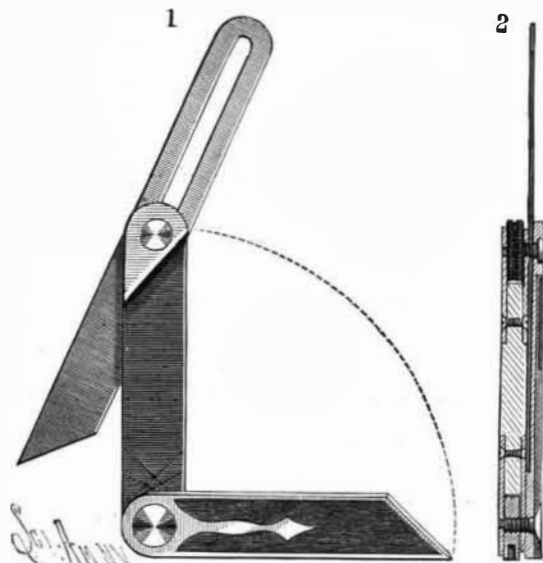


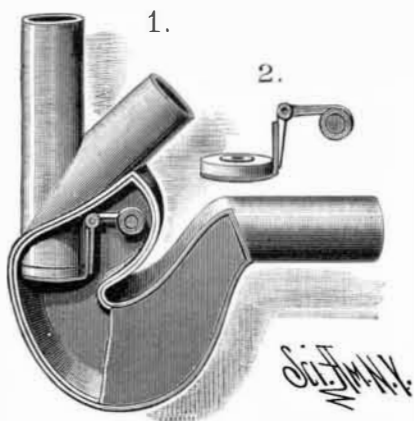
**IMPROVED BEVEL.**

Upon each side of the body at the ends is secured a brass plate having a circular projecting portion. The plates upon one side are formed with circular apertures centrally made in the projecting portions, while the plates upon the opposite side are formed with square



WITTER'S IMPROVED BEVEL.

apertures. Pivoted upon a screw bolt passing through these apertures are the two blades, shaped as shown in Fig. 1; Fig. 2 being a sectional view, showing the blades folded in suitable recesses provided in the body. Each bolt is provided with a circular thumb nut, having milled edges and a groove cut centrally around its edge to facilitate turning. The nuts may be further tightened by means of a nail set inserted in a hole made in their edges. The blades will be securely held in any desired position by these nuts. Near the pivotal point of the short blade, the top plate of the body is provided with gauge lines, to which the blade may be adjusted when it is desired to cut on a square or at an



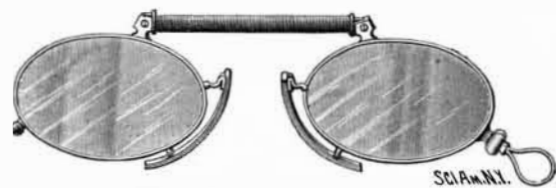
GERSTENBERG'S PLUMBER'S TRAP.

angle. The short blade is especially useful in working from plans, as both blade and handle are brought close thereto. Then, as the bevel is turned over to mark the wood, the thicker part of the handle is brought against the board to be cut. By the use of two blades in combination, almost angle may be obtained, and in cutting hips, valleys, and jack rafters the small top blade will be found especially useful. It will be seen that the means for tightening the blades are entirely out of the way, and not liable, therefore, to form an obstruction in handling the tool or become broken or disarranged from a fall.

This invention has been patented by Mr. Frank E. Witter, of Brooklyn, Conn.

**IMPROVEMENT IN EYE GLASSES.**

Ordinary eye glass frames, connected by means of the usual curved nose spring, can be adapted for use by different persons by springing the frame apart more or



IMPROVED EYE GLASSES.

less, but in so doing they are necessarily turned in their own planes, thereby rendering them useless for holding cylindrical lenses.

The annexed engraving shows a recently patented eye glass frame, in which the two lens-holding frames preserve their parallelism as they are separated or allowed to approach each other.

