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T. PRENTICE.

FIRE HOSE SUPPORT.

Application filed Nov. 10, 1900.

(No Model.)

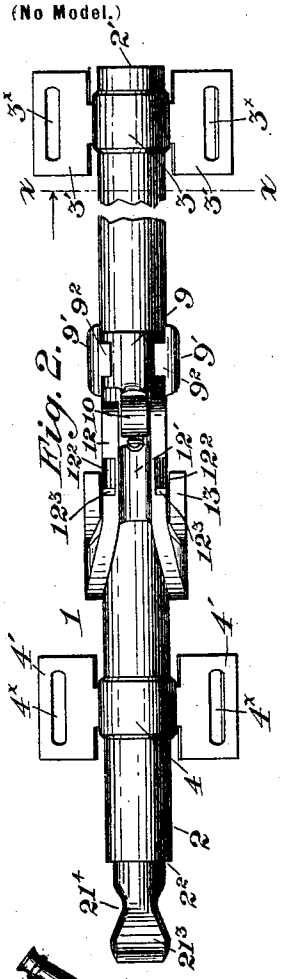


Fig. 2.

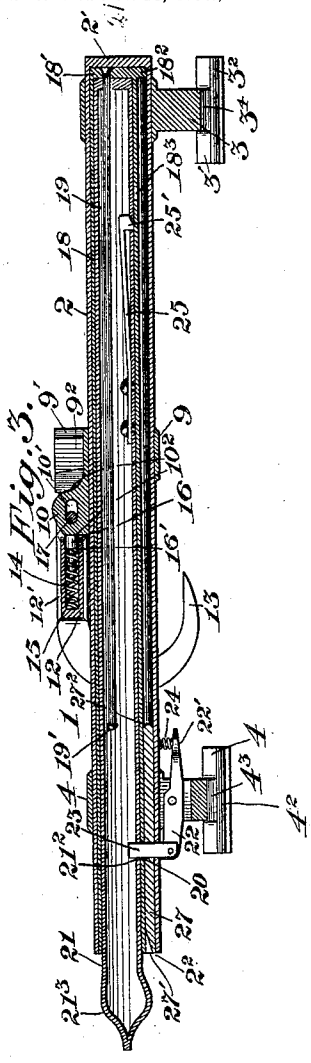


Fig. 3.

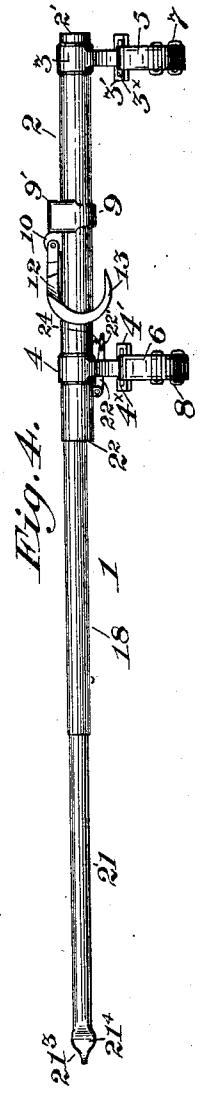


Fig. 4.

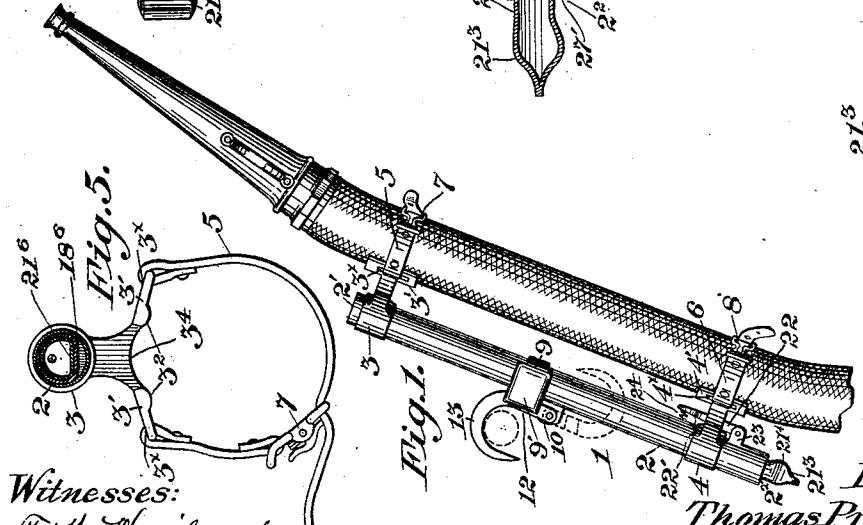


Fig. 1.

Fig. 5.

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UNITED STATES PATENT OFFICE.

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FIRE-HOSE SUPPORT.

