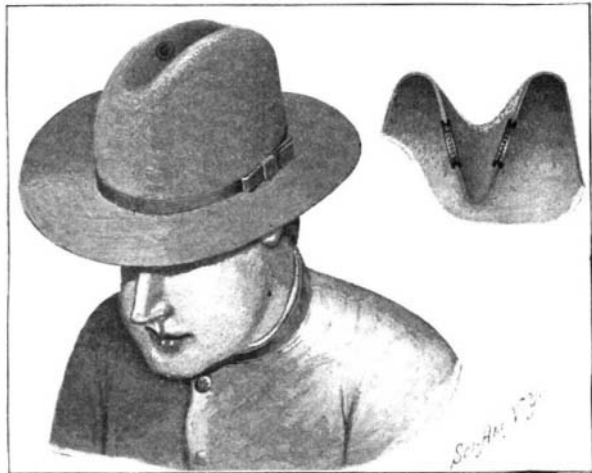


**VENTILATED HAT.**

Residents of tropical countries will appreciate the value of an improvement in ventilated hats, recently patented by Mr. Julius Wolbrecht, Chief Clerk Quartermaster Department of Works, Manila, P. I. The engraving shows the improvement as applied to a campaign or slouch hat, and the arrangement is such that the hat is not only properly ventilated, but, in addition, the rays of the sun are prevented from pene-

**VENTILATED HAT.**

trating the ventilators and striking the head of the wearer.

The slouch hat is formed with the usual crease in the crown and on the side walls of this crease the ventilators are placed, preferably near the top. Each ventilator consists of a piece of wire gauze secured to an eyelet fastened to the wall of an aperture made in the wall of the crease. By arranging the ventilators in the manner described, a proper ventilation of the hat is attained, especially as the air within the hat, and particularly the hottest air, usually located in the uppermost portion of the hat, can readily escape through the ventilators, thus keeping the head of the wearer comparatively cool. It is evident that, as the ventilators are arranged on the side walls of the crease, the rays of the sun in penetrating through the meshes of the ventilators cannot strike the wearer's head, but instead strike the sides of the crown of the hat, consequently the wearer is not liable to suffer from the direct rays of the sun, as is so frequently the case when the ventilators are located either in the top of the crown or on the side. Furthermore, it will be seen that the ventilators are hardly visible and the appearance of the hat is not impaired.

**GURGLESS JUG.**

The accompanying illustration shows a jug provided with an air passage leading down through the handle,

**A GURGLESS JUG.**

whereby air is freely admitted into the vessel to replace the liquid as it is poured out. The advantages of this air passage are apparent. All gurgling sounds incident to the discharge of the liquid are prevented, and a rapid and uninterrupted flow is assured. An important feature of the invention, though one that might possibly be overlooked, is that the mouth for the air passage does not open in the handle, but instead is located in the neck of the jug, so that by using a stopper with an enlarged head, such as the one illustrated, this opening may be closed. Thus air is excluded from the contents of the jug and dust is prevented from accumulating and clogging the air passage.

The members of the Patriotic League of the Revolution are endeavoring to establish the claim that Theodore R. Timbey was the inventor of the armored revolving turret which is popularly ascribed to Ericsson.

**A New Match.**

Another kind of match, intended to supplant the phosphorus matches which have been prohibited for a year, has lately been introduced in the Swedish market. The inventors of the new match are the engineers Landin and Jernander, of Stockholm, who have patented their invention in several countries. This match looks like the well-known potash and paraffin matches, which, however, by reason of the fact that they contain poisonous phosphorus, come under the same prohibition as the old and worthy lucifer match. But the new match, which has been named "Repstickan" (the scratch match), possesses a property which the potash match lacks, viz., it is damp proof and can, therefore, be lighted against a damp or wet surface, provided this is hard. The inventors claim that Repstickan is the least poisonous match in existence, the safety match not excepted.

The manufacture of the new matches, which at present is carried on for the inventors, has been intrusted to Lidköpings Tändsticksfabrik. It is said that negotiations are going on for the sale of the patent in other countries.

**MAGNETICALLY-SUPPORTED TRAIN.**

A curiously interesting invention for railway trains is that shown in the accompanying illustration. The object of the invention is to overcome the weight of the train by the use of magnetism, thus reducing friction to a minimum. The car and locomotive, it will be observed, are provided with arms or brackets which extend downward from each side, bending under the rails to support a series of powerful magnets. These magnets are energized by storage batteries in the cars or by a central power station through the medium of a trolley wire. The magnets are arranged to slide along the under faces of the rails, lifting themselves and the cars to which they are attached, so that the car wheels just clear the upper surfaces of the rails. The wheels, indeed, are required merely for an emergency in case the magnetism should give out. A device may be provided under the control of the engineer for accurately adjusting the power of magnets, so that their upward pull will exactly balance the downward pull of gravity. The engine would require some weight upon its drivers to overcome the inertia of the train and control its movements on grades, when the equilibrium will be destroyed. No fault can be found with the plan theoretically, and on a small scale the invention is perfectly practicable; for a properly-constructed magnet is capable of sustaining about 168 pounds per square inch of its contact surface. We leave it to our readers to figure out, however, the size of magnets required to lift a modern fifty-ton parlor car, and the probable expenditure of power necessary.

