MINING ANTHRACITE.

How The Pennsylvania Coal Fields Are Worked.

THE word anthracite, which has become such a vital part of the life of the American people, is a striking example of how the world becomes dependent on what may be termed the latter-day progress of mankind. Just 100 years ago Philadelphia received her first shipment of anthracite coal. It came to the city in two great river arks, and was used to gravel the sidewalks. A small quantity of this coal was burned in a grate, but the experiment was not a success, and in 1806, when another ark load of coal tied up at the wharf in the Quaker city it was rejected—no one wanted it. In 1808 Judge Fell, of Wilkesbarre, successfully burned anthracite in a grate. In 1812 another effort was made to market anthracite coal in Philadelphia, but nine wagon loads which were sent there from Pottsville had to be given away.

The real history of the anthracite coal industry begins in 1820, when 365 tons of coal were shipped to Philadelphia from the Lehigh region. During the next ten years the trade from the Lehigh regions was firmly established, and the Schuylkill region was opened up upon the completion of water communication with Philadelphia. During the latter part of this period the Delaware and Hudson Canal Company was organized and began the shipment of anthracite from Carbondale by the canal and the gravity railroad.

From this time on the trade rapidly increased, canals and gravity roads multiplied, only to be replaced by locomotives on their advent. One of the first locomotives used in this country was for the purpose of hauling anthracite.

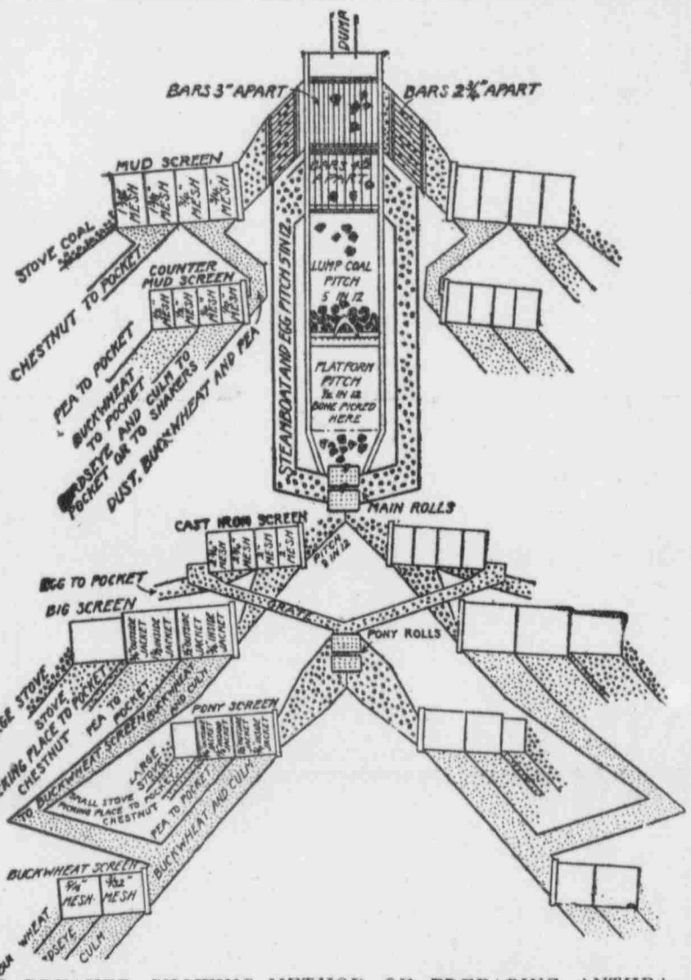
The process of mining anthracite coal consists of two methods—stripping and closed work. Stripping is the process where the coal lies near the surface of the ground as it does in many instances in the anthracite field. The closed work is that done under ground, or at the bottom of a shaft. Owing to the character of the deposits the room and pillar system is employed. When the shaft cannot be placed so as to reach the lowest point of the deposit, th coal below is reached by inside or blind shafts or inside slopes. These shafts, which are sometimes sunk to a depth of over 1000 feet, usually have several compartments, one for the pumpway and ladder, and two or more for hoisting. A common size of the hoisting compartments is 7x12 feet. The coal is brought to the bottom of the shaft from the inside or blind shafts by means of small cars, and in some instances sheet iron chutes, according to the inclination of the shaft, according as the blind shaft slopes up or down from the bottom of the shaft from the surface.

