March 22, 1960 A. P. RUGGIERI ET AL 2,929,597

MOUNTING RACK FOR FIRE HOSE NOZZLES

Filed Feb. 19, 1958

FIG. 1.

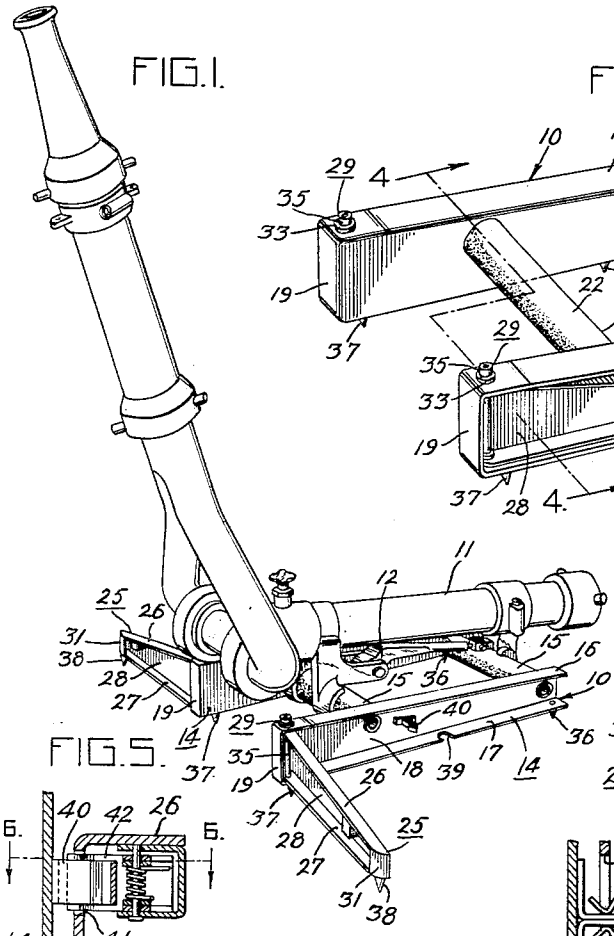


FIG. 2.

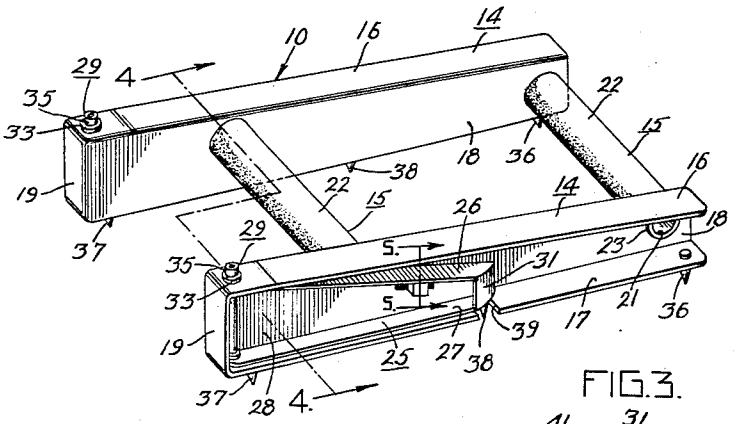


FIG. 3.

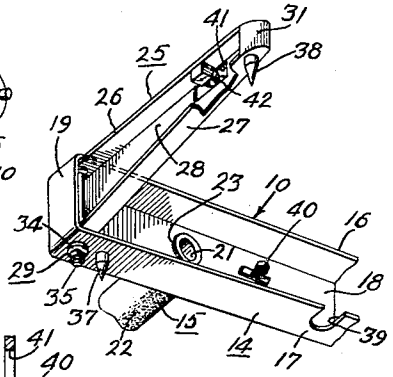


FIG. 5.

FIG. 6.

