Oct. 13, 1942. P. PIRSCH 2,298,541

NOZZLE HOLDER

Filed Jan. 26, 1942

Fig. 1.

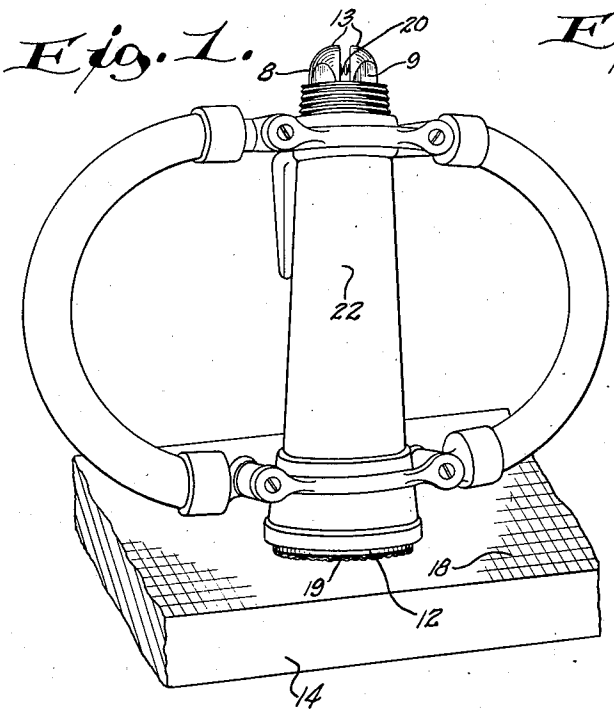
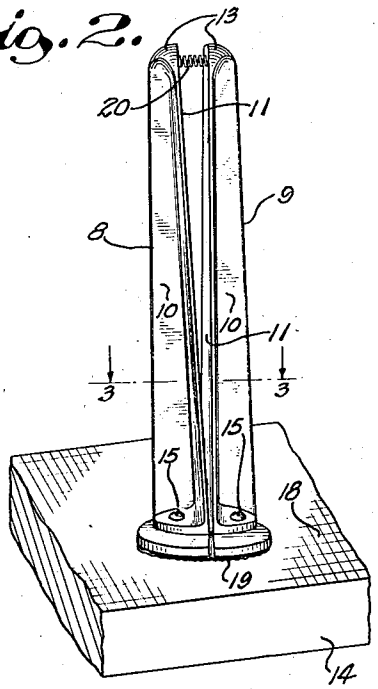


Fig. 2.



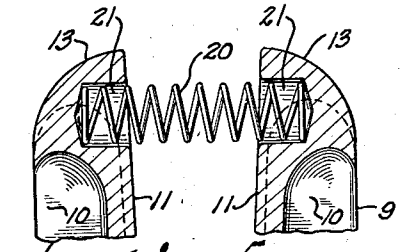


Fig. 5.

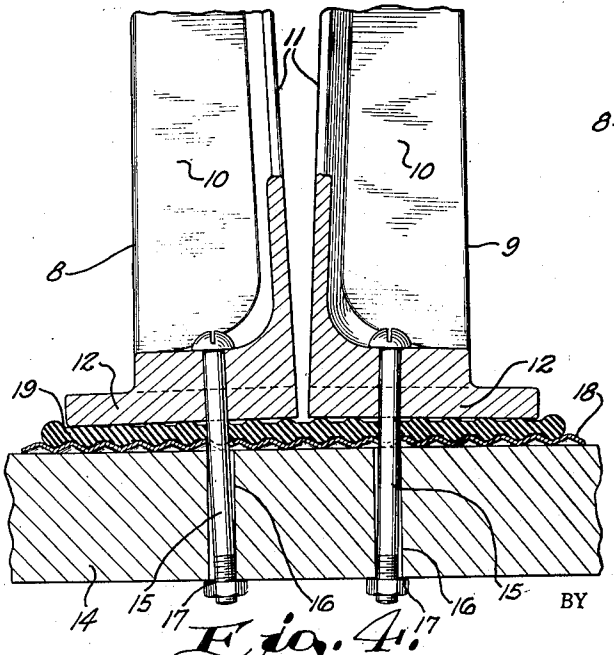


Fig. 4.

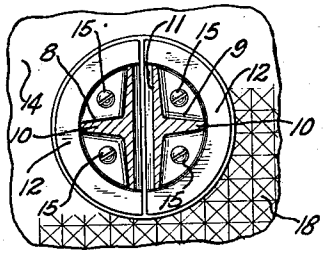


Fig. 3.

