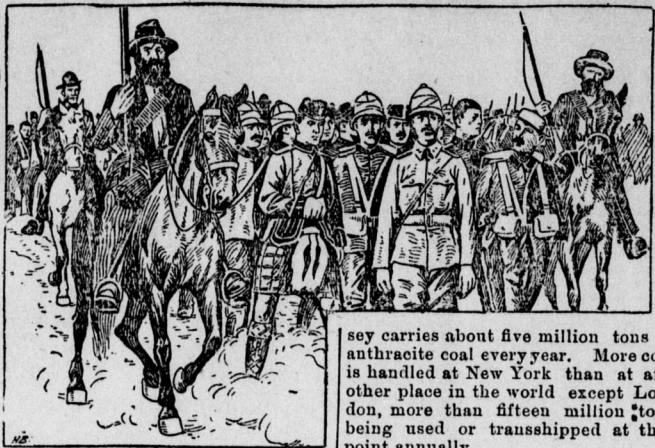


BOERS CONVOYING BRITISH PRISONERS TO PRETORIA



sey carries about five million tons of anthracite coal every year. More coal is handled at New York than at any other place in the world except London, more than fifteen million tons being used or transhipped at that point annually.

The coal miners live as poorly as any other class of workmen in the country. For the most part they are

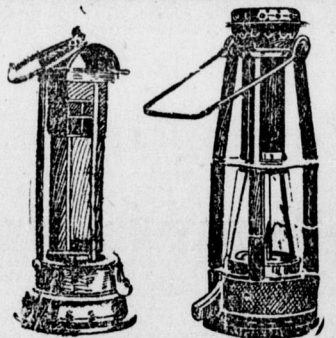
LIFE IN A COAL MINE.

How Our Black Diamonds Are Dug From the Earth.

The accompanying illustrations give a fair idea of the method of living and working in a Pennsylvania coal mine, thousand of feet from pure air and sunshine. The human workers at least get a small share of both these requisites, but the mine mules have no such breathing spells. The animal shown in one of the illustrations not been in the open air for five and he has not been a prisoner as long as many of his fellows.

of a coal miner has improved recent years. Many of the at used to shorten his life it one of extreme hazard eliminated, or at least greatly danger. The air is purer, of that greatest of terrors up—has been reduced to a through more intelligent an those of former days introduction of improved ma- the greatest factor in the workman's safety being the non-explosive Davy lamp, with which a miner may fearlessly enter a pocket full of explosive gas.

But with all these new safeguards

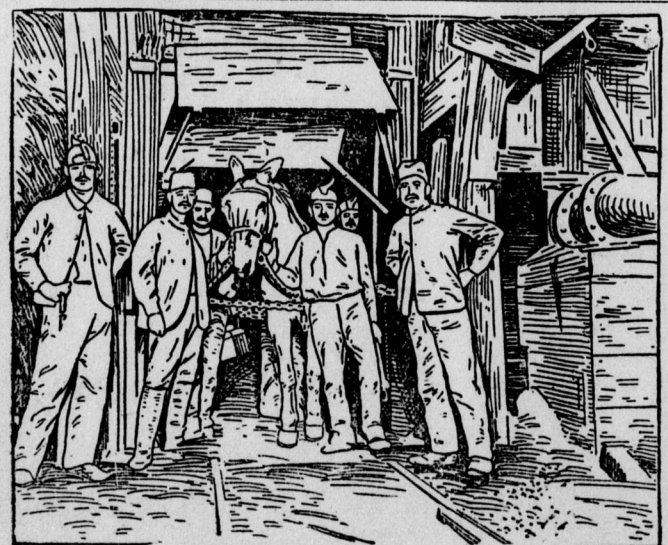


THE OLD AND THE NEW DAVY LAMPS. IN USE IN THE PENNSYLVANIA COAL MINES.

the life is not an alluring one. The pay is small, the work hard and the dangers still many. The only really pleasant way to be connected with a coal mine is as the owner of one.

