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NOZZLE TIP HOLDER

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Fig. 1.

Fig. 2.

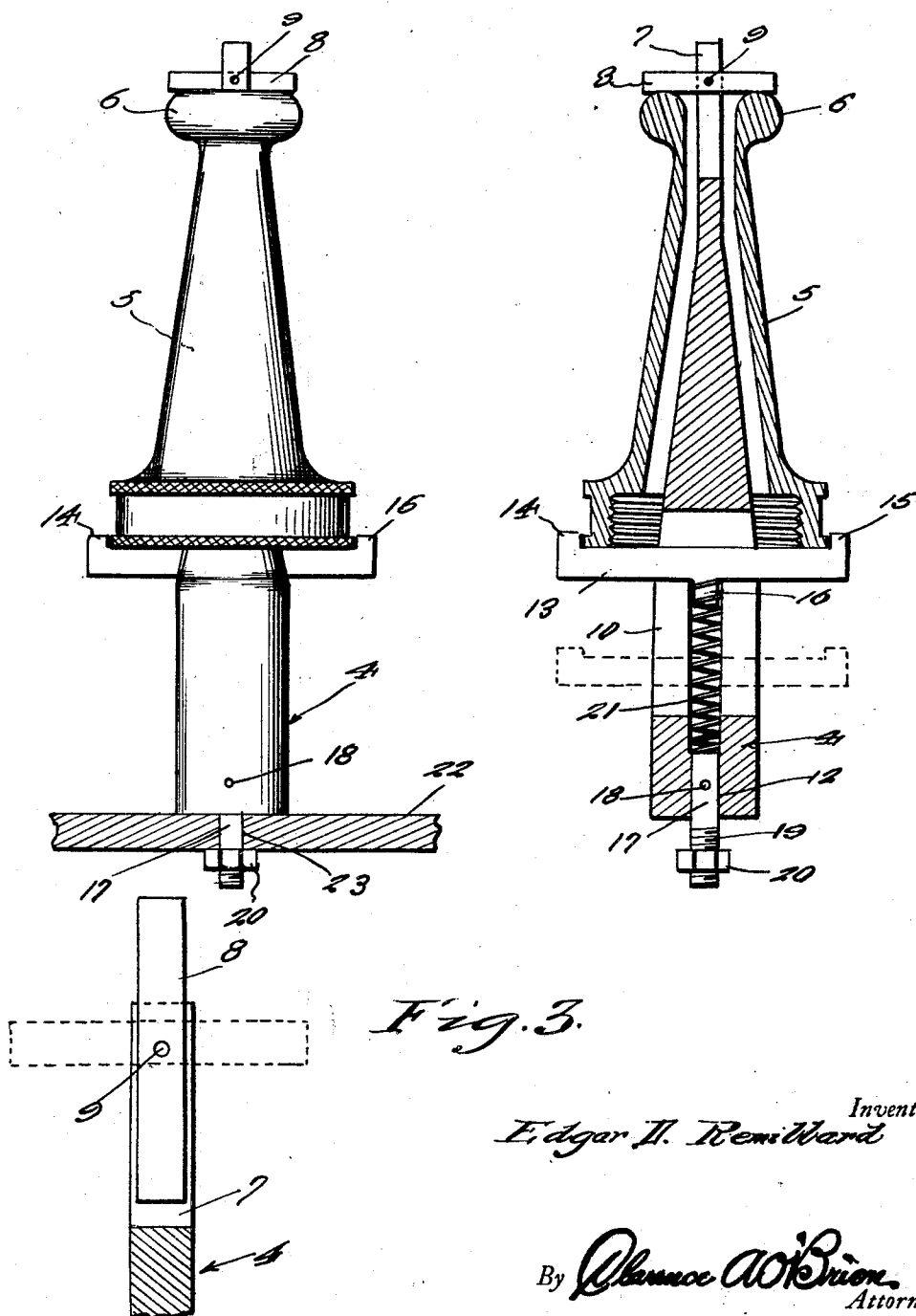


Fig. 3.

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## UNITED STATES PATENT OFFICE

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## NOZZLE TIP HOLDER

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This invention relates to a support for tubular objects, and is particularly adapted for supporting reducing nozzle tips, on fire apparatus.

5 An object of the invention is to provide a holder that permits the supporting of reducing nozzles of various sizes for storage or transportation in such a manner that they may be removed from the holders with ease and dispatch when needed while being normally held securely thereon.

Further objects of the invention are to provide a device of the character referred to, that is strong, compact and durable, thoroughly reliable for its intended purpose, very simple in its method of assembly, and comparatively inexpensive to manufacture, and install.

With the foregoing and other objects in view, the invention consists of a novel construction, combination and arrangement of parts which will be hereinafter more specifically described and illustrated in the accompanying drawings, wherein is disclosed an embodiment of the invention, but it is to be understood that changes, variations, and modifications may be resorted to without departing from the spirit of the invention and the scope of claims hereto appended.

