

No. 654,415.

Patented July 24, 1900.

M. RINN.
FIRE ESCAPE.

(Application filed Nov. 8, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

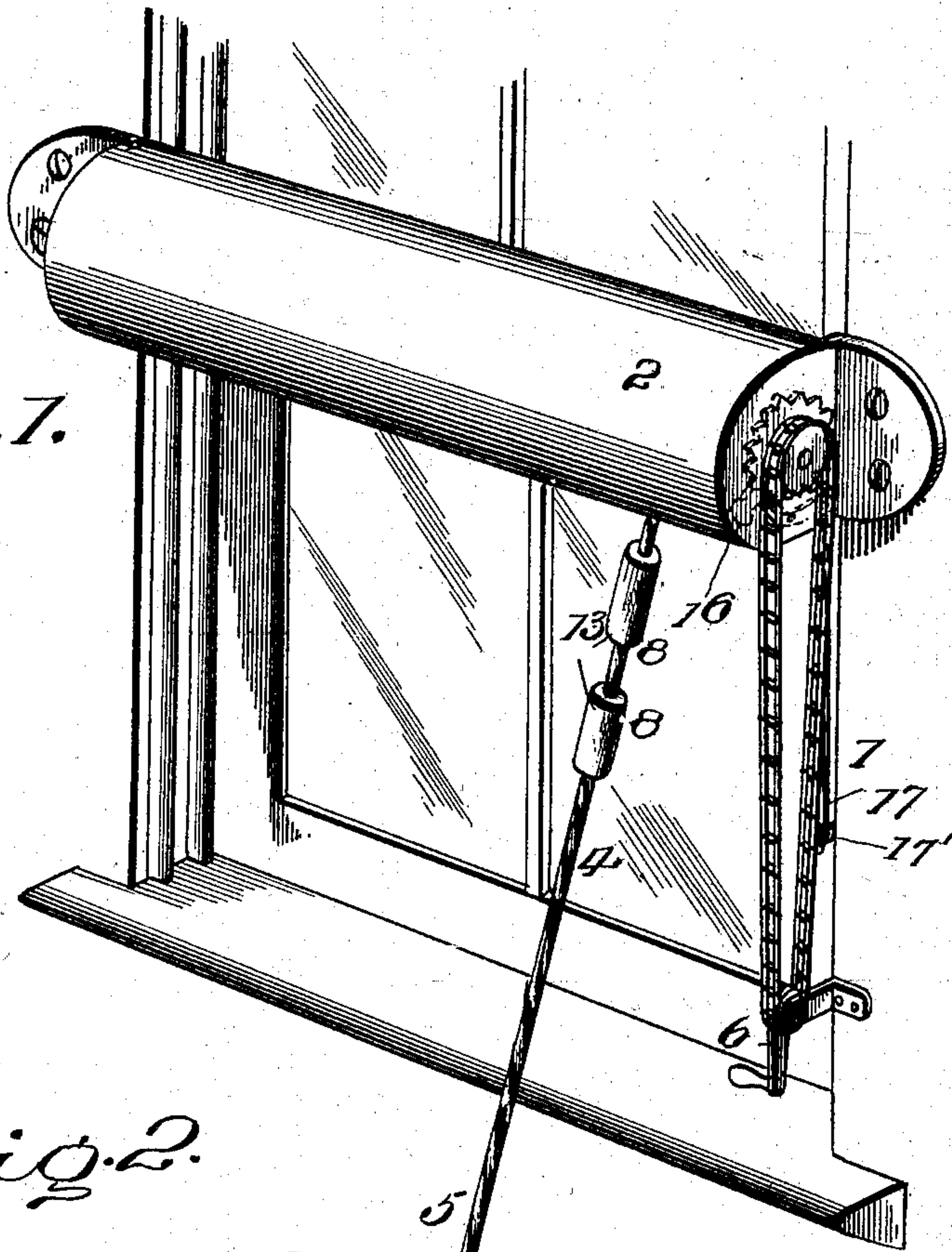


Fig. 2.

