

No. 864,842.

PATENTED AUG. 27, 1907.

G. B. SMITH.
REEL FOR WIRE COILING MACHINES.
APPLICATION FILED DEC. 17, 1906.

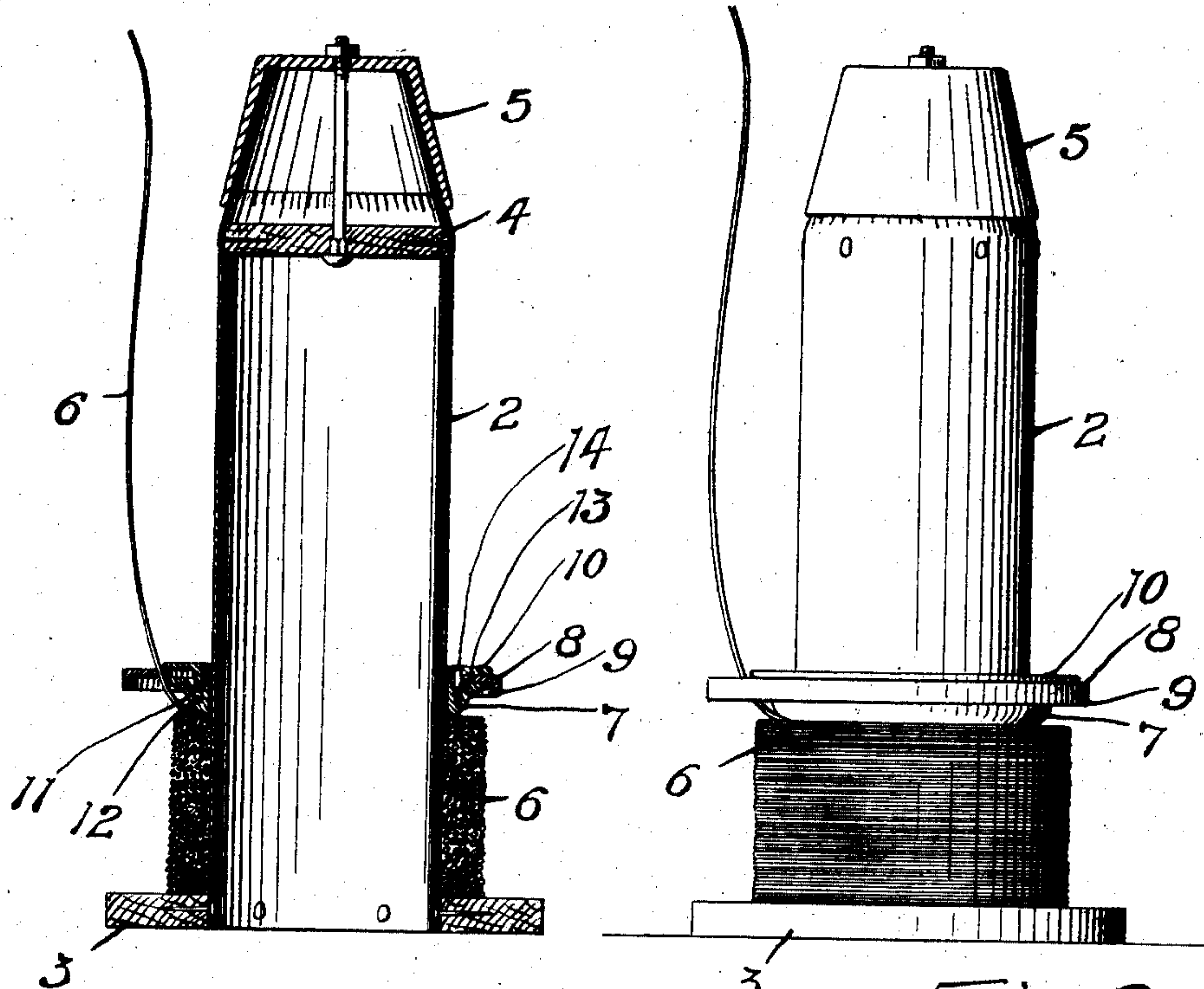


Fig 1.

