

## Cycle Notes.

Scorchers are dealt with severely in Vienna. A rider whose only offense was scorching was sentenced to a week's imprisonment, while two others who run down pedestrians, injuring them slightly, were imprisoned for one and three months and were also obliged to pay damages.

A lamp will light easier if the tip of the wick is squeezed free from oil between the fingers. In lighting a lamp in a wind, turn the side window away from the wind, and the moment the lighted match is inserted close the window until the flame from the match has lighted the wick.

The latest thing aboard ship is a bicycle race, says the Bicycle World. Instead of storing their wheels below, the enthusiastic young cyclers this season are hanging them on hooks in their respective staterooms, and in the dawn of early morning, before others are up, a spin around the deserted deck is almost as refreshing as a spin in the park in the morning. Lounges and camp chairs are shoved aside, everybody clears the way, and it is "one, two, three" and around and around, the motion of the vessel in an ordinary sea giving the most delightful sensation imaginable. A spin on terra firma is nothing to a spin on the ocean wave, as it were.

On the western slope of the United States there are long rainy terms, and to overcome this Mr. R. E. Dawdy, of Hoquim, Washington, has designed a silk covered frame which conforms to some extent to the outline of the person and strikes the rider about ten inches from the neck. This arrangement is fastened to the handle bar and looks not unlike a kite. It keeps the legs and feet dry in the hardest rains. Mr. Dawdy has a lever attachment to his bell which is arranged so that it can be easily rung by the knee on the downward stroke. He uses a wide celluloid mud guard and has his pedals covered with leather. All of the bright work is covered with vaseline. It is a great mistake for riders to put up their wheels at the beginning of winter. With proper arrangements, there should be no difficulty in riding at any time when snow and slush do not prevent.

In the June Bulletin of the Society of Civil Engineers of France an exhaustive account is given of some tests made to determine the efficiency of pneumatic tires contributing to the ease and comfort of a vehicle. With the usual French thoroughness, it describes the earliest pneumatic tires, and reprints descriptions of them published in 1846. The experiments were made with the pneumatic tire and the ordinary wheel, and there were five series in all. The first was made on three days, when the ground was covered with two inches of snow, when the same was melting, and when the ground was muddy. The results obtained showed that with the empty carriage moving at a walk through the snow the draught was 35.9 pounds with the iron wheel, and but 25.2 pounds with the pneumatic tire. At a trot, with a load of 660 pounds, the pull was 68.6 pounds and 39.5 pounds respectively. In the mud, under the same condition of load and speed, the pulls were 35.2 and 50.7 pounds for the iron wheel, and 23.1 and 31.2 pounds for the pneumatic tire. The other tests consisted of pulls of varying speeds over macadam, paved, and ordinary roads, and in every instance the pneumatic tire showed a saving in pulling power of from 30 to nearly 50 per cent. As to comfort, the well known silence of the pneumatic tire is enlarged upon; also careful measurements were made to show the difference in the vibrations caused by the two types of tires, and in this the advantages of the pneumatic tire were clearly shown. Its springy action is demonstrated by the fact that when it is made to pass over three obstacles there is a wavy motion given to the diagram, and that if two of the three are removed, the same wavy effect remains. Hence the elasticity of the pneumatic tire is proved by the rhythmic vibrations that it produces. But the main feature of interest in the matter lies in the fact that the actual amount of power required to pull a carriage equipped with pneumatic tires is very much less than it is when ordinary wheels are used.

## A Beaver's Dam Settles Ownership.

A very interesting suit has just been decided in the Court of Common Pleas of Huntingdon County, says the Philadelphia Press. About two years ago a Clearfield County surveyor, Thomas W. Moore, applied at the land office, in Harrisburg, for a warrant upon a tract of land in Carbon Township, that county, claiming that the land was vacant. The warrant being issued, the Rockhill Iron and Coal Company discovered that the tract was one of their most valued pieces of coal land, worth \$40,000. They filed a caveat protesting against Moore's claim.