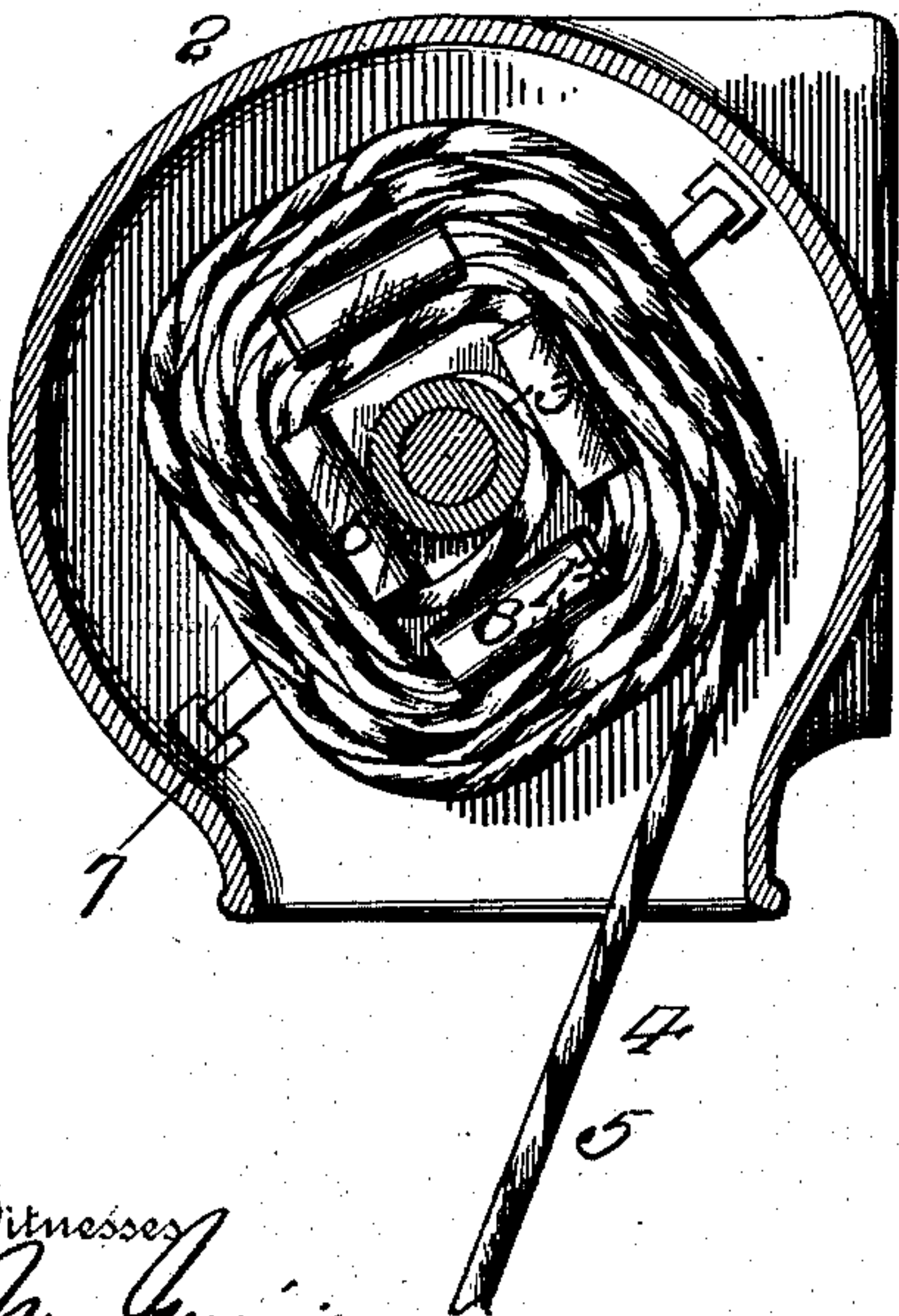
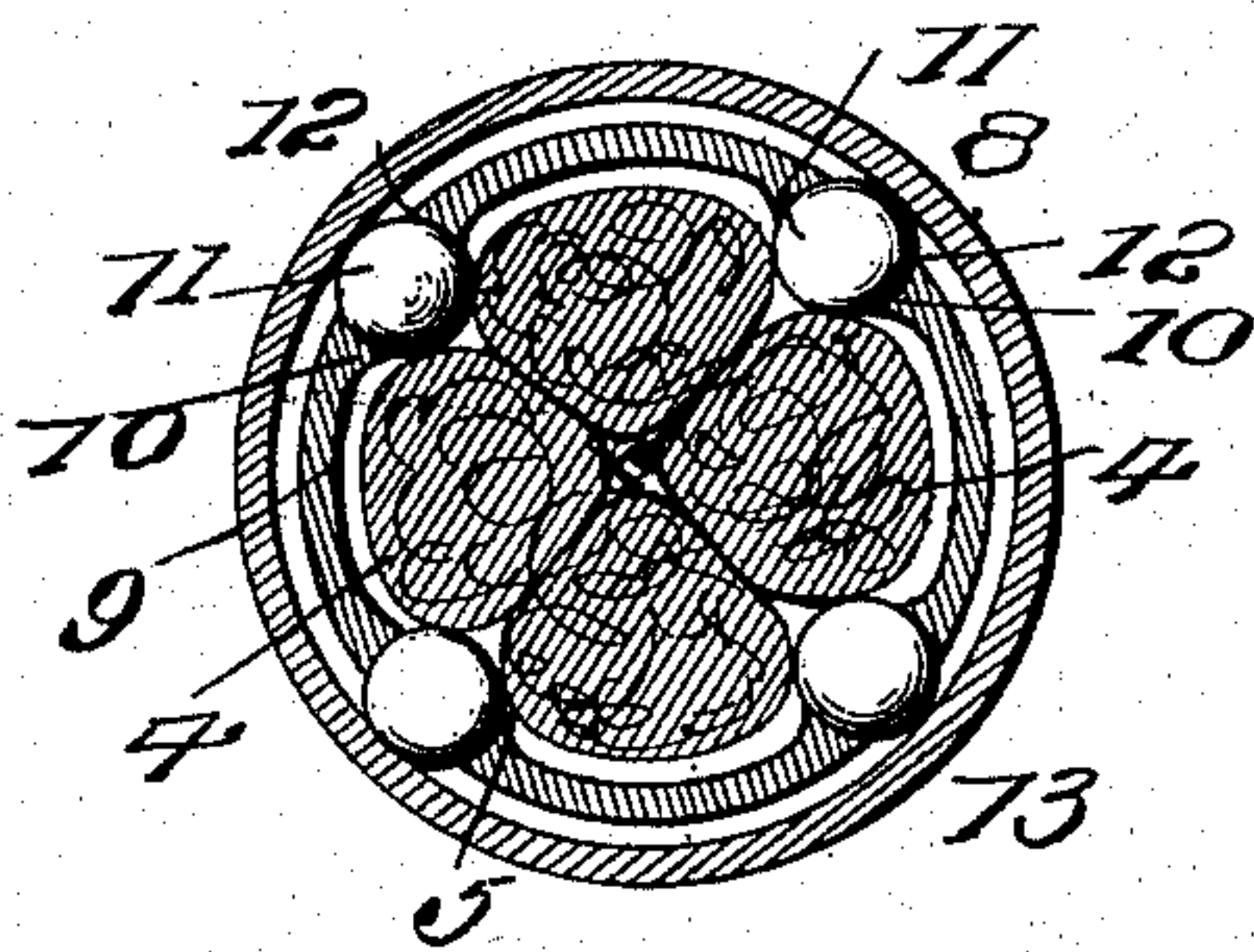