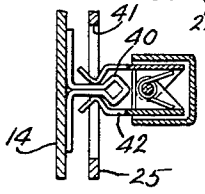
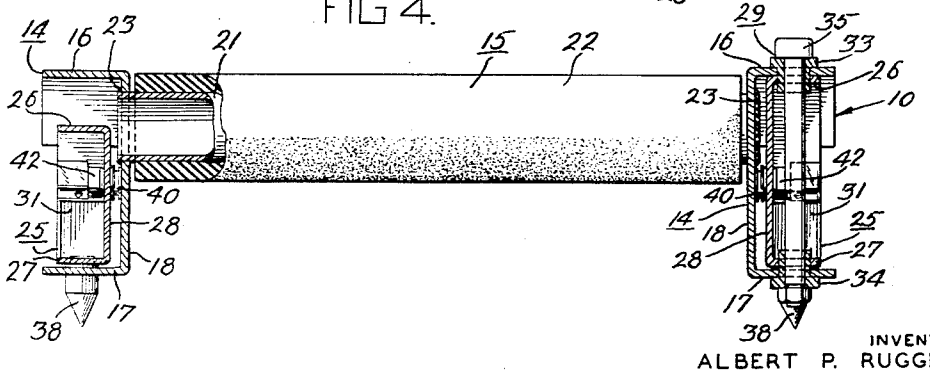


FIG. 4.



INVENTORS;
ALBERT P. RUGGIERI
JOHN WILLIAM HOUSE
BY Howson & Howson
ATTYS.

United States Patent Office 2,929,597
Patented Mar. 22, 1960

2,929,597

MOUNTING RACK FOR FIRE HOSE NOZZLES

Albert P. Ruggieri and John William House,
Flourtown, Pa.

Application February 19, 1958, Serial No. 716,103

4 Claims. (Cl. 248—75)

The present invention relates to a mounting rack for fire hose nozzles, and more particularly to a rack for converting a ladder pipe nozzle into a deluge gun.

Prior to the present invention, it was necessary for a fire company to purchase, in addition to the standard ladder pipe nozzle which is adapted to be mounted on the uppermost rungs of an aerial ladder, a deluge gun, which is adapted to be mounted on the ground. In many instances, especially in small volunteer fire companies, the expense of a separate deluge gun is too great in relation to the amount of use to which such a gun would be put. Because of this, such fire companies must forego the advantages of a deluge gun, and when the need for such equipment arises, they must use a standard nozzle and station two or more firemen to hold the nozzle. This procedure is wasteful manpower, which is very limited in many fire companies.

With the foregoing in mind, the present invention provides a mounting rack for a ladder pipe nozzle which enables the ladder pipe nozzle to be used as a ground-mounted deluge gun.

More specifically the invention contemplates a rack upon which a ladder pipe nozzle may be releasably clamped and which will firmly anchor the nozzle against displacement on the ground so that it may be used as a deluge gun.

The invention provides a rack of simplified construction which is fully effective in operation and use and which is within the financial means of the average small volunteer fire company.

All of the objects of the present invention and the various features and details of the construction and operation thereof are more fully set forth hereinafter with reference to the accompanying drawing in which:

Fig. 1 is a perspective view of a rack made in accordance with the present invention showing a ladder pipe nozzle mounted thereon;

Fig. 2 is an enlarged perspective view of the rack shown in Fig. 1, but in collapsed position for storage;

Fig. 3 is a fragmentary perspective view of the rack in extended position showing certain structural details thereof;

Fig. 4 is an enlarged sectional view taken on the line 4—4 of Fig. 2;

Fig. 5 is an enlarged sectional view taken on the line 5—5 of Fig. 2; and

Fig. 6 is a sectional view taken on line 6—6 of Fig. 5.

