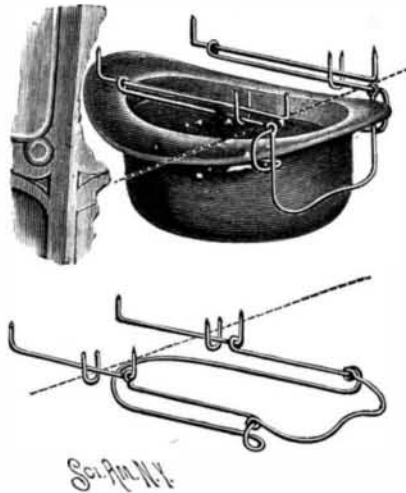


A SIMPLE FORM OF HAT HOLDER.

The illustration represents an inexpensive device to be attached to the bottoms of pews, theater chairs, etc., to conveniently and safely hold an ordinary hat where it will be out of the way, under the seat or against the back of the pew or chair immediately in front of its owner. It has been patented by Mr. Le Roy C. Godwin, corner of High and Chestnut Streets, Portsmouth, Va. Two parallel guide rods, having upwardly bent and pointed ends, are driven into the bottom of the seat, into which also staples are driven



GODWIN'S HAT HOLDER.

to form a fixed loop below the outer portion of each rod. The two ends of a hat-supporting loop formed of a single piece of bent wire are loosely attached by eyes to the guide rods, parallel side rods of the loop extending from the eyes to a forward bent portion where the wire is doubled to extend backward beneath the side rods, its central portion being curved at sufficient distance back to receive the crown of the hat. A bail is secured to the loop near its forward bent portion, and the loop is drawn out, as shown in the outline figure, when a hat is to be placed in it, the loop then sliding by its eyes on the guide rods, and being supported by the staples when pushed back, while the turned-down bail locks the hat in place, as shown in the perspective view. To support the hat against the back of a seat, a light spring catch is placed in position to engage the bail when the loop is turned upward, the eyes by which it is attached to the guide rods permitting it to be also swung, and thus hold the hat in either position.

A SINGLE WHEEL RIDING MACHINE.

The machine shown in the illustration is designed to be easily and safely propelled by the rider, and normally held in upright position when at rest. It has been patented by Mr. Henry C. Ross, of Ipava, Ill. From the rim of the large single wheel short diverging spokes extend to inner parallel rims some distance apart, bent arms attached to the latter rims extending to a hub on each side of the wheel, the hub consisting of a sleeve provided with ball bearings through which the axle extends. Mounted in ball bearings on each of the sleeves is an arm extending above and below, the upper ends of the arms having handles by which the machine is guided, while their lower ends support a framework having a cross bar to which is secured the seat perch, the frame also affording bearings for an axle on which are pivoted the pedal levers. Loosely mounted in a hollow circular case at each side of the machine, on the inner end of the axle and sleeve, is a ratchet mechanism for driving the wheel, one of the figures showing a sectional view of the ratchet attachment. A strap held in a groove on the face of the ratchet casing extends downward on each side to one of the pedal levers, to which it is secured, and as the pedals are operated the ratchet wheel and sleeve are turned to move the main wheel. To the outer ends of the axles are attached rods long enough to extend to the ground, when the axles are turned into position to bring their points down, and at a convenient point in front of the rider is a curved brake bar, connected with the squared inner ends of the axles, so that by raising the brake bar the axle is turned to throw the points of the rods down into the ground, as shown in dotted lines in the sectional plan view, and in full lines in the figure in perspective. When the machine is being operated these rods are held out of contact with the ground by a spring extending from the brake bar to the seat perch. A mud guard, preferably of perforated or wire cloth, is supported by the framework above and back of the seat. The machine is readily steered by the handles on the arms extending upward from the sleeves at each side.

THERE is no way to bend wood better than by steaming.

Rabies.

