

## SOD USED AS FUEL

The Picturesque Turf Cutting Customs of Old England.

Threatened by the scarcity of coal, it is entirely probable that the English people will turn to their fields of peat as a resort. Besides the extensive fields to be found in Scotland and Ireland, there is considerable of it in England as well. In Yorkshire, Devonshire, Cornwall and Somerset, says a writer in the Golden Penny, peat is to be found. I believe it is only in the latter county that it is made use of for fuel. Peat or turf cutting, as the Somerset folk call it, is a matter of supreme interest to a number of people, who, in that remote part of England, look to it as their chief means of warmth in winter, coal being considered a luxury for the better or well-to-do classes, the masses preferring to burn turf.

There seems to be no exact time for commencing operations. It depends a good deal on the spring.

A good cutter prides himself on being able to cut each turf to an almost exact square. These squares are generally cut out in one great "chunk," and then divided into two or more "peats," according to the desired size. As a rule they are about eight or ten inches across, and are five inches deep. When first cut they are stood on end, one on top of the other, something after the fashion that a child builds



CART USED IN HAULING PEAT.

a card house. The next process after the cutting is finished is the turning. This is usually done by women, and very picturesque they look in their great sun bonnets to preserve their complexions, though most are tanned already with exposure to the keen air and hot sun of the moors.

They busily and carefully turn each turf, and, coming to the end, begin all over again, as the peats have to be turned so many times before they are in proper order for use. After they have been turned well they are put up in what is locally termed "hoyles," that is to say, about six peats underneath, and say five on top. They are left like this for a few days, and are then piled up in "ruckles," which are



TURNING THE PEAT.

shaped something like attenuated hayricks.

Peat, like everything else, varies in price according to a good or bad season, and is also appreciably cheaper in summer than in winter. There are various ways of buying and selling. The richer man buys his turf by the load; the poor man by the piece, very much like one man purchases a ton of coal while his poorer neighbor buys a sack or a "hundred." A wagon-load of turf costs about sixteen shillings on the moor, and is hauled or carted at the purchaser's expense. A cart such as in the accompanying illustration, is called a turf cart proper, and would hold about five or possibly six hundredweight.

Turf burns a great deal faster than coal, and in new-fashioned fires is hardly suitable; but a good big fire of peat on an open hearth, is, to my mind,



PEATCUTTING TIME IN YORKSHIRE.

a picture, and tempts one to do away with fireplaces, build chimney corners and import peat.

A peat fire has one drawback; when once lit it should never be allowed to go quite out. A bellows is a necessity, as with that old-fashioned implement the glowing ashes are coaxed into flame, and with the addition of fresh peat the fire is made up for the day again. There are many old-fashioned manor houses in Somerset that still boast of an open hearth and a chimney corner in the good old style, and in these the "Squire" always has a fine peat fire going.

The great fear of most owners is that the turf will come to an end. In many parts it has all been taken out, but evidence remains of its existence

by the extreme blackness of the soil. Many things flourish in old peat grounds; potatoes like it, and rhododendrons delight in a peaty district.

## QUICK BOILING KETTLE

The Active Heating Surface Increased by Novel Design.



HOT WATER KETTLE WITH HOT AIR TUBES

which is designed to further expedite cooking operations dependent on a quick supply of hot water. The ordinary kettle heats water most rapidly when it is made of copper and has a large fire surface. In the kettle here shown this heating surface is further increased by four taper tubes, large at the bottom and small at the top, which pass through the body of the kettle. These act as flues for the hot gases, and, as the water in the kettle is in contact with their sides, they act as so much heating surface. It is asserted that a kettle of this design, even when made of iron, under the same conditions of fire, will bring a given quantity of water to the boiling point in one-half the time that an ordinary copper kettle requires.

## The Medicinal Value of Spiders.

In some out-of-the-way districts in the south of Ireland spiders are highly esteemed in the treatment of croup. The peasants get from an old wall the webs of seven black spiders—two of which must have been the owners sitting in the middle. The insects are killed, and are sprinkled with a little powdered alum. The resulting mixture must then be boiled, and when cool the liquid is poured down the throat of the patient.