Referring now to Fig. 1 of the drawing, the invention provides a rack 10 for mounting the standard ladder pipe nozzle 11. The pipe nozzle 11 includes clamping means 12 which are adjusted to securely clamp the nozzle 11 on the uppermost rungs of an aerial ladder. The rack 10 comprises a pair of spaced parallel side members 14, 14 interconnected by cross pieces 15, 15. Each side member 14 consists of a channel iron having upper and lower flanges 16 and 17 respectively and a web 18. It is noted that the upper and lower flanges 16 and 17 converge slightly from the forward end of the rack rearwardly.

At the forward end of each side member the flanges 16 and 17 are interconnected by an end piece 19. The cross pieces 15, 15 are hollow tubular members 21 having a resilient cover 22 of rubber or other suitable material. The tubular member 21 is secured to the web 18, for example by welding as indicated at 23.

In accordance with the present invention stabilizing arms are pivoted to the side members 14, 14 at their forward end. In the illustrated embodiment of the invention, the stabilizing arms 25, 25 comprise channel members having upper and lower flanges 26 and 27 and a web 28. Each arm is hinged to its associated side member 14 as indicated at 29, and the upper and lower flanges 26 and 27 converge toward the free extremity of the arm 25, as shown. An end cover 31 bridges the flanges 26 and 27 at the free extremity of the arm and provides a finger grip for operating the arm.

As shown in Fig. 4, the hinge 29 comprises upper and lower bushings 33 and 34 respectively which are snugly received in the apertures in the upper and lower flanges respectively of the side member 14 and the arm 25. A hinge pin 35 is engaged in the bushings 33 and 34 to retain them in place. The present construction of the hinge affords minimum play between the arm and the side member and affords ready pivotal movement thereof between the open position shown in Fig. 1 and the closed position shown in Fig. 2.

In accordance with the invention, to provide a firm anchoring of the rack on the ground, pins are mounted at the opposite ends of each side member 14 and at the free extremity of each stabilizing arm 25, as indicated at 36, 37 and 38. The pins 36 and 37 are mounted in the lower flange 17 of the side member 14 and depend downwardly so as to engage the surface on which the rack is mounted. The pin 38 likewise depends downwardly from the lower web 27 of the stabilizing arm 25.

In the operation of the rack, when the nozzle 11 is being used as a deluge gun, the reaction force of the water leaving the nozzle causes the pins to imbed themselves firmly in the surface on which the rack 10 is mounted. The stabilizing arms insure firm engagement of the rack with the surface when the nozzle is rocked laterally, and the spaced relation of the pins 36 and 37 insure firm engagement when the nozzle is rocked vertically. To enable the stabilizing arms 25, 25 to be received between the flanges of the side pieces 14, 14 the lower flange 17 of each side piece is formed with a cut-out 39 to receive the pin 38 when the stabilizing arm 25 is closed against the side piece 14.

Means is provided to releasably lock the stabilizing arms in their closed positions when the rack is not in use. To this end a latch element 40 is mounted on the web 18 of each side member 14. The latch element 40 projects outwardly and is operable to project through an aperture 41 in the web 28 of each stabilizing arm 25 into engagement with a spring-biased keeper 42 mounted on the upper flange 26 of the stabilizing arm 25. Thus when the stabilizing arm 25 is closed into position intermediate the flanges 16 and 17 of the side member 14, the keeper 42 engages over the latch element 40 to releasably retain the arm in its closed position. The latch is readily disengaged by swinging the stabilizing arm 25 outwardly, for example by the operator engaging his finger behind the cover portion 31 of the arm. The opening movement of the stabilizing arm is limited by engagement of the upper and lower flanges 26 and 27 thereof against the end piece 19 of the side member 14. It is noted that the arm moves to an angle slightly greater than 90° to provide a firm and stable support for the nozzle 11 mounted on the rack 10.

While a particular embodiment of the present invention has been herein illustrated and described, it is not

intended to limit the invention to such disclosure but changes and modifications may be made therein and thereto within the scope of the following claims.

