

Wanted--Eastern Cats to Kill Western Gophers.

A cat just a use has been found for the superfluous cat. The voracious cat that lurks on your back yard fence and makes your nights hideous is a good thing now. All you have to do is to push him along to a man in Spokane Falls, Wash., and he says he will remit you at the rate of \$1 per cat. Instead of living about back doors, up-roofing his sustenance from overladen ash barrels and pursuing the occasional indelusive New York rat, the New York cat may go into genuine and steady occupation in the West, where he will have three meals a day and his perpetual ill and his gopher meat and be a respectable and laudable member of a thriving community.

The gopher, to destroy which will be the work of these Eastern cats, is a first-class nuisance on Western farms. He is small, but active. He burrows, after the fashion of the prairie dog and the ground rat, and the havoc he can work with a farmer's crops is "great and greatly to be feared." But the cat is an arch enemy to him. An active cat can get splendid sport on a Western farm, for the gophers are more than plenty.

The collecting of cats for gopher killing ought to become a profitable industry in some quarters of this town. Men who are out of work need be so no longer. Not only is a respect-



This is the Animal the Cats Will Kill.

able revenue to be gathered by luring the voracious neighborhood cats with scraps of meat and sprigs of catnip, but if Mr. Horatio Randall, of Spokane Falls, needs cats as badly as he says he does, a litter of kittens is a very valuable property.

A short time ago Mr. Randall wrote to an acquaintance in the East that he would pay a dollar for every cat sent to him that was big enough to kill a gopher. The gophers, he said, were destroying the crops in the State of Washington at a great rate, and there was no cure for them except their extermination by the cat process.

In one locality in Pennsylvania, where the news was circulated, the small boys of the village set to work and rounded up every cat that they knew of. Plainly old tom cats and pet pussies, vagrant warblers which nobody owned. Baro cats which were wild and flighty and house

Bicycle Grooms.

THE bicycle has brought a new personality into view--the cycling groom in the livery of his employer. He is a feature of the wheeling panorama. You may see him almost any day in the Park or on the Riverside drive, pedalling along in proud attendance upon some little son or daughter of millions. Sometimes he is a colored man, a somewhat shaven serf of the familiar type coach-

ment is sleek, his hair is combed, his eyes are bright, his nose is straight, his mouth is smiling, and his hands are in good order.

So now the cat exodus may begin, and no sound will disturb the nightly quiet of Sharon areas, save the soaring notes of practising sopranos and the Coxy exercise of piano people who want to keep their "hands" in good order.



Raising Vegetables and Plants by Electric Light.

WHEN the electric illumination of parks and city streets became general a cry was set up that the continuous light upon trees and plants would result in their death. Learned articles were printed, and went unchallenged, to the effect that vegetation needed its hour of sleep, just as the animal kingdom does. Some very observant people could see the trees in the parks drooping and going into a rapid decline in consequence of the over-supply of light.

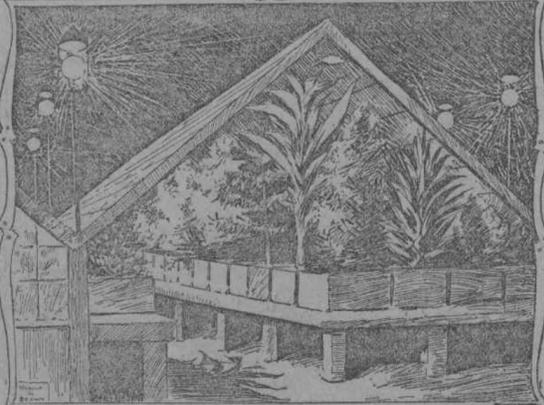
In some cities it was decreed that the parks should go unlighted. But this was all wrong, for it has been proved conclusively that vegetation thrives phenomenally under the glare of the arc light, succeeding the bright rays of the sun. The matter of artificially promoted vegetation was taken up by the agricultural department of Cornell University, which has just published the results of some experiments extending over a period of six years at Ithaca and elsewhere.

Two houses were used in the experiment, both of which were exposed to the sunlight during the day, and one of which received in addition the light from an arc light during a part of the night. The arc lamp was enclosed in clear glass globes. It has been observed that the effect of the light of the unenclosed electric arc and the light of one enclosed in glass are greatly different, the former in some cases proving injurious instead of beneficial to the plants.

