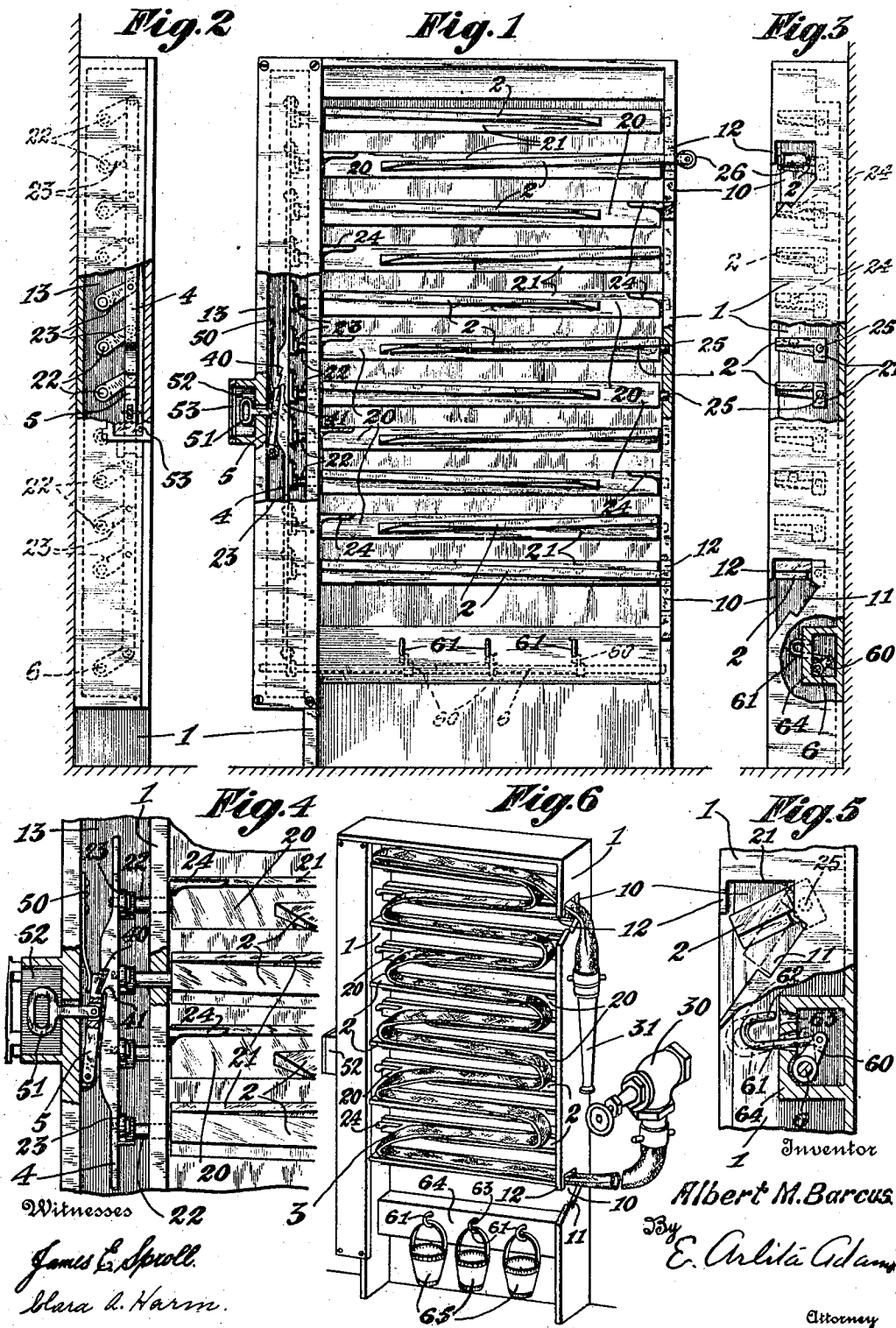


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 COMBINED HOSE AND BUCKET RACK.
 APPLICATION FILED JAN. 13, 1915.

1,241,605.

Patented Oct. 2, 1917.



UNITED STATES PATENT OFFICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALBERT M. BARCUS, a citizen of the United States of America; and a resident of the city of Raymond, in the county of Pacific and State of Washington, have invented certain new and useful Improvements in Combined Hose and Bucket Racks, of which the following is a specification.

My invention relates to devices for holding fire hose and buckets so that they are not accessible for use except after unlocking the same, either with a key or by breaking of some frangible member. I have therefore called it a combined hose and bucket rack.