Fig. 3.



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No. 654,415.

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M. RINN.
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(No Model.)

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2 Sheets—Sheet 2.

Fig. 4.

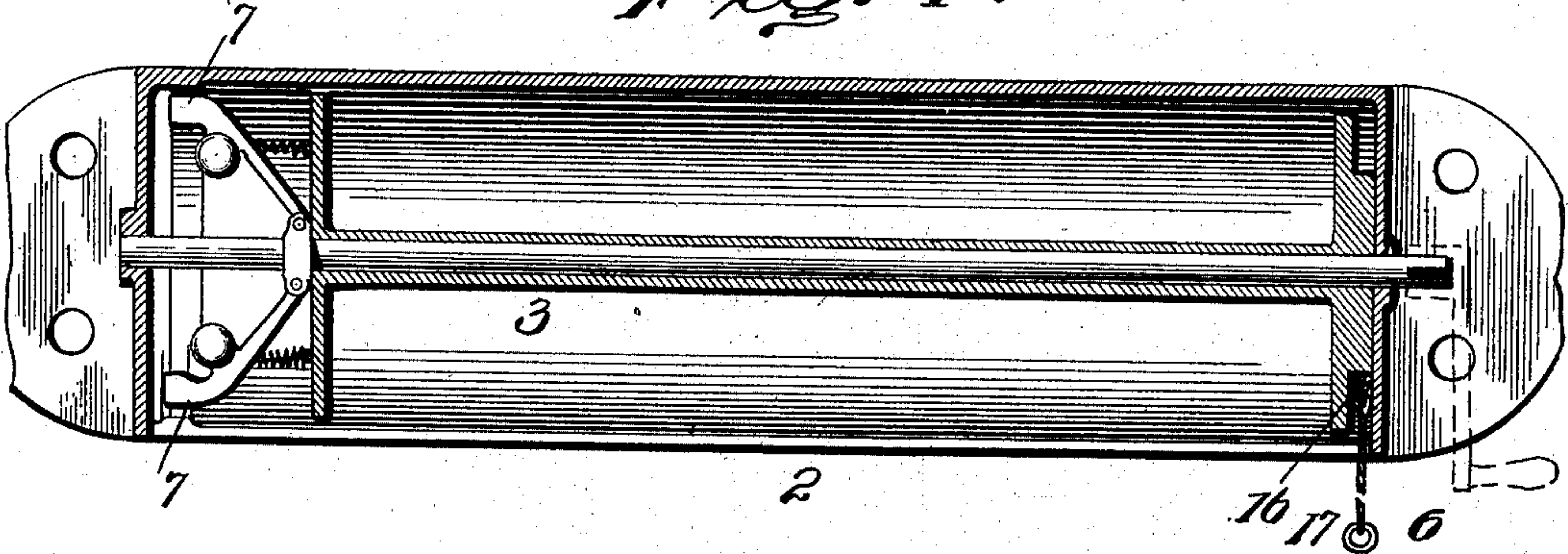


Fig. 5.