Black spiders are evidently supposed to be full of medicinal virtue, for they are largely employed in the treatment of ague as well. In Somersetshire, if one is afflicted with this unpleasant ailment, the way to get well is to shut up a large black spider in a box and leave it there until it dies. At the moment of its decease the ague should disappear. In Cornwall the treatment is more heroic. The patient must swallow the spider, which is generally taken in thick gruel.

In the extreme north of Scotland spiders' webs are believed to be a cure for neuralgia and toothache. The webs are collected and made into a small poultice, which is applied to the spot where the pain is felt.—Answers.

## Ancestor of the Tomato.

In the Botanic Garden of the University



WILD TOMATO.

of Pennsylvania are some fine specimens of the plant from which the cultivated tomato has been evolved. The blossom is of the dainty whitish blue so familiar in vegetable gardens. The plant is thorny. The little tomatoes are of the same green and red as the cultivated tomato.—Philadelphia Record.

## In Doubt.

"How is my son getting on?" inquired the boy's father.

"I can't speak as approvingly as I'd like to," answered the instructor.

"Whenever I ask him a question he wants at least a day to look up the answer, and when he gets it it is usually unsatisfactory."

"Well," answered the parent, with a sigh, "time alone can tell. I suppose he will turn out to be either a great diplomat or no good on earth."—Washington Star.

## Snakes as Domestic Animals.

There are perhaps in no other country of the world so many rats as in Japan. The wooden buildings with their straw roofs offer the best lurking places for them. Whilst we use dogs and cats to get rid of the rats, the Japanese employ for the same purpose a certain kind of snake, the "dodais," or a blue-green viper. They are sometimes as long as seven feet, and are said to be the best rat catchers in the world.

## SCIENCE AND INDUSTRY.

Experiments carried on at the University of Illinois show that coal washing removes a considerable percentage of the slate and ash ingredients and 50 per cent. of the sulphur, rendering the coal more fit for gas-making and coking.

An immense dockyard is to be constructed at Antwerp to cope with the exigencies of the rapidly increasing shipping trade of that port. When completed it will cover no less than 67 acres. The scheme has received the financial support of the most prominent shipping owners in Germany.

It has long been known that there were iron ore deposits east of Biwabik, in the Mesaba Range, in Minnesota, but owing to their apparent small size and the large deposits discovered to the west, they have been neglected, and little prospecting has been done in this region of late years. Ten or 15 years ago, however, the region was carefully examined by a number of experts and passed by for apparently more promising mines. The Minnesota correspondent of the Engineering and Mining Journal now reports the discovery in this region of an ore body a mile long and a half mile wide under but 50 feet of surface, and that a large mining company has already secured an option on the property.

Workmen in steel works are occasionally poisoned by water-gas, of which carbon monoxide is a large constituent. A treatment for such cases has been the transfusion of blood, and now in its place M. A. Mosso, in the Comptes Rendu of the Paris Academy of Science, has suggested that the victim be placed in an atmosphere which contains oxygen at considerable pressure. In experiments on two monkeys, poisoned with carbon monoxide, it was found that the one subjected to this treatment, which involved being placed in an atmosphere containing oxygen at a pressure of 30 pounds to the square inch, completely recovered in half an hour, while the other animal, which had been left to its own resources, died.

A sawmill run by electricity began operations recently in Oregon and seems to have been successful. The electricity is generated by water power, the water being flumed from a small stream which runs a 50-horse-power water-wheel, in connection with which is a dynamo to generate the current to run the mill. Wires are strung from the power-house to the sawmill and are attached to the saws and other machinery of the mill. A feature of the electric sawmill is that the carriage is above the log and carries two saws, which are so fixed as to cut both ways, making two cuts at the same time. This arrangement allows the saws to cut going both ways, and obviates the necessity of having to bring the carriage back and begin cutting at the same end of the log each time. It is claimed that the mill will cut any lumber or logs at one-half the cost of other mills.

