

## PRODUCING COAL OIL

### SCENES IN THE FAMOUS BRADFORD FIELD.

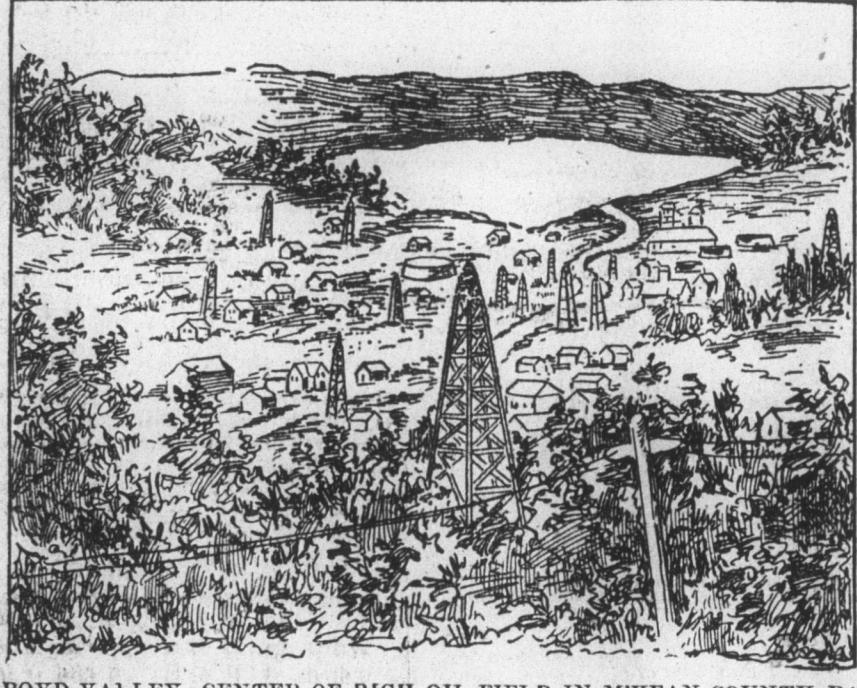
Nitro-Glycerine Lowered and Exploded—Spouting Wells Sometimes Tear Down Derricks—Lightning an Enemy to Storage—Drilling Wells.

**The Oil Region.**  
The recent advance in prices of petroleum and the consequent activity in Pennsylvania's oil fields has aroused public interest in affairs pertaining directly to the production of coal oil. We present herewith a series of illustrations showing several phases of the work of oil production in the Bradford field, a section which made the Penn-



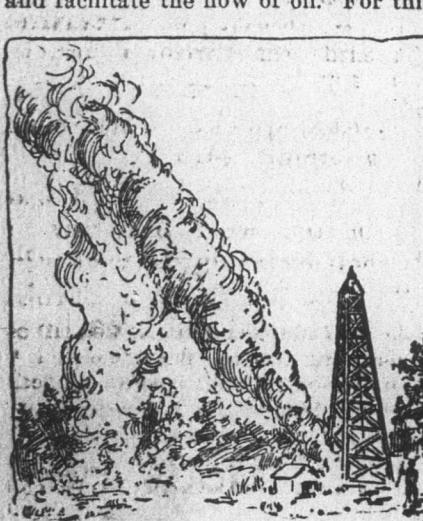
PREPARING A TORPEDO.

sylvania oil territory famous the world over. The picture of Boyd valley gives a good general view of the oil field in McKean County, near Bradford. Many persons unfamiliar with the oil country suppose the wells are drilled only in the valleys. Such is not the case; although the higher up on a hill the well is located, the deeper the well must be, as the oil-bearing rock or "sand" lies nearly level, and, in the



BOYD VALLEY, CENTER OF RICH OIL FIELD IN MCKEAN COUNTY, PA.

