(No Model.)

E. CLIFF.

HOSE REEL.

No. 602,057. Patented Apr. 12, 1898.

Fig. 1.

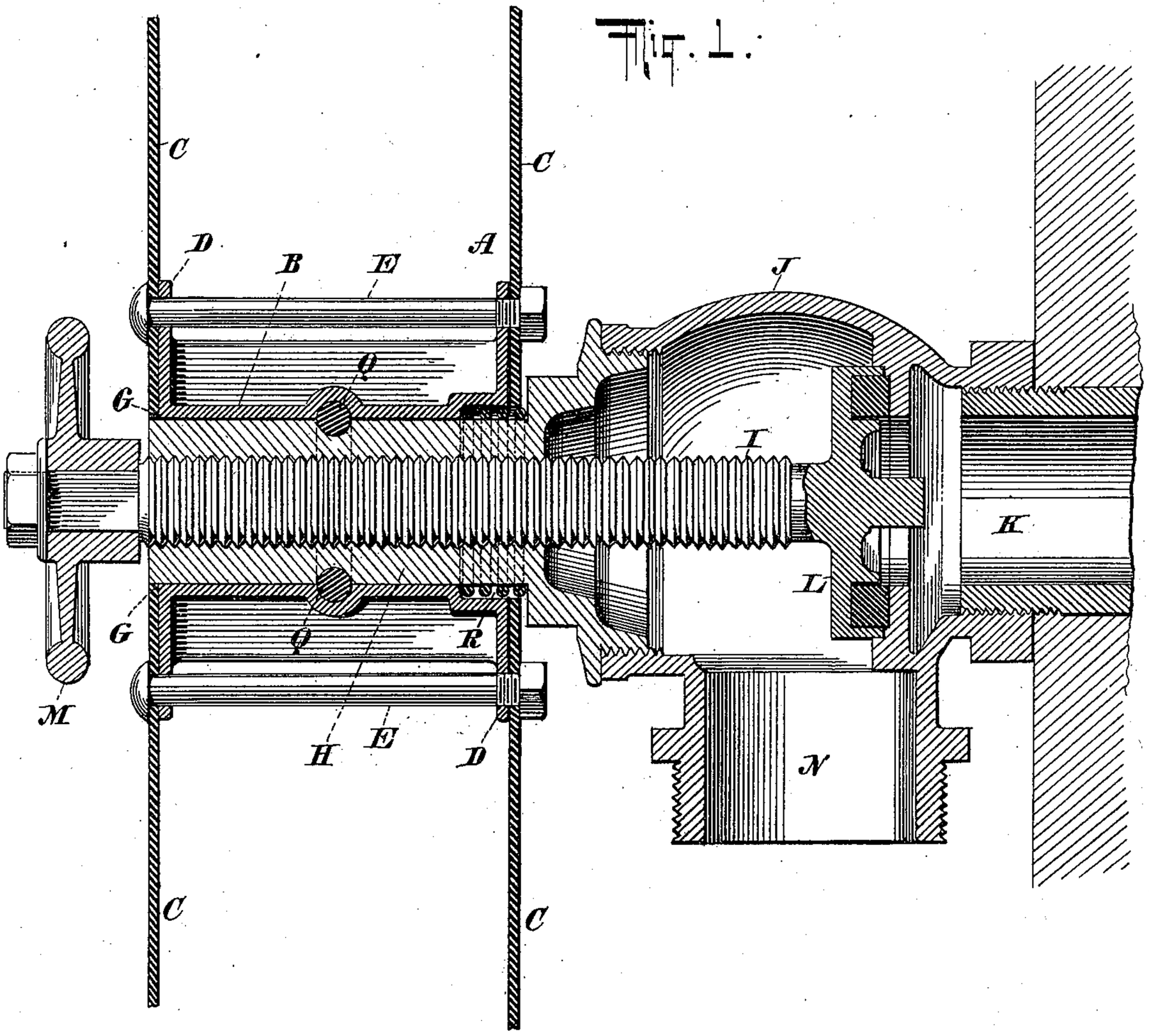
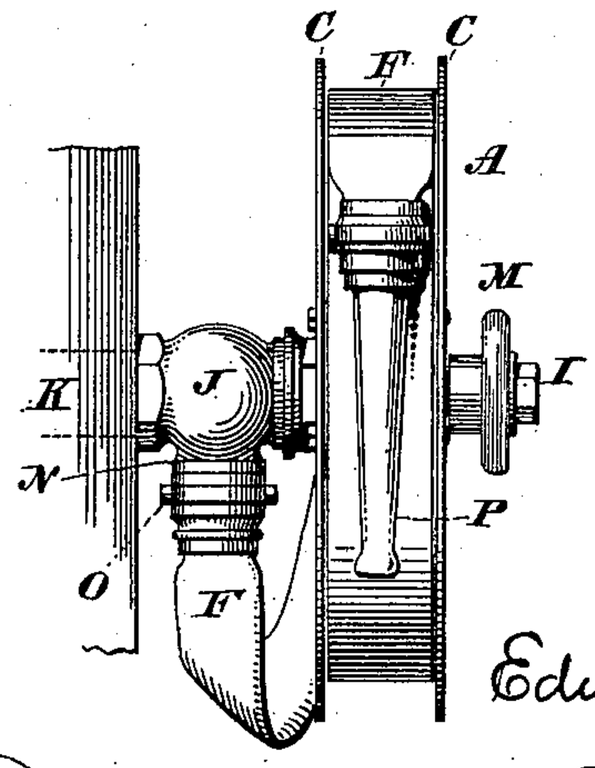