**MOP-WRINGERS.**

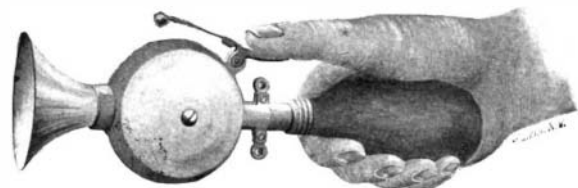
A cheap and effective mop-wringer will prove itself indispensable in any house or building. We have here illustrated two very simple forms which will be found useful. In one of these inventions, the wringer is permanently secured to a pail. Fastened within the pail is a base-board, to which a presser-board is hinged at its lower end. A spiral spring seated between these boards serves to press the presser-board against the squeeze-roll mounted in brackets from the base-board. Hinged to the outside of the pail is a foot lever which has connection with the presser-board. In operation this lever is forced down, depressing the presser-board, whereupon the mop is placed between this board and the squeeze roll. The foot lever is now released and the mop slowly drawn upward. The water is thus thoroughly wrung out and it runs down the board into the pail. During these operations the pail is prevented from upsetting by placing a foot on the foot step, provided on the exterior of the pail.

The second invention provides a detachable device consisting of a hollow conical receptacle tapering downward, one side being open and forming a mouth provided with wide flaring lips. This is secured to the pail by a thumbscrew, and ribs are provided on the wringer to rest against the sides of the pail and prevent twisting. In operation the mop is drawn into the mouth between the flaring lips and twisted as shown, then a

downward pressure of the mop causes the water to be freely expelled through perforations in the side walls of the wringer.

**COMBINED HORN AND BELL.**

A French inventor has devised a combined horn and bell for the use of bicyclists. Upon the tube of the horn he fastens, by means of screws or other appliances, an ordinary bell, which is rung by means of a

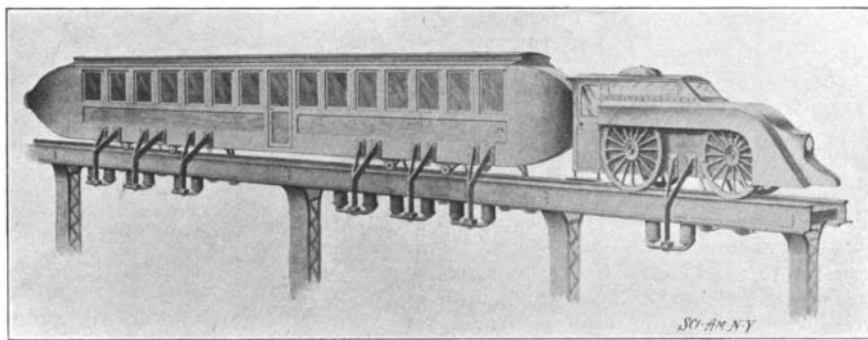
**COMBINED HORN AND BELL.**

clapper fulcrumed adjacent to the bell and provided with a thumbpiece to facilitate its manipulation. It is obvious from this arrangement that it is possible for the bicyclist simultaneously to sound the horn by pressing the bulb and to ring the bell by working the clapper with the thumb.

**A Prize for Women Inventors.**

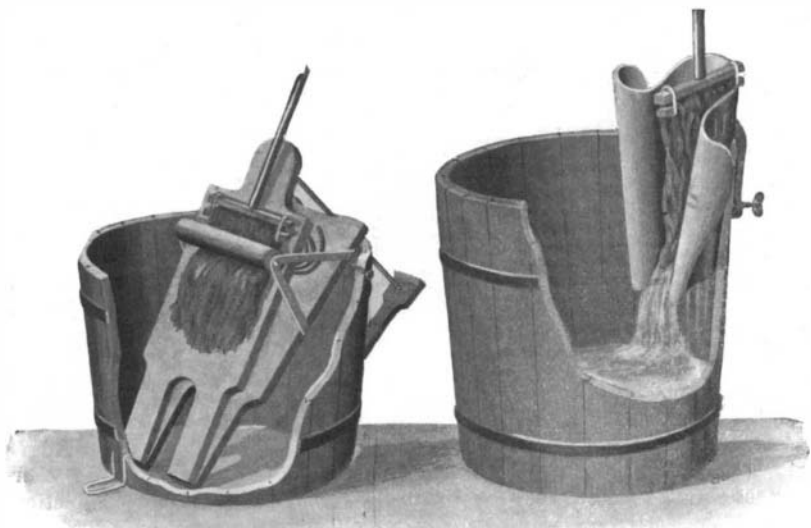
The Boston Women's Educational and Industrial Union has offered a prize of \$50 for the best household labor-saving device invented by a woman. Particulars can be obtained by addressing the Home Economic Committee, 264 Boylston Street, Boston, Mass. The prize is not very lucrative, but the device for which it is offered can be patented, if new, and thus give to the inventor something tangible to sell in the way of manufacturing rights.

Walter Bernard secured a small tract of land a few miles east of Olympia, Ore., and stocked the place with a few dozen chickens. As he is compelled to be away from home during the day, he studied out a scheme for caring for his chickens during his absence. In

**A MAGNETICALLY-SUPPORTED TRAIN.**

each yard he has erected troughs to hold food for the hens, and these troughs are connected by wire with his house. Within the house Mr. Bernard has connected the wire with an alarm clock, with the usual battery attachment. When he leaves home in the morning he sets the alarm clock at the hour for feeding the chickens, and, by an ingenious arrangement, when the time arrives the alarm goes off, the connecting wire releases the troughs and the chickens make a rush for their feed, which is spread before them as if Mr. Bernard did the job in person.

A company has been organized, composed mostly of Pittsburg men, with a capital of \$1,600,000, which will engage in the manufacture of a new system of block signaling apparatus, the invention of George W. Cohen. This system obviates what is called the relays, and it has been tested a number of times in actual operation and its efficiency has been fully demonstrated, it is said.

**TWO FORMS OF MOP-WRINGER.**