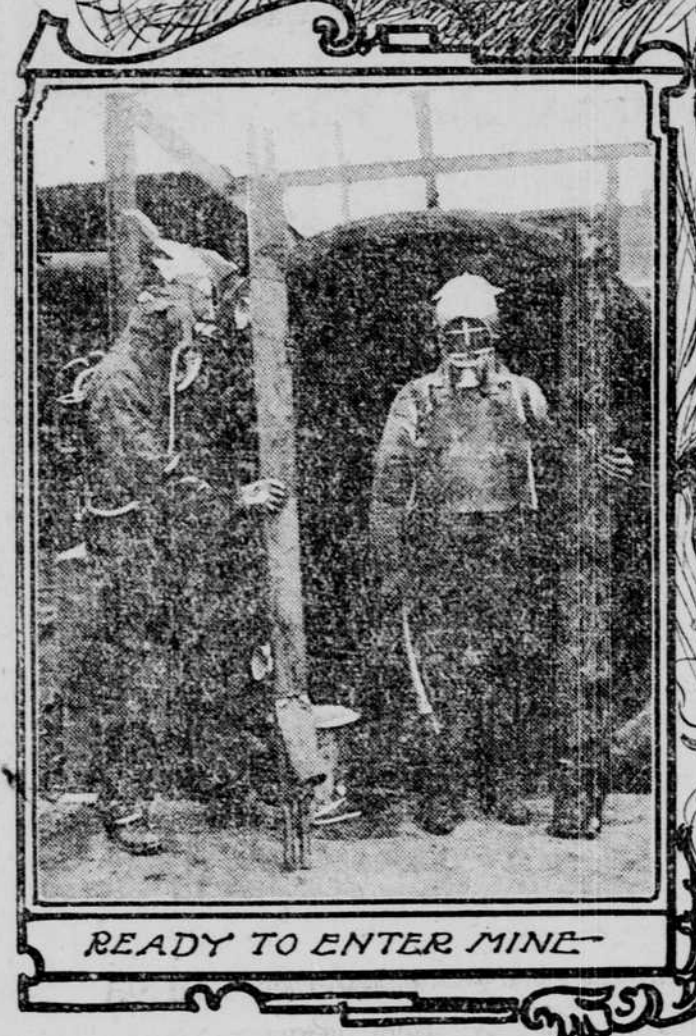


BALKING the GRIM REAPER in MINES

HOWARD E. SEXTON



READY TO ENTER MINE



of improper explosives, as well as the improper use of suitable explosives, results annually in the waste of great amounts of coal. The use of too high charges in blasting, or the use of unnecessarily violent explosives, shatters much good coal, converting fuel into dust which may itself be explosive and become productive of much further damage. Such explosions often loosen the roof of a coal mine, which may fall later to be wasted, or productive of fatal accidents.

In addition to the actual experiments in testing explosives, important experiments are being made in rescue work. One part of the station has been fitted up as a miniature coal mine. This is a large glass-encased, airtight room which contains difficult passages such as are found in coal mines. There are also various obstructions similar to what would be found in a mine after it had been wrecked by an explosion; also dummies weighing 150 to 200 pounds, representing asphyxiated miners. This room is filled with deadly gas and a rescue corps of men who are being trained in the work enter daily, clad in helmets which supply them with oxygen while they work. The men remain in this chamber for two hours, removing obstructions, picking up the dummies, placing them on stretchers and carrying them away. There is also in the room a machine which records the amount of work a man may be expected to do while wearing one of these helmets. One-half of the large building in which this rescue room is located is used as an auditorium and several hundred miners and

IN ITS effort to stop the appalling loss of life in the coal mines of the country, the United States government is meeting with much success. For several months an experiment station, under the direction of the geological branch of the United States geological survey, has been in operation at Pittsburg, Pa., with the purpose of discovering the causes of mine disasters and suggesting a remedy.

