mr. Seele. But, pahaw! and he turned abruptly and went back into the office. At the desk he stood for fully a minute, gazing down at the roll, the fine wrinkles again coming between his brows. Then with an impatient movement he swept the roll into his desk and turned the key. Some chance visitor might come in and notice it lying there.

The next day his examination of Battlesea's mine turned out as he feared. The property was absolutely worthless as an investment. And Faxon's was no better. The only difference was that old Faxon believed implicitly in his mine, while Battlesea did not. So in selling, at whatever price, one would be honest and the other a self-conscious swindler.

From Faxon's mine Clint went straight to Seele's, a quarter of a mile away, expecting the same result. But when he left it, late in the afternoon, there was a strange look on his face. He had examined many mines, some of them very rich, but none had been like Seele's. If he made a conscientious report, this would be the mine sold, at a fabulous price, and Seele, from being merely a prosperous man, would become an immensely rich one. Moreover, it would make Battlesea his bitter enemy, and practically would mean his ruin in this place. And ruin, of course, meant the loss of whatever chance he had of winning Clara Faxon.

The wrinkles were deep in his forehead when he entered the office and dropped down at his desk, his head upon his arms.

It was a long, bitter fight, lasting through the night and into the gray dawn of the next day; but in the end he made the small roll into a secure package and returned it to Battlesea by his office boy, stating it was something that had been left in his office by mistake. Then from his notes he made out the reports for the three mines.

One afternoon a week later, while writing to the management of a mining company in another State in regard to a position, he heard some one enter, but, thinking it the office boy, did not turn: "I—I beg your pardon, Mr. Bayland. Can I speak with you a moment?"

He whirled in his chair, to find Clara Faxon standing before him, her face a little pale, but her eyes glowing.

"Oh, Mr. Bayland," she cried, impetuously, before he could speak, "papa and Mr. Battlesea are so angry with you. I thought you must have done something dreadful, the way they have been talking; but this morning I learned just how it was, and I hurried here, thinking you might feel badly over their being angry. You did nobly, and I—everybody ought to be proud of you. I—I—"

She stopped suddenly, confusedly, for he had caught her with both hands and was gazing into her eyes in a way that could not be misunderstood. Her breath quickened a little, then the eyes met squarely, and the hands were not withdrawn.—Utica Globe.

An Easy Answer.

Grocer—Do you want apples to cook or to eat?

Small Boy—Both. That's what we cook 'em for.—Baltimore American.

ELECTRICITY IN MINES.

Power Brought to Comstock Lode Thirty Miles.

In few industries has electricity been utilized to such advantage as in mining. Operations are there conducted, as a general thing, in a mountainous region, where the cost of fuel is exceptionally high, owing to the difficulties of transportation. If power be taken from the adjacent streams and be converted into electricity by dynamos, it can be transmitted economically for long distances and up grades that would be impassable to railroads. Once obtained, no matter from what source, power is needed for many purposes in and near a mine. Drills must be driven into the rock, water pumped out, ore hoisted and ground, and other work done which calls for mechanical energy.

One of the best illustrations of this modern practice is furnished by the mines of the famous Comstock lode in Nevada. That vein of gold and silver starts over at an angle of about 45 degrees from a vertical plane. Shafts sunk at different points in the neighborhood tapped it at depths varying from 1,000 to 3,500 feet. In the period between 1872 and 1882 one single company took out about \$150,000,000. The whole lode has yielded nearly \$500,000,000, most of that amount being produced in the decade just indicated. Owing to the exhaustion of the richer ores in 1882 and to trouble in properly draining the mines, work was abandoned on them, and an accumulation of water permitted. Eventually the Sutro tunnel, four and a half miles long, opened up an outlet for much of this. Within a few years mining has been resumed, capitalists being satisfied with ores of lower value than those which created such a sensation more than a quarter of a century ago. These are believed to be exceedingly abundant, and the mines are now worked at a reasonable profit.

Some idea of the cost of power there in the old days may be gathered from the fact that the ore was carted fifteen miles from mine to mill and that the latter was run by water brought to it by a flume forty miles in length. To-day power is brought all the way to the mine from the Truckee river, thirty miles off. At the generating station two 1,400-horse-power water wheels of the turbine type have been installed, and these drive separate dynamos. The turbines are automatically governed. Merely for transmission over the intervening country a pressure of 22,000 volts is employed. The current is generated at 500 volts, raised by "step-up" transformers to the figures just named, and reduced at the mines by "step-down" transformers to 450 volts. It is at the latter pressure that the various pumping, hoisting and air-compressing motors are run. So cheap is the power thus supplied, says the New York Tribune, that work can be done far more economically than ever before.

WHY SEALS SWALLOW STONES.

No Satisfactory Reason Advanced to Explain Curious Habit.

F. A. Lucas of the Brooklyn Institute museum, writing to Science on the swallowing of stones by seals, says: "So far as I am aware, no satisfactory reason has been advanced for the swallowing of stones by seals, and this statement may probably be extended to other animals."

