TRICYCLE HOBBY HORSE.

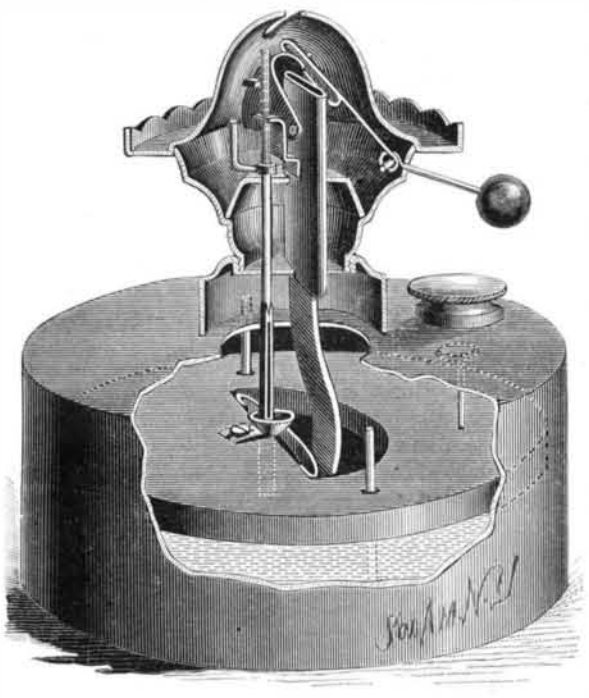
The hobby horse herewith illustrated can be operated in the same manner as a tricycle. The handle shaft is arranged to turn in the hobby horse at the base of the neck, and on its lower end is secured a fork, the shanks of which are shaped like a horse's front legs. Journaled in the lower ends of the shanks, is a shaft having a crank, provided with a foot rest, at each end. The front wheel is rigidly mounted on the shaft between the shanks. Rods pivoted to the shanks at their upper ends are connected by rods with the ends of the cranks; if desired, these rods may have the shape of a horse's front legs. Rods having their upper ends held to the sides of the horse's body at the rear extend downward

HEILMAN & PERKINS' TRICYCLE HOBBY HORSE.

and outward, and in their lower ends the rear axle is journaled. The rear axle is formed with two cranks on which are pivoted rods connected by bars with the sides of the horse body. The hobby horse is operated precisely like a tricycle, the rider's feet resting upon the treadles. Steering is effected by turning the fork by means of its rod and handle. The movements of the jointed bars resemble the moving front and rear legs of a horse. This invention has been patented by Messrs. R. P. Heilman and R. B. Perkins; particulars can be obtained by addressing the former at Emporium, Pa.

AUTOMATIC LAMP EXTINGUISHER.

The engraving shows a lamp extinguisher that automatically extinguishes the flame at any desired time after the lamp has been lighted. Guide rods projecting upward from the bottom of the fount pass through holes in a float formed with a large central aperture, one edge of which is straight. A wire bow spring is secured to the straight edge of the aperture, and a metal clip formed with a funnel-shaped part is held on the top of the float in such a manner that the funnel projects beyond the straight edge. A rod having a round upper and flattened lower part passes through both the burner and funnel. To the upper



BURGESS' AUTOMATIC LAMP EXTINGUISHER.

part of the rod, which is graduated, is attached an angular handle, by means of which the rod may be turned. The upper end of the rod rests against a guide lug on the side of the wick tube. A cap is pivoted to the sides of the wick tube in such a manner that it can swing over the top of the tube and cover it. A lever pivoted in the burner shell has a weight at its outer end, and its inner end is formed into a lengthened loop, through which passes a pin projecting from the side of the cap.

To adjust the extinguisher, the rod is pulled upward until a lug on the cap is at the desired mark of the rod; the cap is then held off the wick tube, and the weight is raised. The handle piece is then moved until the flat portion of the rod is at right angles to the straight edge of the opening, when the spring will firmly hold the rod to the float. The rod can be moved up and down when its flat portion is parallel with the straight edge. The rod descends with the float, and when its upper end passes under the lug, the cap is released and is swung by the weight over the wick tube, thereby extinguishing the lamp. It is immaterial how full the fount is, as the rod and float can be locked together at any time. When the fount is being filled, a pin rising from the float just beneath the filling neck shows the height of the oil.