This invention consists in a pair of parallel bars attached to the lens-holding frames, each bar being provided with a loop for receiving the other bar, and a spiral spring surrounding one of the bars between the loops, and arranged to draw the lens-holding frames

toward each other. This frame is especially adapted for holding cylindrical lenses, such as are used by persons having astigmatic vision. It is of vital importance to mount such lenses so that their axes will preserve their parallelism when the eye glasses are adjusted to the nose. The improved frame accomplishes this result in a very simple and effective way.

While this frame is especially designed for mounting cylindrical lenses, it is not confined to that particular use, as it may be employed to advantage in mounting the ordinary spherical lenses.

Further information regarding this invention may be obtained by addressing Mr. J. B. Laurencot, 33 Maiden Lane, New York City.

**How to Promote Health.**

After all that has been stated of the effects of the atmosphere in high altitudes or at the level of the sea, the influence of forests and ocean, of sea coasts and interior places, humidity and dryness, cold and heat, the winds, electricity, and ozone, and no matter what of other conditions, the paramount considerations for the promotion of health are an abundance of pure air and sunshine and out-door exercise. Without these, no climate is promotive of health or propitious for the cure of disease; and with them, it is safe to say, the human powers of accommodation are such that it is difficult to distinguish the peculiarities of any climate by their joint results on the health and longevity of its subjects.—Bell's "Climatology."

**PLUMBER'S TRAP.**

The annexed engraving represents an improved plumber's trap, especially designed to prevent sewer gas from entering the house through the waste pipe. The horizontal waste pipe extends from one arm of the D-trap, while the vertical main outlet pipe enters the other arm. From near the end of the outlet pipe extends a branch overflow pipe. One side of the trap is closed by a plate which may be removed for clearing the trap or repairing the valve. The upper part of the trap, where it connects with the waste pipe, is on a higher level than the lower end of the outlet pipe, which is, therefore, always water sealed. The trap is formed with an upper chamber, within which the valve is placed. The valve proper, Fig. 2, is composed of a plate bent at right angles. Secured upon the upper surface of the lower portion is a packing of leather or other soft material to form a tight joint with the lower end of the outlet pipe when the valve is closed. The upper portion of the plate is connected to the lower arm of a bell crank, through the angle of which the valve is pivoted to a stud projecting from one side of the chamber. The other arm of the bell crank is provided with a weight which overbalances the lower part of the valve, so that the latter will close automatically when the water stops flowing from the main outlet or overflow pipe. Any gas that may find its way through the water retained in the trap will be prevented from entering the outlet pipe, and any pressure that might result from accumulated gas in the trap would only serve to force the valve more firmly against the end of the pipe.

All further particulars concerning the invention may be obtained from the patentee, Mr. F. C. Gerstenberg, of 1107 First Avenue, New York City.

**IMPROVED CASK OR TUB.**

This invention is applicable to barrels or tubs in which the staves are formed with a groove to receive the heads, the object being to secure the heads against outward displacement, and to support the staves beyond the groove against any blow delivered upon the exterior of the staves that would tend to break off their ends. Secured within the staves, and outside of the head or bottom, is an angle iron hoop having one flange overlapping the head or bottom, and the other lapping the chine or projection of the staves and terminating at or near their ends, as shown in the accompanying cuts. The head or bottom is thus securely held in place, and the ends of the staves are sustained beyond the croze. Such a hoop of angle iron may be employed in connection with the outer hoop, which encircles the staves at their ends, and rivets common to both hoops may be inserted directly through the inner and outer hoop and the interposed staves. In connection with the hoop of angle iron as applied to the bottom of a tub, there may also be provided a second angle iron hoop, arranged upon the inner side of the bottom, and rivets may be passed directly through both the angle iron hoops, the outer hoops, and the staves, as shown in Fig. 3. By this construction the bottom is held both against downward pressure, which would result from the weight of the contents of the tub, and against any upward pressure or blow which would result from the tub being thrown upon a stone or other obstruction that would strike the bottom. This invention, without materially increasing the cost of manufacture of casks and tubs, adds greatly to their strength.

