

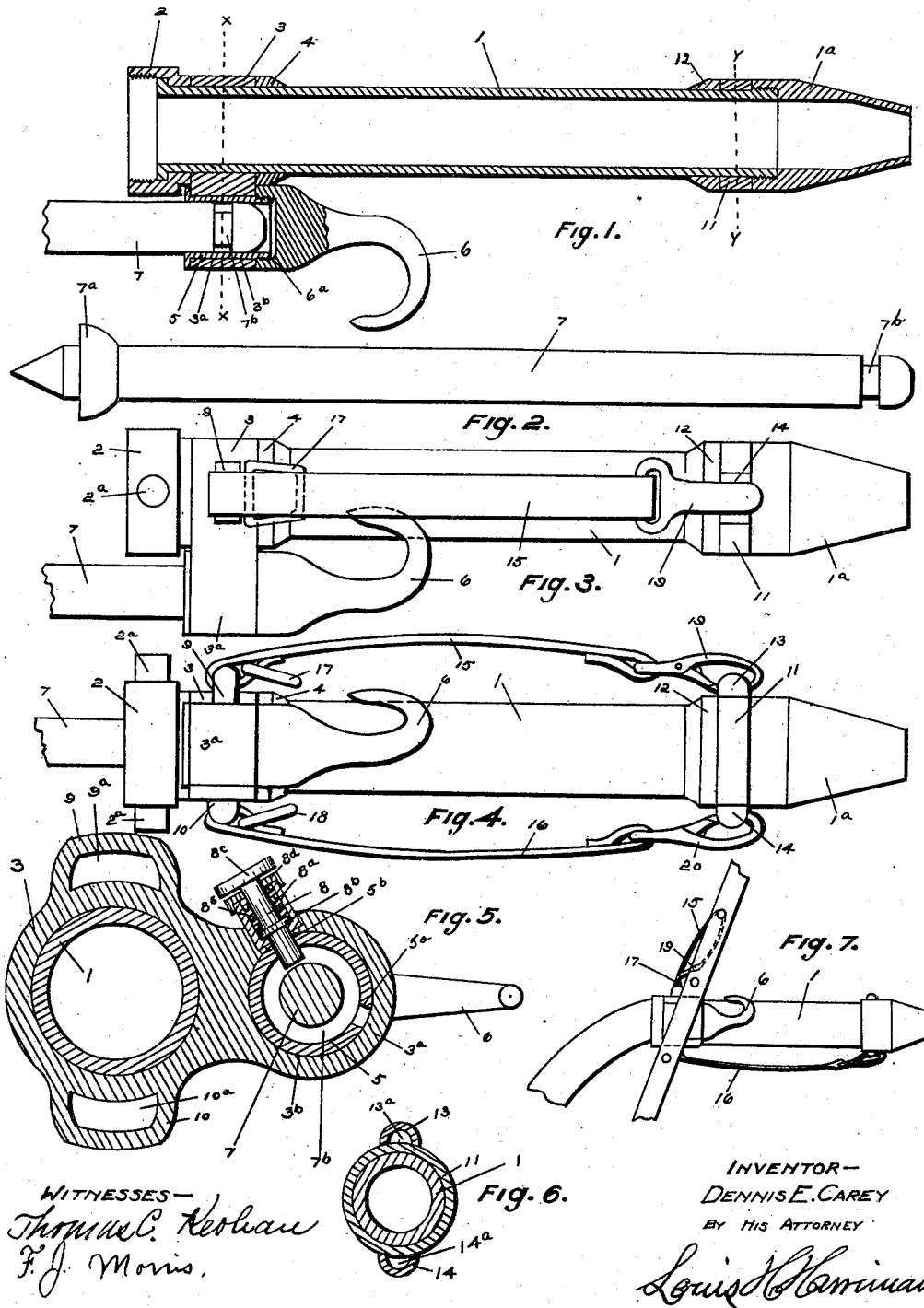
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Patented Apr. 10, 1900.

D. E. CAREY.  
NOZZLE HOLDER.

(Application filed Oct. 18, 1899.)

(No Model.)



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## NOZZLE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 647,216, dated April 10, 1900.

Application filed October 18, 1899. Serial No. 733,960. (No model.)

