(No Model.)

R. S. CHAPMAN.

HOSE REEL.

No. 440,838. Patented Nov. 18, 1890.

Fig. 1.

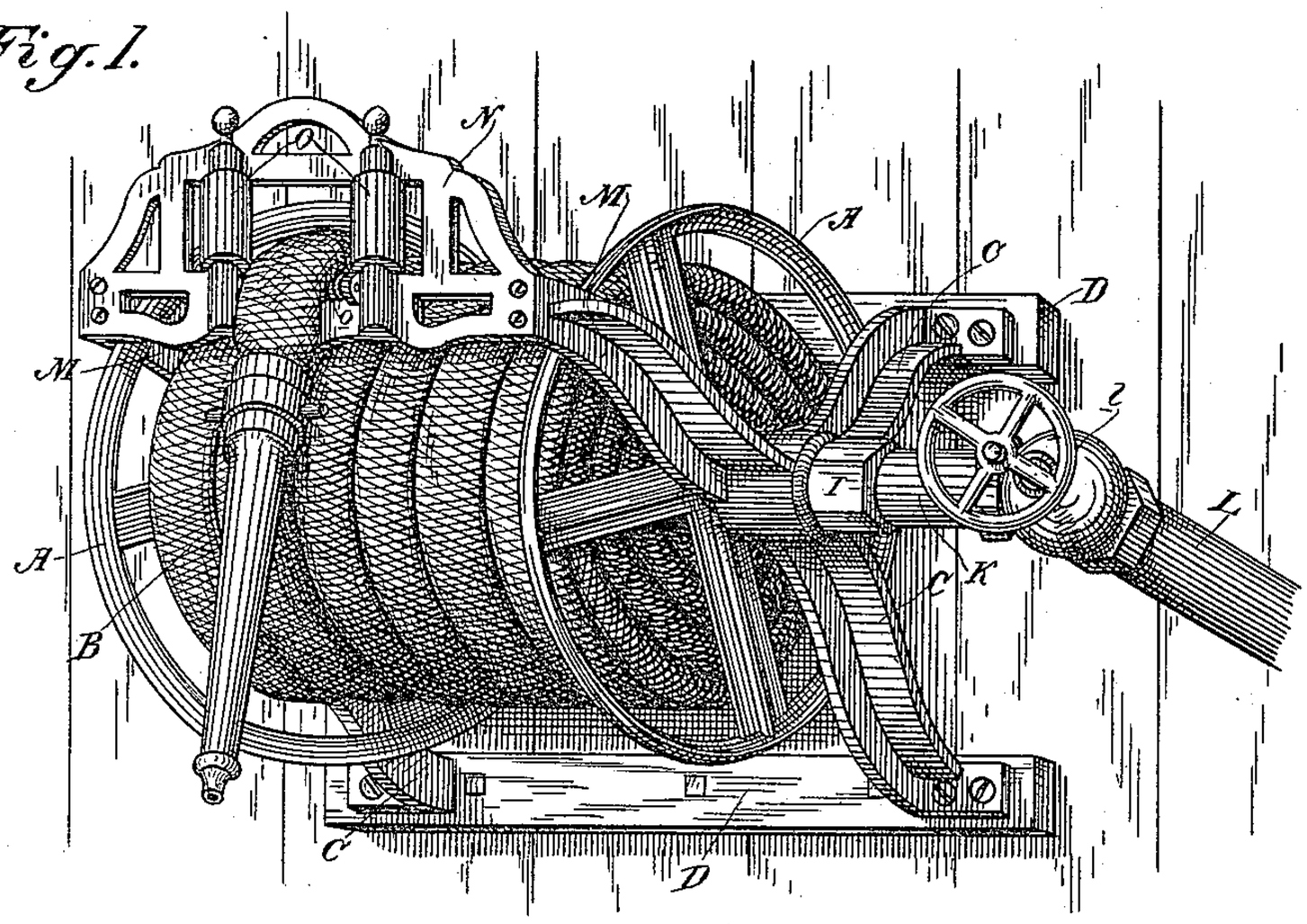
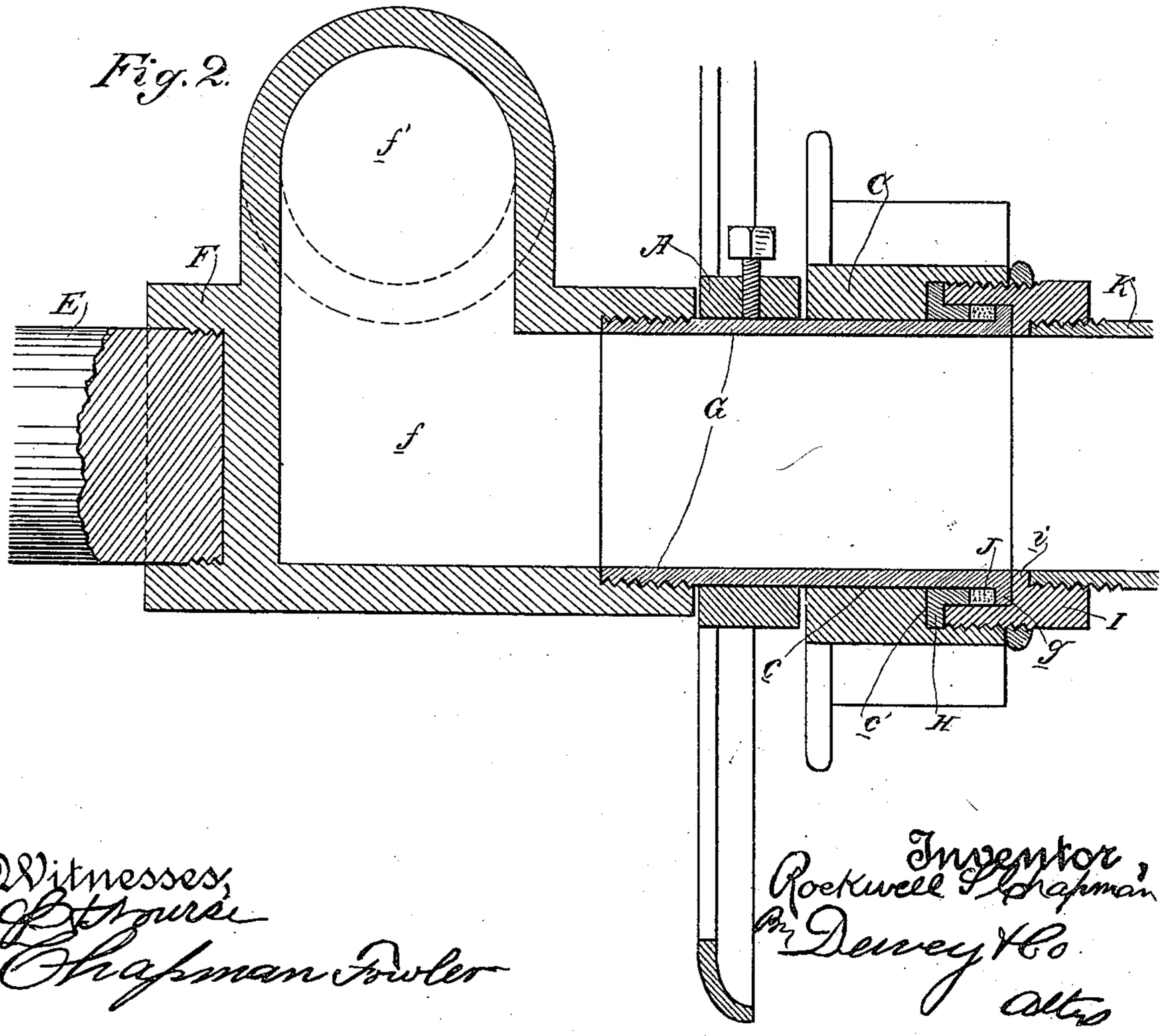