neighborhood of Bradford, is about on a level with tidewater. The drilling is done with a heavy string of tools, consisting of rope-socket,沉器, bar, jars, auger stem and bit attached to the end of a cable and suspended by means of a temper screw from the end of a working beam (walking beam). The temper screw is used to gradually lower the tools as the bit cuts its way downward. The upward and downward movement of the working beam causes the bit to strike and chip the rock. When the tools have been lowered the length of the temper screw, the tools are raised and the drillings removed by means of a brazier. The bit, if dull, is replaced by one freshly "dressed," and the operation is continued. Work is continuous, except in cases of accidents and on Sunday. It is carried on by two crews, consisting of each of driller and tool dresser. One crew starts at noon and works till midnight; the other commences at midnight and works till noon. When the well has been drilled to the proper depth it is torpedoed, or "shot," in the oil-producing rock to shatter the rock and facilitate the flow of oil. For this



JUST AFTER THE TORPEDO EXPLOSION.

purpose a torpedo of tin "shells" containing nitro-glycerine is lowered into the well.

The last shell to be lowered is fitted with a firing head. It is sometimes exploded by dropping a weight called a "mammy-devil," and sometimes by means of a bomb-squid. If a person is standing in the vicinity of a well when the torpedo explodes, a slight shock can be felt as though a blow had been struck under one's feet. The noise resembles the crack of an old-fashioned musket cap. When the torpedo explodes, the tremendous force of the explosion, together with the force of the gas, sends the oil high over the derrick. One of the most fascinating sights to be seen in the oil country is a well flowing after being torpedoed. If the well happens to have a large quantity of oil in the hole when shot, several seconds, perhaps half a minute or more, may pass before there are any signs of the coming flow. Then the oil, churning into the color of "working" molasses, rises a few feet above the casing head, stands like a playing fountain for a few seconds, jumps a little higher and a little higher, and then with a roar that can be heard a mile, the gas throws oil and stones high in the air, sometimes tearing away the top of the derrick, and sometimes throwing the whole string of casing out through the top of the derrick. Occasionally, to avoid injury to the derrick or for other reasons, a piece of bent casing is screwed on and the flow is thrown out through the derrick to one side.

From the well the oil is conducted to small wooden storage tanks which, by

means of pipe lines, are connected to the large iron storage tanks of the pipe line company. These tanks contain from 30,000 to 40,000 barrels of oil each when full, and are located at convenient places through the oil field. At Olean, N. Y., there are a great many of these tanks built in rows, and giving to the place the name of Tank City. The great enemy of the large iron storage tanks is lightning, and when the lightning fires one of them the sight draws spectators for miles around. In case of fire, little can be done as a rule, save to prevent other tanks catching. Generally, the oil burns until all is consumed, but to prevent the fire spreading, a ditch is thrown up around the tank, and often the tank is perforated with cannon balls, thus allowing the oil from near the tank to escape and so prevent boiling over. These tanks sometimes burn from 24 to 36 hours.

### CAVE IN THE SIERRA NEVADAS.

Dark Cavern Where Myriads of Bats and Other Creatures Make Homes.

Of all the strange places to be found in the remote recesses of the Sierra Nevada, none is any stranger than that cave in Kaweah canyon. There is nothing particularly strange about the cave itself, but the fact that it is the dwelling place of thousands of web-winged animals makes it a most uncanny and unusual spot. The cave is in the wall of the canyon, not far back from the water in the rainy season, and there is nothing about the appearance of the opening to attract attention during the day. But approach the place at about dusk, and a black stream of shadowy forms will be seen passing in and out of the opening, accompanied by the most peculiar odor in the world and a soft rustling sound. The bats have been asleep all day and are going in search of food. To enter the cave in the daytime is not a difficult task, but is somewhat unpleasant. The opening

### SHRINE AT LOURDES IN FRONT OF THE SACRED WELL.

This Sketch, Drawn from Life, Gives a Glimpse of What May Be Witnessed at Lourdes Every Year During the Pilgrimage Season.



### DOG WORSHIP IN FRANCE.

Canines Have Their Own Tailors and Eat Off the Family Table.