Up to the present there have been two general methods for operating railroad switches from a central tower. The most common and oldest of these is by means of manual levers in the tower, mechanically connected to the track switch by a system of rods, chains, or wires. The second system, known as the electro-pneumatic, consists of electro-magnets, controlled from the central tower operating valves which in their turn control the compressed air used to change the switches and signals. Now there comes a new system, the "all-electric" as it has been named, which consists simply of a small electro-motor at each switch whose action is governed from the central tower. The only connection necessary is the two wires of the motor circuit. This system has recently been installed in several railroad yards in Chicago, and is giving satisfaction. The practical perfection of the whole apparatus, which in theory is so simple, and especially of the electric interlocking machine in the tower, is the result of several years' experimental work.

## Honesty Developed by Mail Boxes.

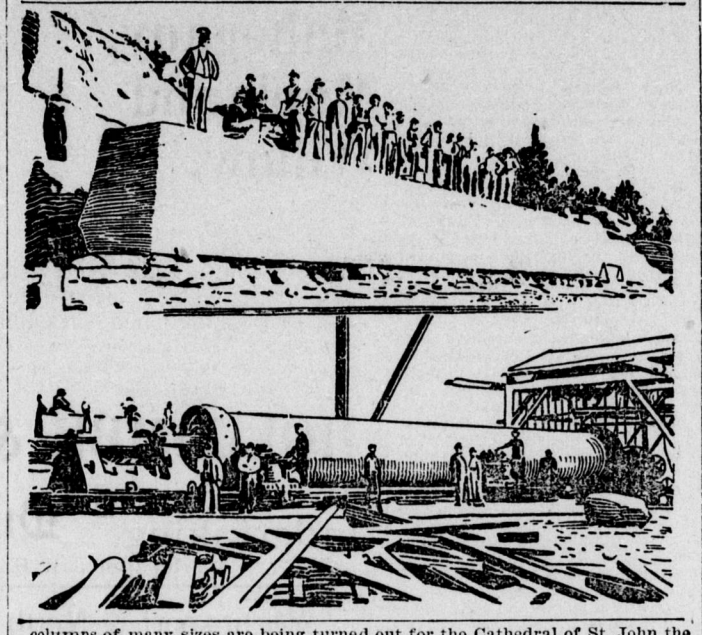
"That naive trust in human honesty that one sees here is distinctively American," said an Englishman, pointing to a letter box. "I would like to see a Continental business man lay packages and large envelopes on the top of the post boxes. They would be taken before the glue of the stamps was dry. There is another reason why we can't do that at home. Our dear old London fogs would wipe out the address in short order and unless the collections were frequent the paper would be reduced to a pulp. A dry climate makes you Americans talk with a dreadful nasal accent, but it shows up your honesty."

## Texas Furnishes a Pictorial Snake.

Jim Newcomb of Caldwell, Texas, is in possession of a mouse snake about 14 inches long that is out of the usual order. On the back of the head and neck is a complete photograph of a woman, showing bust and face. Her hair is done up in a top knot and she has on a shirtwaist. The snake was killed near Milano Junction and is preserved in alcohol as a curiosity. The image is formed on the skin by the arrangement of the two colors of the snake—black and dingy white.—Galveston Daily News

## LATEST TRIUMPH IN THE INDUSTRIAL WORLD.

Look at this immense block of granite shown at the top of the picture and think of the amount of work that must be put upon it to convert it into a perfectly round, high-polished column. Then look at the companion picture taken only a few days later with the granite already reduced to cylindrical form ready for the polishing process. The machine which works this rapid transformation is the latest triumph in the industrial world. It is called a stone lathe, and the work that it has been doing since it was installed has demonstrated that it is a success. This lathe was built in Philadelphia, and has been installed in the granite quarries at Vinalhaven, Me., where



columns of many sizes are being turned out for the Cathedral of St. John the Baptist, New York City. This great new cathedral is to have no less than thirty-two granite columns fifty-four feet long by six feet in diameter, which will weigh when completed 160 tons each. In addition to this it will have innumerable columns of smaller dimensions. In length the lathe that will perform this work is eighty-six feet, and when in working order it weighs 135 tons. It has swings six feet six inches by sixty feet long, and it has eight cutters. Each tool takes out about three inches deep, the entire eight cutters reducing the column twenty-four inches in diameter at one pass over the stone. The block of granite in the illustration weighs 310 tons; it is sixty-seven feet long, eight and a half feet high by seven feet wide.