Along with establishment of this station and the agitation which preceded the necessary legislation, there has been a falling off in the number of deaths in the coal mines for the year 1908, and while the official figures have not yet been obtained, it is stated that the number of deaths will be several hundred less than in 1907, which was an unusual year. In December, 1907, four

explosions took the lives of 700 men, one of them at the Monongah mine in West Virginia—being the greatest mining disaster in the history of this country. There were 356 victims. During 1908, there were but two accidents in which the loss of life was very heavy: one in January at the Hanna mine, in Wyoming, with a loss of 70 men; the other, November 28, at the Marianna mine in Pennsylvania, which resulted in 154 deaths.

Already at the experiment station two discoveries have been made which will tend to decrease the number of deaths in the mines. It has been demonstrated that a number of the so-called "safety" explosives are anything but safe, in fact the statement is made that with the present explosives used in mining, the miner takes his life in his hand every time he touches off a fuse. It is the purpose of the government to continue these experiments until the explosives of the country are standardized in such a manner that the miner will have a definite idea what these explosives will do.

After the government has gone far enough in its experiments, a bulletin will be issued recommending as permissible explosives such as stand the test. The facts learned concerning these explosives will be called directly to the attention of the state mining bureaus as well as the operators.

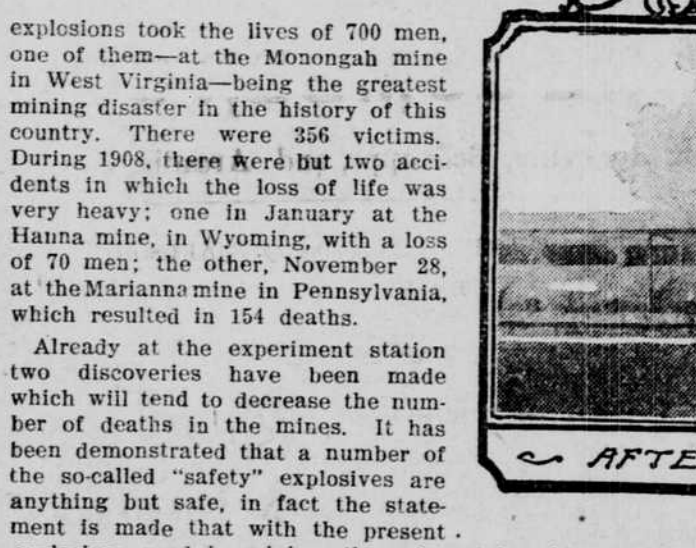
Perhaps the most important and far-reaching experiments so far at the station are those in which it has been definitely shown that coal dust is an explosive equally as dangerous as the deadly fire damp. This has been a mooted question among mining engineers and miners alike, both insisting that it is impossible to explode coal dust unless there is gas present. That the coal dust will explode in the mine where there is no gas has been repeatedly shown to several hundred operators and miners at the testing station. The experts at the station are now bending their en-



EXPLOSIVES GALLERY



RESCUE PARTY AT WORK



AFTER A COAL DUST BLAST

able. The tests of various dynamites and powders used in blasting coal are being made in a mammoth boiler plate cylinder which has previously been filled with gas or coal dust. The cylinder is 100 feet long and six feet in diameter. Safety valves have been placed all along the top and are left unfastened in such a manner that whenever there is an explosion the valves fly open on their hinges. A series of portholes on the side, covered with one-half inch glass, enables those conducting the experiments to witness the results from an observation house 60 feet away. An explosive mixture of fire damp and air, or coal dust and air, is pumped into the cylinder and the explosive which is to be tested is shot into it from one end of the cylinder, so that the flame goes right into the fire damp or coal dust. Natural gas is used at this station for fire damp, because it corresponds very closely to this deadly gas. The cannon in which the explosives are placed is fired by electricity from the observation house which is parallel with the cylinder itself.

These investigations are expected to accomplish a double purpose; not only a reduction in the number of men killed in the mines, but also a saving of the waste in mining coal. The use

of operators have watched the rescue drill through the large glass windows which separate the auditorium from the gas-filled chamber. Although there has been but little opportunity so far for the rescue corps to demonstrate its efficiency at the mines, still it has done some good work.

