C. W. TREMAIN.

AUTOMATIC HOSE-REEL.

No. 192,543. Patented June 26, 1877.

Fig 1.

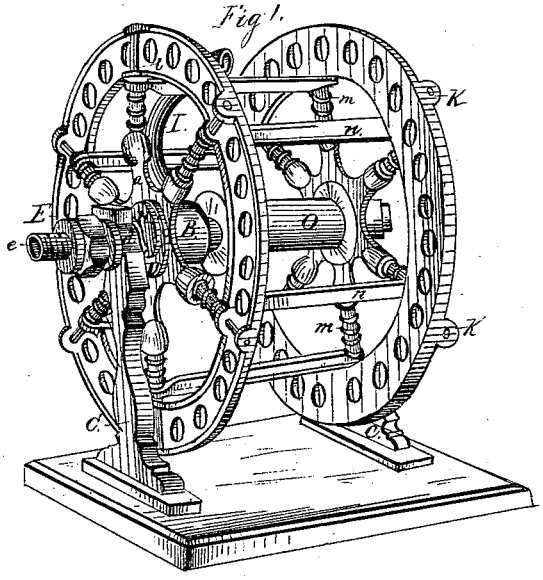


Fig 2.

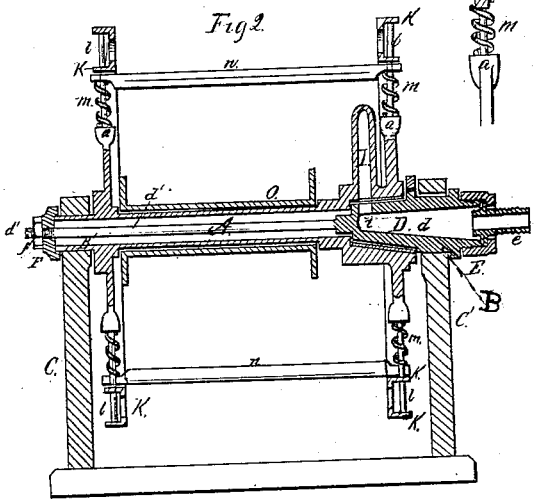
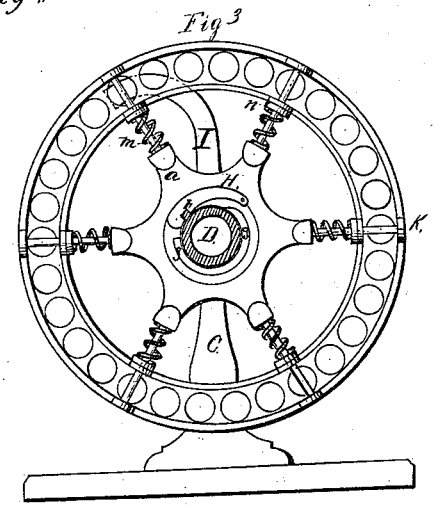


Fig 4.

Fig 3



WITNESSES

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INVENTOR

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UNITED STATES PATENT OFFICE.

CHARLES W. TREMAIN, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-THIRD HIS RIGHT TO CARRIE B. DE FOREST, OF SAME PLACE.

IMPROVEMENT IN AUTOMATIC HOSE-REELS.

Specification forming part of Letters Patent No. 192,543, dated June 26, 1877; application filed June 12, 1877.

To all whom it may concern:

Be it known that I, CHARLES W. TREMAIN, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Automatic Hose-Reels, of which the following is a full and exact description, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of the reel. Fig. 2 is a longitudinal section through its center. Fig. 3 is a sectional end elevation, and Fig. 4 is a section through the middle of one of the reel-bars.

The nature of my invention relates to a reel which is connected with a hydrant in such a manner that, as the hose is being unwound, it is automatically supplied with water, thereby avoiding the necessity of attaching unwound hose; and it consists in the construction and arrangement of the faucet within the hub of the reel, and in the device of automatically turning the water on; in the reel-bars, supported each upon separate springs, so as to yield toward the fulcrum of the reel, and to accommodate themselves, independently of each other, to the hose while filling with water; in a drum for extra hose, inside of and concentric with the reel, and in the general construction, arrangement, and operation of the several parts in combination with each other.