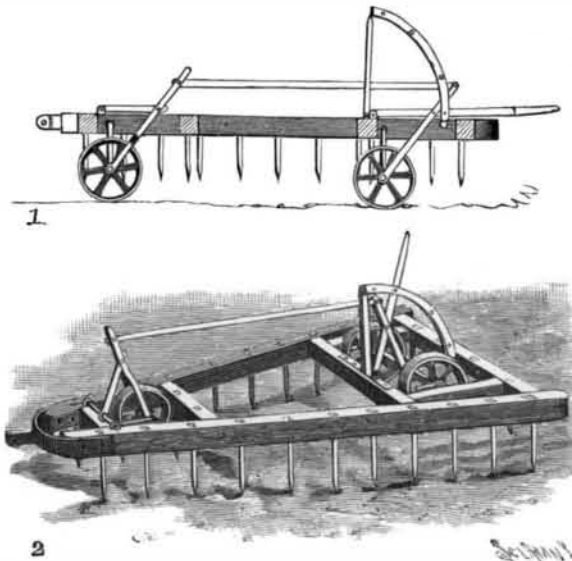
Upon trial of the case, Moore claimed that the land called for in the old warrant of 1786, on which the company based its title, was not on the tract in dispute, but somewhere else in the township.

The line trees having nearly all disappeared, the company would have had some trouble establishing its title had it not been that its old warrant of 1786 called for a beaver dam in Great Trough Creek and that the

company had taken the precaution to send Prof. Wilcox, of Philadelphia, an expert on beavers and their habits, and two surveyors, down to search for the old dam. The professor and his assistants dug down into the bottom of the stream at the point where legend fixed its location. After taking out a couple of feet of wash and gravel, which had accumulated in the bed of the creek within the last century, they found the old dam made by the beavers during or prior to the revolutionary war. The cribbing sticks of the dam were found buried side by side in regular order, and the marks of the beavers' teeth were visible in the wood. These relics from the beaver dam, with Prof. Wilcox's testimony, turned the tide in favor of the Rockhill Company, and the jury had little trouble in agreeing upon a verdict in its favor.

## AN IMPROVED HARROW.

The illustration represents a harrow whose wheels may be readily raised and lowered within the line of the teeth of the harrow, the teeth in operation entering the ground only as far as desired, or being raised entirely from the ground when an obstruction is met with, or where the harrow is to be moved from one place to another. The improvement has been patented by Herman W. Ferling and Emil Heim, of Little Rock, Ark. Fig. 1 is a longitudinal section of the harrow, showing the teeth elevated, and Fig. 2 represents it in perspective, with the wheels elevated. Journalled in the side bars near the front of the harrow is a crank axle on which is the forward single wheel, the two rear wheels being on a second crank axle journalled near the rear of the harrow frame, and both axles, in the portions between their arms, are pivotally connected by links or rods with a parallel link or rod extending from front to rear of the harrow. The forward pivotal rod is also connected by a link with a forward cross bar, and the



FERLING AND HEIM'S HARROW.

rear rod is pivotally connected with a lever movable in an arched, looplike guide, the lever being adjusted in any desired position by passing a pin through openings in the guide and registering openings in the lever. The depth to which the teeth are to be permitted to enter the ground is regulated by the adjustment of the lever, by which the crank portions of the axles are simultaneously raised or lowered. The harrow may be used with particular advantage on planted ground, as it can be adjusted to skim the crust and not injure the seed.

## The Afternoon Nap.

The frequency with which medical men are asked whether it is harmful to indulge in the "afternoon nap" is not, perhaps, surprising, for several reasons. Most persons have had experience of the seductive charms of the somnolence which has followed the comfortable ingestion of a midday or evening meal. The meal finished, the diner arranges himself comfortably in an armchair; it may be he lights a pipe or cigar, takes up a newspaper, and prepares to make the most of the restful conditions of his mind and body. But nature soon begins to assert her sway. In time, the eyelids close, the head begins to nod, the newspaper falls from the hands, the pipe, no longer supported in the mouth, falls to the floor, and the symptoms of a nap are complete. Whether the "winks" be forty or one hundred in number, the result is the same—a short, sound sleep. Then comes the question—Is it harmful thus to fall asleep after a meal? By no means; for the very obvious reason that the process is merely a physiological one, and as such, when it occurs, is quite natural. When digestion is in progress, nature has arranged that all the available blood in the body shall be collected in and about the digestive organs. Consequently, the blood supply to the brain falls to a low ebb, and thus sleep is easily induced. On the other hand, of course, physiologically, it is wrong for brain work to be attempted immediately after a solid meal.—Medical Press.