A new religion has sprung up in France—that of dog worship. These darling pets of smart women have a charming time of it when they are not being vivisected by brutal scientific men, as is often the case, for pet dogs, like refined people, are peculiarly sensitive, their nerves as well as their tastes being ultra-developed. The prided favorite of his doting mistress is armed at all points. He has his own tailor, who provides him with a variety of clothes, of which the fashion changes monthly. He has winter coats, summer wraps, mackintoshes, comforters, pocket-handkerchiefs, even respirators. Dogs have been trained to eat their dinner off a tablecloth and to carry a sunshade over their devoted heads. False teeth, too, can be provided, and dentists are found specially prepared to minister to the canine race. And with all this luxury the charm of the dog's company will be destroyed. Artificial and civilized, he will differ otherwise from men, and we all have experienced the value of a dog who is our friend, who is funny and naughty and mischievous and frolicsome and faithful and undiscriminating, who loves us when we are unjust as well as when we are good, who bears no malice, and never philosophizes, and lives only for pleasure and to have a good time, innocently expecting us to share it with him and looking to us confidently for sympathy—"that dumb, inarticulate ecstasy," as Mrs. Browning says, "which is so affecting—love without speech." Dogs must be pagans frank and free; then lies their worth as companions for men.—London Graphic.

### JAPANESE M. E. CHURCH.

They Dedicate Their First Edifice Erected in America.

The first Japanese church in America was dedicated in San Francisco recently. Its outside is of brick, plaster and wood-carving. Its congregation consists of 300 Japanese Methodists, with a few Japanese girls of various sizes in charge of Miss Hewitt as chaperones. Inside there is a strip of Japanese matting in the aisle and chairs take the place of regular seats. The pulpit has

### His Job Blew Through His Whiskers.

A story is told of a Philadelphia hotel keeper. Employed as a porter at the hotel was an elderly man named Mike, who had been an attache of the hotel for eight years. His most prominent feature and one of which he was very proud, was a beard of luxuriant growth. One day last week the proprietor of the house was pacing the lobby when Mike happened to pass. The proprietor was in a very disagreeable frame of mind, and he stopped and looked at Mike with an evil light in his eye. "Come here, you," he yelled at the porter. "How long have you been here?" "Night on eight years, sir." "Well, you've been here long enough. You needn't come back to-morrow. I'm tired of seeing you about." The poor porter was thunderstruck. He went to his friend, the day clerk, and told him all about it. "What'll Oi do?" said he. "Oi've a wife and family fur' t support, an' Oi can't get another job." The clerk thought for a minute and then said suddenly: "I have it. You go home and shave off your beard, and then go to the boss and tell him you heard he needed a porter." Mike followed the advice next day and secured the situation, becoming his own successor. The proprietor has never suspected the trick.

### Turning an Honest Penny.

The Denver and Rio Grande Railroad has learned that two members of the Colorado Legislature have been renting their annual passes to traveling men for \$15 a month.

### The Effect of the Hard Times.

A story was recently told of how a preacher tested the effect of the hard times upon his congregation. At the conclusion of one of his sermons he said: "Let everybody in the house who pay their debts stand up." Instantly every man, woman, and child, with one exception, arose to their feet. He seated the crowd, and then said: "Let every man who is not paying his debts stand up." The exception noted, a care-worn, hungry-looking individual, clothed in his last summer suit, slowly assumed a perpendicular position, and leaned upon the back of the seat in front of him. "How is it, my friend,"

### Frank's Countenance Fell.

When the class in geography was called up, it was noticed that one of the boys, Frank by name—and rather dull by nature—was looking uncommonly well pleased with himself. "Well, Frank," said the teacher, "do you know your lesson to-day?" "Yes, ma'am," he answered. "The answer to the first question is 'South,' and the next is 'Africa,' and the next is 'South America' and the next is 'Peninsula.'" "But, Frank, that isn't the way to learn a lesson. You must skip about. That's the way I shall do in asking the questions."

Frank's countenance fell. His great discovery was of no use. "But, Miss Gray," he said, "I might not skip round the same way you do."

### Neat Reproof.

Perhaps the neatest reproof to a long-winded preacher was that given by Harvey Combe when Lord Mayor to Dr. Parr. As they were coming out of church together, Parr was so foolish as to ask the other how he liked his sermon. "Well, doctor, to speak firmly, there were four things in it that I did not like to hear. They were the quarters of the church clock which struck before you had finished."