## Gun With a Remarkable Range

The 16-Inch Rifle and the 29-Inch Smooth-Bore Compared.

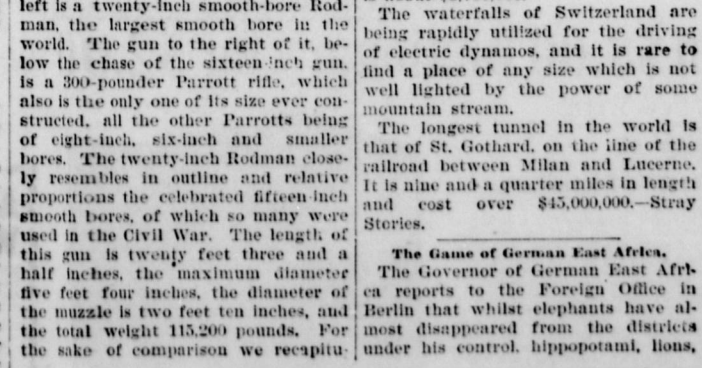
In our recent article of the new army sixteen-inch gun, we described the construction of this powerful weapon and gave some particulars of its remarkable ballistic powers. It was shown that if the gun were set up at the Battery, New York, with an angle of elevation of forty degrees, and fired with a full charge of smokeless powder, the shell would reach a maximum height of five and three-quarter miles, and range to a distance of just under twenty-one miles. With a view to showing what a vast area would be dominated by such a gun, we present the accompanying map of New York City and vicinity, from which our cosmopolitan readers may readily determine whether their nightly ride of one hour, more or less, into the suburbs would be sufficient to place them beyond its zone of fire.

By the courtesy of the War Department, we are enabled to present the



MAP OF NEW YORK AND VICINITY SHOWING AREA DOMINATED BY FIRE OF SIXTEEN-INCH GUN.

accompanying photograph showing a full-sized model of the new sixteen-inch army gun, suspended above two of the largest coast-defense guns of the Civil War period. The one to the left is a twenty-inch smooth-bore Rodman, the largest smooth bore in the world. The gun to the right of it, below the chase of the sixteen-inch gun, is a 300-pounder Parrott rifle, which also is the only one of its size ever constructed, all the other Parrotts being of eight-inch, six-inch and smaller bores. The twenty-inch Rodman closely resembles in outline and relative proportions the celebrated fifteen-inch smooth bores, of which so many were used in the Civil War. The length of this gun is twenty feet three and a half inches, the maximum diameter five feet four inches, the diameter of the muzzle is two feet ten inches, and the total weight 115,200 pounds. For the sake of comparison we recapitulate



THE NEW ARMY 16-INCH BREECH-LOADING RIFLE COMPARED WITH A 29-INCH RODMAN SMOOTH-BORE AND A PARROTT 300-POUNDER RIFLE.

late some figures of the new sixteen-inch army rifle as follows: The length of the gun is forty-nine feet 2.9 inches, the maximum diameter at breech five feet, and at muzzle two feet four and leopards of every species abound. He says that the plantation employes have to take the greatest care in protecting themselves against night attacks of these animals.

## A MAID TO PLEASE A MAN.

I duly appreciate maidenly toil, Embroidery, tatting and simple crochet, A painting on china, a study in oil— Some girls thus employ themselves day after day. But they're hard to make love to when thus they're employed, And so for my own fancy I insist On a girl that's less busy. I'd be overjoyed With one who had nothing to do but be kissed. —Roy Farrell Greene, in Life.