It was found as a result of these experiments that there was a decided beneficial influence on the growth of lettuce, and there can no longer be any doubt as to its advantage in forcing this plant. With seed sown under ordinary circumstances,

the young plants placed under the influence of the light after they are well established will show marked improvement up to forty feet. One curious thing was noticed, that the effects of the shadow of a beam or rafter cast by the electric light showed plainly on the leaves. It is stated in this report that Mr. Rawson, a fancy truck farmer near Boston, now uses the electric light in the commercial forcing of lettuce. He has three lamps of 2,000 candle-power each, which run all night. The hothouse covers nearly one-third of an acre. Mr. Rawson finds that he makes a gain of five days per crop during the winter, which makes a gain of three crops during the winter. The gain from one crop, he estimates, is sufficient to pay the expenses of operating the electric lights during the whole season.

Professor Balley's experiments at Cornell confirm those of Mr. Rawson. He finds that many plants grow more rapidly under the electric light influence at night. Among these are the daisy and the violet. The Professor is satisfied that the light can be used for forcing a large number of blooming plants. In view of these successes it has been suggested by a wag that the man who for so many years has tried to cross bees and lightning bugs may take fresh hope



Electric Gardening at Cornell University.

Hats for Wheelwomen and the Modesty Screen.

THE Summer girl's experience in selecting her best straw hat is as nothing compared with the trials of the bicycle girl when deciding the momentous question of what she shall wear on the wheel.

Now that all girls are wheeling, the hats which they have to choose from are many and varied. There are hats to match their costumes and hats in striking contrast to it. Hats designed upon hygienic principles alone and hats made solely to look picturesque. These and many more are brought forth for the inspection of the bicycle girl, and each and every one is declared to be the best possible hat she can buy.

The most novel cycling hat in town (No. 1 in the illustration) is made of lightweight felt or straw in the alpine shape. It is trimmed with not only the conventional band of ribbon, but quills and a miniature bicycle wheel, with a rubber tire and most natural looking spokes. In Yale blue felt attached in white and trimmed with a white ribbon band, a white quill and a bit of a wheel, it is considered quite a thing of beauty. And it's an inexpensive little hat in the bargain, costing but \$1.30.



To Hide Pretty Ankles.

There are many variations in the alpine shape this year. Some of the hats have the brim more closely rolled up at the side, while others are just the opposite, giving a broad effect. One of the new alpine hats (No. 2) shows the crown squarer than usual and the brim rolled up rather tightly at both sides. It is made almost entirely in cream white straw, and is trimmed with merely a narrow band of black velvet ribbon.

It is quite a fad with the bicycle girl at present to have her hat made of the same material as her suit. With the new crash and duck suits alpine hats are sold to match. The best looking are bound with ribbon and trimmed with a ribbon band. Frequently the college colors are used for the band. Other girls who for reasons of their own are not partial to any special college have their hats trimmed with a ribbon which matches the colored rim of their wheel.

When the alpine shape is unbecoming, then the fair cyclist wears a hat with a Tam o' Shanter crown, and have that crown (as in No. 3) to match their new Summer costume. There are very jaunty little hats, with dark blue or brown straw rim slightly rolling and Tam crowns, in tan color crash. These hats have a quill or two in front and also a bow by way of decoration.

Young women with a fondness for things Scotch are wearing genuine Highland Tam o' Shanter in the gay Scotch plaids. They are made either of light-weight wool or of silk. A new idea this season is to combine a silk Tam crown with a straw or cloth brim, or to have a Tam silk crown and a cloth peak (as shown in No. 5). Cycling caps made entirely of water-proof silk are a novelty recommended for wear during a sudden shower. They are small enough to be easily carried in the pocket.

Perhaps the most stylish bicycle hat in town is a variation of the alpine shape made in two different colored straws. One particularly pretty model (No. 4) has the broad rolling rim in dark blue straw and the crown in cream color. Rosettes of straw in dark blue and cream mixed, with two odd little wings, form the trimming which is arranged effectively at the left side. Bands of straw braid also trim the crown. This hat may be bought in a variety of colors and is as practical as it is pretty. The sailor is another hat high in favor with the bicycle girl.