Anthracite is mined with hand rotary drills and by black blasting powder. Dynamite or giant powder is used for rock work, sometimes for driving gangways, and in some locations for blasting coal itself where fire damp necessitates a flameless explosive. The mines are ventilated by rotary fans. The law requires that each miner shall be supplied with at least 200 cubic feet of air per minute. Fire damp is prevalent in many of the anthracite shafts, necessitating the use of safety lamps by the miners.

The cost of mining anthracite coal is greater than the cost of mining bituminous coal, and this cost does not end when the coal is landed at the surface of the mine. Anthracite as it comes from the mine consists of lumps of various sizes, and intermixed with these lumps is a mixture of rocks. These lumps must be broken and assorted as to size before the anthracite is ready for the market, since the economic use of anthracite requires that the lumps must be o! as near uniform size as possible, and as there is a greater demand for the intermediate sizes, the larger lumps must be broken down to smaller sizes. This elaborate preparation greatly increases the cost of the coal.

Anthracite is prepared for market in what is known as the coal breaker, a large building, usually built of timber, but sometimes of steel and iron. The coal is broken up by machinery consisting of toothed rolls, after which it is screened in circular revolving screens. The slate is picked out by hand by boys and old men, who sit along the chutes through which the coal passes. As far as possible the work of sorting sizes and picking out impurities is done by machinery. As the illustration shows, the general plan is to sort the coal over inclined bars, then to pass what goes through the bars over revolving or shaking screens, while what goes through goes directly to the loading bins, or else is broken up into smaller sizes by rolls and then separated into the various sizes by screens. The capacity of the average breaker is from 2000 to 3000 tons of coal a day.

The tendency of recent years has been to use more of the smaller sizes of anthracite, and consequently the breaking has been done with this end in view.



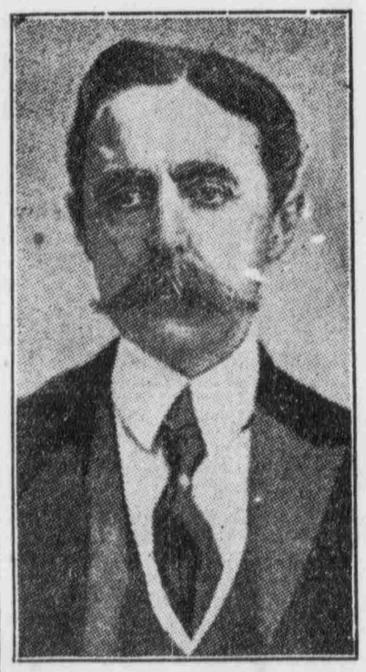
COAL BREAKER, SHOWING METHOD OF PREPARING ANTHRACITE COAL FOR MARKET.

Curious Surgical Case.

The popular belief that a man who receives a wound from a bullet in the heart is bound to die therefrom almost instantaneously is now seen to be unfounded, for at the last meeting of the French Academy of Medicine Dr. Peyrat told of a man who was restored to health after his heart had been pierced by a ball from a revolver. The wounded man, he said, was placed in a hospital in Paris, and Dr. Launay, a noted surgeon, operated on him there with great success. According to Dr. Peyrat this is the only case of the kind on record. True, statistics recently compiled by Dr. Dentu, show that out of every hundred persons who receive wounds in the heart from swords or daggers from thirty to forty-two are cured, but, though medical books have been carefully searched, no record has been found in them of a man who has been rescued from death after his heart had been perforated by a ball.