The object of my invention is to care for both fire hose and fire buckets in such manner that their use for miscellaneous purposes, or purposes not associated with fires, will be discouraged and prevented, while at the same time they are accessible for immediate use whenever this is desired.

Another object, closely associated with this, is to store the hose in such manner that it will be thoroughly drained as a necessary consequence of placing it in storage, from which it follows that the life of the hose is increased.

The characteristic features of my invention and that of which it consists will be described hereinafter and particularly pointed out in the claims terminating this specification.

In the accompanying drawings I have shown my invention embodied in the forms which are now preferred by me.

Figure 1 is a front elevation of the rack, a portion of the side chamber being broken away to better show the locking and releasing mechanism.

Fig. 2 is an elevation from the side containing the locking mechanism, a part of wall of this chamber being broken away.

Fig. 3 is a like view from the other side.

Fig. 4 shows the locking mechanism on a larger scale.

Fig. 5 shows in detail the bucket holding lock and the adjacent hose retaining device.

Fig. 6 shows the rack or cabinet in perspective with hose and buckets in place, all parts being in locked position.

The casing within which the hose is stored, consists of an open front cabinet having side pieces 1, between which extend a series of shelves 2, upon which the hose is

laid, the hose extending back and forth and from one shelf to another. The combined length of the shelves will be closely related to the length of the section of hose which is to be stored in the case, such length being usually 50 feet.

To permit this disposition of the hose, each shelf, except it may be the lowermost, is shorter than the width of the case, being cut away at one end to provide a gap, or opening, at 20, through which the hose passes from one shelf to the next.

The sides 1 are also provided with openings through which the ends of the hose may pass. One end of the hose is fixed in place upon a source of water supply, as the valve 30, while the other end has a nozzle 31 connected thereto. I have shown the notches 10, as both in one side of the case, although they may be divided between the two sides, or two may be provided in each side. As these notches extend through the front edge of the side pieces, the hose may pass out or in through the same.

To secure drainage of the hose when in place in the rack, the shelves 2 are all slightly inclined, this inclination being downwardly toward the end which is cut away to form the notches 20, through which the hose passes from one shelf to the next. When the hose is in place, as is shown in Fig. 6, there is a continuous slight inclination from its upper to its lower end, thus insuring complete draining thereof. Each shelf contains a bar or continuous member 21, which extends along the rear or inner edge thereof and has bearing pins or journals 22, 25, formed upon or secured to the ends thereof. These pivot pins are journaled in the side members 1 of the case, the pins 22 projecting through the side piece at the side of the case and each having secured thereto, a short crank arm 23. All the crank arms 23 are connected by a controlling bar 4, to thereby cause all the shelves to occupy the same angular position and to move together when they turn upon their pivots.

The controlling bar 4 lies within a supplemental chamber 13 formed at the side of the case. The central portion of the controlling bar is provided with two notches 40 and 41, which are adapted to be engaged by a retaining pawl or dog 5, whereby this bar and the shelves controlled thereby may be held in either of two raised positions. The

retaining pawl or dog 5 is acted upon by a spring, as 50, to maintain engagement with the controlling bar. This dog is also connected with a member 51 which projects through the outer side of the case into a small chamber 52, which is intended to be provided with a breakable closure 53, consisting of a small glass plate after the fashion of the auxiliary firealarm boxes, whereby the member 51 is protected from access except the plate 53 be broken.

By pulling the member 51, which is shown as having an eye-shaped outer end, the retaining dog 5 may be freed from the controlling bar. The result of this will be the dropping of the bar 4 and with it the tilting downward of the forward edges of the shelves 2. This will result in causing the hose to slide forward, out of the shelves. When the shelves are in their upper position, or that shown in Figs. 3 and 6, their upper surface is transversely level. The uppermost fold of the hose 3 passes through a notch 10 formed in the side wall of the case, while the lowermost portion of the hose passes through a like notch 10 in the side wall of the case. This notch is so cut as to provide a downwardly extending finger 12 which, when the shelves are in their uppermost position, projects downward over the front edge of the shelf with which it is in line, thereby securely locking the hose against being removed from these notches. While the retaining dog 5 is in engagement with the uppermost notch in the controlling bar 4, or the notch 40, the shelves will be in the position shown in full lines in Fig. 5, wherein the shelves have dropped to such a point that the hose may be passed between the lower end of the finger 12 and the shelf, this angular position of the shelf being one in which the hose will not slide off of the shelves. The hose would be placed upon the shelves while they were occupying this angular position and when the hose is in place upon all the shelves, they would then be thrown upward into the horizontal position shown in Fig. 3, which would cause the fingers 12 to hold the hose securely in place.