SPECIFICATION forming part of Letters Patent No. 673,061, dated April 30, 1901.

Application filed November 10, 1900. Serial No. 36,074. (No model.)

To all whom it may concern:

Be it known that I, THOMAS PRENTICE, a citizen of the United States, residing in New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Fire-Hose Supports, of which the following is a specification.

This invention relates to supports for hose employed by firemen in suppressing conflagrations; and it has for one object the provision of a simple and compact device by means of which the hose may be sustained either on the surface of the ground or on the rounds of a ladder in a position to direct the nozzle at the proper angle.

A further object of the invention is the provision of a telescopic hose-support composed of tubular sections and which when to be used upon the ground may be extended to form a rest or support of the desired length and when employed upon a ladder may be reduced in length by telescoping the sections, as will be hereinafter described.

A further object of the invention is the provision in connection with the telescopic sections of the support of means for locking the sections within the outer tubular member of such support when telescoped and also of means for locking said sections in position when extended.

A further object of the invention is the provision of an improved device for securing the hook or hooks by which the support may be sustained upon the round of a ladder.

A further object of the invention is the provision of a tip of improved form on one of the sections for sustaining the support upon the ground.

A further object of the invention is the provision of improved means for securing the hose to the support in such a manner that said hose will be sustained on diagonal clamping-points, such support being provided with laterally-extending brackets having bosses against which the hose is forced and with straps or bands connected to said brackets and encircling the hose.

In the accompanying drawings, Figure 1 is a side elevation of my improvement, showing it sustained on the round of a ladder. Fig. 2 is a plan view thereof. Fig. 3 is a longitudinal vertical section of the improved hose-support, showing the parts in their normal telescopic condition. Fig. 4 is a side elevation illustrating the sections of the hose-support as extended for use upon the ground; and Fig. 5 is a cross-section on line x x, Fig. 2, looking in the direction of the arrow.

Similar characters designate corresponding parts throughout the several views.

Referring to the drawings, the numeral 1 designates in a general way my improved fire-hose support, and the numeral 2 the outer tube of said support, which is closed at one end, as at 2′, and is open at its other end, as at 2^2. Firmly secured adjacent to the closed end of said tube 2 is a bracket 3, having laterally-projecting and downwardly-inclined arms 3′, provided with bearing-points 3^2, shown as rounded bosses, against which the periphery of the hose is supported, as illustrated in Fig. 5, and intermediate these bosses the end wall of the bracket is concaved or hollowed out, as at 3^4, to receive the wall of the hose as it yields slightly under the pressure of the securing-straps between said bosses. Adjacent to the opposite end of this outer tube 2 a similar bracket 4 is secured, having corresponding arms 4′ and rounded protuberances or bosses 4^2 and a similar concaved portion 4^3. Each arm of these brackets is slotted at $3^\times$ and $4^\times$, respectively, for the reception of the ends of straps 5 and 6, the free ends of which are passed through buckles or other convenient securing means 7 and 8, respectively, as shown in Figs. 1 and 5.

Firmly secured to the tube 2 at a point intermediate its length is a sleeve or coupling 9, having lateral projections 9′, provided with lugs or tenons 9^2, and pivoted to a boss 10 of the sleeve (said boss having a slot 10′ for the reception of a pivot 17) is a shank 12, to which are attached or, as shown, formed integral therewith hooks 13. This shank 12 is concaved at 12′ on each side to fit the peripheries of the outer tube 2 and sleeve 9, and the hooks 13 are separated by a space sufficient to enable them to straddle said tube when they are in the operative position represented in Figs. 2, 3, and 4. The shank 12 is longitudinally recessed at 14 for the reception of a spring 15, which bears against a shoulder 16′ on a rod or plunger 16, having a flat end which comes into contact with locking por-

tions 10^2 on the ends of the boss or abutment 10 when said shank is swung to either of its two extreme positions, as shown in Figs. 1 and 3. To release the shank carrying the hooks, so that it may be swung over from the position shown in dotted lines to that represented in full lines in Fig. 1, it is turned toward the left, causing the pivot 17 to slide in the slot 10′, and it is then locked by the contact of the flat end of the plunger 16 with one of the sides 10^2, and by grasping the hooked end 13 it can readily be thrown to the opposite position (represented in Figs. 2 and 3) when desired, the pivot sliding in the slot of the boss. This shank 12 is also provided with recesses 12^2 in its sides, having inclined walls 12^3, which when it is swung and adjusted in the manner described to the position represented in full lines in Fig. 1, where the hooks are illustrated as engaging the round of a ladder, will receive the lugs or tenons 9^2 on the sleeve 9, thereby firmly sustaining the hooks against endwise movement and displacement, the inclined walls 12^3 facilitating this engagement of the parts.