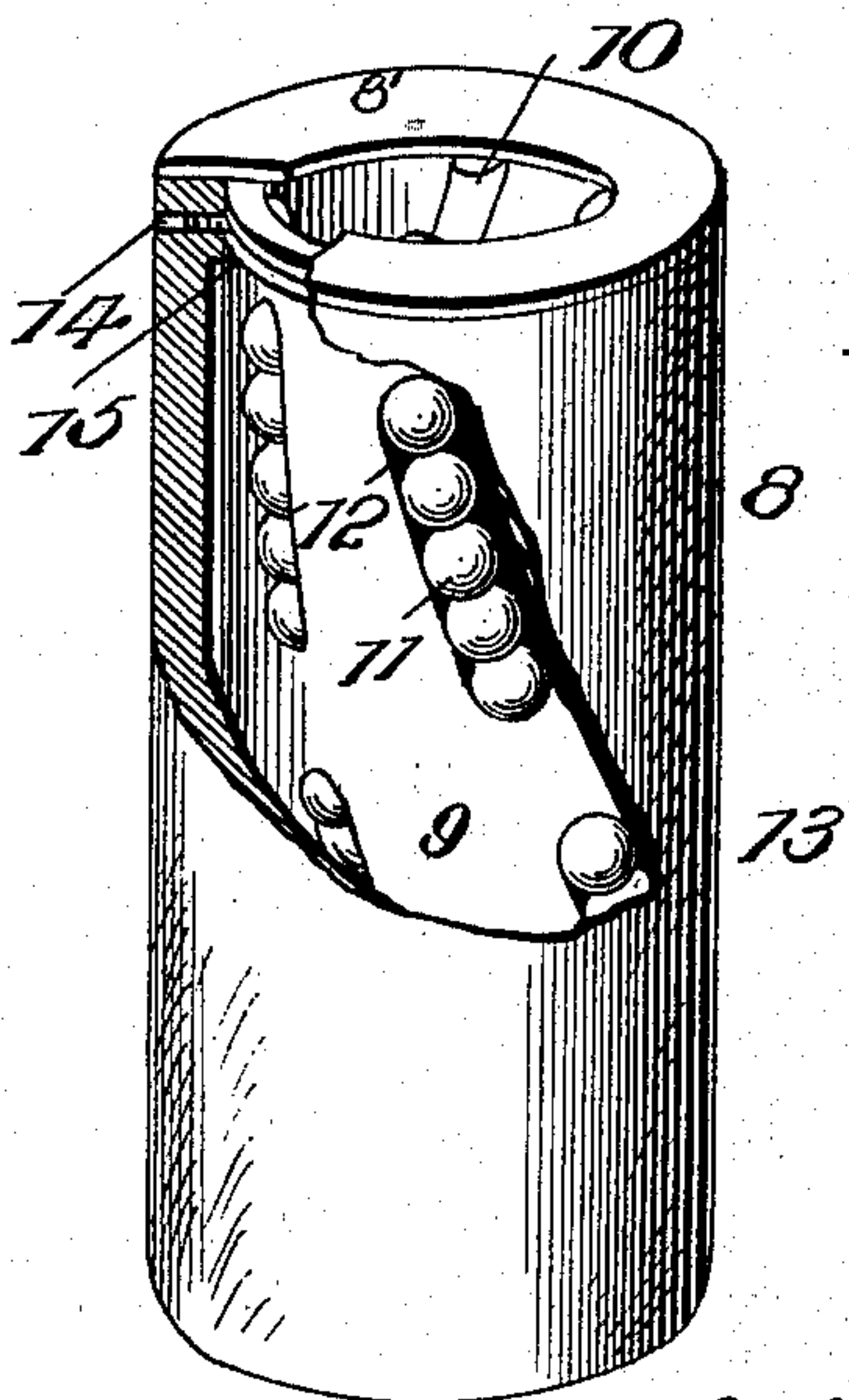


Fig. 6.

