No. 890,653. PATENTED JUNE 16, 1908.

H. J. M. HOWARD.

MEANS FOR SUPPORTING FLEXIBLE HOSE.

APPLICATION FILED JAN. 23, 1908.

Fig. 1.

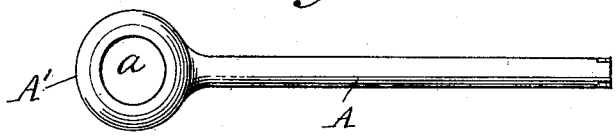



Fig. 2.

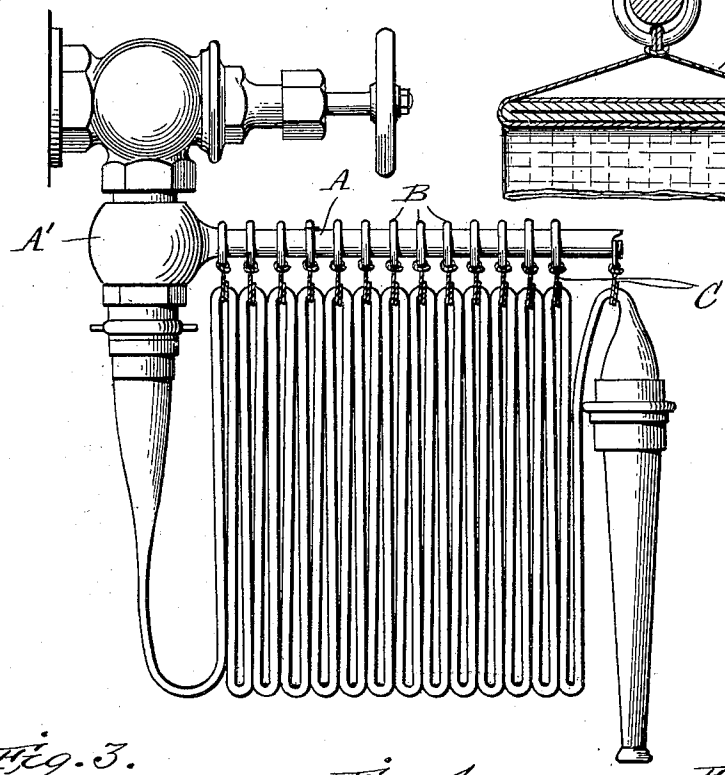



Fig. 6.




Fig. 3.

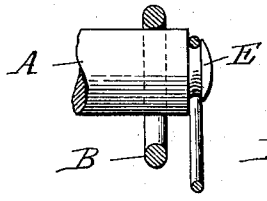



Fig. 4.

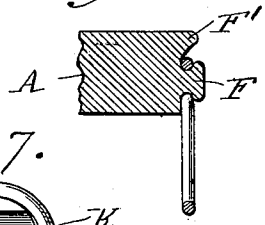



Fig. 5.

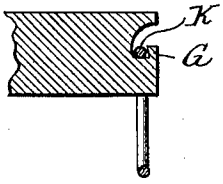
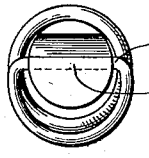



Fig. 7.




Witnesses

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# UNITED STATES PATENT OFFICE.

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## MEANS FOR SUPPORTING FLEXIBLE HOSE.

No. 890,653. Specification of Letters Patent. Patented June 16, 1908.

Application filed January 23, 1908. Serial No. 412,347.

*To all whom it may concern:*

Be it known that I, HENRY J. M. HOWARD, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Means for Supporting Flexible Hose; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

The present invention relates to means employed for supporting flexible hose in vertically arranged loops, in such manner that the same may be readily extended for use in case of fire, and the object of the invention is to simplify and improve the means employed to support the hose when in its normal or stored position.

A further object of the invention is to provide a supporting means which will enable the hose to be folded in uniform loops and easily and quickly remounted on the supporting bracket without the necessity of adjusting the portions of the supporting means which directly engage the hose itself.

A further object of the invention is to provide a supporting bracket which may be finished with a minimum of labor and expense.

The invention consists in novel details of construction which will be hereinafter described and pointed out particularly in the appended claims.

In the accompanying drawings: Figure 1 is a top plan view of a supporting bracket which is used in the present invention. Fig. 2 is an elevation of a supporting bracket, its connection with the permanent structure of the building, and a hose pipe suspended in loops in accordance with the present invention. Figs. 3 and 4 are details of modified arrangements for preventing the accidental disengagement of the outer or final hanger from the supporting arm of the bracket. Fig. 5 is a section showing the preferred arrangement for holding the hangers against accidental escape. Fig. 6 is a detail cross section taken through the supporting arm and the upper end of one of the loops of the hose. Fig. 7 is an end elevation of the preferred arrangement shown in Figs. 1, 2 and 5.

Similar letters of reference are employed to indicate corresponding parts in all the views.

The supporting bracket of the present invention is a device of severe simplicity in that it consists of a simple substantially straight supporting arm A, approximately cylindrical in section and terminating at the base end in a spherical enlargement A′ through which a cylindrical bearing *a* is formed and adapted for the reception of a pintle, conveniently, a nipple or portion of the water supply pipe upon which the supporting bracket is free to swing horizontally in either direction. This construction of supporting bracket permits of the finishing of the outer surface in a single, simple lathe manipulation with the bracket chucked in the lathe on an axis coincident with the axis of the arm.