## HUMOROUS.

"Did your pastor's ocean trip benefit him much?" "No; he seems to be more at sea in his sermons than ever."

"Nothing is impossible," said the lawyer, grandly. "No," remarked his client; "I suppose anything is feasible where there's a fee."

Wigg—That young lawyer friend of yours seems wedded to his profession. Wagg—I don't know about that; he's going to marry a girl named Sue.

"Why didn't you come to work yesterday?" asked the boss. "By Jove!" exclaimed the absent-minded clerk. "I really believe I forgot all about it."

"Clear out now!" commanded the housewife, "or I'll set the dog on you." "He wouldn't hatch nothin', lady," shouted back the tramp. "I'm er bad egg."

Tommy—Pop, what does it mean to fritter your time away? Tommy's Pop—Oh, that's just another way of expressing the futility of arguing with a woman.

"Life with you," he wooed fervently, "would be one grand, sweet song." "Not much," replied the practical girl, "if it's to be anything of that sort it will be a duet."

"They say obesity is dangerous," remarked the Wise Guy. "Ha," chuckled the Simple Mug, "that explains why the Pullman porter always gives the fat man a wide berth."

Nell—How does Maude get along with her husband? He is so fond of pie, and she can't bake one to save her life. Belle—Oh, she convinced him that pie didn't agree with him.

Mrs. Smith—Old Mrs. Funnibone's gift to the insane asylum wasn't very large this Donation day, I hear. Mrs. Jones—No; but it was very appropriate. "What was it?" "A crazy quilt."

"So you wish to take my daughter away from me," remarked her dotting father. "Well—ah—that wasn't just exactly my thought," stammered the nervous young suitor; "my folks could, perhaps, spare me with fewer paangs."

## CONJURER MARCO DEAD.

He Was Regarded by Many as the Best of Necromancers.

One of the best-known and at the same time most romantic figures on Paris boulevards has just disappeared. Marco, the marvelous conjurer is dead.

For the last 30 years this extraordinary little Greek, with a smiling face, twinkling gray eyes and well-trimmed mustache, wearing an Inverness cape and red Turkish fez was a most familiar feature of the night life on the boulevards and elsewhere where Paris has its amusements. Marco could do anything he liked with a pack of cards. He could sit at a cafe table, quite surrounded by onlookers, and completely baffle the keenest observers.

Marco had traveled through Persia and India. In the latter country he had learned his conjuring craft. He was at one time known to every officers' mess in India, and always liked to meet on the boulevards an English officer who had known him in the old days.

Experts described Marco as the greatest conjurer on earth. Managers all over the continent sent him tempting offers, but Marco loved the freedom of his bohemian boulevard life. Money did not tempt him. He could make as much as he wanted by displaying his skill as a conjurer to his innumerable friends in the leading cafes.

Marco was an honest man. Although he had such astonishing skill in the manipulation of cards, when he played cards and other games he invariably lost all his money. Still, he was rich and could have retired at any time, but he could not leave the old haunts and occupations.

A fortnight ago he was struck in the back with a knuckle duster and robbed while leaving the famous Montmartre restaurant. He neglected the wound, erysipelas ensued and poor Marco had to go to Larradose's Hospital, where he died, aged 65.

## Football in Olden Days.

The commencement of the football season recalls many curious descriptions of the game given by old writers. In early days it was nothing but a favorite way for an excited mob to let off their superfluous spirits. They contented themselves by kicking a blown bladder up one street and down another. The play became so rough that in 1365 Edward III ultimately was forced to prohibit it, and he enacted that all its players were to be imprisoned during his Majesty's pleasure. Richard II, Henry IV and James I. were also enemies of football, the latter expressing his utter abhorrence for "all rough and violent exercises as football," and at the end of his diatribe describing the game as "meet for the lambling than making a lie the users thereof." It is interesting to note that the first leather ball was made at Chester, where one of the value of 3s. 4d. was annually presented by the shoemakers to the boys on Shrove Tuesday up to the year 1540, when the game was once again abolished.—London Globe