Our Appalachian coal fields alone could supply the world with fuel for centuries. They are the largest and richest known, and they are so situated that the coal can be shipped from them long distances by water. From Pittsburgh coal can be carried for eighteen thousand miles on navigable streams, and the grate fires of the South blaze with the rays from the black diamonds from Pennsylvania. The Ohio River is the great coal chute for the Mississippi valley. The coal is carried down it in great barges, pushed by little steamers, and so fastened together that a single steamer will push acres of coal. Loads of twenty thousand tons are taken. A vast amount of coal is carried on the canals and the great lakes from one of the chief highways of the coal traffic.

The amount of coal carried on the railroads is almost beyond conception. The Philadelphia and Reading has more than fifty thousand coal cars, which are dragged by nine hundred coal locomotives. These cars are kept busy in carrying anthracite coal. The



THE ELEVATOR OF A COAL MINE. (The mule in the photograph has been in the mine for five years.)

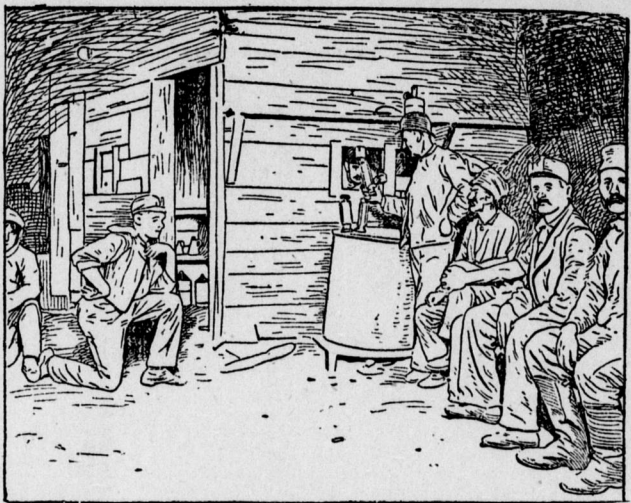
Pennsylvania Railroad employs more than seventy thousand cars for the movement of its coal and coke trade, and the Central Railroad of New Jer-

thing within reach. Miners are blinded, scorched and sometimes burned to cinders. Hundreds have often been killed at a time by such

explosions, and by the flood of carbonic acid and gas which follows them. The statistics show that even in the United States one miner is killed for every hundred thousand tons of coal mined, and those who are injured number many times this proportion.

The first coal found in America was near Ottawa, Illinois. It is mentioned by Father Hennepin, a French explorer, who visited there in 1679. The first mines worked were about Richmond, Va. This coal was discovered by a boy while out fishing.

He was hunting for crabs for bait in a small creek, and thus stumbled upon the outcroppings of the James River coal bed. Our anthracite coal fields have perhaps paid better than any other coal fields of the world. They were discovered by a hunter named Nicho Allen, when George Washington was President. Allen encamped one night in the Schuylkill regions, kindling his fire upon some black stones. He awoke to find himself almost roasted. The stones were on fire, and anthracite was burning for the first time. Shortly after this a company was organized to sell anthracite coal. It was taken around to



THE "FIRE BOSS'S" OFFICE IN A COAL MINE. (The position of the kneeling miner is the one usually taken when resting.)

the blacksmiths, but they didn't know how to use it, and it was very unpopular. Some of it was shipped to Philadelphia by a Colonel Shoemaker and sold there. It was not at all satisfactory, and a writ was gotten out from the city authorities, denouncing the colonel as a knave and scoundrel for trying to impose rocks upon them as coal. Still Philadelphia has largely been built up by anthracite coal, and 50,000,000 tons of this coal were taken out of the Pennsylvania fields in 1896.

Since then some of these coal lands have been sold as high as \$1200 an acre, and the Philadelphia and Reading Company, in 1871, paid \$40,000,000 for 100,000 acres of coal land in this region.