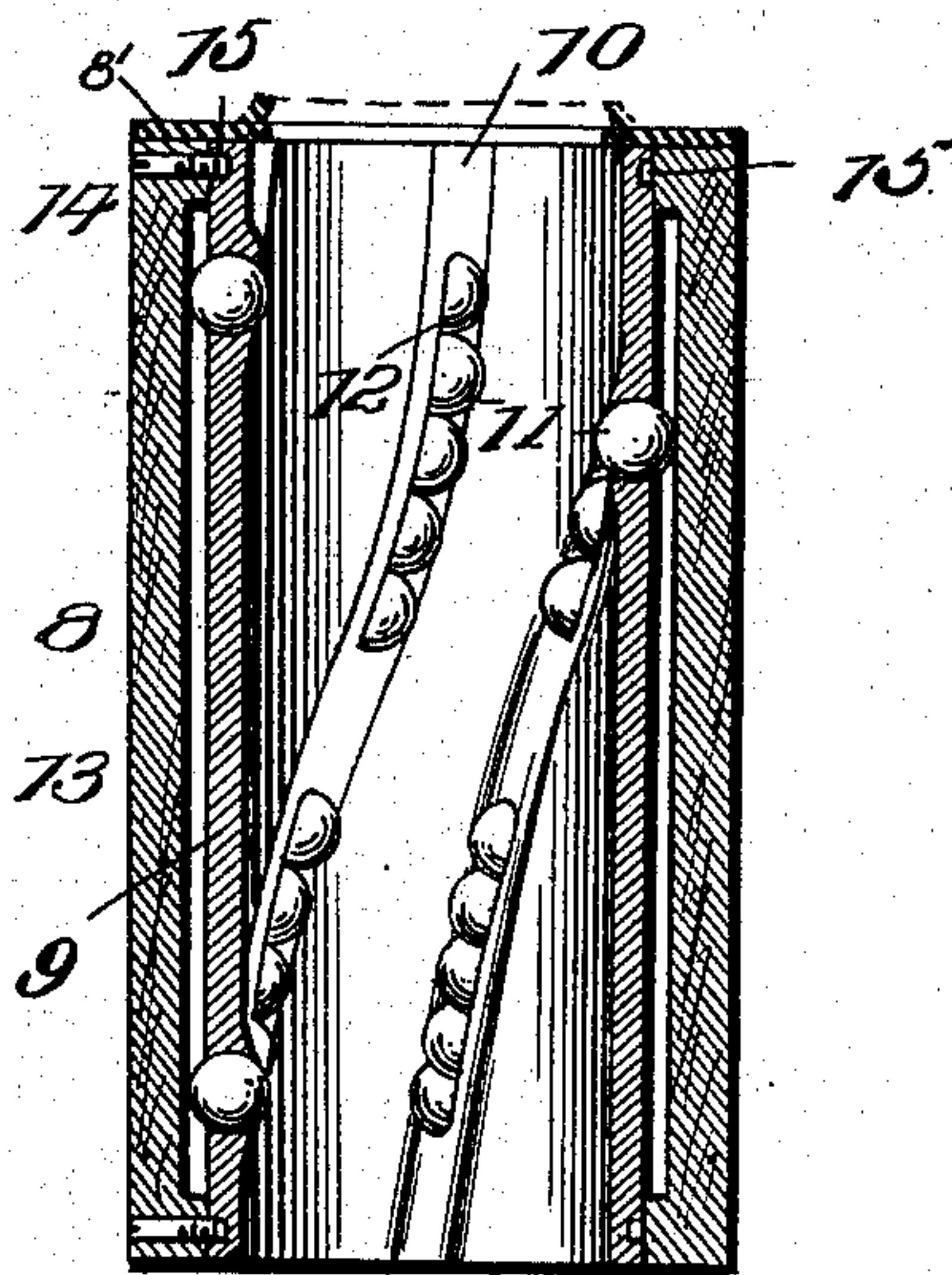


Fig. 7.