We claim:

1. A mounting rack for fire hose nozzles comprising a pair of spaced parallel channel side members having upper and lower flanges and a web therebetween, at least two cross pieces and mounted in spaced parallel relation substantially normal to said side members therebetween, a stabilizing arm hingedly mounted on each side member at the forward end thereof for displacement between extended and retracted positions, said arm in its extended position operable to project outwardly approximately parallel to said cross pieces, and in its retracted position operable to extend parallel to said side member intermediate said upper and lower flanges thereof, an end piece at the forward end of each side member spanning between said upper and lower flanges operable to engage the stabilizing arm in its extended position to limit movement thereof beyond said extended position, an end cover at the free extremity of the stabilizing arm to provide a finger grip for operating the arm, a latch element mounted on the web of each side member and projecting outwardly therefrom, and a spring-biased keeper mounted on the upper flange of said stabilizing arm operable to engage said latch element and releasably retain said stabilizing arm in its retracted position.

2. A mounting rack for fire hose nozzles comprising a pair of spaced parallel channel side members having upper and lower flanges converging from the forward end of the rack rearwardly and a web therebetween, at least two cross pieces of hollow tubular form having a resilient outer covering thereon, and mounted in spaced parallel relation substantially normal to said side members therebetween, a stabilizing arm of channel form hingedly mounted on each side member at the forward end thereof for displacement between extended and retracted positions, said arm in its extended position operable to project outwardly approximately parallel to said cross pieces, and in its retracted position operable to extend parallel to said side member intermediate said upper and lower flanges thereof, each said stabilizing arms having upper and lower flanges converging from said hinged connection toward the free ends of said arms, an end piece at the forward end of each side member spanning between said upper and lower flanges operable to engage the stabilizing arm in its extended position to limit movement thereof beyond said extended position, an end cover spanning between the upper and lower flanges of the stabilizing arm at the free extremity thereof to provide a finger grip for operating the arm, a latch element mounted on the web of each side member and projecting outwardly therefrom, and a spring-biased keeper mounted on the upper flange of said stabilizing arm operable to engage said latch element and releasably retain said stabilizing arm in its retracted position.

3. A mounting rack for fire hose nozzles comprising a pair of spaced parallel channel side members having upper and lower flanges and a web therebetween, at least two cross pieces and mounted in spaced parallel relation substantially normal to said side members therebetween, a stabilizing arm hingedly mounted on each side member at the forward end thereof for displacement between extended and retracted positions, said arm in its extended position operable to project outwardly approximately parallel to said cross pieces, and in its retracted position operable to extend parallel to said side member intermediate said upper and lower flanges thereof in nested relationship therewith, releasable latch means mounted on each side member operable to engage the associated arm in its retracted position for releasably maintaining the arm nested within the channel side member, and an end piece at the forward end of each side member spanning between said upper and lower flanges operable to engage the stabilizing arm in its extended position to limit movement thereof beyond said extended position.

4. A mounting rack for fire hose nozzles comprising a pair of spaced parallel side members, at least two cross pieces mounted in spaced parallel relation substantially normal to said side members therebetween, a stabilizing arm of channel form hingedly mounted on each side member at the forward end thereof for displacement between extended and retracted positions, said arm in its extended position operable to project outwardly approximately parallel to said cross pieces, and in its retracted position operable to extend parallel to said side member, each said stabilizing arm having upper and lower flanges, an end cover spanning between the upper and lower flanges at the free extremity thereof to provide a finger grip for operating the arm, a latch element mounted on each side member and projecting outwardly therefrom, and a spring-biased keeper mounted on said stabilizing arm operable to engage said latch element and releasably retain said stabilizing arm in its retracted position.

References Cited in the file of this patent

UNITED STATES PATENTS

2,244,344	North	June 3, 1941
2,436,298	Gunderson	Feb. 17, 1948
2,763,454	Lindsell	Sept. 18, 1956
2,783,009	Petterson	Feb. 26, 1957