It is hard to estimate the enormous amount of money the United States makes out of its coal. We get more than three times as much out of our coal mines as out of our gold mines, and the silver metal is not in it with the black diamonds. There is a little region in eastern Pennsylvania, about a hundred and twenty-five miles from Philadelphia, and not more than two hundred miles from New York, which produces every year coal to a greater value than all the gold mines of the Rockies, Canada and Alaska. It is our anthracite coal fields which turn out between 50,000,000 and 60,000,000 tons of anthracite every year. We have in addition to this a hundred and thirty odd million tons of bituminous coal annually. We have, in short, the biggest and best coal measures on the globe. It is estimated that our coal east of the Rocky Mountains covers 192,000 square miles, and within the past few years coal has been found in many parts of the Far West. Colorado will eventually be a great manufacturing State on account of its coal.

A Marriage Made in Heaven.
At a recent wedding all went merrily until the bridegroom was called upon to produce the wedding-ring. In vain he felt in his newly-created trousers pocket for the indispensable trifle. Nothing could be found except a hole through which the ring had evidently fallen. What was he to do? Suddenly a happy thought struck the parson.

"Take your shoe off," he said. The suspense and silence was painful. The organist, at the clergyman's bidding, struck up a voluntary. The young man removed his shoe. The ring was found, also a hole in his stocking, and the worthy minister remarked, evidently with more than the delay of the ceremony on his mind: "Young man, it's high time you were married."

Swiss Schools of Agriculture.
Switzerland was the home of the philanthropist and educator Fellenberg. His school, established in Hopyl in 1806, was a philanthropy in aid of the peasantry, concerning whom he said that, possessing nothing but bodies and minds, the cultivation of these was the only antidote for their poverty. At least three thousand pupils received their education in agriculture here. The Federal Polytechnic School at Zurich is the nation's pride. Out of six courses of superior training which it provides for its one thousand students, forestry and agriculture count as two. Five universities and numerous special schools furnish aid to agricultural education. —W. E. De Riemer, in Appletons' Popular Science Monthly.

There are a thousand vessels which cross the Atlantic Ocean regularly every month, some of them twice a month.

DON'T LIKE BRITISH BULLETS.

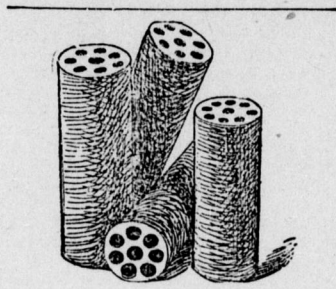
New English Missile Said to Be Quite as Bad as the Dum-Dum.

It is asserted in France that the British are violating one of the provisions of The Hague conference by their use in the Transvaal of a bullet almost, if not quite, as barbarously destructive as the famous dum-dum bullet. The conference decreed that only those bullets should be used which are completely covered by a hard envelope or case, the objectionable feature about the dum-dum bullet being its jagged nickel envelope.

The new British bullet has a copper socket, which contains a charge of smokeless powder, and at the end is a lead ball inclosed in a nickel envelope.

Toward the head of the bullet there is a small opening in this envelope. Frenchmen say that when this bullet touches a soft substance the opening is compressed and the projectile is so enlarged that it assumes the form of a mushroom. As a result, they maintain, fearful wounds are caused. Bullets of small caliber, they point out, are intended to put men hors du combat without making them undergo needless suffering.

Dr. Bruns, Inspector-General of the military hospital at Wurtemberg, recently made some experiments with bullets of this type, and pointed out that a bullet with a cavity in its head and "having greater penetration than the dum-dum bullet reaches a soft or liquid body without changing its form, and then bursts." Illustrations made during these experiments show wounds so frightful that they seem to have been caused by some very powerful explosives, but, according to English experts, we ought to remember while studying these illustrations, that the doctor's experiments consisted mainly of shots fired from a Lee-Netford rifle



POWDER USED IN NEW ENGLISH BULLET.

at short ranges into dead bodies and results thus obtained are always unsatisfactory.