36 In the drawings wherein like reference characters designate like parts throughout the several views:—

Figure 1 is a side elevational view of a nozzle holder in accordance with the present invention, showing a reducing nozzle tip supported thereon.

Fig. 2 is a vertical transverse sectional view through Figure 1.

40 Fig. 3 is an enlarged fragmentary detailed sectional view taken through the upper end of the holder.

Referring to the drawings in detail, 4 indicates generally a solid post preferably formed of non-corrosive metal. It tapers from near its lower to its upper end. The upper end of the post may be modified as desired, having in mind that the post is to receive the nozzle 5 circumposed thereover with the discharge end 6 of the nozzle adjacent the outer end of the post.

The upper end of the post 4 is formed with an axially extending slot 7, within which is pivoted intermediate its ends a bar 8. The pivot consists of a pin 9 which extends through an opening intermediate the ends of the bar 8 and the ends of the pivot are secured through the walls of the post on opposite sides of the slot 7.

The fastening bar 8 when turned transversely of the axis of the post as shown in dotted lines in Fig. 3 of the drawings, extends across the discharge end 6 of the nozzle and holds the nozzle firmly in place as will be presently described.

Adjacent the lower end of the post 4 there is formed an axially extending slot 10 in communication with a bore 12 which extends along the axis of the post from the lower end thereof. A cross bar 13 extends through and is carried slidably in the slot 10. It is formed on each end with an upstanding lip 14, 15.

Intermediate the ends of the cross bar 13, there is formed a depending, cylindrical-shaped lug 16 that rides in the circular guide channel or bore 12. A shank of a bolt 17 is anchored in the lower end of the channel 12, by means of the pin 18. The free end of the bolt shank which projects below the post 4 is threaded as at 19 to receive the nut 20.

Confined in the channel 12 is a helical coiled spring 21, the upper end of which is disposed about the lug 16 on the lower end of the cross bar 13 and the lower end of which is disposed against the inner end of the bolt 17. By means of this arrangement a nozzle placed upon the post in the manner described will be yieldably held between the cross bar 13 and the pivoted retaining bar 8 against falling from the post and rattling. The post 4 may be attached to a shelf or running board or the like of the conventional fire apparatus as indicated at 22 by simply boring a hole 23 therethrough to receive the threaded projecting end of the bolt 17, and then screwing of the nut 20 on the threaded portion 19 into tight abutment with the lower face of the shelf or running board 22 or the like.

To detach the nozzle 5 from the position on the holder shown in Fig. 1, the nozzle is

gripped in one hand and pressed inwardly. The lower end of the nozzle being in engagement with the cross bar 13 will move the cross bar inwardly against the action of the  
5 spring 21. When the nozzle has been pressed inwardly far enough to permit the bar 8 to be rotated on its pivot, within the slot 7 so as to be substantially axially alined with the slot and post, the nozzle may be removed from  
10 the post 4. To replace the nozzle on the holder the fastening bar 8 is swung into axial alinement in the slot 7 and the nozzle then passed over the outer end of the post, into place with its large end on the cross bar  
15 13, the cross bar is then depressed against the action of the spring 21 in the bore 12 by pushing on the nozzle, until the retaining bar 8 is freed to swing to the transverse position, whereupon pressure upon the nozzle  
20 is released.

It is to be understood that by describing in detail herein, any particular form, structure, or arrangement, it is not intended to limit the invention beyond the scope of the  
25 several claims, or the requirements, of the prior art.

Having thus described my invention, what I claim as new is:—

1. A nozzle tip holder comprising a post  
30 having longitudinally spaced slots therein, means for securing the post on a support, said post adapted for insertion through the nozzle tip, a cross bar pivotally mounted in one of the slots for engagement by the nozzle,  
35 a transversely disposed cross bar mounted in the other slot for longitudinal sliding movement on the post and engageable with the nozzle tip, and resilient means engaged with the last named cross bar for yieldingly  
40 urging the nozzle tip toward the first named cross bar.

2. A nozzle tip holder comprising a post adapted for insertion through the nozzle tip and having a slot adjacent one end and  
45 further having a longitudinal bore communicating with the slot from said one end, a threaded shank anchored in the bore and projecting from the post, a nut threaded on the shank and, in conjunction with said  
50 shank, constituting means for securing the post on a support, a cross bar extending transversely through the slot for longitudinal sliding movement on the post and engageable with one end of the nozzle tip, a  
55 coil spring mounted in the post having one end engaged with the shank and its other end engaged with the cross bar for yieldingly urging the cross bar toward the free end of the post, and means on the free end portion of the post for engagement with the  
60 other end of the nozzle tip for co-action with the cross bar for retaining the nozzle tip on the post.

In testimony whereof I affix my signature.

85 EDGAR D. REMILLARD.