The upper shelf, which is in alinement with the upper notch 10, is shown as projecting slightly through the notch and as having a roller 26 journaled thereon. The purpose of this is to facilitate drawing in the lower portion of the hose while bringing it in place upon the rack. The edge of the case is also provided with a depression 11 in the lower side of the notch into which this projection of the shelf fits. This depression is just enough to bring the upper surface of the shelf into line with the slope of the lower side of the notch when the shelf is in its lowermost position.

Below the shelves occupied by the hose, I

have shown means for holding a set of buckets 65 so that they are normally locked against removal, and have provided means by which these buckets are automatically released so that they may be removed whenever the hose is discharged from its rack. Such means, as shown, consists of the following mechanism:

A shaft 6 extends from side to side of the case and is mounted within a chamber 64. It has a series of short arms 60 secured thereto and corresponding in number and position with the location of the buckets 65. To each of the arms 60 is secured a link 61, which passes through the outer base of the chamber 64 and is bent backward upon itself to form a hook 62. The face of the chamber 64 is provided with holes 63, into which the points of the hooks 62 enter when the latter are in their innermost position. These hooks form loops when they are drawn inward into each hole by which the bail of the bucket may be held. The outermost or dotted position of Fig. 5, corresponds with the lowermost position of the shelves, wherein the points of the hooks are far enough out to permit removal of the buckets. The shaft 6 also extends into the chamber 13 which contains the controlling bar 4 and carries a crank arm similar to the crank arm 23, to which the lower end of the controlling bar 4 is pivoted.

At the ends of the hose supporting shelves 2 which are cut away to provide a passage for the hose to the next shelf, I have shown small brackets 24 secured to the side of the casing slightly above the passage-ways 20 through which the hose passes. These serve to retain the hose in position at this point.

When it is desired to place the hose in use, the shelves are released and permitted to drop, this being done by either unlocking the chamber 52 or by breaking the glass in its face, so as to obtain access to the releasing member 51, which is then pulled outward, thus releasing the support of the controlling bar 4 and permitting the hose to be discharged forwardly. The hose is thus discharged on the floor and in such shape that it cannot become tangled by carrying the nozzle away from the rack in any direction. At the same time the valve 30 should be opened, thus turning on the water. With the hose placed in position in such a rack the slight inclination given to the shelves causes the water in the hose to be drained to the lower end and thus prevents rotting of the hose which is caused by having water continuously therein.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is:—

1. A hose rack comprising a frame having

vertical side pieces, a series of superposed shelves supported within and extending between said side pieces, the opposite ends of successive shelves being cut away to permit passage of the hose thereabout in a zig-zag disposition.

2. A hose rack comprising a frame having vertical sides, a series of shelves supported within and extending between said sides and inclined lengthwise, the inclination of said shelves alternating with successive shelves, the lower ends of the shelves being cut away to permit passage of the hose thereabout.

3. A hose rack having a frame containing vertical side pieces and a series of shelves supported within and extending between said side pieces, said shelves being cut away alternately at opposite ends to permit passage of the hose thereabout, the side pieces being cut to permit passage of the ends of the hose.

4. A hose rack having a frame containing vertical side pieces and a series of shelves extending between the side pieces, said shelves being cut away alternately at opposite ends to permit passage of the hose thereabout, and being pivoted upon axes extending lengthwise thereof and rearwardly of their center of gravity, and a releasable catch normally holding the front sides of the shelves in raised position.

5. A hose rack having a series of superposed shelves upon which a hose may be placed in zig-zag position, said shelves being mounted upon pivot axes extending lengthwise thereof, a bar connecting all said shelves to control their position alike, a catch normally engaging said connecting bar to hold the shelves in hose-retaining position, and means for releasing said catch.

6. A hose rack having a series of superposed shelves upon which a hose may be placed in zig-zag position, said shelves being mounted upon pivot axes extending lengthwise thereof, a bar connecting all said shelves to control their position alike, a catch normally engaging said connecting bar to hold the shelves in hose-retaining position, means for releasing said catch, and means for automatically locking the hose in place when the shelves are in raised position.