*To all whom it may concern:*

Be it known that I, DENNIS E. CAREY, a citizen of the United States, and a resident of Lawrence, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Nozzle-Holders, of which the following is a specification.

It is a well-known fact that when the nozzle of a fire-engine hose is delivering a very forcible stream the reactive force of the stream upon the nozzle is so great as to often require the services of three or four men to hold the nozzle properly. To resist this reactive force of the stream on the nozzle, props or holders have been devised, which are secured to the nozzle and have a pointed end which is adapted to be placed in the ground. When these devices are used, one man can hold the nozzle as easily as four can without using such device. Prior to my invention the holders devised for this purpose have been cumbersome inconvenient devices which are strapped or clamped to the nozzle, they usually being carried on the hose-wagon separately and strapped on when needed. This method is very inconvenient, for the reason that the holder is often not at hand when needed, and when it is at hand it takes a certain amount of time, when time is most valuable, to attach the same. The holders as thus far constructed, so far as I am aware, are much too cumbersome to be conveniently permanently attached to the nozzle.

One object of my invention is to provide a hose-nozzle with a simple device which may be permanently attached thereto and to which a supporting-rod may be conveniently connected, which is so small and light that it will not in any way interfere with the handling of the nozzle when the rod is not being used.

A further object of my invention is to provide the nozzle with a hook which is normally locked in such a position that it lies closely against the nozzle in such a manner that there is no danger of the fireman being injured thereby, but which may be turned outwardly into such a position that it may be conveniently used to support the nozzle upon a ladder or window-sill.

A further object of my invention is to provide the nozzle with handles which may be used in such a manner as to attach the nozzle to a ladder, so that it will not be necessary for the fireman to hold the nozzle at all.

For an understanding of the manner in which I accomplish the above objects attention is called to the accompanying drawings in connection with the following description.

In the drawings, Figure 1 is a central longitudinal cross-section of the nozzle and its attachments. Fig. 2 is an elevation of the supporting-rod. Fig. 3 is a side elevation of the nozzle with the hook folded. Fig. 4 is a bottom view thereof. Fig. 5 is an enlarged cross-section on the line *x x* of Fig. 1. Fig. 6 is a cross-section on the line *y y*, Fig. 1. Fig. 7 is an elevation on a reduced scale, showing in a general way the application of one feature of my invention.

The nozzle 1 is of common form and is provided at its ends with the usual union coupling-ring 2 having the spanner-lugs 2<sup>a</sup>. A ring 3 is loosely swiveled upon the nozzle between the coupling-ring 2 and a rib 4, which is sweated or otherwise firmly secured to the nozzle. The ring 3 is thus held against longitudinal movement with respect to the nozzle, though freely swiveled thereon. Cast integral with said ring 3 is a side projection 3<sup>a</sup>, which is provided with a central aperture 3<sup>b</sup>, parallel to the nozzle. A bushing 5, having one end flanged and the other end threaded, is fitted into said aperture 3<sup>b</sup>. A hook 6, having a screw-threaded aperture 6<sup>a</sup> in its base, is screwed onto the threaded end of the bushing 5 or otherwise secured so that the flange on the end of the bushing 5 is drawn up against the base end of the projection 3<sup>a</sup> and the base of the hook bears against the opposite end thereof. The bushing 5 and hook 6 are, however, not drawn together upon the ring 3<sup>a</sup> so tightly as to prevent the free rotation of the bushing within the ring, so that the hook may be swung laterally with respect to the nozzle. The hook is made of such form that it will conveniently engage the round of an ordinary ladder.

The supporting rod or prop 7 is shown in

elevation detached from the nozzle in Fig. 2 of the drawings. One end of this rod is pointed and is provided with a flange 7<sup>a</sup>, which prevents the rod from sinking into the ground when in use. The opposite end is rounded, as shown, and the rod is provided with an annular groove 7<sup>b</sup> a short distance from this end. The diameter of the rounded end of rod 7 is such as to permit its ready insertion in bushing 5.