The hub or axis of the reel consists of a sleeve A, hollow from end to end, and having cast or otherwise secured upon its ends the spoke-sockets *a*. This sleeve is enlarged at one end, forming a conical chamber, B, while its opposite end has a trunnion, B′, resting in a standard-bearing, C. The plug D, which enters the conical chamber B, together with which it forms the faucet, is fitted watertight into said chamber by turning and facing it smooth in the lathe, by placing it concentrically into the chamber B, and by filling the space between with Babbitt or any other suitable anti-friction metal, which will save the skillful and tedious labor of boring the chamber B, and yet will make a good job for the purpose designed.

The plug D is extended or elongated to form the trunnion *d*, which rests in standard-bearing C′, and has a screw-threaded end for the coupling-nut E, holding the collared sleeve *e*, which is secured into the end of the hose connecting with the hydrant. To the opposite end of the plug D is attached a rod, *d′*, projecting through the sleeve A, where it is screw-threaded, and is adjustably secured by washer F and nut *f*.

To the end of conical chamber B is cast a projecting flange, *g*, forming about two-thirds of a full circle, with one of its ends chamfered, and upon the plug D is secured a tooth, *h*, which is on a line with the flange *g*, so as to move between the ends of the same. A hook-latch, H, being pivoted at one end to the side of the bearing C′, is notched on its opposite end, so as to fit upon and grasp the tooth *h*, holds the plug D stationary while the reel is turned, until the chamfered end of the flange *g* comes into contact with said latch H, and raises the hook-notch of the tooth *h*, liberating the plug D, which will now turn with the reel.

Said plug D forms a hollow chamber, into which the water is admitted from the hydrant, having a port, *i*, near its bottom end, which corresponds with a port in the chamber B, connecting into a goose-neck-shaped pipe, I, to the end of which the hose wound upon the reel is coupled.

As will be seen by the above-described arrangement, the plug is held stationary until the reel is turned about one-third of a revolution, which is sufficient for bringing the ports *i* and I in line with each other, admitting thereby the water into the hose, after which the plug will turn with the reel, leaving a free passage for the water while the hose is being unwound. For shutting off the water again the plug is to be held stationary while the reel is turned in the opposite direction.

The reel-rims K are cast separate, and are secured upon the sleeve A by bars *l*, screwed into the spoke-sockets *a*, and passed through lugs *k* of the rim, in which they are secured. The advantage of this is, that the reels are more easy cast, and that the machine-work can be done in a small turning-lathe. Each spoke-bar *l* of the reel is encircled by a coil-spring, *m*, and forms a guide for the end

of a T-shaped reel-bar, *n*. The T-shaped bar is preferable to a common rod, because more width for the bearing of the hose is obtained without any additional weight to the reel, this shape being best adapted for lightness and strength, while the support of said reel-bars by separate springs has the advantage of a better self-adjusting yield of the bars to the additional strain upon them by the filling of the hose with water than in reels having their bars yield simultaneously.

The drum O is journaled upon the sleeve A, so as to wind upon it an extra section of hose, to be on hand if required. It offers the advantage of holding additional hose, ready for use, without occupying space otherwise useful.

What I claim as my invention is—

1. In a hose-reel, the combination of the sleeve A and conical chamber B, together extending entirely across the reel and supported upon the standard-bearings, and the plug D, having a trunnion, *d*, substantially as and for the purposes set forth.

2. In a hose-reel, the sleeve A, having conical chamber B and hose-connecting pipe I, in combination with the plug D, having trunnion *d*, nut E, sleeve *e*, and rod *d'*, all constructed and arranged substantially as described and shown.

3. In a hose-reel, the combination of the conical chamber B, having flange *g*, the plug D, having trunnion *d* and tooth *h*, and the standard-bearing C', having hook-latch H, all arranged and operating substantially as described, for the purpose specified.

4. In a hose-reel, the rim K, attached to the hub A by a series of spokes screwed into sockets *a*, and secured in lugs *k* of the rim K, in the manner substantially as described and shown.

5. A hose-reel, having bars *n*, supported each independently by two springs, *m*, so as to yield toward the center of the reel, substantially as and for the purpose described and shown.

6. A hose-reel having T-shaped bars, each guided on the spokes *l* of the reel, so as to yield toward the fulcrum, and being supported by springs *m*, independent of each other, substantially as and for the purpose herein set forth.

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Witnesses:
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