7. A hose rack having a series of superposed shelves upon which a hose may be placed in zig-zag position, said shelves being mounted upon pivot axes extending lengthwise thereof, a bar connecting all said shelves to control their position alike, a catch normally engaging said connecting bar to hold the shelves in hose retaining position, means for releasing said catch, and hose-retaining fingers extending from above downward close to the front edge of the shelves, permitting removal of the hose when the shelves are dropped.

8. A hose rack having vertical side pieces,

and a series of superposed shelves supported within and extending between said side pieces, with one end of each shelf recessed inward from the like ends of the adjacent shelves.

9. A hose rack having a series of superposed shelves placed with one end of each shelf recessed inward from the like ends of the adjacent shelves, and a small ledge placed a little above each of said recesses and spaced lengthwise of the shelves from the recessed shelf end.

10. A hose rack comprising a casing having side pieces, a series of shelves extending between the side pieces and cut away at one end to permit passage of the hose, said cut-away ends being alternately at opposite sides of the casing, said casing having notches therein adjacent the upper and lower shelves of the series.

11. A hose rack comprising a casing having side pieces and a series of shelves extending between the side pieces, said shelves being journaled upon axes extending lengthwise thereof, the casing being notched in its side adjacent the upper and the lower shelf to pass the hose when the shelves are down and to retain the hose when the shelves are up, and a catch for holding the shelves in raised position.

12. A hose rack comprising a casing having side pieces and a series of shelves extending between the side pieces, said shelves being journaled upon axes extending lengthwise thereof, the casing being notched in its side adjacent the upper and the lower shelf to pass the hose, when the shelves are lowered and to retain the hose when the shelves are up, and means for holding the shelves in raised position.

13. A hose rack comprising a casing having side pieces and a series of shelves extending between and having pivot axes extending lengthwise thereof and at one end through one side piece, said ends of the pivot axes each having an arm secured thereto, a controller bar pivoted to each of said arms and a catch engaging said arm to maintain the shelves in raised position.

14. A hose rack comprising a casing having a main compartment having an open front and a closed side compartment, a series of shelves extending across the main compartment and journaled upon pivot axes extending lengthwise thereof and into the side compartment, crank arms secured within the side compartment, a controlling bar secured to each axis, a catch engaging the controlling bar to hold it raised, and a frangible member controlling access to said catch.

15. A hose rack having a series of superposed shelves inclined lengthwise, the direction of inclination of said shelves alternating with successive shelves, said shelves being

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pivoted upon longitudinally extending axes, means for locking said shelves and means for releasing them to swing upon their pivots.

5 16. A hose rack having a series of superposed shelves inclined lengthwise, the direction of inclination of said shelves alternating with successive shelves, and means for simultaneously ejecting the hose from said
10 shelves.

17. A hose rack having a series of superposed shelves inclined lengthwise, the direction of inclination of said shelves alternating with successive shelves, means for locking
15 ing the hose to prevent its removal from the rack, and means for releasing said lock and ejecting the hose.

18. A hose rack having a series of superposed shelves inclined lengthwise, the direction of inclination alternating with successive shelves, said shelves being pivoted upon longitudinally extending axes and being cut away at their lower ends to permit passage of the hose thereabout, and means
20 for controlling the position of said shelves in their swinging action upon their axes.

19. A hose rack having a series of hose supporting members, a series of bucket locking members and means connected with both
25 the hose-supporting and the bucket locking members to release them simultaneously.

20. A hose rack having a series of hinged hose-supporting members, and a series of bucket-supporting members normally locking
35 the buckets in place, the hose-supporting

members being movable to discharge the hose, an operating member secured to both said hose-supporting and said bucket-supporting members, and a controlling member normally holding said other members in
40 locked position, and adapted to release both said hose-supporting and said bucket-supporting members simultaneously.

21. The combination with a hose rack provided with hose-discharging mechanism, of
45 a series of bucket retaining hooks movable into open and into closed positions, and means for operating said hooks operatively connected with the hose-discharging mechanism.

22. The combination with a hose rack and means for releasing the hose, of a rotative shaft, a series of bucket retaining hooks movable from said shaft into and out of holding position, and operative connection
50 between said shaft and the hose releasing mechanism.

23. The combination with a hose rack and means for releasing the hose, of a rotative shaft, a series of hooks connected with said
55 shaft to be given a reciprocating movement, a guiding support for said hooks, and an operative connection between said shaft and the hose-releasing mechanism.

Signed at Raymond, Washington, this 7th day of January, 1915.

ALBERT M. BARCUS.

Witnesses:

VERNE DE FOREST,
FRED HOYT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."