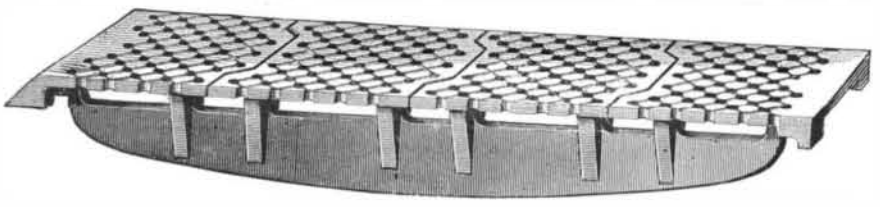
This invention has been patented by Mr. W. Scott Burgess, of Marathon, N. Y.

Solder for Glass, Porcelain, and Metals.

A soft alloy which attaches itself so firmly to the surface of metals, glass, and porcelain that it can be employed to solder articles that will not bear a high temperature can, as the *Pharmaceutical Record* asserts, be made as follows: Copper dust obtained by precipitation from a solution of the sulphate by means of zinc is put in a cast iron or porcelain lined mortar and mixed with strong sulphuric acid, specific gravity 1·85. From 20 to 30 or 36 parts of the dust are taken, according to the hardness desired. To the cake formed of acid and copper there is added, under constant stirring, 70 parts of mercury. When well mixed, the amalgam is carefully rinsed with warm water to remove all the acid, and then set aside to cool. In 10 or 12 hours it is hard enough to scratch tin. If it is to be used now, it is to be heated so hot that when worked over and brayed in a mortar it becomes as soft as wax. In this ductile form it can be spread out on any surface, to which it adheres with great tenacity when it gets cold and hard.

IMPROVEMENT IN GRATE BARS.

The grate bar shown in the cut consists of a perforated and grooved top plate divided into a number of sections having narrow spaces between their adjacent ends. The sectional plates are cast upon lugs which are cast upon the supporting rib, thus allowing the air to freely circulate through and around the top plates; this secures thorough combustion of fuel, and by equalizing all strain resulting from expansion and contraction, prevents warping and insures long service. The perforations in the plates can be regulated to any size or kind of fuel, and we are assured that culm or coal dirt has been and is burned on this bar with great success. The surface of the grate is always level—making an even fire—and there are no ends or tilted bars to be broken off by the scraper in cleaning the fire. This bar, the invention of Mr. Joseph B. Miller, 407 South Main St., Wilkesbarre, Pa., is used extensively in furnaces throughout the coal regions.



MILLER'S IMPROVED GRATE BAR.

Removing Hair and Freckles by Electricity.

The American Dermatological Association lately held its ninth annual meeting at Greenwich, Conn. Among the proceedings were remarks by various doctors who gave their experiences in removing hair from the face by electricity. Quite a large and important business is done in this line, especially among ladies. The only remedy is to kill the root of each hair, which must be done separately, by means of an electrical needle and battery.

Dr. Fox said: In the case of a young woman with a heavy beard, he had removed, by actual count, eight thousand hairs. This process had required two or three years. Since then it had been necessary to remove only a few dozen hairs.

The president, Dr. Hardaway, had performed the operation of electrolysis for ten or twelve years, probably longer than any other member of the association. He used the irido-platinum needle, which had the advantage of being bent, and was not likely to pass through the follicle wall. The moment the follicle was entered, there was an escape of sebum. One case, that of a woman with a heavy black beard, had been entirely relieved. Electrolysis with a fine needle afforded a method of getting rid of freckles. The plan was to dot the surface covered by the freckle with the needle.

FRECKLES.