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROCKWELL S. CHAPMAN, OF SAN FRANCISCO, CALIFORNIA.

HOSE-REEL.

SPECIFICATION forming part of Letters Patent No. 440,838, dated November 18, 1890.

Application filed July 11, 1890. Serial No. 358,446. (No model.)

To all whom it may concern:

Be it known that I, ROCKWELL S. CHAPMAN, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Hose-Reels; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to that class of hose-reels adapted to be permanently secured to the walls of buildings in convenient positions, whereby the hose wound thereon can be drawn off for use in case of emergency, said reels being commonly known as "wall hose-reels."

My invention consists in the novel rotary joint by which the water-connection is effected and in the novel device secured to the reel for guiding the hose in any direction while being drawn off, all of which will be hereinafter fully described, and specifically pointed out in the claims.

The objects of my invention are to provide a simple and effective joint for the water-connection which will admit of the rotation of the hose-reel and will be self-tightening, and also to provide a simple and suitable guide for directing the hose as it is unreeled.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my reel. Fig. 2 is a section of the rotary joint.

The reel-frame is designated generally by A. Upon this the hose B is wound. The bracket which secures the reel and in which it is mounted consists of two end pieces or arms, one of which is in plan view in Fig. 1, and is designated by C. These end arms are secured at their inner ends to pieces D, which are secured firmly to the wall. The axle of the reel is a composite one, made up, as shown in Fig. 2, of the following parts:

E is a cylindrical piece, the outer end of which may be supposed to be journaled in the bracket-arm C at the other end of the device.

F is the hose-coupling piece, into one end of which the cylindrical piece E is screwed. This hose-coupling piece has a channel *f*, opening from its other end and then turning at right angles into its exit portion *f'*, to which said portion the end of the hose B is connected.