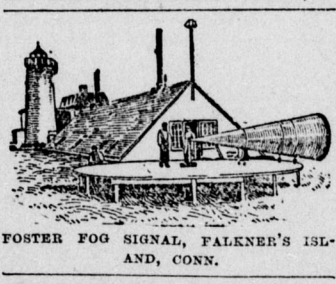
A similar charge against Great Britain has been made in Holland ever since the Transvaal war started, and there are few continental papers which have not referred to the subject in one way or another. Many experiments have also been made as to the effect of nickel-coated bullets with objectionable cavities, but, as British experts pertinently point out, these experiments have been made on dead animals, and the conclusions drawn therefrom are of little value.

A New Style of Fog Horn.

How to render navigation safe in thick weather is a question which has engaged the attention of many inventors and experimentalists without any very satisfactory result at the present day.

There are now in use several instruments, modifications of the megaphone, which are intended to be carried on vessels for the purpose of locating fog signals, be they on ship or shore. All such inventions are intended for the listener. It occurred to R. F. Foster that this was working at the wrong end of the problem, and that the proper place to locate a fog signal was in the signal itself, so that if a person heard it at all he could be certain of its direction, without being compelled to use any instrument.

On this theory a signal was built and installed at Falkner's Island, in



FOSTER FOG SIGNAL, FALKNER'S ISLAND, CONN.

Long Island Sound, under the supervision of the United States Lighthouse Board. The apparatus consists in brief of an immense megaphone, mounted on a circular table. By changing the position of the phone toward each of the principal points of the compass in turn, and by blowing a different signal at each point, the compass bearing is given to passing vessels.

The apparatus works automatically, a three-horse power gas engine being sufficient to pump all the air required for blowing the signals and to turn the worm gear that revolves the megaphone.

Japanese Women Divers.

Over one hundred Japanese women, following the hazardous profession of divers, are found along the coast of the peninsula. They are divided into four batches, and their ages range from seventeen to thirty. They come almost exclusively from Shima, Miyake, a noted fishery centre in Japan. Their earnings are, of course, not uniform, as they are paid according to the amount of their work, which consists in diving for agar-agar seaweed, sea-ear, sea-cucumber and so forth. —Japanese Weekly News.

PEARLS OF THOUGHT.

Vain hope to make people happy by politics! —Carlyle.

The good man's life is like the spark that is brightest at the close.

Difficulties of thought, acceptance of what is without full comprehension, belong to every system of thinking.

When interest is at variance with conscience, any pretence that seems to reconcile them satisfies the hollow-hearted.

Idleness is a craven's goal. No man of worth wants to be free from work. Without work life is not worth the living.

If you want knowledge, you must toil for it; if food, you must toil for it; and if pleasure, you must toil for it; toil is the law.

To let a man know that you recognize and rejoice in some good quality of his, is to bless him with a new heart and stimulus.

Courtesy is the passport to success. We double the power of our life when we add to its gifts unflinching courtesy. The world always befriends room to a boor.

The habit of blaming others when things go wrong is an insidious and dangerous one. Far more is it to the purpose to inquire within whether the fault, or much of it, may not lie at home.

Benevolence should never be exercised at random, nor upon irrational impulse, but should be the outcome and expression of a disposition trained and nourished in the atmosphere of human friendship.

A CANAL ACROSS FLORIDA.

Thus We May Steal the Gulf Stream Declares Berlin.