It will now be possible for young women to a-wheeling go without displaying their feet and ankles. Dainty feet and ankles flashing in and out of skirts has proved an irresistible attraction for many that in the future will be denied if the cherry screen shall come into popular use. It is named after Theron R. Cherry, of Buckhannon, W. Va., the inventor. Many modest young women have refrained from riding because the skirts have to be short and they object to exposing their lower limbs. The screens look half like an umbrella. They are attached to the front or head of a lady's bicycle. They can be folded up against it or unfolded and extended past the pedals, perfectly protecting the feet and ankles from view when mounting or riding. They also act as a wind guard and prevent the skirts from being blown about the limbs.

Summer Styles in Hats for the Bicycling Girl.



NO. 1--THE LATEST NOVELTY; NO. 2--THE NEW ALPINE; NO. 3--CLOTH CROWN AND STRAW BRIM; NO. 4--IN TWO COLORED STRAWS; NO. 5--CLOTH PEAK AND TAM O' SHANTER SILK CROWN.

The Hottest Place on Earth. Magnetic Torpedo for Ships.

SCIENCE has made a place that can far surpass in its enormous heat the wonderful fiery furnace of Biblical times, and even Vesuvius and Etna when in full action. As might or might not be expected, this stupendous heat is due to the agency of electricity, and it is the Molson electric furnace. In the interior of this carbon, lime, platinum and other substances which can withstand in their bulk the hottest blast furnace that ever sprang into being can be refertilized or made into intangible and glowing vapors with little delay and with no other effort than that of being simply thrown within this furnace's vitals.

Exactly how hot this hottest place on earth is, neither scientists have been able to determine. There is no way of estimating the degree of its awful heat. It is only known that within the maw of this furnace metals that heat generated in other ways has no effect upon at once begin to lose their solidity and vanish, as it were, into thin air. Up to date no practical uses for this heat have appeared, but by its power some extraordinary and valuable chemical experiments have been performed.

Carbon, for example, intractable, a dingy lump in the rough, that has hitherto remained unaffected by the most terrible heat, in the Molson furnace turns into a violet vapor, and while in that state can be blended with some of the metallic earths to form carbides, which science thinks can later on be turned into commercial use. Acetylene may or may not be valuable, and may or may not become a substitute for illuminating gas before long, but at all events it can only be produced satisfactorily and cheaply through this electric furnace. The furnace can give forth carbide of lime by tons. Dropped into water, carbide of lime becomes acetylene. Made red hot, or rather white hot, worked up to this extraordinary degree of heat, acetylene turns into benzol, useful for aniline dyes, formerly costly, but by this method made cheap.

This hottest furnace on earth has another strange power, that of making petroleum. There is a substance known as cerium, fused with carbon in the furnace, is changed instantly into this product, and decomposed by being put into water, it becomes nothing else than petroleum itself. It is probable that this will explain the chemical production of petroleum by nature.

EXPERIMENTS are being made with an invention for the torpedo service, at the torpedo station in Narragansett Bay, of which remarkable results are expected. The torpedoes now in existence, so far as their destructive qualities are concerned, are perfect when a vessel is struck by one of them, but should one of them miss the torpedo is lost.

The device which is now being experimented with consists of a magnet, delicately constructed and intended to be hung on an arm at the bow, which is in turn fastened to the rudder. The two arms are connected by crossed wires or chains, and the idea of the invention is that, when approaching a vessel the magnet will be attracted in that direction, and in turning will move the arm to which it is fastened and so operate the rudder, thus steering the torpedo toward the ship. It is said that the magnet is so delicately constructed that should it come within one hundred yards of the vessel it would be effective.

The torpedoes will be painted water color and would be of immense advantage at night, when the enemy has extinguished the lights aboard ship. The improved torpedoes are cigar shaped, and would approach a hostile fleet with more stealth than even a submarine boat would.

The question has been raised as to whether the magnet would not be attracted to the vessel from which it is fired, but the mechanism is arranged so that the magnet will not be influenced at all until it has reached a certain distance from the vessel.

