Aug. 17, 1954 H. L. PRATT 2,686,644

FIRE HOSE RACK MOUNTING

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Fig. 1.

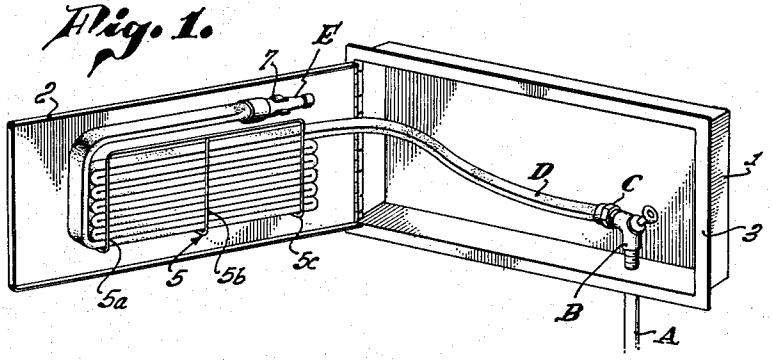


Fig. 3.

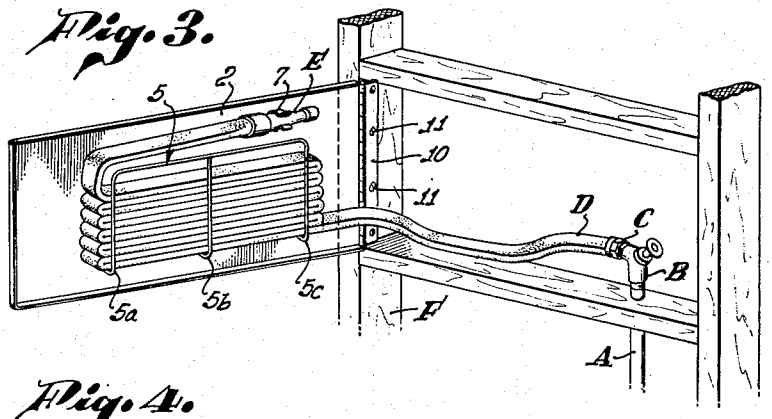
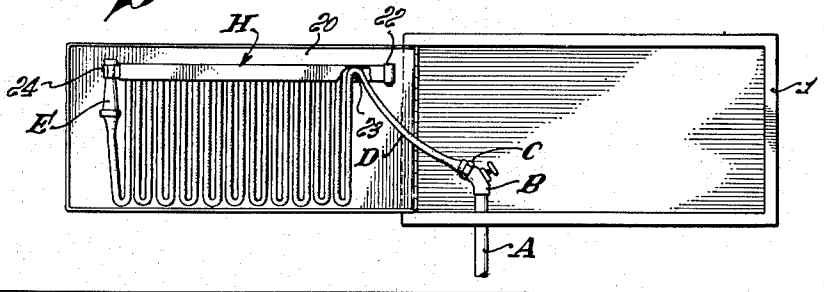


Fig. 4.



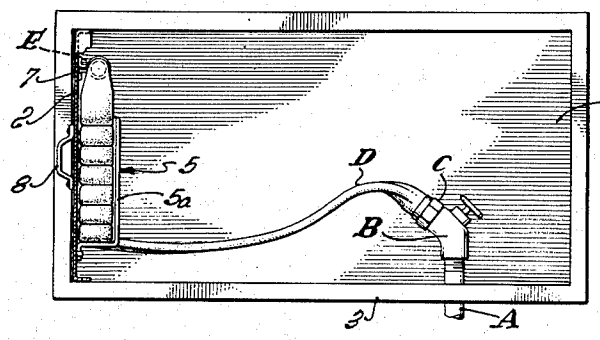


Fig. 2.

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Fig. 5.