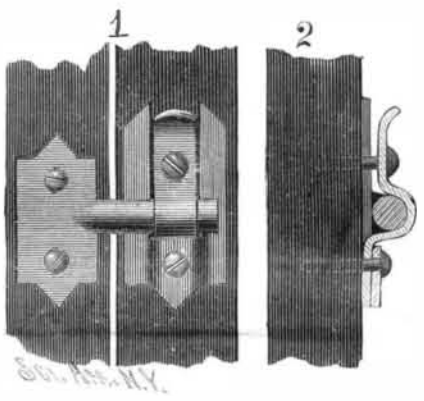
The following ointment was recommended by Dr. Heitzman and others at the late Greenwich meeting of the American Dermatological Association, being an ointment recommended by Wertheim, of Vienna:

White precipitate, Subnitrate of bismuth	each	1 drachm.
Glycerine ointment		1 ounce.

This was to be applied in a thin layer every other night, and in from four to six weeks the result would be found to be highly satisfactory.

SPRING FRICTION MIRROR PIVOT.

The object of this invention is to provide an effective spring friction hinge for hanging mirrors, transom lights, and for other similar uses. The base plate is formed with a longitudinal slot, and is grooved on its under side to receive the end of a spring which is shaped as shown in the sectional view; the lower portion of the spring forms a loop for receiving a pivot, and the



BREITHUT'S SPRING FRICTION MIRROR PIVOT.

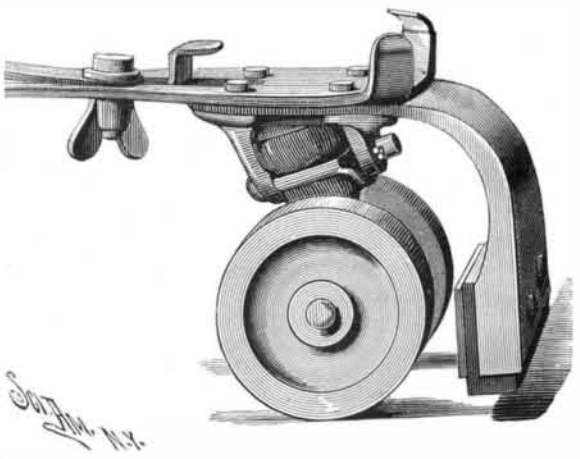
upper portion is turned outward to admit of readily inserting the pivot between the spring and plate. The plate and spring are held to the supporting frame of the mirror or transom by a screw. A second screw passes through a hole in the spring above the pivot, and serves to draw the spring around the pivot, so as to produce more or less friction, to cause the frame to which the pivot is secured to remain in any desired position. By removing the upper screw from the spring the pivot may be raised out of the hinge or replaced therein. It will be seen that by this construction the mirror or transom frame can be easily removed or replaced by one person.

This invention has been patented by Mr. Oscar P. Breithut, of 58 William St., Williamsport, Pa.

STOP ATTACHMENT FOR ROLLER SKATES.

By the use of this attachment on any roller skate the advance of the skater can be readily checked; it also serves as a safeguard to prevent the skater from falling backward. To the lower side of the rear end of the main plate is secured a plate made of steel or other suitable material. This plate curves downward in the rear of the rollers, and is of such length that its lower end will be near the floor when the rollers rest upon the floor. The side edges of the plate project forward to strengthen it, and to form a recess to receive a block of rubber which is held in place by screws and rivets. When the skater wishes to stop, he raises the forward part of the skate a little, thereby bringing the rubber block in contact with the floor, when the friction checks further progress.

This construction also overcomes the danger



GERAN'S STOP ATTACHMENT FOR ROLLER SKATES.

of falling backward, since the raising of the forward part of the foot brings the rubber against the floor, stops the forward movement of the skate, and enables the skater to maintain his equilibrium. This invention has been patented by Mr. J. P. Geran; further information can be had from Judge Garret Bergen, P. O. box 81, Brooklyn, N. Y.