Every woman occasionally says something that causes you to wonder where she learned it.

### TERROR TO WAR VESSELS.

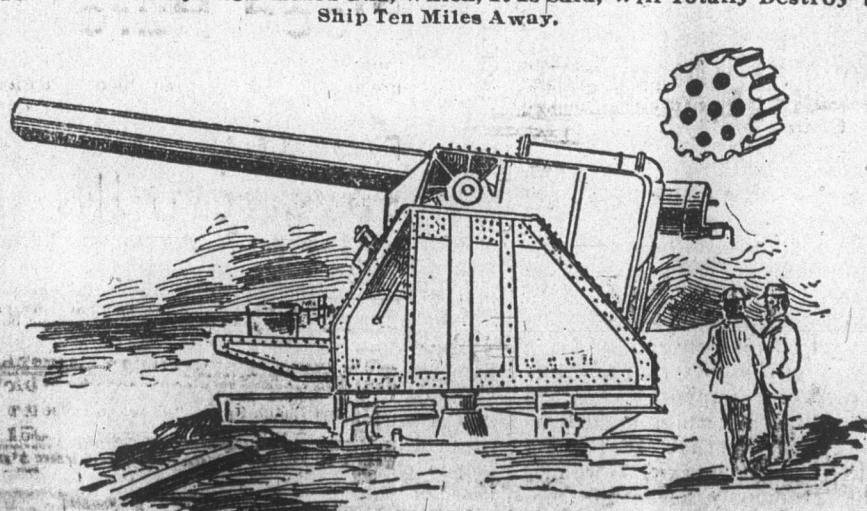
The New Twenty-Inch Rifled Gun, Which, It Is Said, Will Totally Destroy a Ship Ten Miles Away.

### Safely Housed.

In St. Paul's one day, a London guide was showing an American gentleman round the tombs. "That, sir," said the man, "is the tomb of the greatest naval hero Europe or the whole world ever knew—Lord Nelson's. This marble sarcophagus weighs forty-two tons. Inside that is a steel receptacle weighing twelve tons, and inside that is a leaden casket, hermetically sealed, weighing two tons. Inside that is a mahogany coffin holding the ashes of the great hero."

"Well," said the Yankee, after thinking awhile, "I guess you've got him. If he ever gets out of that, telegraph me at my expense."

"Willie, have you been in another fight?" "No, mamma. This feller outclassed me and I wasn't in it."—Brooklyn Life.



## HUMOR OF THE WEEK

### STORIES TOLD BY FUNNY MEN OF THE PRESS.

Odd, Curious and Laughable Phases of Human Nature Graphically Portrayed by Eminent Word Artists of Our Own Day—A Budget of Fun.

#### Sprinkles of Spice.

In languid summer when each tree In lazy cadence rustles, The blithe mosquito seems to be The only thing that hustles. —Washington Star.

Hoax—"That story of yours reminds me of a tramp!" Joax—"How so?" Hoax—"It won't wash."—Philadelphia Record.

The teacher—"Now, who can tell me which travels the faster—heat or cold?" Jonnie Bright (promptly)—"Heat, of course. Anybody can catch cold."—Tid-Bits.

Judge—"You say you have some means of subsistence?" Tramp—"Yes, you honor." Judge—"Then why is it not visible?" Tramp—"I ate it."—Harlem Life.

Miss Parique—"In New York do the prominent social lights smoke?" Miss Caustique—"Yes, particularly after they have been turned down."—New York World.

Briggs—"You say the phrenologist who examined your head wasn't very complimentary?" "Hardly. He told me I was fitted to be a leader in society."—Life.

"I'm going now; yes, I'm going, going," murmured Steiger. "What an excellent auctioneer you'd make," said the heartless but tired Miss Nyceger.—Boston Courier.

Tramp—"Do you know what it is, sir, to be shunned by all; to not have the grasp of a single friendly hand?" Stranger—"Indeed, I do. I'm a life insurance agent."—Judge.