"They are not taken in for ballast, for the empty seals keep down as easily as the others; they are not swallowed for the purpose of grinding up food, for they occur in the stomachs of nursing pups; they are not to allay the irritation caused by parasitic worms, since the two are by no means found together; they are not taken in with food, not merely because they are found in the stomachs of young seals, but in those adults that have fed on squid caught in the open sea. On page 68, volume III, 'Report of Fur Seal Investigation,' it says:

"It is evident that these things are not swallowed haphazard, but are selected with considerable care from among the articles strewn along the shore, and that a preference is exhibited for rounded objects. This is shown by the fact that, as a rule, only articles of one kind are found in one stomach, although seals do not discriminate between fragments of barnacles and fragments of gastropods."

"Moreover, pebbles of serpentine and chalcodony are now and then found on the hauling grounds, under conditions indicating that they were brought there by the seals, while the pup seen gathering pebbles on Lukanin did so with great care, by no means taking the first that came to hand. The most striking example of this discriminative selection is, perhaps, shown by the pup which had swallowed a buck-shot while the chance of finding such a thing must be at a guess about one in a million."

"Furthermore, it may be said that as the fur seal regurgitates bones and other indigestible things, the supply of stones must be renewed from time to time. That there is any connection between the presence of stones and the presence of a gizzard does not follow."

About the only really wise man in the world is the "by-stander."

KNOCKING THE KNOCKER WHO LOVES TO KNOCK

THAT IS THE WORK IN WHICH ALL SHOULD HELP.

If a thug hits you on the head with a sling-shot and later falls into the hands of the police, he may be punished severely; if a man is guilty of repeatedly knocking on a door for the purpose of causing annoyance, the law will provide redress for the person or persons annoyed; if a man poisons your dog or clubs a mule unmercifully, he can be made to suffer; if a man is caught taking your watch, he is held to strict account; but the knocker can knock from busy morn till dewy eve; he can besmirch your character; he can ruin your business; he can defame you by innuendo; and the only satisfaction is that when you get to heaven you won't see him there.

Many men carry a hammer habitually, as a policeman carries his night-stick—ready for use—and whenever they see an opportunity they knock. To the man who used his fists in such a manner, bully and brute would be too mild to apply, but the one who strikes at the character, and, through that, at the reputation, is not interfered with. Between the knocker and the skunk there is a marked difference, and that difference is entirely in favor of the skunk, which emits its offensive odor as protection. In other words, the skunk is offensive when defensive; the knocker is offensive all the time without being on the defensive at all. There is some difference, too, between the mosquito and the knocker; the former has its seasons of innocuous desuetude; not so the latter.

The knocker is a moral thug, paradoxical as the expression may seem. To moral influence he is impervious; and, unfortunately, society has not yet learned to put him in that class of the animal kingdom to which he belongs. It would, it is true, be difficult, if not impossible, to find any other animal with so many hateful traits as the knocker. Besides, there is no class of animals where the knocker would be tolerated.

It is generally supposed that the way to succeed in life is to work; but among many who succeed there are those whose only work is "working" others, and whose idea of good business is to knock every competitor. They seem to imagine that by knocking and depreciating the stock of others they are sending up their own; and that by complaining they show their critical acumen. As a matter of fact, they do nothing of the kind, for "any fool can find fault; most fools do; some can do nothing else," we are often led to believe.

The knocker as a rule devotes most of his time and energy to those who are down and out, or those who are struggling. The more manfully a man struggles the more persistently will the knocker attack him. A knocker rarely attacks a man his own size, for he would have difficulty in finding one as small as himself. He is worse than a rattler, for the latter at least does not strike until he has given warning, and when he does strike his victim is there. The knocker, on the other hand, shoots poisoned arrows from ambush.

The knocker's rule of business is, "If you see anybody who is getting along better than you are, or if you see anybody who is getting along at all, knock."

Unfortunately the knockers, although in reality our enemies, are often found in the ranks of our supposed friends, and so well disguised that we never see them in their true light. It is hard to think that we have to put up with them, but the best of men have suffered, if that is any consolation.

The mistake is made of treating the knocker with contempt. He should be treated with a club. The best way to cure a bully is to thrash him. The best way to treat a knocker is to jump on him. Instead of which most men listen to him, forgetting that if he will knock others he will surely knock them.—Charles T. Logan, in Newspaperdom.



Aside from errors of refraction, W. H. Rivers finds the eyes of all races and classes of men to be practically the same. The apparent superior sight of savages is attributed entirely to practice and education, with familiarity with the surroundings.

Radiant, the invention of two English engineers, is claimed to increase the efficiency of gas fires as remarkably as the incandescent mantle adds to the light. It is a product of the waste of chemical works, replaces asbestos or fire-clay balls and causes the gas to burn brightly and completely, trebling the heat. The material can be had in any quantity at no greater cost than fire-clay.