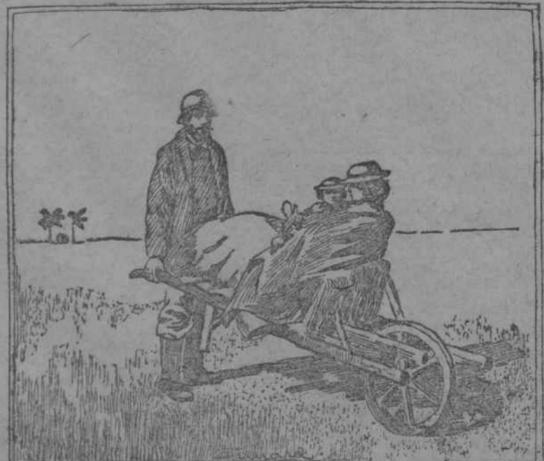
Caryl D. Haskins, of the General Electric Company, of Boston, is the inventor. The device is seven feet long and weighs 130 pounds. At a recent trial the magnet needed followed an iron steamer at distances of from fifty to several hundred feet. The boat against which the device was operated was a comparatively small iron one, and could not be expected to offer as great an attraction as the big battleships plated with armor.

The fact that these experiments are being made has been cabled abroad by the military attaches of foreign legations at Washington. With a view of offsetting the deadly power of these torpedoes there is a talk of trying to demagnetize the big war cruisers. If watches can be demagnetized, it is thought that warships may be also.

Pushed a Wheelbarrow 2,500 Miles.

A WIZENED, wiry, sunburned little old man walked into Oakland, Cal., the other day, pushing a dusty and road-worn wheelbarrow before him. "My name?" he said to a newspaper man who questioned him. "Why, my name is 'Man Friday.' That's what I always sign it on papers, and that's what most people know me by wherever I go. Hundreds and hundreds of people have asked me what my real name was, I always tell them it's 'Man Friday.' That's all the name anybody will ever get from me. It's just as good as any other so long as it identifies me, I guess it does, I can trundle the wheelbarrow just as in a day, with as name of 'Man Friday' as I could if I had a string of patronymics a yard long."

"Man Friday" is a character. He had pushed his barrow, when he footed it into Oakland, over 2,500 miles. He has been wheelbarrowing it for years. "This is the second time," he said, "that I have made the long trip with the barrow, and if I live I will make it again. I left Chicago on the 5th of last August and have travelled for ten long months. Here I am wheeling into San Francisco in exactly the same way that I did in 1890. I wheeled the barrow across the continent, following the old emigrant trail." Man Friday on his last trip found a woman and her child alone and helpless on the desert. He gave them a ride on his wheelbarrow into the nearest big town.



Man Friday Picks Up Some Passengers.

The Most Wonderful of All Lenses to Study Mars.

THE study of the stars is likely to be revolutionized by a new discovery. Before long telescopes will be provided with lenses not of glass, but of oxygen gas. They can be made of almost unlimited size, so that the heavenly bodies may be inspected at comparatively short range. The moon will be brought within a few miles, so that every topographical feature of the side which it turns toward the earth may be explored and mapped. The problem of the so-called canals of Mars will be solved, and if that planet has any inhabitants the fact will be ascertained. In short, astronomical science will leap into a new era.

Such are the claims made for an invention which is the achievement of Professor Elmer Gates, of Washington. The beginning of it was simply a short piece of iron tubing, in the experiment, both of which were exposed to the sunlight during the day, and one of which received in addition the light from an arc light during a part of the night. The arc lamp was enclosed in clear glass globes. It has been observed that the effect of the light of the unenclosed electric arc and the light of one enclosed in glass are greatly different, the former in some cases proving injurious instead of beneficial to the plants.

It was found as a result of these experiments that there was a decided beneficial influence on the growth of lettuce, and there can no longer be any doubt as to its advantage in forcing this plant. With seed sown under ordinary circumstances,

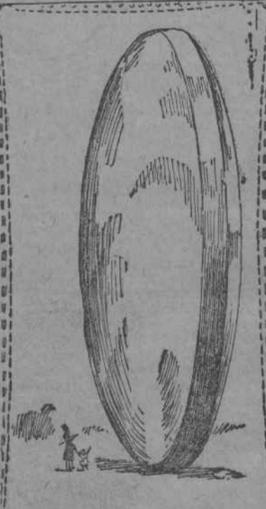
Here, then, was the discovery--namely, that oxygen gas would serve instead of glass as a material for lenses. Professor Gates says that he can build a lens fifty feet in diameter which will photograph the moon on such a scale and with such accuracy of detail that the surface of our satellite may be studied to an advantage never dreamed of hitherto.