Fig 2.

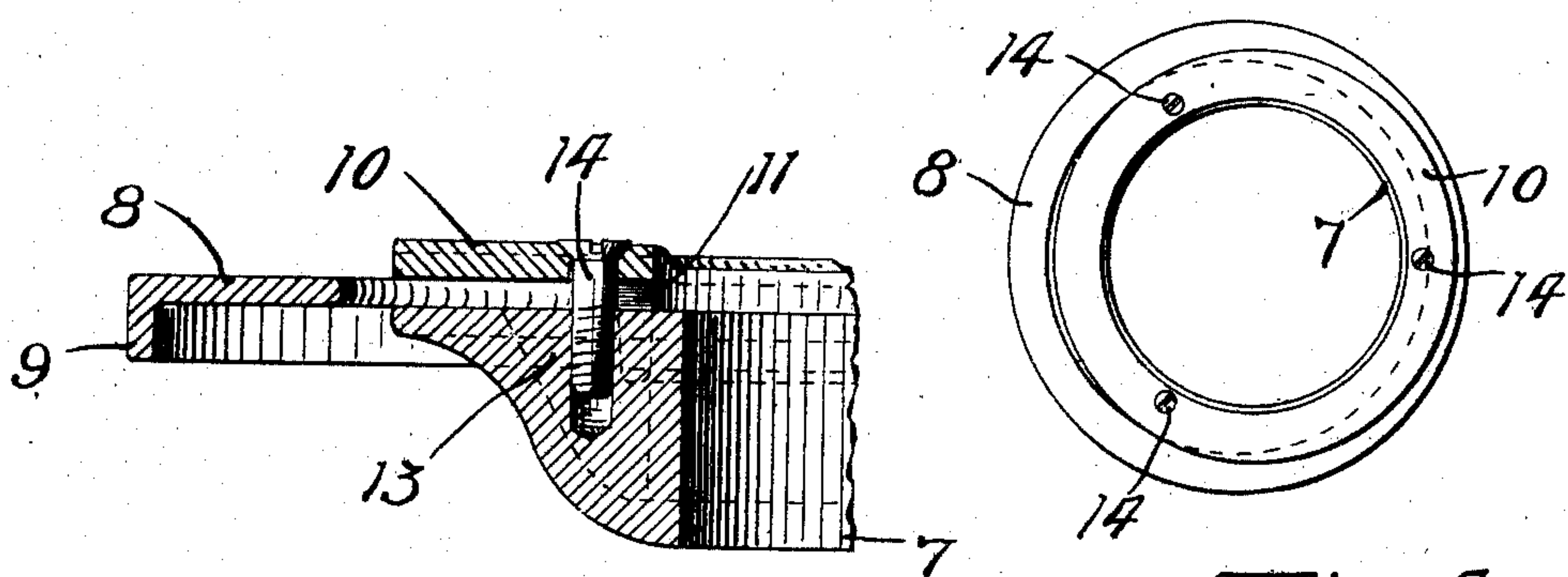


Fig 3.

Fig 4.

WITNESSES
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UNITED STATES PATENT OFFICE.

GARY B. SMITH, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO SMITH BEDDING COMPANY,
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REEL FOR WIRE-COILING MACHINES.

No. 864,342.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed December 17, 1906. Serial No. 348,139.

To all whom it may concern:

Be it known that I, GARY B. SMITH, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful Improvements in Reels for Wire-Coiling Machines, of which the following is a specification.

My invention relates to a reel or drum adapted to carry a coil of wire and from which the wire is uncoiled in the operation of the machine.

The object of my invention is to improve the reel or drum shown and described in Letters Patent of the United States, issued to me July 4, 1905, No. 793,688.