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NOZZLE HOLDER

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5 Claims. (Cl. 248—75)

This invention relates to improvements in nozzle holders, and more particularly to a device especially adapted to firmly, but quickly removably hold and support a fire hose nozzle on the running board or other suitable surface of a fire apparatus vehicle.

A primary object of the present invention is to provide a nozzle holder, mounted on a portion of a fire apparatus vehicle, which will permit the easy mounting thereon and quick removal therefrom of a fire hose nozzle, the holder clampingly engaging the nozzle in a manner to prevent the nozzle from being dislodged or removed through jolting of the moving vehicle, while permitting easy and quick manual removal of the nozzle without the manipulation of any auxiliary levers, clamps or other devices.

A further object of the invention is to provide a nozzle holder which does not have a threaded engagement with a nozzle mounted thereon and consequently the nozzle threads can not become bruised or injured.

A further object of the invention is to provide an expansile and contractile nozzle holder devoid of external manipulating or clamping devices which might be exposed to and rendered ineffective by ice and dirt.

A further object of the invention is to provide a vehicle carried fire hose nozzle holder which is relatively small and compact and may be mounted on an out-of-the-way portion of the vehicle, which is strong and durable and inexpensive to manufacture, which is positive in its engagement with a nozzle and which is easily and quickly operated under all conditions, and which is well adapted for the purposes set forth.

With the above and other objects in view the invention consists of the improved nozzle holder, and its parts and combinations as set forth in the claims, and all equivalents thereof.

In the accompanying drawing in which the same reference characters indicate the same parts in all of the views:

Fig. 1 is a perspective view of a fragment of a fire apparatus vehicle running board showing the improved holder mounted thereon and firmly supporting a detached fire hose nozzle;

Fig. 2 is a perspective view similar to Fig. 1 only with the nozzle removed from the holder;

Fig. 3 is a transverse sectional view taken on line 3—3 of Fig. 2 and on a slightly larger scale;

Fig. 4 is an enlarged, fragmentary, detail sectional view through the base portion of the holder and the vehicle running board, the nozzle being removed; and

Fig. 5 is an enlarged, fragmentary, detail sectional view through the upper portion of the holder with the same expanded and the nozzle removed.

Relatively large nozzles are threadably carried by the discharge ends of fire hoses. Due to the fact that when a fire hose is not in use it is carried on a fire apparatus vehicle in coiled condition it is the practice for a fire apparatus to carry a fire hose nozzle detached from its hose. In fighting a fire, time is of the essence and consequently when the apparatus arrives at its destination the nozzle must be quickly and readily accessible and removable from its mounting on the truck, the mounting for the nozzle must be unaffected by exposure, ice and dirt, and the internal threads of the nozzle must be maintained undamaged and unmarred so that quick attachment of the nozzle to a hose may be effected. A convenient place on a vehicle for the mounting and transportation of a fire hose nozzle is the running board and in the present invention the improved nozzle holder is preferably, but not necessarily, so located. However, this subjects the holder and nozzle to severe jolting and also to the likelihood of ice formations thereon during winter. The present improvement takes into account all of the aforementioned contingencies and effectively guards against disadvantages flowing therefrom, as will appear from the following description of a preferred embodiment of the invention.

The nozzle holder per se comprises a pair of complementary independent half sections 8 and 9 of T-form in transverse section to provide laterally projecting webs 10 and inner faces 11 with the outward extents of the inner faces forming webs angularly separated from the webs 8 and 9. Each half section 8 or 9 has a flat semicircular shouldered base portion 12 and when mounted is positioned substantially vertically and is relatively elongated, being reduced or tapered toward its upper extremity. The upper end of each half section 8 or 9 is rounded as at 13. In mounted cooperative relationship the face portions 11 of the complementary half sections 8 and 9 are adjacent one another.

The complementary sections 8 and 9 of a nozzle holder are preferably mounted on a convenient portion of a running board 14 of a fire apparatus vehicle in the manner best shown in Fig. 4. The attaching means for a section 8 or 9 comprises a pair of elongated bolts 15 disposed on opposite sides of the central webs 10 and extended through apertures therefor in the base portions 12. The running board 14 is provided with vertical openings 16 in substantial registration with the bolts 15 and through which the bolts depend, there being retaining nuts 17 on the lower threaded end portions of the bolts 15. It should be observed that the running board openings 16 are of somewhat greater diameter than the bolts 15 to allow for play and rocking movements of the bolts therein.

There is interposed between the base portions

12 of the holder sections and the top corrugated or "non-slip" covering portion 18 of the running board 14 a pad 19 of resilient compressible material. The bolts 15 of course extend through the pad 19 and through the corrugated running board covering strip 18.