A spring-pin 8 of any suitable form is arranged in the projecting ring 3<sup>a</sup>. The pin 8 is carried in an outer casing 8<sup>a</sup>, which is screwed into or otherwise secured to ring 3<sup>a</sup> and is provided with an intermediate flange 8<sup>b</sup> and with a larger flange or handle 8<sup>c</sup> at its outer end. A cap 8<sup>d</sup> is screwed onto the top of casing 8<sup>a</sup>, and the spring 8<sup>e</sup> is interposed between the cap 8<sup>d</sup> and the flange 8<sup>b</sup>. This spring 8<sup>e</sup>, acting against the cap 8<sup>d</sup>, constantly tends to force the pin 8 inwardly. The pin 8 is arranged centrally in the ring 3<sup>a</sup> at right angles to the aperture 3<sup>b</sup> therein and as close to the ring 3 as convenient. The diameter of the end of the pin is slightly less than the width of the annular groove 8<sup>b</sup>. The bushing 5 is provided with two apertures 5<sup>a</sup> and 5<sup>b</sup>, which are arranged in the same radial plane as the pin 8.

To attach the rod 7 to the ring 3, it is simply necessary to insert the rod in its socket in the bushing, and the rounded end of the rod will engage the end of the pin and force the pin outwardly until the groove 7<sup>b</sup> comes opposite it, when it will spring into engagement with the groove, holding the rod securely in place. To remove the rod, it is simply necessary to draw the pin out of the groove, so as to permit the end thereof to pass the end of the rod beyond the groove. It will also be observed that as the pin 8 passes through the bushing 5 it will prevent the bushing 5, and consequently the hook 6, from rotating. When it is not desired to use the hook 6, the pin will be withdrawn and the hook swing laterally to the position shown in Figs. 3, 4, and 7, so that the end thereof lies up against the nozzle. The aperture 5<sup>a</sup> is arranged so that when the hook lies against the side of the nozzle the aperture will register with the path of the pin, so that the pin may spring into engagement therewith and hold the hook securely in this position. When the hook is in this position, it will be wholly out of the way of the user of the nozzle and there will be no danger of the user being injured thereby. When it is desired to use the hook, the pin will be withdrawn and the hook swung to the position shown in Figs. 1 and 5, so that the pin 8 may pass into the aperture 5<sup>b</sup>. The hook will thus be securely held in this position.

Cast integral with the ring 3 at each side thereof are two lugs 9 and 10, having apertures 9<sup>a</sup> and 10<sup>a</sup> therein, which are of sufficient width and length to permit the ready insertion of a stout strap. The ring 11 is swiveled on the nozzle between the nozzle

end 1<sup>a</sup> and the rib 12, which latter is firmly secured to the nozzle in the same manner as the rib 4. The ring 11 is thus held against longitudinal movement with respect to the nozzle, although it is free to rotate thereon. Lugs 13 and 14 are secured to or cast integral with the ring 11 at each side thereof, these lugs being provided with apertures 13<sup>a</sup> and 14<sup>a</sup>. The straps 15 and 16 pass through lugs 9 and 10, respectively, each end being bent around and secured to its inner side in an obvious manner. The ends of the straps pass through D-rings 17 and 18, respectively, before they are secured in place, so that each ring will be secured to the corresponding strap adjacent to the lugs 9 and 10. The opposite ends of the straps are secured to suitable snap-hooks 19 and 20, and these snap-hooks are adapted to engage the lugs 13 and 14 of the ring 11, as shown in Figs. 3 and 4. These straps thus form handles at each side of the nozzle, which provide a very convenient means of holding the nozzle in place when in use.

In practice the rod 7 will not be secured to the ring 3 except when it is desired to use the same to support the nozzle, and as the rod itself is not cumbersome it may be conveniently carried in the belt of the fireman when not in use, so that it will be at hand when it is desired. If it becomes necessary to take the hose upon a ladder, the rod will be detached from the ring by pulling out the pin 8, as previously explained, and left on the ground, so that the fireman will not have the additional weight of the rod while carrying the hose up the ladder. When the fireman wishes to hold the nozzle in the same position for any length of time, he will draw out the pin and turn out the hook to the position shown in Figs. 1 and 5, so that he may secure the nozzle to the ladder-round. If it is found necessary to hold the nozzle in one position for a considerable length of time, the fireman may relieve himself of the work of holding the nozzle in place by detaching one of the snap-hooks from the ring 11, passing the strap over a ladder-round, and attaching the hook to its corresponding D-ring. After the strap is passed over the round of the ladder as the strap is attached to the nozzle near the base end thereof the weight of the hose will be about sufficient to hold the nozzle in a horizontal position, as shown in Fig. 7.

