W. J. LORCH.

FIRE HOSE CLAMP.

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1,219,968.

Patented Mar. 20, 1917.

Fig. 1.

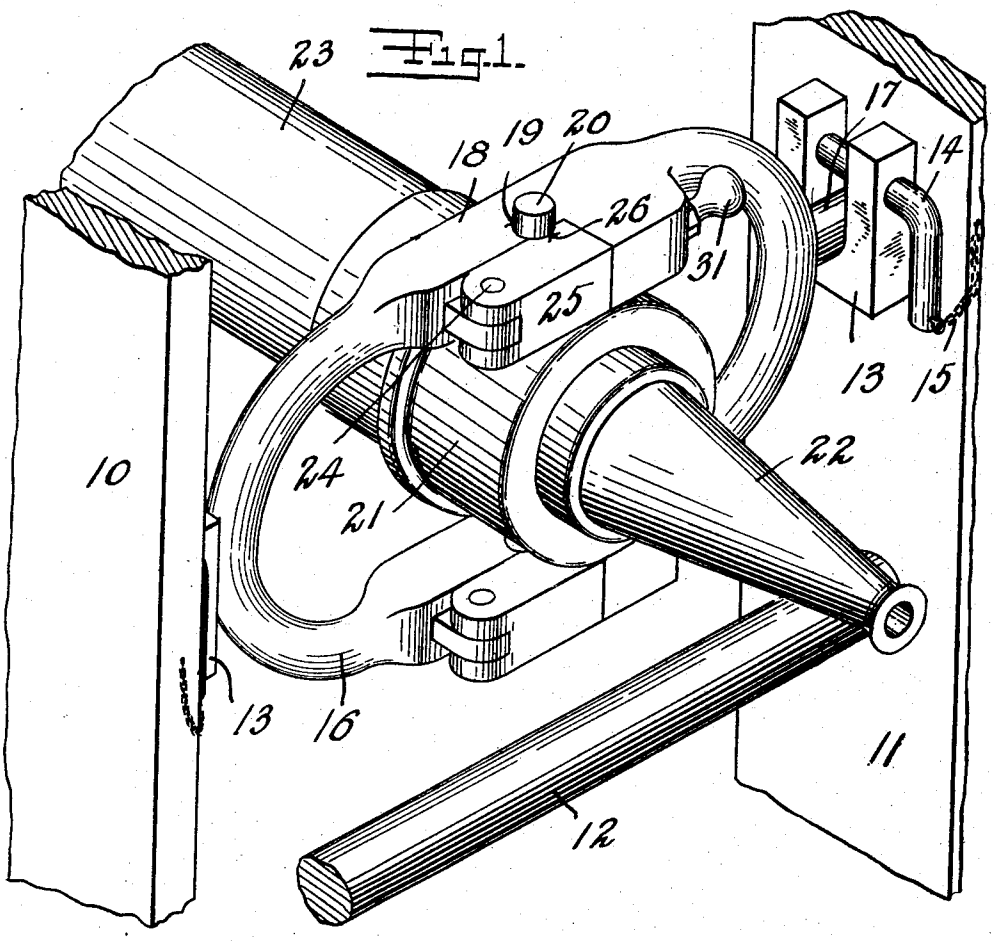
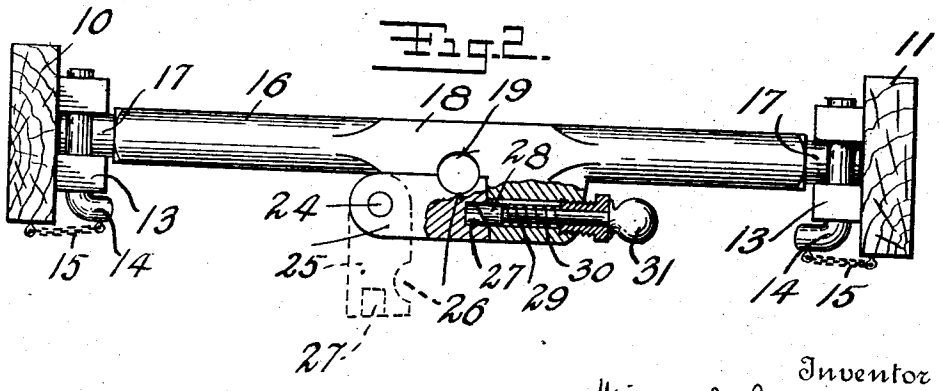


Fig. 2.



Inventor

William J. Lorch

By his Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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FIRE-HOSE CLAMP.

1,219,968. Specification of Letters Patent. Patented Mar. 20, 1917.

Application filed April 25, 1916. Serial No. 93,364.

To all whom it may concern:

Be it known that I, WILLIAM J. LORCH, a citizen of the United States of America, residing at Cornwall-on-the-Hudson, in the county of Orange and State of New York, have invented certain new and useful Improvements in Fire-Hose Clamps, of which the following is a specification.

My invention relates to an improved hose-clamp, and is particularly designed for use in connection with fire hose.

In many localities water under high pressure is used in extinguishing fires, and this high pressure makes it exceedingly difficult for the firemen to handle the hose when the water rushes therethrough.

One object of my invention is to provide simply constructed mechanism by which the hose is supported on a fire ladder or other structure, requiring practically no effort on the part of the firemen in handling the hose during a fire.