Fitted within the outer and fixed tube 2 is a sliding tube 18, having a closed head 18′, provided with a flange 18^2, and attached to this head is a rod 19, having a button or other stop 19′ at its free end, said tube 18 being provided with a slot 20 for a purpose hereinafter described.

Fitted within the tube 18 is a third tube 21, which is provided with a closed head 21′, the latter being perforated to receive the rod 19, as illustrated in Fig. 3, and this tube 21 is provided with a slot 21^2 for a purpose hereinafter described.

Pivoted within a slot of the bracket 4 is a lever 22, carrying a locking arm or detent 23, which when tubes 18 and 21 are telescoped, as illustrated in Fig. 3, will enter the slots 20 and 21^2 and lock the parts in their closed positions. This lever 22 is provided with a thumb-piece 22′, and between the thumb-piece and the periphery of the outer tube 2 is a spiral or other form of spring 24, which normally tends to force the detent or head-piece 23 into the slots 20 and 21^2, as illustrated in said Fig. 3. At its free end the tube 21 is provided with a blunt point 21^3 to prevent the tube from sinking too deeply into the ground and with concavities 21^4 in its sides, which serve as convenient hand-grasps for pulling out or extending the tubes.

Carried on the inner side of the tube 21 is a spring catch or detent 25, which is provided with a beveled nose 25′, and at its open end the outer tube 2 is provided with a reinforce 27, having a flared forward end 27′ and also having an abutment 27^2 at its inner end, as shown in Fig. 3, so that when the sections are telescoped or collapsed one within the other the beveled end 25′ of the detent 25 will come into contact with the flared or beveled end of the reinforce 27 and will be pressed inward, thereby automatically releasing the tube 21 and permitting it to be forced within the tube 18.

Formed within the flat side of the tube 18 is a slot 18^3, (illustrated in Fig. 3,) which when said tube is withdrawn to extend the hose-support, as illustrated in Fig. 4, will receive the detent 23, thereby firmly locking said tube in its extended position. After the tubes 18 and 21 have been together withdrawn from the fixed tube 2 the detent 23 snaps into slot 18^3, thereby locking tube 18 in its extended position, and the tube 21 is then grasped and pulled out from said tube 18, and as said tube 18 has already been extended to carry its slot 20 outward the spring catch or detent 25 will immediately snap into the slot 20 and firmly retain the tube 21 in its extended position.

When it is desired to reduce the size of the improved hose-support to the minimum extent, the thumb is applied to the lever 22, thereby withdrawing the detent 23 from engagement with the slot 18^3 of the tube 18, and said tube is forced inward, and as it proceeds to its seat the beveled nose 25′ of the detent 25 comes into contact with the inclined or flared portion 27′ of the reinforce 27 and is forced back, thereby releasing the tube 21, so that it may be telescoped within said tube 18, and when the parts have been brought into the positions shown in Fig. 3 the detent 23 will snap into the slots 20 and 21^2, which then register with each other, and will hold the parts in their telescoped positions.

As will be observed by reference to Fig. 5, each of the tubes 18 and 21 is formed with a flat side 18^6 and 21^6, respectively, which will prevent the tubes from rotation with respect to each other or with respect to the outer fixed tube 2. The outward movement of tube 18 is limited by the contact of flange 18^2 on the end of said tube with the end 27^2 of reinforce 27, while that of the tube 21 is limited by the engagement of its head 21′ with stop 19′ of rod 19.

My invention is not limited to the specific details shown and described, for many modifications may be made without departure therefrom.

My improved hose-support is adapted for use by applying the same directly to the hose; but more generally it will be used by attaching the same to the so-called "flexible" nozzles such as now in general use, and when desired it may be applied directly to the ordinary rigid nozzle, as may be preferred in any particular case.

Having thus described my invention, I claim—

1. In a hose-support, the combination, with a fixed tubular member, of means for securing the hose to said member; a sliding tubular member fitted within said fixed tubular member; a ground-engaging member fitted for endwise movement within the sliding tu-

bular member; and means for locking said members in their telescoped and extended positions.

2. In a hose-support, the combination, with an outer fixed tube, of an inner tube having a flattened side and fitted for sliding movement within said outer tube; a ground-engaging tube having a flattened side and fitted for endwise movement within said inner tube; and means for securing the movable tubes when in their extended positions.

3. In a hose-support, the combination, with an outer tubular member, of means for securing the hose to said member; extensible sections adapted to be telescoped within said member; and a hook movably mounted upon said outer member and the shank of which is adapted to be folded upon the same to bring the hook to its inoperative position.

4. In a hose-support, the combination, with an outer tubular member, of means for securing a hose to said member; a hook pivoted to the outer member and the shank of which is adapted to be folded upon said member; and means for locking said hook in its operative and inoperative positions.