The Telephone in Corsica.

Ajaccio, in Corsica, the birthplace of Napoleon, has a new telephone service. At present its subscribers are three in number.



Photograph by Alman & Co.

The Hon. Michael Henry Herbert,

(Successor to Lord Pauncefote as British Ambassador to the United States.)

Brussels has a church clock wound up by atmospheric expansion induced by the heat of the sun.

Two More of Our Series of Tombs of the Presidents

Thomas Jefferson.

At Monticello, near Charlottesville, Virginia, Thomas Jefferson was buried. The plain granite shaft at the grave bears an inscription, prepared by Jefferson himself, setting forth that it is the burial place of the author of the Declaration of Independence.

Andrew Jackson.

Like several of the early Presidents, Andrew Jackson was buried beside his wife, at his homestead, The Hermitage, near Nashville, Tennessee. This corner of the estate was afterward bought by the women of Tennessee and given to the State.

Woman at Railroad Crossing.

The feminine guardian of a railroad crossing is a type well known to travelers in France. As the train approaches a crossing one sees a quaint old dame, with a sunburned face, wearing an apron with wondrous stripes, and a queer-looking black hat made of waxed cloth, similar in shape to the old straw hat of the Jack Tar of bygone days. This hat is only worn when a train goes by, presumably to give a certain amount of official dignity to the wearer when on duty. Slung around the left arm is the trumpet with which warning is given to pedestrains and others of the approach of a train, and in the right hand is seen the red flag, which is kept rolled round the stock when the road is clear, and only unfurled as a danger signal.

GUARDING A FRENCH RAILROAD CROSSING

A REMARKABLE "CATCH."

Nine-Year-Old Girl Landed a Ninety-seven Pound Fish.

Miss Kathleen Dunsmuir, the nine-year-old daughter of the Premier of British Columbia, succeeded not long ago in landing the monster fish in the illustration, which actually weighed ninety-seven pounds and measured over five feet, considerable more than the little lady who made so successful a haul. The catch was effected from a steamer anchored in Union Bay, British Columbia, a strong salmon line and salmon bait being used, and so delighted were the crew with her success that nothing would satisfy them but that the small fisherwoman and her giant fish should be photographed together.

A NINE-YEAR-OLD FISHER MAIDEN'S REMARKABLE CATCH.

A Woman's Unwieldy Load.

Hardly anywhere in the world does the traveler see men, women and children staggering under loads so unwieldy as in Mexico. The photo. reproduced—taken in Pcotlan, Mexico—shows a native girl with both hands full of baskets and a stack of hats on her head which would crush an ordinary American man. A Mexican woman will walk the streets all day carrying such a burden and look and feel none the tireder for it.—The Wide World Magazine.