At the recent International Congress of Hygiene, London, in section 3, which dealt with the relations of the diseases of animals to those of man, this was one of the principal topics. The first paper on the subject was read by Dr. E. Roux, of the Pasteur Institute. In this he described how the virus is made by inoculating rabbits with the virus, drying the spinal marrow from such rabbits, and using this in inoculations, commencing with marrow fourteen days old, when it has lost much of its virulence, and continuing with marrow thirteen and twelve days old to those of less than a day old, when it is very active. Dogs so treated do not take the disease. In the case of man, the same method is applied to the prevention of rabies in man after the infliction of the bite. From 1885 to 1891, 9,465 persons have been treated at the Pasteur Institute. Of these, 90 have succumbed in spite of the treatment, which gives a mortality of 0.95 per cent.

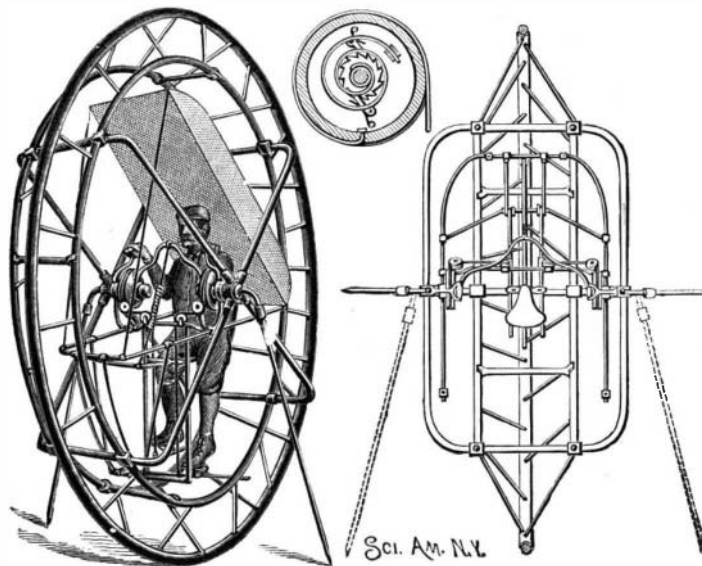
Dr. George Fleming, C.B., the veterinarian, followed with a long paper on the propagation and prevention of the disease. This contained valuable information regarding the prevalence of rabies in England and Continental countries. In England the numbers of cases for the last four years in dogs, cattle, sheep, swine, horses, and deer are: 1887, 497 (deer 257); 1888, 176; 1889, 340; and 1890, 134. Except in 1887, an unusual year, dogs form about 90 per cent of the rabid animals. Dr. Fleming spoke at considerable length on these suppressive sanitary police measures, which he considered to be all that is necessary to insure the extinction of the disease:

1. Destruction of all dogs which are rabid, or which are suspected of being or becoming rabid.
2. The seizure and, if need be, destruction of all ownerless and wandering dogs.
3. All other dogs to wear a properly constructed and well-fitting muzzle while rabies prevails, and also for a period equal to longest interval of latency after the malady has been suppressed.
4. The imposition of a tax upon all dogs.

The discussion was mainly in praise of Pasteur, Dr. Hime (Bradford), Dr. Charles Drysdale (London), Dr. Redfern (Belfast), and Dr. Nocard, of Paris, joining in this; but Dr. Elizabeth Blackwell, who had visited the Pasteur Institute, said she saw there dogs in various stages of rabies suffering extreme agonies, and she pointed out that the establishment of a Pasteur institute involves the constant producing of madness in dogs, and in a Christian country there ought to be no question in preferring muzzling as a preventive of the disease. Dr. Roux quietly retaliated that rabbits, not dogs, are used for inoculation. The muzzling proposal received the strongest support from Professor Ostertag, of Berlin, who said that all dogs in that city are muzzled, and a case of hydrophobia has not been known there for ten years. So Germans have no need of a Pasteur institute.

New Torpedo Boat.