Once the helmeted men while fighting a mine fire succeeded in bringing an unconscious man to a place of safety, where he was given oxygen treatment and recovered his senses in a short time.

It is not the intention of the United States government to furnish rescue corps whenever there is a disaster. The present corps was organized with the idea of encouraging the mine owners and miners themselves to form such organizations. Invitations have been issued to operators throughout the country to send picked men to the experiment station, where they may watch the government rescuers at work and later go through the same training themselves, in order that they may gain the necessary confidence in the use of these helmets. Already a number of the large mining companies have taken advantage of this invitation and are organizing rescue corps at their mines, fully equipped with oxygen helmets.

In 1907 more than 3,125 men were killed in the coal mines of the country—a death rate of 4.86 for every 1,000 men employed. This is from three to four times as many men per thousand as are killed in any coal-producing country of Europe, where experimental stations such as the one in Pittsburg have been in operation for several years.

Full Beards for Farmers.

The protection of farmers and others who are exposed to the heat a great deal is a serious and difficult matter. Cancer is on the increase, and farmers furnish a large proportion of the cases, many of them being due to the direct effects of sunlight on the face and hands. A full beard for the farmer is most desirable for his protection.

OLD ROMAN WALL DISFIGURED

Relic of Antiquity Sacrificed to Comfort of Suburbanites.

A correspondent in Rome has taken a first opportunity of looking into it—rather through the breach made by a municipal authority in the Aurelian wall. It has been made quite whole and candidly for the sake of belonging to the suburbs. See what suburbs to a walled

city! Rome is only partially walled, of course, but this piece of rather late antiquity—still still antiquity—the great brown range of brick, was, for a great space of the Pincian Hill, complete. The three gates piercing it were sufficient for the carts on their way to and from the outer world of the Campagna. And one might have thought that the few hundred yards that the suburbanites had to walk or drive in order to get in at one of those

historic gates were not too great a tax to pay to history and archeology. But it was deemed too great, and the wall is broken, not by a new gate, but by a mere cutting, which disfigures as well as destroys.

The Scene Painter's Retort.

The late Theodore Thomas was rehearsing the Chicago orchestra on the stage of the Auditorium theater. He was disturbed by the whistling of Albert Burridge, the well-known scene painter, who was at work in the loft

above the stage. A few minutes later Mr. Thomas' librarian appeared on the "bridge" where Mr. Burridge, merrily whistling, was at work. "Mr. Thomas' compliments," said the librarian, "and he requests me to state that if Mr. Burridge wishes to whistle he will be glad to discontinue his rehearsal." To which Mr. Burridge replied, suavely: "Mr. Burridge's compliments to Mr. Thomas; and please inform Mr. Thomas that, if Mr. Burridge cannot whistle with the orchestra, he won't whistle at all."—The Argonaut.

of improper explosives, as well as the improper use of suitable explosives, results annually in the waste of great amounts of coal. The use of too high charges in blasting, or the use of unnecessarily violent explosives, shatters much good coal, converting fuel into dust which may itself be explosive and become productive of much further damage. Such explosions often loosen the roof of a coal mine, which may fall later to be wasted, or productive of fatal accidents.

of operators have watched the rescue drill through the large glass windows which separate the auditorium from the gas-filled chamber. Although there has been but little opportunity so far for the rescue corps to demonstrate its efficiency at the mines, still it has done some good work.

Three New Designs



The walking costume illustrated is both useful and smart. The skirt is quite plain, and is cut a comfortable walking length. A great advantage in the coat is that it is high in the neck, and fastens over at the left side in a point; nine small buttons put closely together form the fastening. The entire coat is tight-fitting, a fur necklet adds a finish. Hat of soft felt, trimmed with velvet and quills. Materials required: 8 yards cloth 48 inches wide, 19 buttons, 5 yards coat lining.

The simple but effective blouse is composed of lace and spotted net. For the yoke and collar, the net is tucked horizontally, and is edged with lace medallions, which are also taken in rows down the front of blouse; then net is finely tucked in between them. Three frills of lace form the sleeves. Materials required: 1 1/2 yard net 42 inches wide, 2 yards of medallions, 6 yards of lace for sleeves.

