C. L. FITCH.

Hose Reel and Carriage.

No. 195,922. Patented Oct. 9, 1877.

Fig. 1.

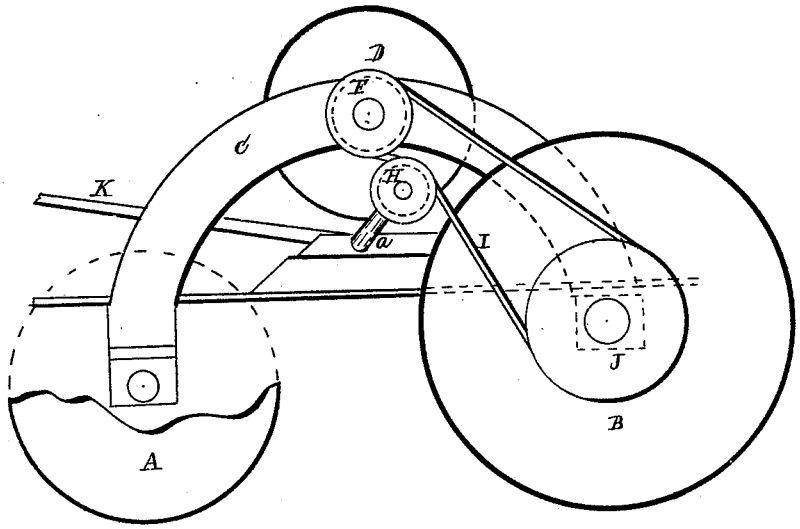
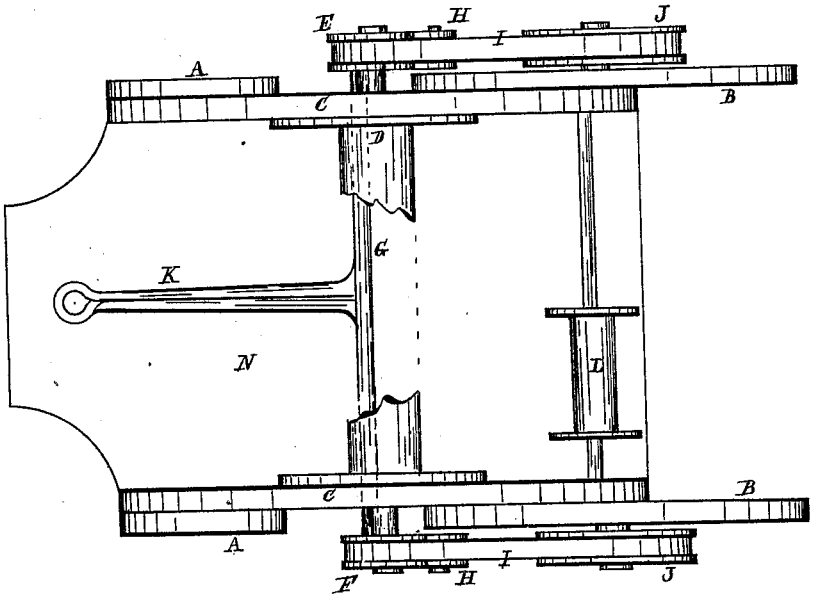


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES L. FITCH, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO W. J. McKENNEY, OF SAME PLACE.

IMPROVEMENT IN HOSE REEL AND CARRIAGE.

Specification forming part of Letters Patent No. **195,922**, dated October 9, 1877; application filed August 21, 1877.

To all whom it may concern:

Be it known that I, CHARLES L. FITCH, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and Improved Hose-Reel; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawings, making a part of the same.

Figure 1 is a side elevation of the reel. Fig. 2 is a plan view.

Like letters of reference refer to like parts in the several views.

This invention is a reel on which to wind up fire-engine hose by means of the team drawing the hose cart or reel, and in which, by certain devices hereinafter described, the speed of reeling the hose can be accelerated or retarded at the will of those having charge of the reel.

Of the construction of the aforesaid reel, and the practical operation of the same, the following is a detailed description:

On a carriage of suitable construction, of which A and B represent the front and hind wheels, are attached the sides C, in which is journaled a reel, D. On each end of the shaft of the reel is secured, respectively, the band-wheels E and F. Directly below the reel D, and parallel therewith, is journaled, in suitable bearings, a shaft, G, Fig. 2. A portion of the reel D is represented as broken away, so that said shaft may be seen.

Each end of the shaft alluded to terminates in an arm or crank, *a*, Fig. 1, on the wrist of which, respectively, is a tightening wheel or pulley, H, over which passes the belt I. Said belt also passes around the band-wheel J, secured to the hub of the wheels B, and also over the pulley F, substantially as shown in Fig. 1 of the drawing. Each of the band-wheels referred to is grooved, to prevent the belt from slipping therefrom.

K is an arm projecting from the shaft G, whereby said shaft is actuated for applying the tightening-pulleys to the belts. L, Fig. 2, is a roller, playing loosely on the shaft, the purpose of which will presently be shown.

The following is a description of the practical operation of the reel: By any suitable means one end of a hose lying stretched out upon the ground is attached to the reel D. For this purpose the carriage of the reel is brought to stand lengthwise over the hose, facing its outstretched length. The end to be attached to the reel is then brought up over the rear of the carriage, passing over the roller L. The reeling up of the hose is now accomplished by driving along over it, which, as the carriage moves forward, is wound upon the reel D, caused to revolve by its belted connection with the wheels B.

The first windings of the hose upon the reel will be at a certain rate relatively to the diameter of the reel; hence, as the diameter of the reel increases by virtue of the hose continued to be wound thereon, the reeling up of the hose will be correspondingly rapid, which eventually would become too fast for the forward movement of the carriage, and, as a consequence, cause so much draft upon the hose as to prevent the carriage from moving forward, unless at a very rapid speed, which would be too great for practical use. To avoid this rapid reeling up of the hose after being partially wound up is the purpose of the belt-tightener H, which, on first taking up the hose upon the reel, is pressed upon the belt by the operator as he stands or sits upon the platform N of the carriage. The belt, which is a loose one, thus tightened by the pulley H, rotates the reel, but which is gradually slackened as the hose is being reeled up, thereby allowing the belt to slip on the pulley or wheel F more or less, as may be required, to conform the winding of the reel to the forward movement of the carriage, thereby avoiding undue strain or drag upon the hose. On completing the reeling up of the hose, the belt is then slackened so that the carriage can run without rotating the reel.

The hose-reel, as represented in the drawing, is mounted on a four-wheeled carriage, but which, however, may be adapted to a two-wheeled one without changing the nature of my invention.

The differential relation of the wheel or pulley F to the driving-wheel J may be as three to one. This relative proportion, however, is arbitrary, and hence may be varied more or less.

I am aware that it is not new to reel up the

hose of fire apparatus automatically by the movement of the carriage over the hose as it lies upon the ground, as there are hose-reels which do this; but they are not provided with such simple and economical means as shown in my apparatus.

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

The reel D, belt I, and belt-tightener, constructed and arranged in relation to and in combination with the pulley J and wheel of a hose-reel carriage, substantially as herein described, and for the purpose set forth.

CHARLES L. FITCH.

Witnesses:
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