## Science Notes.

There will be a national exposition held at Turin in 1898.

At the Leyden International Zoological Congress, held last year, it was decided that the next meeting of the kind should take place in England, in September, 1898, and that Sir William Flower, director of the British Museum (natural history), should be its president. We now learn that it has been determined that the 1898 congress, the fourth of the series, shall meet at Cambridge under the auspices of the university, simultaneously with the International Physiological Congress, which has arranged to go there in that year.

M. Maurice Versepuy, the African explorer, is on his way back to France, having successfully accomplished a journey across Equatorial Africa. M. Versepuy set out from Zanzibar on July 3, 1895, accompanied by M. De Saint Romon and M. Spöck, with a caravan of one hundred and fifty-one Ascari. The chief landmarks of his journey to the Upper Congo were Kilimanjaro, Mount Kenia, Boringo, Mengo, and Uganda. The expedition on several occasions met with resistance from the natives. This is the seventeenth time Africa has been crossed in modern times.

Sparrows are possessed of queer traits, and are in the habit of building nests in strange places. One would scarcely believe that a sparrow would build a nest upon the gear underneath a railroad car that traveled many miles in a day, yet such a case was noted by the press not long ago. A newspaper reporter, not long ago, was standing upon a canal bridge, and saw attached to the rail running along the deck over the rudder a sparrow's nest. Almost every electric light contains a sparrow's nest, tucked away in the top of the shade and protected from the glare of the light by the framework of the lamp. The electric light tenders, who change the carbon points every morning, expect to find the nests, and never disturb them, and the sparrows seem not to mind the men at work.

Some six years ago M. Vallot erected on Mont Blanc, 1,400 feet from the summit, or 14,381 feet above sea level, the highest meteorological observatory in Europe. Having made twenty-one or more ascents of the mountain, and obtained observations during three successive summers, he now generously offers the use, not only of laboratory and instruments, but of kitchen and salon, to meteorologists of any nation who care to pursue their investigations amid such exalted surroundings. Intending visitors are advised to provide themselves with a somewhat substantial smelling bottle in the form of a steel tube filled with compressed oxygen, the approved remedy for mountain sickness being to inhale a few quarts of this enlivening element. Four Frenchmen, three Swiss, a German, an Italian, and an American have already availed themselves of M. Vallot's invitation, which is presumably for the summer months.

An interesting scientific experiment was made recently in Paris with the aid of a balloon which was sent up from Villeite at half past ten, says the Westminster Gazette. The object of the experiment was to collect a quantity of the atmosphere at a very great altitude for purposes of analysis. The balloon was, therefore, sent up alone with the necessary instruments attached to it. These consisted of an entirely new kind of reservoir, capable of holding six liters of air. To this was attached a spiral arrangement terminating in a tap hermetically sealed, but so arranged with a clockwork apparatus that it would open just one hour after the ascent and close again one minute later. A good deal of ingenuity had been displayed in this invention. In order to preserve the reservoir from the intense cold of the upper regions, it was surrounded by a bath of soda water, which was expected to keep the apparatus at an even temperature. In addition, the balloon also carried two baro-thermographs for registration purposes at high altitudes. Attached to the balloon are instructions to those who may find it, so that it may be carefully wrapped up and forwarded to Paris forthwith.

Lamentations are arising from the Jardin des Plantes, Paris, and if they are not heeded, the decline and fall of the Zoological Gardens of Paris will soon become a matter of history. Valuable trees are dead or are dying from lack of attention. The monkey houses are in a bad way; the cages kept for the wild beasts which happen still to be in the land of the living leave much to be desired, from the point of view both of comfort and security; and the animals generally are throughout the twelve months strict observers of a sort of Lenten diet. Five years ago the last survivor of the rhinoceros species went over to the majority, and the poor beast's place has not since been filled. Lately there was a scare because the solitary hippopotamus, aged forty-one, betrayed symptoms of a break-up. The prospect of the gardens being left without a single representative of that kind of animal proved too much for the worthy director, M. Milne Edwards, who, with great difficulty, contrived to scrape together 10,000 francs, with which he purchased a juvenile member of the tribe, which is now on its road to the metropolis. Lack of funds, it scarcely need be added, is at the bottom of this melancholy collapse. The allowance granted by the government has been cut down, and there is every likelihood of its being further curtailed.