On August 25, the official trial took place of a first class torpedo boat for the Victorian government, built by Messrs. Yarrow & Co. The dimensions of the vessel are as follows: Length, 130 ft., beam, 13 ft. 6 in., with a displacement on trial of about 82 tons. She is fitted with triple expansion engines of about 1,100 H. P., and, in fact, is almost exactly identical with the

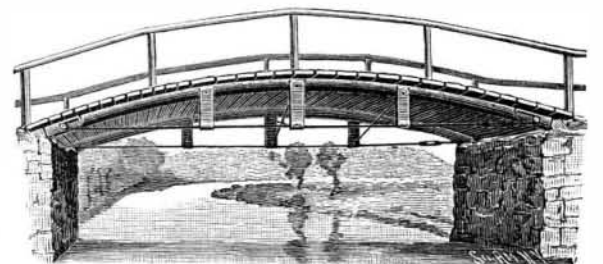


ROSS' UNICYCLE.

last six first-class boats constructed for the British Admiralty. The speed obtained during a three hours' run was 22½ knots in very boisterous weather, with a load on board representing the whole armament and equipment required for service in actual war. General Stewart was present on behalf of the Victorian government and Messrs. Pledge & Ellis represented the English Admiralty. The seaworthiness and steering capabilities proved very satisfactory, and the speed in spite of the adverse weather was half a knot beyond that contracted for.

AN INEXPENSIVE BOW BRIDGE SILL.

The improved bridge sill whose use is represented in the illustration is designed to partake of the character of both the tubular and truss construction, while representing also the suspension type. It has been patented by Mr. William H. Murphy, of Morgantown, Ind. It consists, essentially, of three parts, a bowed beam, a cable, preferably of steel, passing through or over the beam, and struts interposed, as shown. The beam may be of any desired material, shape, or length, with a groove along its top, in which the cable lies, but is preferably of iron tubing, to receive the cable, and sufficiently flexible to allow of considerable bending, the beam in either case supporting at each end a grooved pulley. The ends of the cable are connected by turnbuckles, one portion passing over the beam or through the tubing, as shown, the other portion being



MURPHY'S BOW BRIDGE SILL.

separated therefrom by short struts interposed between it and the beam, the pulleys allowing for free motion of the cable, according to the load on the bridge, whereby the strain is equalized and principally transferred to the cable, the beam supporting the weight only as end or crushing strain. The cable is lengthened or shortened by the turnbuckles to maintain the desired bow or arch form. One or more of these sills may be placed side by side if desired, and the floor may rest on top of the sills or on floor beams transverse to the length of the bridge, which can thus be built at comparatively small expense, and yet be very light and strong.

Return of the German Arctic Expedition.

A telegram has been received here from Hammerfest announcing the safe return to that port of the German expedition to the Spitzbergen Islands, under the command of Captain Bade. The expedition visited Baeren Island, and proceeding northward followed the west shore of Spitzbergen itself as far as the 80th degree of north latitude, at which point a landing was made and the German flag was hoisted and saluted. It was found impossible to proceed further, on account of the thickness of the ice, so it was resolved to return homeward. All the members of the expedition are reported to be well. The ship and her engines stood all the tests to which they were subjected admirably.

Action of Oils on Metals.

A series of tests, lasting some twelve months, on the action of various oils on metals in contact with them, recently carried out, gave the following results: In the case of iron, seal oil acted the least on it and tallow the most. Bronze was not attacked at all by colza oil, and but very slightly by olive oil. It was, on the other hand, vigorously eroded by linseed oil. In the case of lead, the most deleterious lubricant was whale oil; the best, olive oil. Whale, lard, and sperm oils were about equally erosive. Zinc seemed to be but little attacked by mineral lubricant oils. The best oil was lard, and the worst sperm. Copper was not attacked by any of the mineral oils. Sperm oil had the least and tallow the most action on it. Generally speaking, mineral oil attacked the metals under test the least, and sperm oil attacked them the most. In conducting the experiments, the metals were first thoroughly cleaned in ether and then dried. They were next carefully weighed and placed in closed vessels filled with oil, which were kept for a year at a uniform temperature in summer of 80° Fah. and in winter of about 50° Fah.

Borax for Epilepsy.

Dr. Dijoud has tried this remedy in twenty-five cases, and he claims to have entirely cured one, and to have relieved all except six. The duration of the treatment varied from one to seven months, and he was able without inconvenience to carry the dose up to ninety grains a day. This was only possible if a beginning was made with small doses, which were gradually increased; and when the dose exceeded sixty grains daily, he found it advisable to add some glycerine to the water and sirup in which the drug was usually administered. The patients to whom Dr. Dijoud administered borax had been treated unsuccessfully with the bromides.—*Med Record.*