Fig. 2.



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HOSE-REEL.

SPECIFICATION forming part of Letters Patent No. 602,057, dated April 12, 1898.

Application filed November 8, 1897. Serial No. 657,751. (No model.)

To all whom it may concern:

Be it known that I, EDWARD CLIFF, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Hose-Reels, of which the following is a specification.

The invention relates to improvements in hose-reels, and particularly to improvements in hose-reels of the character employed in buildings having a fixed water-supply apparatus, to which the hose and reel may be permanently applied.

In the embodiment of my invention herein presented the reel is mounted to revolve freely upon a sleeve connected with the valve-casing and receiving within its bore the threaded valve-stem, which is provided upon its outer end with a wheel or handle by which the valve may be opened or closed independently of the reel. The hose is secured at one end upon the exposed discharge-nozzle from the water-supply apparatus and thence, while folded at about its middle portion, is wound upon the reel, the latter being free to be revolved in either direction upon the aforesaid sleeve. The reel is keyed upon the sleeve by means which permit of the free rotation of the reel upon the sleeve and which prevent any sliding movement of the reel longitudinally upon the said sleeve. I prefer to provide the reel with a frictional device in order that the reel may not revolve with undue freedom, this frictional device preventing the weight of the discharge-nozzle from the hose from turning the reel.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical longitudinal section through a reel and water-supply apparatus embodying the invention, the valve controlling the flow of water being shown in its closed position and the hose being omitted from the reel and water-supply pipe; and Fig. 2 is a front elevation, on a reduced scale, of the reel and water-supply apparatus, with the hose shown in its proper position ready for use.

In the drawings, A denotes the reel, which is composed of a hub B and plates or disks C C, the latter being secured to the flanges D of said hub by means of the bolts E, upon which the hose (lettered F) is wound in double layers.

The hub B is of cast metal and contains the circular hollow bore G to receive the sleeve H, which incloses the valve-stem I and is connected with the valve-casing J, the latter being supported from the water-supply pipe K. The bore of the sleeve H is threaded throughout to engage the male thread extending substantially throughout the length of the valve-stem I, which upon its inner end carries the valve L and upon its outer end is polygonal in cross-section and receives the wheel or handle M, by which the valve-stem may be manually operated at will independently of the reel A. By turning the wheel or handle M in one direction the valve L is opened, and by turning the said wheel or handle M in the opposite direction the valve L will be closed. The valve-casing J is provided with the outlet-nozzle N, having the exterior thread to receive the coupling O on the hose F. The hose F is coupled at one end to the discharge-nozzle N, and thence while doubled upon itself is wound upon the reel A, the discharge-nozzle P of the hose being left exposed, as illustrated in Fig. 2.