First Carpenter—"I can't see what you are driving at." Second Carpenter (howling with pain)—"Well, I can now! I was driving at the nail, but hit my thumb!"—Boston Courier.

Smallwort—"Well, I have to hunt up another cook. Our latest one left yesterday." Ford—"Did she barely desert you for gold?" "No, Copper."—Pittsburgh Chronicle-Telegraph.

First cycler (nearing a road-house)—Do you suppose we can get anything to drink there? Second cycler—Just look at the enormous aggregation of wheels at the carriage shed.—Life.

Principal (to new apprentice)—"Has the book-keeper told you what you have to do in the afternoon?" Youth—"Yes, sir; I was to waken him when I saw you coming."—Dahlem.

Stoutlady, at street crossing (to policeman)—"Could you see me across the street, officer?" Policeman—"Sure, madam. I could see you in times of darkness, also."—London Tid-Bits.

Walk O. Nights—Doctor, what is a simple remedy for sleeplessness? Doctor—Let the person count until he is asleep. Walk O. Nights—"He can't count it's the baby."—Philadelphia Inquirer.

"My face is my fortune, sir," she said. "Excuse me, madam, but you can't really mean it," rejoined the astonished male. "Certainly. I'm the lady with the iron jaw in the dime museum."—Washington Star.

Baker got into a rumpus with a policeman the other night," said Pinkney. "He offered to beat the policeman he didn't dare arrest him." "What did the copper do?" "Took him up."—Harper's Bazaar.

"What was the principal object of interest in America when you were there?" The eminent British novelist looked at his questioner with chilling scorn and replied: "I was, of course."—Washington Star.

"Begob," said Mrs. Dolan, "that b'y

Pat o'urs'll soon be knowin' more than his father does." "I'll never mind that," replied Dolan, "if he goes ahead an' know it for sure insted an' only thinkin' he does."—Washington Star.

"You made a slight mistake in my poem this morning," said the poet. "Sorry," replied the editor. "What was it?" "Well, I wrote 'The clouds hang murky o'er the west,' and you make me say 'The clouds hang turkey over my desk'."—Exchange.

Upwardson—I had a singular experience last Tuesday. You remember it looked like rain and the weather prophets predicted rain? Atom—Yes. "Well, I brought my umbrella, raincoat and rubber shoes down to town that morning." "Yes." "Well, it rained."—Chicago Tribune.

"I have come to ask for your daughter's hand, Mr. Herrick," said young Walter nervously. "Oh, well, you can't have it," said Herrick. "I'm not doling out my daughter on the installment plan. When you feel that you can support the whole girl, you may call again."—Washington Star.

Edward—Isn't Dick going off in his writings? Forrest—I haven't noticed it.

Edward—It seems to me that he has lost that exquisite delicacy of touch he used to have. Forrest (truthfully)—By Jove! You wouldn't think so if you had seen him work me for ten this morning.

—New Rochelle Life.

Friend Perrichon, accompanied by his wife, took a trip to the outskirts of Paris. Very tired and hungry, they entered an eating house. The proprietor declared that he had nothing but a chop to offer them. "Only one!" exclaimed Perrichon, "then what is my wife to have?"—Le Gaulois.

"Missouri's Old Soldiers."

Missouri is a great country for soldiers.

During the great civil war it would appear that almost the entire male population of sufficient age was called on to bear arms. Between the Union and Confederate forces there was, as Phil Kearny phrased it, "lovely fighting along the whole line." There was no community that did not experience the sights and sounds, the excitements and alarms of war. After hostilities had ceased the military element was largely reinforced from beyond the Mississippi. In those days Missouri was considered a new country and was sought by immigrants. Certain portions of the State were counted as "homestead country." The disbanded soldiers of both armies came to Missouri. This gave birth to a great martial population.—Kansas City Star.

"Oh, yes, my husband has been a collector of curios and such things for a number of years." "Was he in that business when he married you?" "Yes, indeed." "I thought so."—Atlanta Constitution.

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