Berlin has been taking a lively interest in the report that an American engineer has suggested the idea of digging a canal through the peninsula of Florida in order to divert the Gulf Stream from the west coast of Europe to the east coast of America. Berliners, however, do not display much anxiety over the possibility of the United States, as it were, robbing the northwest of Europe of some of its warmth. They admit that Florida, being flat, does not oppose great engineering difficulties to a canal digger whose ambitions are within ordinary limits. But to make a canal which would accommodate the Gulf Stream would entail an expenditure in comparison with which the cost of the Suez or Panama canals would be a mere fleabite. The Suez Canal is 160 kilometres long, 100 metres broad, and eight metres deep. It cost 4,000,000 marks. The Florida peninsula, at the point where it is to be intersected, is almost as broad as the Suez Canal is long; or, perhaps, five or ten kilometres less. The Gulf Stream is about 100 kilometres broad, and 200 metres deep, and the new canal would have to be equally broad and deep. That is to say, it would have to be 25 times as deep and more than a 1000 times as broad as the Suez Canal; and the cost of excavation, quite apart from the extra expense of working at such a depth, would amount to 10,000,000,000 of marks, or 2500 times as much as the indemnity paid by France to Germany. Quite apart from the question whether it is technically possible to dig such a broad canal to a depth of 200 metres, the impossibility of raising such a sum may deliver Europe from the fear of the northwest of the continent being subjected to such an enormous lowering of temperature.

After thus seriously considering the idea, Berlin has arrived at the conclusion that the formation of a company will be about as far as this newest canal scheme is likely to get. —New York Sun.

African Rivers.

It is a distinguishing feature of most African rivers that they contain no water for at least eight months of the year. It is true that water can almost always be found in a river bed by digging for it, but in outward appearance a river is usually a broad belt of sand lying between high and precipitous banks. Many and many a coach has been upset in one of these drifts, as they are called. The descent is always steep, frequently so steep that the brakes cannot hold the coaches.

They start going down at a crawl, and then the coach gathers way and goes on with a rush, the mules are driven into a heap anyhow, and one wonders that they do not get their legs broken; but they usually land all right, while the coach, practically unmanageable, goes down like a sort of toboggan, jumping from stone to stone, and swaying like a ship in a sudden squall, and may or may not arrive right side up at the bottom. In fact, the passenger who has gathered his ideas of coaching from a trip to Brighton or a drive to Virginia Water, finds that he has a lot to learn about the subject when he gets to South Africa. Still, on the whole, it was wonderful how few accidents did occur, and if one considers that the coaches ran night and day, and that when there was no moon it would sometimes be too dark to see the mules from off the coach, it reflects great credit on the drivers. —The Gentleman's Magazine.

Prosodic Modernity.

Romance and chivalry are not what they were, alas! Once, the hero, having rescued the maiden from the tower, paused in his flight to exclaim: "Hark! The hoof-beats of pursuers!"

But now—

"Smell! The odor of my father's automobile!"

It is terrible, this sordid utilitarianism! —Detroit Journal.

THE GREAT DESTROYER.

SOME STARTLING FACTS ABOUT THE VICE OF INTEMPERANCE.

Come Away From the Eye—The Importance of Improving the Dwelling of the Poor as a Counteractive to the Influences of the Saloon.

If a body's always drinking, Everything's awry. Should a body get to thinking Sure he'd stop and sigh. All such boilies think teetotal Very hard and dry. But 'ere they say they could not keep it Ought they not to try? —National Temperance Advocate.

Better Homes For the Poor.

Some very wise and practical suggestions are contained in the report presented to the Presbytery of New York by its Committee on Temperance. The report deals on the importance of improving the homes of the poor as a counteractive to the influences of the saloons. It says: "The liquor traffic makes unceasing and deadly war upon the saloon. It supplies the weapons and pays for the campaign. It entraps the breadwinner of the household and robs him of his wages, his strength, his character and his enjoyment. It robs the wife of the love and protection pledged to her at the altar. It takes from the children the care and affection of a father. It steals from every member shelter, food, clothing and an honorable name."

To exterminate the saloon is, then, the way to save the home; but this may often be done more effectively by making the home more attractive than the saloon. Laws have been enacted, sermons preached, public meetings held, lectures obtained, reformatories established, lecture halls, coffee houses and other substitutes tried—and all have done good in a greater or less degree—but why should not efforts be intelligent, comprehensive, liberal, persistent, self-sacrificing efforts, go back to the original source; why should not the chief solicitude center around the home?

What can missions and churches among the poor accomplish unless the homes from which the congregations come are auxiliaries of such agencies?