5. In a hose-support, the combination, with the outer tubular member thereof, of a pair of separated hooks; a shank from which said hooks project, said shank being pivoted to said member and having recesses; lugs carried by the member and adapted to fit within the recesses of said shank; and means for locking the shank in its operative and inoperative positions.

6. In a hose-support, the combination, with the outer tubular member thereof, of a pair of separated hooks for securing said member to the round of a ladder; a shank from which said hooks project, said shank having recesses in its side; and a sleeve secured to said outer member and having lugs adapted to fit the recesses in the shank when the hooks are thrown to their operative position.

7. In a hose-support, the combination, with the outer tubular member thereof, of a sleeve having lateral projections provided with lugs; a slotted boss located upon the outer member adjacent to said sleeve; a shank having a hook, and pivoted within the slot of said boss; and means for locking the shank in either of its extreme positions.

8. In a hose-support, the combination, with the outer tubular member thereof, of arms having lugs projecting from said member; a slotted boss also projecting from said member; a shank carrying a hook and pivoted within the slot of said boss, said shank also having recesses in its sides; and a spring-actuated locking-pin carried by the shank and adapted to engage with the boss when the hook is thrown to either of its extreme positions.

9. In a hose-support, the combination, with the outer tubular member thereof, of means for securing the hose to said member; a sleeve secured to said member and having lateral projections provided with lugs; a boss projecting from the member and having a slot; a shank carrying a hook and pivoted within the slot of a boss, said shank being recessed upon its sides to receive the lugs, and also having concaved top and bottom portions; and means for locking said shank in either of its extreme positions.

10. In a hose-support, the combination, with the outer tubular member thereof, of a pair of brackets secured adjacent to the ends of said member, each of said brackets having laterally-projecting arms provided with slots and bosses; straps the ends of which are secured in the slots of the brackets; and means for securing said straps together when forced against the hose.

11. In a hose-support, the combination, with an outer tubular member having a closed end and an open end, of an inner tube having slots adjacent to its rear and forward ends; a detent for engaging either of said slots; a sliding tube fitted within said inner tube; and means for locking said sliding tube to the inner tube.

12. In a hose-support, the combination, with an outer tubular member, of means for securing the hose to said member; an inner tube fitted for sliding movement within said outer member, said inner tube having a flattened side and being provided with a slot adjacent to each of its ends; a detent carried by and passing through the outer member and adapted to engage with either of said slots; a sliding tube fitted within said inner tube; and means for locking said sliding tube to the inner tube when the tubes are extended.

13. In a hose-support, the combination, with an outer tube having an open end, of a reinforce having a flared or beveled portion secured in said end; an inner tube having a flattened side and mounted for sliding movement within said outer tube, said inner tube being provided with a slot adjacent to each of its ends; a detent carried by the outer tube and adapted to engage either of said slots; and a sliding tube having a flattened side and fitted within said inner tube, said sliding tube having a slot adjacent to one of its ends and a spring-actuated detent adjacent to its other end, the construction being such that when the detent carried by the outer tube is released the inner and sliding tubes may be moved together within said outer tube and the detent of said sliding tube will be automatically released to permit said sliding tube to be telescoped within the inner tube.

14. In a hose-support, the combination, with an outer tube, of means for securing the hose to said tube; inner tubular sections adapted to be telescoped within said outer tube; and means for locking said sections in their telescoped and extended positions.

15. The combination, with a hose-support consisting of a plurality of sections, at least one of which is extensible, of a stop secured to the inner end of one section and engaging

the inner end of the extensible section in its extended position.

16. The combination, with an outer tube having a closed end and an open end, of means for securing a hose to said tube; an inner tube having a closed end provided with a lateral projection; a rod secured to the closed end of said inner tube and having a button at its free end; a sliding tube having a closed end provided with a perforation for the reception of said rod and having a point at its opposite end for engagement with the ground; means for locking said tubes in their telescoped positions; and means for locking said tubes when extended to form a ground rest or support for the hose.

17. In a hose-support, the combination, with an outer tube having a closed end and an open end and carrying a reinforce having a flared or beveled extremity, of means for securing a hose to said tube; an inner tube fitted within said outer tube and having a closed end and an open end; a rod secured to the closed end of said tube and carrying a stop at its free end; a sliding tube having a closed end provided with a perforation for the reception of said rod; a detent for locking said tubes when telescoped within the outer tube; and a detent for locking the sliding tube when withdrawn from the inner tube.

18. In a hose-support, the combination, with an outer tube, of brackets having slotted arms provided with bosses, the body of said brackets being reduced or concaved between said bosses; straps secured within the slots of the brackets; means for locking said straps together when compressed against the hose; and extensible sections carried by said outer tube.

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