The next shows a useful indoor-dress that would look well made up in royal blue cashmere; the skirt is tight-fitting round the hips, and just full enough at the foot to hang gracefully. A row of passementerie forms the trimming. The over-bodice is slit up at each side of back and front, also on the sleeve; passementerie completely edges it and covered buttons add to the trimming. Gulpure lace forms the yoke and tight sleeves of under-slip. Materials required: 7 yards cashmere 46 inches wide, 2 1/2 yards lace, 2 dozen buttons, 3 yards passementerie.

IDEA FOR SHORT CURTAINS.

Decorative Scheme That is Proving Helpful to a Degree.

There is a fashion in decoration that should be helpful to the woman who must fit short curtains to new windows.

This is the idea of having deep decorative borders on fabrics of solid color.

Separate borders can be bought at the large shops with surprising ease by the woman who knows how to root out the artistic thing. They do not come for curtains as a rule, but they serve admirably.

The foundation color is usually deep tinted, although some good patterns can be got with the foundation in natural crash tones.

The color note is intended, of course, to harmonize with the room in which it is placed.

The border may be fastened on by a double row of stitching close together, over which are big stitches with coarse thread of the foundation color, sewed as Bagdad strips are sewed.

Some people omit the stitching, using only this coarse sewing.

SEPARATE TUNIC A BLESSING.

Can Be Used to Advantage in Altering Old-Fashioned Frocks.

Clever women have found out that a separate tunic made of another material than the gown and draped over it is an excellent method of altering an old-fashioned frock.

There are some skirts that are too short to be lifted up even for two inches on the bodice to give the empire effect, and they are too much out of style to wear as they are.

If the skirt and bodice are put together by their linings and two or three folds of self-colored material neatly draped around the waist line in order to make it invisible the foundation work is finished.

The tunic may be made of net, chiffon cloth, bands of net and embroidered satin or all-over lace edged with fur or gold galloons.

This is cut with a seam down the middle of the back and neatly draped three inches above the waist line, headed with folds of the material or a piece of the trimming used elsewhere.

This tunic drops from bust to knees and gives the exact line that it needs this winter on smart frocks.

Turban Notes.

The round-crowned turban in straw is a distinct favorite for early spring. Satin trimming shirred over cords is a favored decoration on the newest turban.

The all-flower model lends itself most successfully to the large turban shape.

A flat-crowned turban in rough black straw of unusual height is bound round with a narrow black velvet, ending in one huge rosette.

The narrow stiff quill—in pairs—divides honors with the tight bunch of small roses as a middle front decoration for the straw turban.

Small turbans fitting very low on the head are draped with black lace veils.

NEW HEAD DRESSING.



Simple Greek Coiffure of Paste, Mounted on Silver.

Embroidery in General.

Some very exquisite centerpieces are being made in a combination of stitches. The use of coronation braid intermingled with solid embroidery and French knots is rich in effect. One edge shows a row of heavy stem stitch just inside of the buttonholed finish, another buttonholed edge is finished in long uneven scallops with a second row exactly like it a half inch further in.

White Suede Gloves.

White suede is the favorite evening glove.

LITTLE ESSAY ON THE BRAIN.

Fruitful Theme Wittily Handled by Thomas L. Masson.

Thomas L. Masson, in Lippincott's Magazine, thus wittily discourses upon a fruitful theme:

"Brains are common to all parts of the country, and traces of them have been discovered in summer at Lenox, Bar Harbor and Newport.

"They are originally used to obtain money, but when money is obtained by them it usually takes their place.

"The quality of brains varies in different localities. Mixed with ginger, they become very valuable. With a spine, they are a necessity in every household.

"At one time they influenced literature, but the discovery was made that the literature could do without them. Since then they have been almost exclusively devoted to advertising.

"Brains are employed in various enterprises. They make bridges, railroads and other systems of transportation. They also create capital, and are used extensively in evading the law.