As the rings 3 and 11 are swiveled on the nozzle, they may be rotated easily, so that the lugs on the rings which are connected by the same strap will be at the upper side of the nozzle when it is desired to attach the nozzle to a ladder by the straps, as shown in Fig. 7, whatever the position of the nozzle. If the ring 3 were not swiveled, it would also be necessary to have the projecting ring 3<sup>a</sup> extend a much greater distance from the side of the nozzle than that shown, for the reason that one of the lugs of the hose-coupling onto

which the coupling-ring 2 is screwed would be liable to be in line with the socket of the rod 7, and thus interfere with or prevent the insertion thereof. It will therefore be obvious that when the rod 7 is to be inserted the ring 3 will be swung to some position which will permit the ready insertion of the rod in its socket at one side of the lugs of the hose-coupling. If the ring could not be conveniently swung, it would be necessary to have the rod-socket arranged beyond the ends of lugs 2<sup>a</sup>, which project the same distance as the lugs on the hose-coupling. It will also be obvious that when the hose is laid and the nozzle connected, the projecting ring may be in a lateral position, and it is desirable when the rod 7 or hook 6 is used to have it connected thereon at the upper or under side of the nozzle. If the projection to which the rod or hook is connected were not swiveled, it would often be necessary to twist the hose in order to bring them into the proper position, and this is not easy to do when the hose is filled with water under pressure. It is even more difficult to turn the nozzle in the coupling-ring without first loosening the latter's connection with the hose-coupling.

In the foregoing description it will be apparent that I provide a nozzle-holder which is very inexpensive to manufacture and yet will be much more convenient than the nozzle-holders now in use.

What I claim as my invention is as follows:

1. The combination with a hose-nozzle of a ring swiveled thereon means for holding the ring against longitudinal movement with respect thereto, a projection carried by said ring which extends to one side thereof, a socket in said projection, a supporting-rod, a groove therein near one end thereof and a spring-catch carried by said projection which is adapted to engage said groove and hold said rod in place when it is inserted in the socket of said projection.

2. In combination with a hose-nozzle a coupling-ring swiveled at the base thereof, a ring swiveled on said nozzle adjacent to said coupling-ring, a rib secured to said nozzle at the opposite side of said swiveled ring, a projec-

tion carried at one end or side of said swiveled ring, a supporting-rod and means for connecting said rod to said projection.

3. In combination with a nozzle, a ring swiveled thereon, means for holding the same from longitudinal movement with respect thereto, a projection carried at one side of said ring, an aperture therein, a bushing swiveled in said aperture, a hook carried by one end of said bushing, a supporting-rod which is adapted to be inserted in the end of said bushing opposite said hook and a spring-pin which is arranged to pass through said bushing and engage said rod whereby said hook and said rod will be locked in place.

4. In combination with a hose-nozzle, a projection carried at one side thereof and a hook which is journaled therein so that it may swing laterally with respect to said nozzle.

5. In combination with a hose-nozzle, a projection carried at one side thereof, a hook which is journaled therein so that it may swing laterally with respect to said nozzle, so that the point of the hook may be swung into proximity with the nozzle and swing away therefrom and means for locking said hook in its inner and outer positions.

6. In combination with a hose-nozzle, a ring swiveled thereon near the base thereof, an apertured lug projecting from one side of said ring, a strap which is secured at one end to said lug, a hook which is secured to the opposite end of said strap, a ring which is secured to said nozzle adjacent to the base thereof, a ring carrying an apertured lug which is swiveled to said nozzle near the discharge end thereof, whereby said strap may be used as a handle or a support, as described.

7. In combination with a hose-nozzle, a ring swiveled thereon and a hook which is journaled in one side of said ring so that it may swing laterally with respect to said nozzle.

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

DENNIS E. CAREY.

Witnesses:

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F. J. MORRIS.