From a Photo. by Winfield Scott

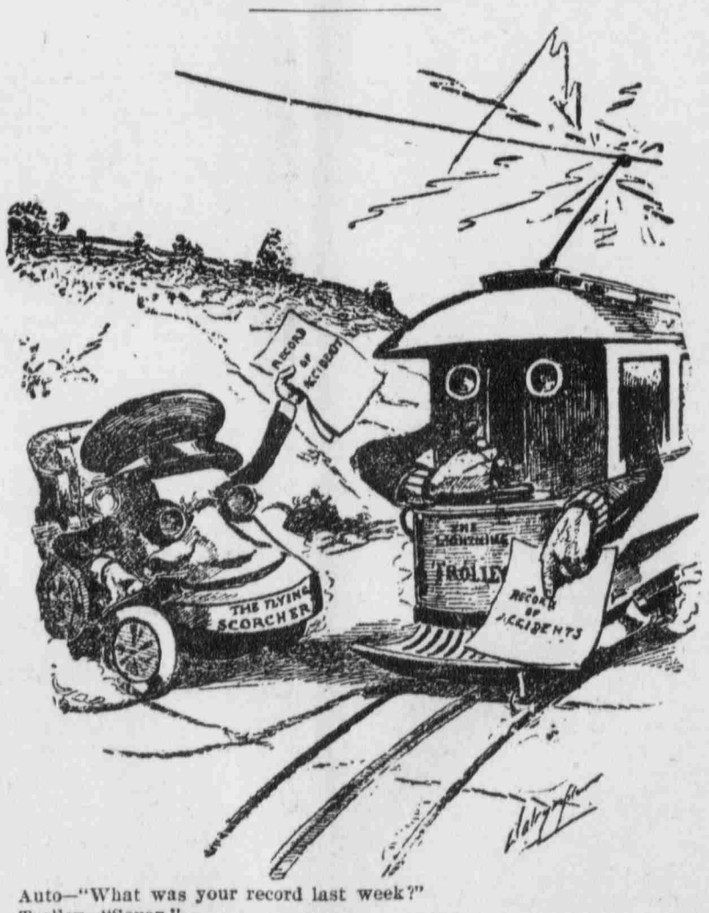
"HARDLY ANYWHERE IN THE WORLD DOES THE TRAVELER SEE MEN, WOMEN AND CHILDREN STAGGERING UNDER LOADS SO UNWIELDY AS IN MEXICO."

The Punishment Sufficient.

The law has no penalty for stealing a heart, because the punishment of having it left on your hands is enough. —New York Press.

A man has to have a pretty hard cheek to travel on his face.

"IT'S THE PACE THAT KILLS."



Auto—"What was your record last week?"
Trolley—"Seven."
Auto—"Oh! You're dead slow. Mine was nine."
Trolley—"Yes, but I once nearly killed a President of the United States; you can't beat that."—Philadelphia Inquirer.

TO ADORN FAIR WOMEN.

Ostriches Despoiled of Their Feathers in Painful Way.

Ostrich feathers are plucked for market as follows: A man carefully examines the flock and picks out those birds whose feathers are ripening, groups them in so that they can not run about and injure their beautiful plumage. When the plucking time comes each bird is enticed into a narrow, dark passageway. The entrances are then closed and the bird thus imprisoned. A cloth bag is thrown over the creature's head. Then the plucking begins. Three men, perched upon platforms outside of the pen, reach over the board inclosure, and with various scissor-like appliances pluck off the feathers. Whatever wounds a bird may receive are immediately dressed. The tail feathers are pulled and not cut, simply because they reproduce better than other feathers of the ostrich. While the plucking is in progress the ostrich keeps up a dismal roaring. Were it not for the stanch construction of the pen the creature would kick the boards into splinters.

Dogs as Collectors.

"Collecting dogs" are popular just now in England for gathering money for charitable purposes. The Royal Berks hospital has recently been enriched to the extent of nearly $50 in 2,574 coins which Prince, a fox terrier, collected at Workingham. Prince is the property of a local public house keeper, whose customers amuse themselves by hiding a coin which the intelligent terrior speedily finds, when it is transferred to a box, where it remains until the time comes for the donations to be handed over to the hospital's treasury. It is said that a collecting dog at Paddington railway station in London has during its service collected over $3,750 for charity and still continues his good work.

Would Reform Calendars.

Camille Flammarion, the astronomer and social reformer, has introduced a bill in the French chamber of deputies for the rationalizing of the calendar. He wants the year to start with the vernal equinox and to consist of 364 days. The odd day he wants to make a fete day independent of the year. The object of the reform is to make the same dates recur on the same days of the week year after year.

Bicycle Still Popular in France.

The bicycle craze shows no abatement in France. Good roads have kept the wheel from falling into oblivion. True, there are not so many wheels seen on the boulevards and parks, but in the country the wheeling tourist is as promiscuous as ever. At the seaside and summer resorts the wheel is still the favorite method of locomotion.