A further object is to provide a reel or spool with a feed regulating means which is not only adapted for wire coils but may be used for rope, cables, thread and the like.

The invention consists generally in regulating the frictional engagement or contact of the loose feed-regulating ring with the follower.

Further, the invention consists in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical sectional view of a reel or drum with my invention applied thereto. Fig. 2 is a side elevation of the same. Fig. 3 is a detail sectional view of the loose feed ring and follower showing the means for regulating the frictional contact between them. Fig. 4 is a plan view of the feed regulating device.

In the drawing, 2 represents the cylindrical core or drum of the reel having a base 3 and a head 4 at its upper end surmounted by a tapered cap 5. The wire 6 is coiled on the reel in the usual way, layer upon layer, and to regulate the uncoiling of the wire and prevent it from unreeling too fast and becoming twisted and snarled, I provide a follower 7, preferably of metal fitting loosely around the core of the reel and resting upon the wire by gravity. A ring 8 fits loosely upon the follower and is adapted to slide thereon toward or from the axis of the reel, the movement of the ring being planetary in its nature and without rotating about the reel. A depending flange 9 is provided at the periphery of the ring 8 to limit its movement and the wire 6 passes up between the follower and the inner edge of the ring and is held between them with sufficient tension to prevent the coils from unwinding prematurely or becoming bent or twisted. For the purpose of regulating this feed I provide a second ring 10 fitting loosely on the reel and having a flange 11 that depends within a recess 12 in the follower. At intervals the follower has webs 13 into which screws 14 pass from the ring 10 to permit the ring and follower

to be drawn together and press on the loose ring 8 to increase or decrease its frictional contact with the ring 10 and follower, and to regulate the feed of the wire. The ring 8 will slide horizontally back and forth between the follower and the ring 10 and any desired degree of tension on the wire may be obtained by the simple adjustment of the connecting means between the follower and the upper ring.

I have shown this invention used in connection with a reel or drum whereon wire is wound but it is equally applicable for regulating the feed of a rope, cord, cable, thread or wherever a flexible strand is uncoiled from a spool or drum and it is desirable to provide a means for regulating the feed.

I claim as my invention:—

1. A reel adapted to carry a coil of wire, a follower free to play up and down on said reel, a loose ring resting upon said follower and between which ring and follower the wire is uncoiled, and means for varying the frictional contact of said ring with said follower, whereby the tension on the wire as it is uncoiled is regulated.

2. A reel adapted to carry a coil of wire, a follower ring loosely mounted on the hub of said reel and resting by gravity upon the wire, a flat ring having a sliding engagement with the top of said follower and having a planetary movement on said reel and between which ring and follower the wire is uncoiled, and means for increasing or decreasing the friction between said ring and follower, for the purpose specified.

3. A reel adapted to carry a coil of wire, a follower loosely mounted on the hub of said reel, a ring resting upon said follower and between which ring and follower the wire is uncoiled, said ring having a planetary action with respect to the hub of said reel, and a second ring resting upon said first named ring and adjustably connected with said follower, substantially as described.

4. A reel adapted to carry a coil of wire, a follower loosely mounted on said reel, a loose ring resting upon said follower and having a planetary movement with respect to the hub of said reel, a strand of wire as it is uncoiled passing between said follower and said ring, a second ring resting upon said first named ring, and adjusting screws connecting said second ring with said follower, and whereby the frictional contact between said first named ring and said follower and said second named ring may be increased or decreased, substantially as described.

5. A reel or drum having a core, a follower adapted to play up and down on said core, a loose ring resting upon said follower, and between which ring and follower the material on the core is uncoiled, and means for varying the frictional contact of said ring with said follower, whereby the tension on the said material as it is uncoiled is regulated, substantially as described.

In witness whereof, I have hereunto set my hand this 15th day of December 1906.

GARY B. SMITH.

Witnesses:

RICHARD PAUL,
J. B. ERA.