G is a pipe, which forms the other journal of the reel. The inner end of this pipe is screwed into the coupling-piece F, and upon this pipe G and upon the cylindrical piece E at the other side the radial arms of the reel are properly secured. These parts E, F, and G form the axle. The bracket-arm C at one end is formed with a tubular socket or bearing *c*, in which the pipe G is journaled. This tubular bearing has within it a faced shoulder *c'*. The end of the pipe G is provided with the exterior flange *g*. Around the pipe G is loosely fitted a bearing-ring H, which is adapted to fit up against the shoulder *c'* of the bracket-arm, and is faced so that it forms with the faced shoulder *c'* a tight joint of itself.

I is the gland-nut, exteriorly threaded and adapted to be screwed into the outer end of the bracket-arm socket or bearing *c*. This gland-nut is provided with the interior flange *i*, which is adapted to press up against the end flange *g* of pipe G. Between this end flange and the bearing-ring H is any suitable packing, (represented by J.) The outer end of the gland-nut is interiorly threaded to receive the fixed pipe K of the water-connection L, which said connection is controlled by a valve or cock *l*. Now it will be seen that the pipe G can rotate freely within the bracket-arm socket *c*, and by setting up the gland-nut I its internal flange, bearing against the flange *g* of the pipe G, sets said pipe up so that said flange *g* compresses the packing J between itself and the bearing-ring H, which is seated against the shoulder *c'* in the bracket-arm socket, thereby effecting a tight joint. It will also be seen that the pressure of water bearing against the end of the passage-way *f* in the coupling-piece F tends to throw the whole reel-axle over to one side, thereby compressing the packing J and automatically effecting a tight joint. In this construction it will be noticed that the bracket-arm socket *c* forms a part of the joint and is really the seat for the several parts, being the boxing or bearing for the rotary pipe G and the seat for the bearing-ring, packing, and gland-nut. I need not therefore have a separate boxing for these parts, as the bracket-arm itself serves this purpose and simplifies the construction of the entire reel.

Referring to Fig. 1, it will be seen that arms M are secured to the bracket-arms C and extend forwardly beyond the outer circumference of the reel. To these arms is secured a plate N, which carries in its front two vertically-mounted rollers O. Between these rollers the end of the hose extends, and they serve to guide said hose in any direction that it may be pulled, thereby enabling the operator to walk with the hose to either side or even around to the back. By this guide I accomplish the desired result of directing the hose to any quarter without having to use a swinging reel, which would necessitate the employment of another rotary joint and other complications.

If found necessary, I may mount in the front plate N a horizontal roller *o*, upon which the hose may rest, and any wear thus prevented.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hose-reel, the combination of the bracket-arms for supporting the reel, one of said arms having a socket-bearing *c*, provided with an internal shoulder *c'*, the pipe G of the reel-axle, journaled in said socket-bearing, a loose bearing-ring H around the pipe G and seated against the shoulder *c'* of the bracket-arm socket-bearing, and a gland-nut I, connected with the water-pipe and screwed into the outer end of the socket-bearing and having an internal flange *i* bearing against the end of pipe G, substantially as herein described.

2. In a hose-reel, the combination of the bracket-arms for supporting the reel, one of said arms having a socket-bearing *c*, provided with an internal shoulder *c'*, the pipe G of the hose-reel axle, journaled in said socket-bearing and having an end flange *g*, the bearing-ring H, freely encircling the pipe G and seated against the internal shoulder of the socket-bearing *c*, the packing J between the end flange of pipe G and said bearing-ring, and the gland-nut I, connected with the water-pipe and adapted to be screwed into the socket-bearing, said nut having an internal flange *i* bearing against the flange of the pipe G, substantially as herein described.

3. In a hose-reel, the combination of the bracket-arms C, one of said arms having a socket-bearing *c*, with the internal shoulder *c'*, the piece E of the hose-reel axle, journaled in one of the bracket-arms, the pipe G of said axle journaled in the socket-bearing *c* of the other bracket-arm and having an end flange *g*, the coupling-piece F, let in between and secured to the piece E and pipe G, the bearing-ring H, encircling the pipe G and seated against the shoulder *c'* of the socket-bearing of the bracket-arm, the packing J, and the gland-nut I, seated in the socket-bearing and having an internal flange *i*, substantially as herein described.

4. In a hose-reel, the means for guiding the hose and supporting it when being unrolled, consisting of the plate N in front of the reel and carried by arms secured to the supporting-bracket, the separated vertical rollers O in the plate, between which the hose passes, and the horizontal roller in said plate upon which it rests, substantially as herein described.

In witness whereof I have hereunto set my hand.

ROCKWELL S. CHAPMAN.

Witnesses:
S. H. NOURSE,
H. C. LEE.