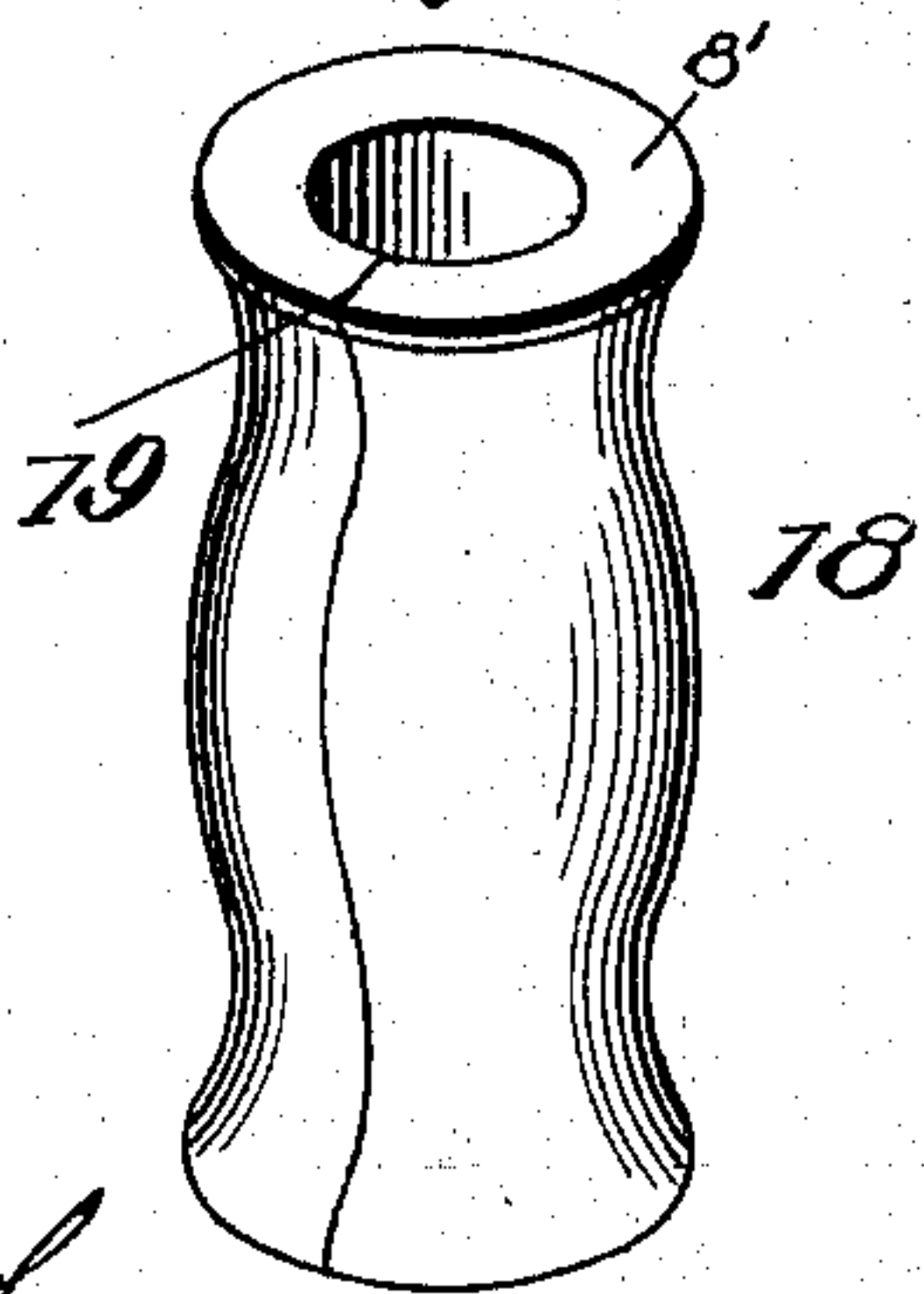
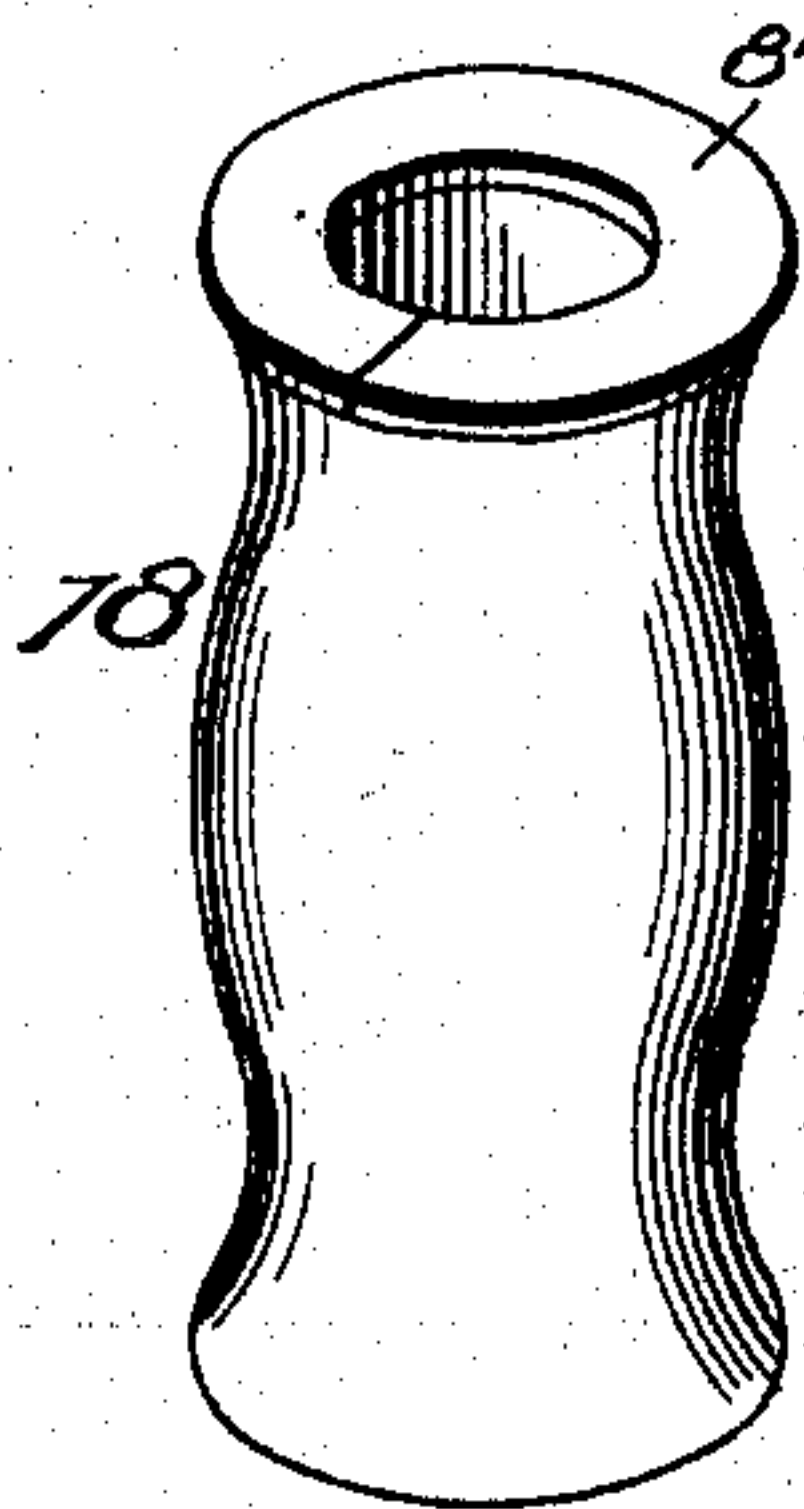


Fig. 8.



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UNITED STATES PATENT OFFICE.

MARY RINN, OF CHICAGO, ILLINOIS.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 654,415, dated July 24, 1900.

Application filed November 6, 1899. Serial No. 735,988. (No model.)