The reel A is keyed upon the sleeve H by any suitable means, but preferably by means of pins Q, which are partly in horizontal grooves formed in the hub B and partly in the annular groove formed in the sleeve H. The keys or pins Q prevent the reel A from sliding longitudinally upon the sleeve H, but permit said reel to revolve freely around said sleeve, which is stationary and rigid with the valve-casing J. The sleeve H forms an axle around which the reel A may revolve and upon which it is supported in close proximity to the valve-casing J. In order to prevent a too free revoluble action of the reel A upon the sleeve H, I provide the spring R, which is interposed between a shoulder on the sleeve H and a shoulder on the hub B, in order that said spring by its outward tension may press the hub B against the pins Q or the pins Q against the sleeve H with sufficient firmness to create an adequate amount of friction between said

hub and said pins or said pins and said sleeve to prevent the weight of the discharge-nozzle P from turning the reel A.

The reel A is entirely independent of the valve-stem I, but receives its support from the sleeve H, which incloses the valve-stem I. The movement of the valve-stem I is effected by the hand-wheel M in connection with the interior thread of the sleeve H and the exterior thread on said valve-stem. The sleeve H has its bore provided with a thread which never disengages itself from the thread on the valve-stem I, and hence the valve L will always remain under the control of the operator through the medium of the handle or wheel M. The nozzle N from the valve-casing is exposed beyond the reel A and receives one end of the hose, and the connection between the hose and said nozzle N is thus always subject to inspection without disturbing the reel A. In case of fire the attendant will seize the discharge-nozzle P of the hose and carry the same in the direction of the fire, thus drawing the hose from the reel A while the latter revolves on the sleeve H until all of the hose has fallen from the reel, whereupon the attendant will, by means of the hand-wheel M, open the valve L and permit the water from the pipe K to pass through the nozzle N and into the hose F. After the fire has been extinguished the valve L will be closed, and after the water has been drained from the hose F the latter will be folded upon itself at about its center and rewound upon the reel A, the latter being free to turn in the necessary reverse direction for rewinding the hose without affecting in any way the valve-stem I. The hub B of the reel A bears substantially throughout its entire length upon the sleeve H, and thus is adequately supported and is enabled to be constructed in a durable manner and to have a free, regular, revolving motion.

The apparatus constructed in the manner shown and described is entirely efficient and lacks the packed joints, which are liable to leakage. The parts of the apparatus are also exposed, so as to be readily inspected from time to time, and this is a feature of importance, particularly when it is remembered that the reel after being put into position may remain for months and even years before any necessity may arise for its use. The reel being entirely free of the valve-stem I avoids the necessity of any manipulation connecting or releasing the reel and stem during the use of the apparatus.

The reel made the subject of this application is shown upon a horizontal sleeve H and valve-stem I; but the invention is not limited to the position the reel may occupy with respect to the wall adjacent to which it may be placed, and said sleeve and valve-stem may, when desired, be placed in a vertical position or arranged at an angle of forty-five degrees or at any other angle which may be found convenient under the conditions to be met in supplying the apparatus to buildings.

By the expression "exposed hose-attaching nozzle" as employed in this application and the claims thereof I mean a stationary nozzle exposed at the water-supply valve-casing and entirely free of the reel, so that the hose when unwound will hang from the valve-casing and be entirely disconnected from the reel as distinguished from a hose-nozzle confined between the two sides of the reel and which necessitates the connection of the coupling end of the hose to the reel and between the sides thereof.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The water-supply apparatus having the valve-casing, valve, exposed hose-attaching nozzle, sleeve and valve-stem, the latter passing through said sleeve, combined with the reel mounted to revolve upon said sleeve, the hose secured to said exposed nozzle and thence wound upon said reel, and the handle upon the said stem; substantially as set forth.

2. The water-supply apparatus having the valve-casing, valve, exposed hose-attaching nozzle, sleeve, and valve-stem, the latter passing through said sleeve, combined with the reel mounted to revolve upon said sleeve, the key retaining the reel upon said sleeve, the frictional device applied to said reel to prevent the too free revolution of the same, the hose secured to said exposed nozzle and thence wound upon said reel, and the handle upon said stem; substantially as set forth.

3. The water-supply apparatus having the valve-casing, the valve, the threaded valve-stem, the sleeve connected with said casing and internally threaded to engage said valve-stem, and the exposed hose-attaching nozzle, combined with the reel mounted to revolve upon said sleeve, the hose attached to said nozzle, and thence wound upon said reel, and the handle upon said stem; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 6th day of November, A. D. 1897.

EDWARD CLIFF.

Witnesses:
CHAS. C. GILL,
E. JOS. BELKNAP.