

## a convenient pipe-hanger.

Pictured in the accompanying engravings is an improved solit pipe-hanger, adapted for attaching a pipe to a wall or other support. The hanger is of very simple but strong construction and may be conveniently adjusted to support the pipe. It consists of
ing adjustable. Passing longitudinally through the blocks $B$ is a rack bar $C$, the forward end of which projects beyond the toe and terminates in a forked jaw $E^{\prime}$. Mounted to slide on the rack bar $C$ is an $\operatorname{arm} D$, which rises to about the height of the ankle of the user and then curves around until it terminates in a jaw $F$ diametrically opposed to the jaw $E$ but some dis tance above it. The jaws $E$ and $F$ are fitted with rubber pads to provide gripping surfaces when climbing iron poles. - The rubber pads may be removed when the climbers are to be used on wooden poles. Mounted on the arm $D$ is a spring-pressed pawl $G$, adapted to engage the teeth of the rack $\boldsymbol{C}$. By adjusting the $\operatorname{arm} D$ along this rack the distance between the opposed jaws may be varied to suit different poles. The user by throwing his weight on one foot will bind the jaws of this shoe against the pole. Thus supported, he can release the jaws of the other shoe by raising his heel to increase the diametrical distance between the jaws. This foot is then carried upward and the jaws automatically engaged with the pole by throwing his weight upon it. Thus the
two parts, one adapted to fit under the pipe and the other over it. The general form of the two members is indicated in the engravings, one cut showing the parts separated to receive a pipe and the other showing the parts fitted together in position to hold the pipe. Both parts of the hanger are stamped out of sheet metal, bent to $U$ shape in cross-section. The $U$ shaped walls of the inner member of the hanger are adapted to snugly fit within the walls of the outer member. Both of the members are provided with foot extensions at each side, and on the extensions of the inner member prongs are formed, which are adapted to be driven into the support. In addition to this, the inner member is held in place by nails driven through the extensions. After the pipe is seated on the inner part the outer member is fitted into place and fastened with a couple of screws which pass through the foot extensions of both parts. When desired the outer part may be readily removed without disturbing the position of the inner part. Owing to the simple form of the two members, the hanger can be economically manufactured and the U-shaped form of the stock renders it very strong. Mr. W. D. Van Brunt, of Southampton, N. Y., has recently procured a patent on this improved pipe-hanger

## IMPROVED POLE-CLIMBING SHOE.

In the accompanying engraving we illustrate an improved type of climbers, adapted for the use of linemen and others, in climbing wood or metal telegraph, telephone, flag poles and the like. The ordinary climbers are provided with spurs, which are driven into the pole to support the lineman. Such climbers obviously can not be used on metal poles and even on wooden poles do not always furnish a perfectly secure foothold. These deficiencies are over come in the new climbers, which also enable the line man to ascend and descend the pole with greater facility and less exertion.

The device comprises a foot-plate $A$, slightly depressed at the heel to prevent the foot from slipping when strapped thereon. A pair of blocks $B$ are se cured to the foot-plate, one at the heel and the other at the toe. Each block carries a pair of jaws adapted to engage the sole of the shoe, the jaws at the toe be


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## CUSHIONED CAR WHEEL

With a view to reducing noise in city streets, Mr. Benjamin Gastal, of Pelotas, Brazil, has devised an improved wheel adapted to be used on all classes of vehicles, but more especially on street and railroad cars. Of course, the ordinary expedient of equipping the wheels with pneumatic tires is not applicable to wheels which travel on rails, but Mr. Gastal has invented a special form of wheel, in which the pneumatic cushion is placed between the rim and a flanged tire, so that without changing the character of the tread surface, the wheel is cushioned and the usual noise and


## CUSHIONED CAR WHEEL

vibration materially abated. In the accompanying engraving, one of the figures shows the improved wheel complete, and the other, which is a cross section through the rim, shows the details of construction. The rim $A$ of the wheel is provided with a central annular flange. In this flange and in the main body of the rim at either side of the flange annular grooves are formed, which serve as seats for the pneumatic tubes $B$. The rim $C$ of the wheel is provided with seats, which bear against the tubes $B$ at the center and outer side of the wheel. A side section $D$, which is fastened to the tire section $C$, and bears against the inner pneumatic tube and the inner side of the central pneumatic tube, serves to hold the tire section to the wheel and prevent it from being moved laterally off toward the outer side. The section $D$ is held in place by a series of countersunk screws $E$. The space which separates the rim $A$ from the tire section $\mathcal{C}$ and side section $D$ is covered by a pair if $\varepsilon$ nular covering flaps $F$.

One can hardly look out of a window in contemplation of the roofs without seeing a number of metalhooded ventilators, which have come into general use for the purpose of creating an air current in lofts or air chambers. The only disadvantage connected with their use is that in case of fire they act as a chimney and aid materially in the spread of the flames. In a recent improvement made in these ventilators, the hood is held in an open position by a lever movement controlled by a fusible link. In case of fire this link is melted, and the hood is allowed to fall of its own weight, and in doing so it closes the air passage and cuts off the draft.

a novel advertising device.