"THE MARRYING SQUIRE."

Justice George E. Law Has Broken All Records.

George E. Law, Justice of the Peace, 13 1/2 Franklin St., Brazil, Ind., is known far and wide as the "Marrying Squire," from the fact that he has married more couples than any other official in Indiana. Judge Law wrote a letter in 1906, recommending Doan's Kidney Pills, which he said had made a bad back well, enabled him to sleep better nights and feel more fit for work. The treatment also cleared up the urine. On January 5, 1909, Judge Law confirmed his previous testimony. "I have recommended this remedy to many people since I first used it," said he.

Sold by all dealers. 50 cents a box. Foster-Milburn Co., Buffalo, N. Y.

Teacher of Physiology.

"Now we will dissect this odd little animal. But first, Jimmy Phalig, will you tell me what we have here?" Jimmy—"Faith, and it's called a bat, sir." Teacher—"Very well. Now, how many kinds of bats are there?" Jimmy—"There are foive. The black bat, the red bat, the arabat, the baseball bat and the brickbat, sir."

How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by his firm.

WALDING, KIRKIN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75 cents per bottle. Sold by all druggists.

Take Hall's Family Cure for constipation.

If thou speakest what thou wilt, thou shalt hear what thou wouldst not.—Blas.

OWES HER LIFE TO

Lydia E. Pinkham's Vegetable Compound

Vienna, W. Va.—"I feel that I owe the last ten years of my life to Lydia E. Pinkham's Vegetable Compound. Eleven years ago I was a walking shadow. I had been under the doctor's care but got no relief. My husband persuaded me to try Lydia E. Pinkham's Vegetable Compound and it worked like a charm. It relieved all my pains and misery. I advise all suffering women to take Lydia E. Pinkham's Vegetable Compound."—Mrs. EMMA WHEATON, Vienna, W. Va.

Lydia E. Pinkham's Vegetable Compound, made from native roots and herbs, contains no narcotics or harmful drugs, and to-day holds the record for the largest number of actual cures of female diseases of any similar medicine in the country, and thousands of voluntary testimonials are on file in the Pinkham laboratory at Lynn, Mass., from women who have been cured from almost every form of female complaint, inflammation, ulceration, displacements, fibroid tumors, irregularities, periodic pains, backache, indigestion and nervous prostration. Every such suffering woman owes it to herself to give Lydia E. Pinkham's Vegetable Compound a trial.

If you would like special advice about your case write a confidential letter to Mrs. Pinkham, at Lynn, Mass. Her advice is free, and always helpful.

There's Danger Ahead

If you've been neglecting a cold. Don't experiment with your health. Get a remedy that you know will cure—that remedy is

DR. D. JAYNE'S EXPECTORANT

It's safe. In the severest cases of coughs, colds, bronchitis, croup, inflammation of chest and lungs it is the most effective remedy known. It does its work quickly, removes the cause of the disease.

Sold everywhere in three size bottles, \$1.00, 50c, 25c.

A 25c. Bottle of Kemp's Balsam

Contains 40 DOSES.

And each dose is more effective than four times the same quantity of any other cough remedy, however well advertised and however strongly recommended that remedy may be.

Remember always that Kemp's Balsam is the Best Cough Cure.

It has saved thousands from consumption. It has saved thousands of lives. At all druggists, 25c., 50c. and \$1. Don't accept anything else.

WISCONSIN SEEDS

Let us send you our catalog. It is free and tells you all about vegetable, fruit and field seeds, that never disappoint you when harvest time comes.

Wisconsin Seed Growers' Ass'n., La Crosse, Wis.

TEXAS STATE LAND

Millions of acres of school land for sale by the State. \$1.00 to \$3.00 per acre; only one-fourth cash interest; opportunity to buy 100 acres at \$2.00 per acre; only \$12.50 cash for 100 acres at \$2.00 per acre; 50 cents for book of land lists and New State Land. J. J. Sawyer, School Land Locator, 100 N. 2nd St., Austin, Tex. Reference: Austin National Bank.