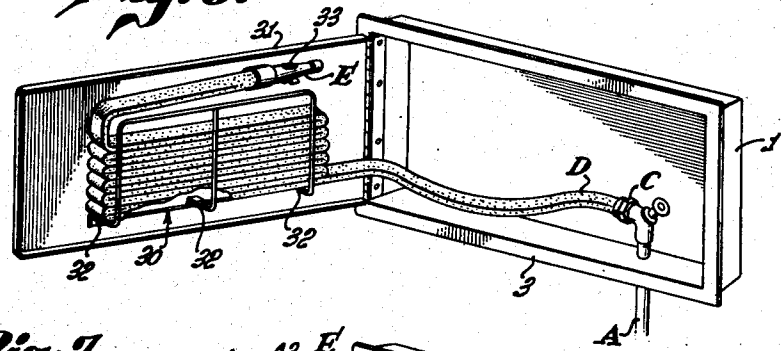


Fig. 7.

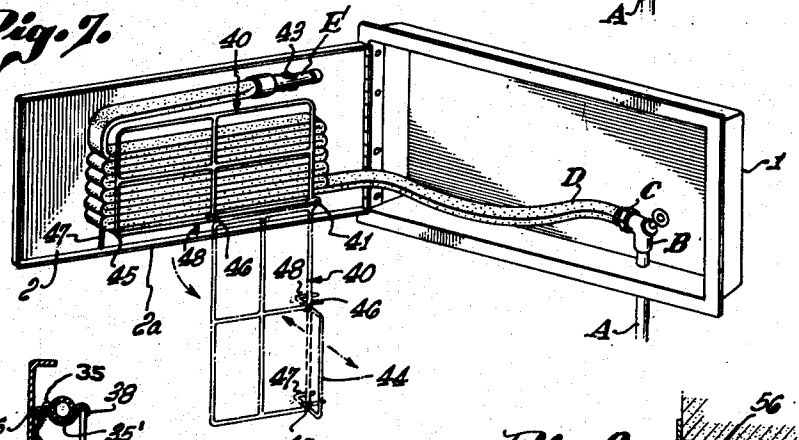


Fig. 6.

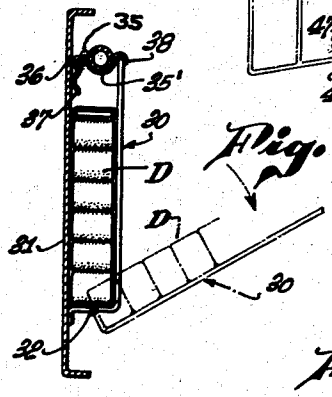


Fig. 8.

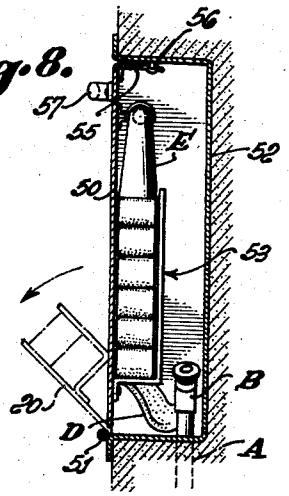
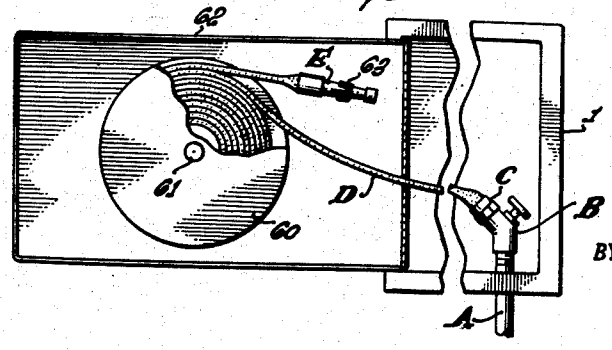


Fig. 9.



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FIRE HOSE RACK MOUNTING

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4 Claims. (Cl. 248—90)

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The present invention relates to fire extinguishing equipment and has particular reference to improvements in devices for supporting fire hose at any location where such equipment is required for dependable quick service fire protection.