Further particulars may be obtained from the patentee, Mr. George R. Nafis, of 266 Monroe Street, Brooklyn, N. Y.

**IMPROVED VEHICLE POLE.**

The vehicle pole herewith represented is the invention of Mr. John J. Ryan, of Sardis, Miss. This pole is so designed as to permit of the use of a straight piece of timber in its construction in lieu of the ordinary curved pole, and which will allow hitching the horses nearer the vehicle. The curved bar is provided at its ends with pole couplings for attachment to the running gear. To the top of the center of the bar is secured a curved standard, the upper portion of which extends along the under side of the rear end of the pole. A brace rod extends from the center of the curved bar to the pole, while two side braces extend from the pole to

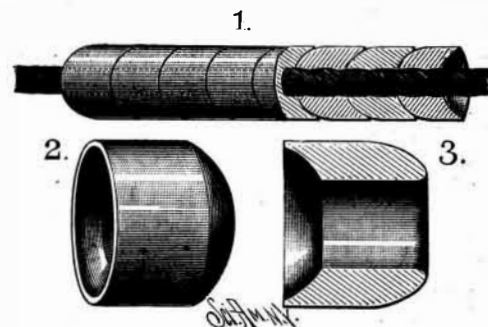


RYAN'S IMPROVED VEHICLE POLE.

the ends of the curved bar, the ends of these braces being extended sufficiently to form the pole couplings. The whiffletrees may be placed at the extreme rear end of the pole, if desirable, thus permitting of hitching the horses near the vehicle where they can pull to greater advantage, or the whiffletrees may be secured by passing the bolt through any one of the series of holes formed in the rear end of the pole.

**COVERING FOR TRACTION CABLES.**

This covering is designed to protect the cables and car grips from the extreme wear to which they are at present subjected, while it will in no wise impair either the flexibility or efficiency of the cable. On the cable is strung an endless series of tubular sections—one of which is shown detached in Figs. 2 and 3—one end of each of which is concave and the other correspond-



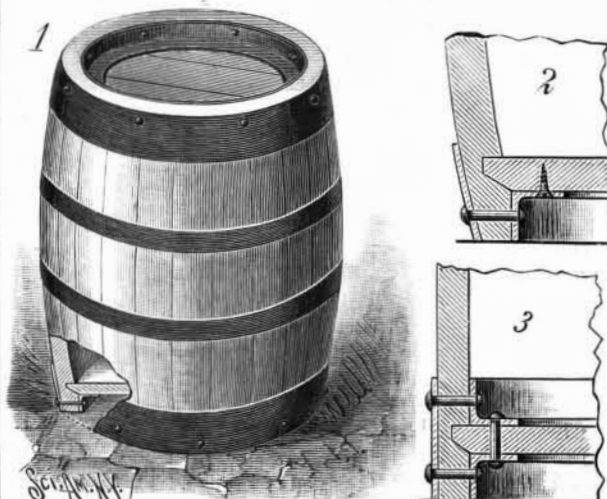
MCCANN'S COVERING FOR TRACTION CABLES.

ingly convex. The convex end of each section fits closely and smoothly in the concave end of the next succeeding one, so that a ball and socket or universal joint is formed between each pair of sections. The sections are preferably made of cast metal, as iron, but may be of any other material capable of withstanding the great wear. They are strung closely on the cable, and at the splice may either be made in halves, secured together, or they may be formed by pouring melted metal into suitable moulds surrounding the cable. A continuous flexible covering is thus formed, which will receive the wear now falling on the cable strands.

This invention has been patented by Mr. Thomas E. McCann, of 1631 Catharine Street, Philadelphia, Pa.

**Nitrate of Silver Stains.**

Dip the fingers into a strong solution of cupric chloride. In about a minute the silver will be converted into a chloride, and may then be washed off with hyposulphate of soda solution.



NAFIS' IMPROVED CASK OR TUB.