Due also to the pressure of the water as it flows through the hose, the firemen have difficulty in directing the stream at desired objects, and another important object of my invention is to so construct the improved clamp that the nozzle of the hose resting therein may be given practically universal motion, by which I mean it may be oscillated in any direction with great ease on the part of the firemen. In this manner the stream may be directed from the ground at any angle and if desired the hose may be carried up on the ladder and played on the fire in almost any direction.

Stated in general terms, the invention comprises a yoke which is pivotally carried in a suitable support, said yoke being provided with bearings in which the pins or studs of a hose bib are revoluble. The yoke may be completely swung about its own axis in one direction, and the hose or nozzle may be revolved or oscillated in the arc of a circle in a direction at right angles to that, in which the yoke may be turned, and in this manner the practically universal motion, above referred to, is secured.

The preferred embodiment of the invention is illustrated in the accompanying drawing, in which—

Figure 1 is a perspective view of my device supported by a portion of a fire ladder; and

Fig. 2 is a top plan view thereof with parts in section.

Referring to the drawing by reference characters, 10 and 11 denote side bars of a ladder, and 12 denotes the rungs. Secured to each of the side bars is a socket 13 which is preferably simply a U-shaped casting, the legs of the U being provided with alined holes to receive a keeper 14 attached by a chain 15 to the side bars.

The hose support proper comprises a yoke which is generally designated as 16, and which is preferably elliptical in form. Projecting from the yoke are oppositely disposed pins or studs 17 which are designed to bear in the sockets 13 and to be freely revoluble therein. The studs 17 are prevented from working out of the sockets 13 by means of the keepers 14, the holes in the sockets being above that portion of the socket in which the studs 17 bear.

The longer sides or arms of the elliptical yoke 16 are thickened at 18, each such thickened portion being provided with a substantially semi-circular groove 19 in which bears a pin 20 formed on the bib 21 of the nozzle 22 which is removably attached to the fire hose 23, a fragment only of the latter being shown.

Hinged or pivoted at 24, adjacent each of the grooves 19 is a keeper plate 25 having a semi-circular groove 26 adapted to complement the groove 19 in the thickened portion 18 of the yoke. The keeper plate 25 is also provided with an axial bore 27 to receive the plug 28 of a spring pressed plunger 29 which acts as a latch to maintain the keeper 25 in locked position over the pins 20 of the nozzle. Preferably formed integrally with the thickened portion 18 of the yoke is what may be termed a casing 30 in which the plunger operates, said plunger being provided with an enlarged head 31 to act as a handhold in operating the plunger. The end of the plug 28 is beveled as shown in Fig. 2, so that the same may be forced into the casing 30 by pressure of the keeper plate 25 against such beveled end of the plug.

The operation of the invention will be understood from the following description

thereof. I may if desired provide every ladder in a fire house with the sockets 13. The yoke 16 may either normally remain supported in the sockets 13 or may be kept in any other desired place. After the yoke 16 is in position in the sockets 13, and the keepers inserted through the holes in the legs of the sockets, the plungers 29 are pulled outwardly by means of the heads 31, the keeper bars 25 raised, the studs 20 of the hose laid into the bearings 19, and the keeper bars 25 then snapped back into position. As the keeper bars 25 are forced home, the plunger block 28 will first be forced back and then when the bore 27 is in alinement with the block 28, the spring 32 will force the plunger block 28 into the bore 27 and thus hold the keeper block 25 in locked position.

The studs 17 being free to revolve in the sockets 13 it will be obvious that the yoke 16, carrying the hose and the nozzle, may be oscillated about its own axis so that, for example, the nozzle 22 may be pointed at any angle vertically. The pins 20 also being free to revolve in their bearings, the nozzle 22 may be swung in the arc of a circle in a direction at right angles to its axis, so that the nozzle after being pointed vertically may be swung horizontally to direct the stream to any desired point or to sweep over any desired area. By the combined movements of the yoke and of the nozzle therein I obtain the substantially universal movement which is desirable with a fire hose.

The operation of the device requires a minimum of effort on the part of the fireman, as he is entirely relieved from the burden of holding the hose and may devote his entire attention to moving the nozzle as desired for the purpose of directing the stream against burning objects.

What I claim as new and desire to secure by Letters Patent is:—

1. In a device of the character described, the combination of a pivotally mounted yoke having oppositely arranged arms each provided with a thickened portion and an axial bore in such thickened portion, a keeper plate pivotally mounted adjacent each thickened portion, a spring pressed plunger in said keeper plate adapted to be forced into the bore of the adjacent thickened portion of the arm, and each thickened portion and keeper plate having a groove therein adapted to receive the stud of a hose bib.

2. In a device of the character described, the combination of a pivotally mounted yoke having oppositely arranged arms each provided with a thickened portion having an axial bore therein, a keeper plate pivotally mounted adjacent each thickened portion, a spring pressed plunger axially reciprocable in each keeper plate and adapted to be forced into the bore of the adjacent thickened portion, there being a semi-circular groove in each thickened portion and each keeper plate, said grooves being complemental to each other and adapted to pivotally support the stud of a hose bib, studs projecting from opposite ends of said yoke, and sockets in which said studs are pivotally supported.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM J. LORCH.

Witnesses:
JAMES G. GIBSON,
TOWNSEND D. WOOD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."