But this is by no means all. The lens of oxygen gas necessarily is far more perfect than any glass lens can be made, inasmuch as the particles of oxygen under such conditions as those described arrange themselves in accordance with mathematical law. Again, it is an accepted truth that lenses of glass have their limitations. In other words, their usefulness in telescopic work does not increase indefinitely with bigness.

The lenses made for the Lick and Yerkes observatories represent the limit of size in glass lenses; bigger ones could not be rendered available for practical purposes. With oxygen lenses it is quite otherwise. Professor Gates believes that there is practically no limit to the size of the oxygen lens. His discovery will bring the whole stellar field into comparatively near view, and the astronomy of the near future will be science enormously more far-reaching and comprehensive than at present.

Think of a telescope with a lens fifty feet in diameter! What might not this gigantic eye search out in the realms of space as yet unexplored? The topography of Mars and the other planets which attend the sun will become familiar. If there are any people on the Martian orb, some means may be found to communicate with them. Even far-off Jupiter may be watched as it cools off and gets ready to support the population which eventually doubtless will be evolved and furnish inhabitants for that huge world then making some researches recently which throw light upon the nature of the ether which is supposed to fill all interstellar space. Hitherto science has been disposed to claim that this mysterious element, if such it may be termed, was homogeneous and continued everywhere--i. e., not consisting of distinct particles. That they must be infinitely small goes without saying; but the Professor asserts that they are as much smaller than a chemical atom as such an atom is smaller than the sun. If that be so, it is no wonder that nobody has succeeded as yet in finding out about the nature and properties of ether.

However, Professor Gates thinks that he has made a beginning in research in this direction. The first step has been accomplished by devising a means of creating an absolute vacuum--something never accomplished hitherto. The receiver has absolutely nothing in it save the long-sought ether.



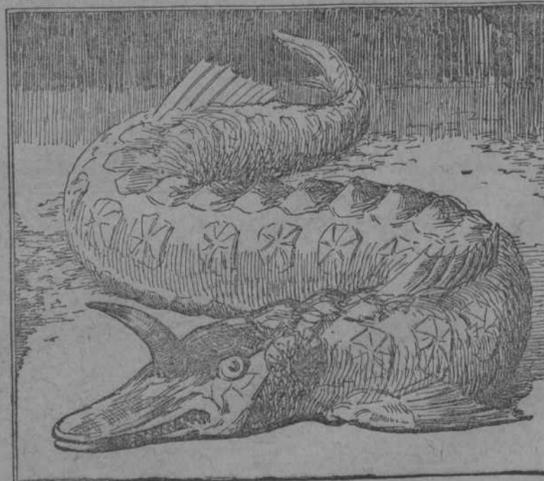
The Biggest Lens Yet.

First Sea Monster of the Season.

IT becomes the Sunday Journal's duty to tell the actual facts of the unclassified and hitherto unknown monster of the sea, weighing over 600 pounds, reported to have been captured at Caviar, N. J., by Captain John Shannon and his crew of sturgeon fishermen. The Journal did not print this highly entertaining story, but instead sent a reporter to Caviar, N. J., which is a fishing station on the Delaware River near Cape May, to find out whether or not the sea monster existed only in some one's imagination.

From all the reliable testimony obtainable, the hideous denizen of the deep was at the time of its capture just an ordinary sturgeon. An enterprising Philadelphia, who is in the amusement business, wanted a sea monster for exhibition during the season at Atlantic City. So it happened that a stranger appeared at the fishing station at Caviar in quest of the biggest sturgeon he could secure with the head and skin intact. Captain Shannon and his crew of sturgeon

fishers were on the spot, and it did not take the suave stranger and the genial Captain long to strike a bargain. One day an extra large fish was caught. It was nearly seven feet in length. The stranger took it and removed the skin and prepared it to withstand the ravages of time. A cow's horn was secured and thrust through the head above the eyes. The "Sea Monster" will be placed on exhibition at Atlantic City during the Summer.



The Real New Jersey Sea Monster.