It is the general object of the invention to provide a simple inexpensive and conveniently operable device which may be installed in industrial, commercial and residential buildings during the construction thereof or even within completed buildings without the necessity of extensive alterations of the structure. More particularly, it is the object of my invention to provide equipment in the form of a cabinet which may be placed on a wall or any other suitable supporting surface, or which may be placed within a wall to occupy the space between adjacent studs of the wall and which is provided with a hinged door on the inner surface of which the fire hose may be held supported. It is a further object as an alternative construction to provide a fire extinguishing device including a member in the shape of a door which is pivotally hung on a stud of the building, or on a brace extended between the studs of the building, for outward swinging movement relative thereto, there being on the inner surface of the door a rack or other suitable device for receiving and normally maintaining the fire hose in position thereon. Another object is to provide a fire hose support which normally is held in position on the door securely to maintain the fire hose in folded position thereon but which, upon opening the door, becomes released for outward or downward swinging movement to allow the hose to drop or to release the hose for more convenient extraction.

Other objects and the many advantageous features of the invention will be better understood from the following detailed description, particularly when reference is had to the accompanying drawings in which preferred forms of the invention are illustrated.

Fig. 1 is a front elevational view of the device of the invention in the form of a cabinet on the door of which a fire hose is shown supported;

Fig. 2 shows the door of the cabinet in a different position of opening adjustment;

Fig. 3 is added to illustrate the manner in which a door, such as shown in Fig. 1, may be mounted in position between the studs of a wall to support a fire hose without the other parts of the cabinet;

Fig. 4 illustrates a somewhat modified method of supporting a fire hose on the door of the invention;

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Fig. 5 illustrates the manner in which the door of the cabinet is fitted with a hose support hung thereon for outward swinging movement;

Fig. 6 is an end view of the door of Fig. 5 illustrating means for locking the fire hose support in position on the door;

Fig. 7 shows a hose support pivotally mounted on a door at one corner thereof for downward swinging movement parallel with the inner surface of the door;

Fig. 8 is added to illustrate that the door of the cabinet may be pivotally mounted on the cabinet at the bottom thereof for outward swinging movement relative thereto; and

Fig. 9 shows the hose mounted on a reel which is hung for rotation on the door.

The device illustrated in Figs. 1 and 2 takes the form of a cabinet consisting of a box or tray 1 to which is hingedly secured a door 2. This cabinet may be of any desired size and may be placed in position on any supporting surface, such as the wall of a building. In the shape illustrated in the drawings, it is designed to fit between adjacent studs of a wall and for this purpose may conveniently be of a depth to seat the flange 3 thereof against the surface of the wall. The lower side plate of the tray 1 is shown perforated to receive a water pipe A forming part of the water circulating system of the structure on or within which the cabinet is mounted. A conventional hose bib B is mounted in position on the upper end of this pipe to receive the coupling C of a fire hose D.

To the inner surface of the door, at or near the bottom thereof, is suitably fastened a rack 5 having a base projecting from the door and a plurality of rods 5^a, 5^b, 5^c rising from the base thereof parallel with and in such spaced relation to the surface of the door to form a grating so that the fire hose extending from the hose bib may be held snugly stored therein in any convenient manner. Illustrative thereof, I have shown the nozzle E of the hose held detachably secured in position within a spring clip 7 of the door, whereupon the hose is extended over the base of the rack and horizontally stacked within the rack in the manner that a fire hose is commonly stacked. The inner end of the hose is then attached to the hose bib and the door closed. In case of an emergency, it is merely required to open the door and to pull out the nozzle to withdraw the hose from the rack. The door is, for this purpose, shown fitted with a door pull 8.