Philanthropists, sanitary reformers, shrewd investors and public officials have done not a little to improve the dwelling places of the poor classes, but is there nothing the churches can do in the organized capacity and individual activities? Doubtless the accepted policy of most missionary operations has had this general end in view. Saloons, however, still occupy every available corner, and sometimes half the stores on the block.

If the law cannot close them, the loss of patronage will—but patrons will crowd the saloon door until some other door, more inviting and with more behind it, shall be opened.

This should be, and we believe can be, the door of each man's own home, even if that home consists of only one or two rooms.

No attempt at concerted action by the churches of any one denomination of the entire city would probably effect large results; but if each particular church in its own immediate sphere, and with such resources as it can command, will practically, patiently and resolutely undertake to improve the actual living conditions of the poor, something might be hoped for.

Poisoned Beer.

The United States Senate Committee on Manufactures has been investigating a lutedated malt liquor, and examining chemists and other expert witnesses. Their testimony shows that salicylic acid is used in beer—particularly imported European beers. European Governments have a way of benevolently prohibiting adulterated home-consumed beers, but liberally permitting adulteration in beers made for foreign consumption. That is the kind we get. However, as beer is possibly the worst drink that human beings can put into their stomachs—except champagne—beer drinkers probably deserve their penalties. There are certain acute forms of kidney disease—waxy, cirrhotic types—found only among beer-drinkers. Life insurance companies will not insure brewery-workmen. Rich brewers and all their families have been known to die of kidney disease. This is from beer presumably pure for probably brewers drink their best beer. What happens to those who drink the worst, heaven alone can tell. —San Francisco Argonaut.

One Cause of Poverty.

In order to learn some definite facts which would be upon the question as to what causes poverty, one of the agents of the Municipal Reform League of New York was stationed to watch an entrance of a tenement on lower Broadway one evening from seven to eleven o'clock. He saw nineteen men go in with buckets of beer, fourteen women with buckets of beer, and seven girls from ten to twelve years of age with buckets of beer; three women also carried in bottles of whiskey. Forty buckets of beer and three bottles of whiskey in one evening carried into a building in which the average weekly earnings per family will not exceed three dollars seems to furnish a suggestion of the cause of poverty. On the evening of the 10th the same agent took observation on a tenement of a better class. Between half-past seven and ten o'clock he saw ten boys from eight to fourteen years old carry in buckets of beer. The better class tenement had fewer buckets of beer. The more beer the worse home.

One Saloon a Menace.

It may go without saying that no community can be perfectly happy and prosperous throughout all its borders while a single drinking place remains within its confines. One saloon argues the presence of an evil and harmful thing; it is a dark and baleful spot in the life of a community; it means misery and death to many a one. The saloon can only live and thrive as it develops and feeds on the vices of men. Its presence is inconceivable in a community where every home is a home indeed and in truth, and where purity and virtue make up the life conduct of every man and woman.

It Injures the Memory.

Over-indulgence in spirits injures the memory to an incredible degree. In years gone by no person who was known to be of intemperate habits was permitted to appear as a witness in the Spanish courts of justice, the authorities maintaining that alcoholism was so prejudicial to the brain that it was unsafe to accept the testimony of an inebriate.

A Sad Lack of Thrift.

In a recently published book, "Shall We Drink Wine?" written by Doctor John Madden, it is proved that the American laboring man pays about twenty times as much for the food he obtains in his beer—and beer is shown to be the most nutritive of alcoholic drinks—as for that he obtains in his bread.

The Crusade in Brief.

The amount of alcohol given to-day is not one-tenth of that prescribed forty years ago. In private and hospital practice its use is steadily declining.

When it is considered that among the ruling classes in Chile it is usual to drink seventeen whisky cocktails before breakfast, it is not to be wondered at that cock fighting is one of the principal amusements.

Railroad companies turn a cold shoulder to all applicants for positions when the faintest suggestion of whisky is detected, knowing, to their sorrow, that even a moderate indulgence in alcohol clouds the brain and places a leaden hand upon muscular power.