For supporting the hose, or the loops of the hose, a series of hangers B, preferably simple metallic rings of slightly larger internal diameter than the arm, are slipped on the arm from its free end, and hose suspenders C in the form of pliant cords or straps are attached to the rings and embrace the upper ends of the folds in the hose. As shown, the pliant suspenders are simple cords or bands, preferably of a fiber which conforms in character and color with the fiber of which the hose is made. These suspenders are passed twice about the hose, and one only of the reaches is secured to the hangers, preferably by a slip-knot which will permit the hanger and suspender to lie in the same plane without tendency to turn at an angle to each other. The length of suspender for each turn around the hose is such that when the hose is distended by the water the suspender does not form a constriction, but being pliant will follow closely the contour of the hose, when the latter is in either its flattened or distended condition. Furthermore, by attaching only one reach of the suspender to the hanger, the weight of the hose tends to tighten the suspender about the hose, and consequently there is little or no danger of the position of the suspender being shifted from one point to another, whereby a uniform spacing of the suspenders is always preserved. An additional advantage following from the use of a pliant suspender lies in the fact that there is absolutely no chafing or wear on the walls of the hose itself, either through swinging of the hose when in its stored position on the bracket arm or as the hose is being drawn off or replaced.

In order to support the nozzle, which, as compared with the weight of the hose, is a heavy body, the pliant suspender is particu-

larly advantageous inasmuch as it cannot slip readily and the nozzle end may be suspended directly from the last hanger without other special attaching or supporting means.

The accidental escape of the outer or terminal hanger may be conveniently prevented by forming a groove or recess in the extremity of the supporting arm for its reception. The groove or recess may be arranged as shown, for instance, in Fig. 3, where the annular groove is formed by a button or head E, or, as shown in Fig. 4, where a somewhat similar button F lies beneath a guard or overhanging portion F'. In the preferred construction, however, shown in Figs. 1, 2, 5 and 7, the end of the arm is formed into a hook G, and the hanger which coöperates therewith will not only be itself held against accidental escape, but will hold the other hangers on the arm, even should the water be turned on before the nozzle end of the hose is taken from the rack. The hook may, for convenience, be formed by recessing the end face of the arm, care being taken to form the walls constituting the hook of such shape that outward pressure on the terminal hanger by the next adjacent hanger will not dislodge the same, but at the same time little or no resistance will be offered when the nozzle end of the hose is lifted or moved to intentionally detach the hose. A slight undercutting of the hook is usually sufficient to accomplish the desired end. The terminal hanger employed in this preferred construction is of D-shape or provided with a substantially straight bar K at the top adapted to rest in the hook and extend out at the sides of the arm, thereby forming a stop against which the other hangers will be arrested, should they tend to slide off the arm before the terminal hanger is removed.

It will be particularly noted that the use of pliant fibrous suspenders permits the hose to be supported without contacting any metal or other surface liable to injure the webbing.

Having thus described the invention, what I claim and desire to secure by Letters-Patent, is:

1. A means for supporting flexible hose embodying a supporting arm free at one end, a series of hangers freely suspended on said arm to move readily off the free end of the same, and pliant hose suspenders depending from the hangers.

2. A means for supporting flexible hose in folds or loops embodying a supporting arm free at one end, a series of hangers freely suspended on said arm to move readily off the free end of the same, and pliant suspenders connecting the hangers with the upper ends of the loops of the hose.

3. A means for supporting flexible hose in folds or loops embodying a supporting arm free at one end, a series of hangers freely suspended on the arm to move readily off the free end of the same, and pliant suspenders passing around the hose at the upper ends of the loops and each having one reach connected with a hanger, whereby the weight of the hose tightens the suspender about the hose.

4. A means for supporting flexible hose in folds or loops, embodying a supporting arm free at one end, a series of rings forming hangers and freely suspended on the arm to move readily off the free end of the same, and pliant cords tied to and depending from said rings to embrace the upper ends of the loops of hose.

5. In a hose rack, the combination with the supporting arm free at one end, of a series of rings mounted on said arm and free to escape from the free end thereof, a pliant hose suspender attached to each ring, and means for retaining the outermost ring in place against accidental escape.

6. In a hose rack, the combination with the supporting arm free at one end and having a recess in the extremity, of a series of hose hangers freely suspended on said arm, the outer hanger being fitted to the recess, whereby its accidental escape is prevented.

7. In a hose rack, the combination with the supporting arm free at one end and having a recess in its extremity located below the top of the arm, of a series of hose hangers freely suspended on said arm, the outer hanger being adapted to seat in said recess, whereby its accidental escape is prevented.

8. In a hose rack, the combination with the supporting arm free at one end and having an undercut hook-shaped recess in its extremity, of a series of hangers on said arm, and a terminal hanger having a substantially straight top bar fitted to said recess, whereby the accidental disengagement of the hangers from the arm is prevented.

9. A means for supporting flexible hose in folds or loops embodying a supporting arm free at one end and pliant suspenders depending from the arm and passing around the hose at the upper ends of the loops.

10. A means for supporting flexible hose in folds or loops embodying a supporting arm and pliant suspenders passing twice around the hose at the upper ends of the loops, one reach only of each suspender being connected with the supporting arm.

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Witnesses:
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