It is an important feature of the invention that the door, whether the cabinet is mounted on a wall or within a wall, is free to swing open

through an arc of at least 180°. This is essential in order to make it possible quickly to withdraw the hose in any direction. As stated, the cabinet may be of any size required to support and to make room for the size of fire hose to be stored. Where the cabinet is placed between ordinary wall studs and mounted flush with the surface of the wall, it is understood that only a small size hose can be accommodated between the door and the hose bib.

It is furthermore important to note that, where the device is to be so mounted between ordinary wall studs, flush with the outer wall surface, the door may be mounted on one of the studs and the tray 1 entirely eliminated. This arrangement is shown in Fig. 3. The door is, for this purpose, shown hung on a flange 10 which, in turn, by means of screws 11 is secured in position on the inner side surface of the stud F. The door assembly may remain exactly as above described and the hose is in this view shown stacked in reverse order merely to indicate that any commercially acceptable method of stacking may be employed. It is, for example, common practice to maintain fire hoses suspended from racks in vertically folded sequence. Such means of supporting a fire hose may also be employed in the present invention and Fig. 4 is added to suggest the manner in which the parts may be combined to form a convenient arrangement. The door 20 may remain unchanged and it is shown fitted with a hose rack H of conventional construction. The rack is at 22 shown pivotally hung on the inner door surface for horizontally swinging movement relative thereto. The hose extending from the hose bib B is hung on pins 23 which are slidable within the rack in the usual manner to support the vertically directed folds thereof. The nozzle E is held in a clip 24 at the end of the rack. The great advantage of this arrangement is that the door may be swung fully open against the supporting wall surface and the rack then may be swung into the most convenient position for withdrawal of the hose upon detachment of the nozzle from its clip.

The structure of Fig. 5 differs from the foregoing in the manner in which the rack 30 is supported on the door 31. The door may remain unchanged except that it is fitted along the bottom thereof with a hinge 32 on which the rack is hung for outward swinging movement. The nozzle is held detachably secured within a spring clip 33 and the hose is folded within the rack in the manner above described. When the door is opened to detach the nozzle, it is found that the rack will be free to swing into fully open position to discharge the hose therefrom. In this construction, it may be found advantageous to lock the rack in closed position until the nozzle is withdrawn in order to prevent discharge of the hose when the door is opened merely for inspection or cleaning of the device. This may be done by mounting a resilient latch member 35 on a hinge 36 of the door. The member is grooved at 35' to form a seat to tightly receive therein the nozzle, the weight of which maintains the latch in engagement with the top of the rack. The inner end of the latch member is at 37 shown downwardly extending to form a resilient finger 37 contacting the surface of the door. The tension of this finger is sufficient to lift the lip 38 of the member away from the rack when the nozzle has been withdrawn and so to release the rack for opening movement.

In the device illustrated in Fig. 7, a rack 40 is hung on a stud 41 of the door for downward swinging movement thereon. When so constructed, it is seen that the hose will drop out of the rack during the downward movement thereof. It is merely required to draw the nozzle out of the clip 43 and the hose will become entirely disengaged from the rack. It is, however, necessary to provide means for normally maintaining the rack in its elevated position and such means is, for the sake of simplicity, in Fig. 7 shown to consist of a sub-frame 44 which is seated for outward sliding movement in loops 45, 46 of the rack. This frame is pulled outwardly a distance sufficient to cause the prongs 47, 48 thereof to clear the bottom rim 2a of the door and so to release the rack for downward movement.

In all of the devices as above described, the door is shown hung for outward swinging movement on a vertically disposed hinge at one end of the door. It may, however, in some installations be found preferable to mount the door on a horizontally extending hinge at the bottom thereof, substantially as illustrated in Fig. 8 of the drawings. The hinge 51 extends along the bottom edge of the door 50 but the door and the cabinet may otherwise remain as described in connection with Fig. 1 of the drawings. The weight of the rack 53 and of the hose D, all being located within the cabinet and held suspended at one side of the hinge, tend to retain the door in closed position. It would for this reason ordinarily not be found necessary to provide additional door closing means. Should such means be wanted, it is merely required to provide a device, such as a resilient latch member 55, at the top of the door for engagement with a lug 56 of the cabinet. A handle 57 is added at the top of the door to facilitate opening movement thereof against the tension of the latch member.