While the complementary sections 8 and 9 of a nozzle holder are mounted by the bolts 15 so as to normally cause the complementary inner faces 11 to be in relative adjacency, the outer end portions of said sections 8 and 9 are constantly urged away from one another by means of a rather heavy short coiled spring 20 whose opposite end portions are seated and secured in recesses 21 within the upper portions of the sections 8 and 9 respectively.

A fire hose nozzle, as shown in Fig. 1, is designated generally by the numeral 22. A nozzle of this type is formed of metal and is relatively heavy. The nozzle is also of hollow or bored formation and is tapered toward its upper or outer end.

In use, when it is desired to mount a nozzle 22 on the improved holder, the enlarged end of the nozzle is slipped over the rounded upper end portions 13 of the sections 8 and 9 and the nozzle is then slid downwardly on the holder. During the process of engaging the nozzle with the upper end of the holder the spring 20 will be compressed so as to bring the upper end portions of the sections 8 and 9 together. When the nozzle is fully mounted on the holder the spring 20 will urge the sections 8 and 9 apart so as to cause the free edges of the webs of the holder sections to impinge against and firmly engage inner wall portions of the nozzle. It will thus be seen that the clamping engagement of the holder with the interior of the nozzle is effected quickly and automatically by the mere process of inserting the nozzle over the holder. Obviously, the quick removal of a nozzle from a holder is effected in a manner reverse to that described. A simple quick upward movement of the nozzle is effective to slip the same free of the holder sections. During the upward movement of the nozzle the upper end of the holder will become contracted with compression of the spring 20 and a drawing together of the sections. The clamping and releasing action of the holder is not in any way dependent upon exterior levers or other devices which could become frozen or rendered inoperative from deposits thereon. During running of the vehicle on which the holder nozzle is mounted, the impingement of the sections 8 and 9 with the exterior of the nozzle is so firm and secure as to prevent rattling of the nozzle and further to prevent jarring and jolting such as might dislodge the nozzle from the holder.

The resilient pad 19 between the base portion of the holder sections and the running board plays an important part in the effective operation of the holder, in conjunction with the attachment of the bolts 15 in a manner to permit slight rocking movements thereof. When the sections 8 and 9 expand or move outwardly relative to each other under the influence of the spring 20 they will rock somewhat on the resilient pad 19, which permits this rocking movement and furthermore the bolts 15, in the larger hole 16, may likewise accommodatingly rock.

While the holder has been illustrated as composed of two complementary sections 8 and 9, it is obvious that the same may, without departing from the spirit of the invention, be composed of any suitable number of complementary mating and spring urged sections. Likewise any suitable resilient material may be used as between the base portions of the sections and the running board, and in lieu of having the running board openings enlarged, as at 16, the openings in the base portions 12, through which the bolts pass, might be enlarged.

From the foregoing description it will be seen that the improved fire hose nozzle holder is of simple and novel construction and is well adapted for the purposes described.

What is claimed as the invention is:

1. A nozzle holder, comprising a support, an elongated, split nozzle insert extending away from said support and having a base portion and an outer end portion, means rockingly mounting the base portion of said insert on said support, and yielding means interposed between split outer end portions of said insert to normally urge the same apart.

2. A nozzle holder, comprising a horizontal support, an elongated, split nozzle insert extending vertically from said support and having an enlarged base portion, the body of said insert being upwardly tapered, means rockingly mounting the base portion on said support, and a coiled spring interposed between split upper portions of said insert to normally urge the same apart.

3. A nozzle holder, comprising a rigid support, an elongated nozzle insert extending away from said support and having a base portion and an outer end portion, the entire insert including said base portion being longitudinally split, means slightly rockingly mounting the split sections of said insert on said support in adjacency, a resilient member interposed between the insert base portions and the support, and yielding means interposed between split outer end portions of said insert to normally urge the same apart.

4. A nozzle holder, comprising a rigid, horizontal support, an elongated nozzle insert extending vertically from said support and having an enlarged base portion, the body of the insert being upwardly reduced and the entire insert including said base portion being centrally, longitudinally split, means depending from said base portion slightly rockingly mounting the split sections of said insert on said support in adjacency, a resilient pad interposed between the insert base portions and the support, and a coiled spring interposed between split upper portions of said insert to normally urge the same apart.

5. A holder for a fire hose nozzle, comprising nozzle bore entering companion sections outwardly tapered and having laterally projecting webs for impingement with inner surface portions of a tubular nozzle slid thereover, and yielding means for holding said sections in spreading relationship against inner surfaces of the nozzle, the nozzle being quickly removable from the holder by moving it longitudinally thereon along said webs and past the tapered end and causing contraction of the sections relative to each other.

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