The action of water as an anesthetic is illustrated in some recent cases brought to notice by Joseph Clements. In one case five hemorrhoids were injected with distilled water when they were removed in fifteen minutes without pain, and the patient at once returned home. In another case two fistules were opened and scraped, one after the injection of water, and the other without it. The last operation was exceedingly painful. The action of the water is declared to be the same as that of solutions of cocaine or other drug—a filling of the interspaces of the tissues, thus temporarily suspending intercellular respiration and paralyzing the local nerve centers.

The University of Nebraska is instrumental in calling attention to the advantages of Pike's Peak as a field laboratory for the study of plant physiology. Rising abruptly from the plain, and standing out in front of the main range of the Rocky Mountains, the great peak is like a section of stratified climates, temperate at the bottom and arctic-alpine at the top. The distance from the plains to the summit is only ten miles, and the vertical rise is nearly 8,000 feet. Two or three botanical stations have already been established on and near the mountain. Experimental methods in studying vegetation and the evolution of new forms may here be applied with ease.

The size of farms in Japan runs from less than two up to about three and three-quarter acres apiece. Even these diminutive farms are often in several separate pieces, the average size of which is about one-eighth of an acre. During the past four years a law has been in operation for the rearrangement of these scattered farms. The owners are to exchange fields in such a manner as to make their possessions more compact. The spirit of scientific progress is behind the movement, the government wishing to enlarge the cultivated fields so that agricultural machinery may be used. With all his primitive ways, the Japanese farmer manages to make his soil very

productive by thorough cultivation and fertilization.

Recent experiments by Berthelot show that the nerves of smell are so sensitive that the odor of iodiform can be recognized in quantities as small as the one hundredth-billionth of a gram. In such a case the odor was distinct, although hundreds of years would be required for the substance to lose a thousandth part of its weight. This indicates that the delicacy of the nerves of smell in detecting the presence of minute quantities of emanations is of the same order as that of the spectroscopist; and for this reason Berthelot calls attention to the risk of inferring from spectroscopic examination the change of one element into another. The spectral lines of one element might appear in the spectrum of another, owing to the presence of an infinitesimal impurity.

A MEMORY OF M'KINLEY.

One Perfectly Cool Man in Washington During Campaign of 1900.

During August and September preceding the political campaign which resulted in Mr. McKinley's re-election, I was in the United States. It was the hottest summer in very many years, and certainly, within my whole experience, there had been no torrid heat like that during my visits to Washington. Nearly every one seemed prostrated by it. Going to the White House to pay my respects to the President, I found him the one man in Washington perfectly cool, serene and unaffected by the burning heat or by the pressure of public affairs. Although matters in Cuba, in Porto Rico, in the Philippines, in China and in the political campaign then going on must have been constantly in his mind, he had plenty of time, seemed to take trouble about nothing, and kept me in his office for a full hour, discussing calmly the various phases of the situation as they were affected by matters in Germany.

His discussion of public affairs showed the same quiet insight and strength which I had recognized in him when we first met in 1884, as delegates at the Chicago national convention. One thing during this Washington interview struck me especially. I asked him if he was to make any addresses during the campaign. He answered: "No; several of my friends have urged me to do so, but I shall not. I intend to return to what seems to me the better policy of the earlier Presidents. The American people have my administration before them; they have ample material for judging it, and with them I shall silently leave the whole matter." He said this in a perfectly simple, quiet way, which showed that he meant what he said. At the time I regretted his decision; but it soon became clear that he was right.—Century.

No Wonder.

"It looks as if the people were getting on to us at last," said the crooked politician.

"What will we do?" "Time, I'm afraid," replied the other, despondently.



"I—I BEG YOUR PARDON."

light. The Englishman has heard of you and will accept it without question. You understand?"

Yes, Clint Bayland understood, and he understood the significance of a small roll which Battlesea's hand dropped carelessly upon his desk as he turned and went out. It was a first installment for his reputation. And Clara Faxon, the most beautiful girl in twenty miles around, was the daughter of the old man whom Battlesea would be glad to help.

He walked nervously to the window of the office and looked out, not daring to trust his eyes with a second glance at the small roll on his desk. He did need the money sorely, more than he would care to have anyone know. And it was only an indication of what would come. With Battlesea, who owned more mine and town property than any ten men in the country, as his friend, his prosperity would be assured.

But somehow the thought of the prosperity did not give him the pleasure that it ought. Oddly enough, his mind went over the snow-clad peaks to the mother he had left in the East, and from her to—Clara Faxon. What would they think?

A smart runabout swung up to the office door, and a handsome young fellow of about his own age raised a beckoning finger. The other occupant of the runabout was Clara Faxon. Clint left the window and went to the door.

"Hello, Bayland!" the man called, affably: "be busy to-morrow?"

"In the morning, yes. But I can spare you part of the afternoon, Mr. Seele, if that will do."

"Nicely. I want you to take a run through my mine and make a report of its general characteristics. I haven't opened it much yet, but the indications, I think, point to a good thing.