While the type of rack hereinbefore described is found entirely satisfactory and convenient to use, it is possible to mount the fire hose in a reel hung on a stud projecting from the inner surface of the door. This combination is, in Fig. 9, shown to include a reel 60 which is mounted for rotation on a stud 61 horizontally projecting from the inner surface of the door 62. It is necessary in order to place the hose on this reel, first to fold the hose at or near the middle thereof, then to feed the folded end of the hose on to the reel and to continue feeding the folded hose in the reel until the entire hose is placed thereon. The nozzle E is then secured in position within a clip 63 and the coupling C is mounted on the bib B. The door and cabinet may otherwise remain as described in connection with Fig. 1. To remove the hose, it is merely required to disengage the nozzle and to pull thereon to start rotation of the wheel, the weight of the unwound portion of the hose will induce continued rotation of the reel until the hose drops away from the reel.

In all the fire hose supports, of the type herein described, that have come to my attention, I have found that the hose is hung on racks positioned within a cabinet and that the door of the cabinet merely functions as a closing device for the cabinet. When it is considered that, in cases of fire, the one essential feature is speed and that the hose is free to be drawn out into a room or through a room in any direction it will be appreciated that mounting the hose on a door which is free to swing fully open and even around a corner, when the hinge is placed on the corner, is of great importance.

I claim:

1. A device for supporting a fire hose having a nozzle on the end thereof, said device including, a hingedly supported outwardly opening door, a rack consisting of a horizontal base rigidly mounted on the inner surface of the door and a bracket pivotally mounted on the base and rising therefrom in parallel spaced relation to the door for supporting the fire hose, means for locking the bracket of said rack against outward swinging movement, said means comprising a resilient clip pivotally mounted on the door and engaging the bracket to retain the rack unmoved on the door, the clip being adapted to support the hose nozzle, the weight of the nozzle maintaining the clip in engagement with the bracket.

2. A device for supporting a fire hose having a nozzle at one end thereof, said device comprising, a hingedly supported outwardly opening door, a rack consisting of a base inwardly projecting from the door and a bracket hingedly secured to the outer edge of said base and rising therefrom to provide between the bracket and the inner door surface space for supporting therein the fire hose, and a resilient latch pivotally mounted on the door and movable against the force of resilience to engage the upper edge of the bracket to lock the bracket against opening movement on its hinge, the latch being shaped to form a seat for the hose nozzle, the weight of the hose maintaining the latch in engagement with the bracket.

3. A device for supporting a fire hose having a nozzle at one end thereof, said device comprising, a hingedly supported outwardly opening door, a rack consisting of a base horizontally projecting from the inner surface of the door and a bracket, said bracket including a base portion hingedly secured to the outer edge of said rack base and a grating rising from the base portion

thereof parallel with the door to provide between the bracket and the door a space for supporting therein the fire hose, and a resilient latch member hingedly mounted on the door, said latch member being movable against the force exerted by its resilience to engage the bracket of the rack, the latch member being grooved to receive and to support the nozzle of the hose, the weight of the nozzle maintaining the latch member in engagement with the bracket.

4. A device for supporting a fire hose between adjacent studs of a building, there being a hose bib between the studs, said device comprising a door hinged on one of said studs for outward swinging movement relative thereto, a hose supporting rack mounted for outward swinging movement on a horizontal pivot on the inner surface of the door, the rack being of a width to support the fire hose and to fit into the space between the studs, and a resilient clip on the door adjacent the rack, said clip being shaped detachably to support the nozzle of the hose, the weight of the nozzle urging the clip into engagement with the rack to prevent outward swinging movement thereof.

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