To all whom it may concern:

Be it known that I, MARY RINN, a resident of No. 1299 West North avenue, Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Fire-Escapes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it
10 pertains to make and use the same.

The invention relates to fire-escapes, and has for its object to produce simple and efficient means whereby a person may descend from a height with comparative safety.

15 The invention consists in the construction hereinafter described and pointed out.

In the accompanying drawings, Figure 1 is a perspective of the improved device applied to a window. Fig. 2 is a transverse section of a reel and case. Fig. 3 is a transverse section of a rope and slipping handle. Fig. 4 is a longitudinal section of the reel-case, showing an automatic brake and a handle-releasing cord. Fig. 5 is a broken elevation of a handle.
20 Fig. 6 is a longitudinal section of a handle. Figs. 7 and 8 are perspectives of modified handles.

Numeral 1 denotes a window.

2 indicates a case or housing for a reel, and
30 3 denotes the reel. Said reel-case is represented as fixed to the wall of the house on its exterior; but obviously it is capable of being fixed in the interior.

4 denotes a rope, preferably of non-com-
35 bustible material and comprising a plurality of well-marked strands 5, substantially as represented. The rope is secured to and wound upon the reel in any usual or suitable manner and is intended to be kept in readiness to be unwound either by suitably turning a reel-handle 6 or by the weight of a person grasping the loose end of the rope. In the latter case the action of the reel may be controlled by a brake or brakes 7, automatically operated by the descent of the person grasping the rope and causing an increase of friction in proportion to its speed. Obviously the uncoiling of the rope can be controlled by the handle of the reel by a person suitably
45 manipulating it within the building, and the rope can thus be lowered either with or with-

out the weight of another person depending from it.

8 denotes handles composed of two sections. The inner section 9 surrounds the rope contiguous thereto and has interior spiral ribs 10, similar in form to the convolutions of the rope strands and fitting between them, as shown.

11 denote antifriction-balls situated in the ribs and projecting through the handle-section in both directions, so as to follow the spiral grooves 12 in the rope and so as to be in contact with the exterior handle-section 13. The said handle-section 13 is made of compressible non-combustible material and connected loosely to the inner section by projections, pins, or ribs 14 entering suitable grooves 15 in the handle-section 9. The construction is such that when the handle is slipped endwise the rope the inner handle-section is compelled to follow the spiral grooves along the strands and rotate within the outer section. Said outer section may be made in part or entirely of asbestos or prepared fibrous non-combustible material. If made of combustible fiber, it can be chemically treated to render it incombustible, as also may be the rope.

As the handle-covering is compressible, it affords means for varying the friction between the two handle-sections, whereby the descent of the person grasping the handles can be varied without injury to the hands. The speed of descent is normally reduced by the nature of the connection between the handle and rope which compels the inner handle-section to travel around the rope. The rapidity of the descent of the person using the device when not positively regulated by means of the reel-handle is further controlled by the automatic brake. When the handles are used, they automatically reduce the speed and also provide means for voluntarily checking it. In practice handles will be situated on the rope within the reel-case and near the point of attachment of the rope to the reel. To insure that a plurality of handles may be kept in proper situation for immediate use, a holding-pawl 16 is provided which can be lifted by a cord 17 to allow the reel to be partially rotated to release a pair of handles, said pawls
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95
100

automatically engaging the reel to hold it until it is desired to release other handles. The cord can be secured at will to the casing at 17'.

- In some cases compressible rubber handles 5 18 may be employed. These may be open, as indicated at 19, whereby they can be attached at will to the rope. They can be kept protected in the reel-case and applied to the rope for use in an emergency. They prevent injury to the hands and afford a means of regulating the speed of descent. They can also be made entire and threaded upon the rope and released by the use of a pawl 16, as set forth. An open or split handle of compressible elastic material is indicated in Fig. 7, and a like 15 handle that is not split in Fig. 8. In these and other figures 8' denotes an elastic washer with an opening of less diameter than the rope to prevent free slipping of the same.
- 20 I am aware that fire-escapes comprising a reel and rope are not new. My improvement is characterized, in addition to particular features of construction elsewhere pointed out, by a combination for holding in reserve 25 a part of the rope, with handles strung thereon and wound upon the reel, whereby the handles are kept in readiness to be used in successive pairs.

Having thus described my invention, what I claim is—

1. The combination of the rope and a handle, said handle comprising a rotatable and a non-rotatable section. 30

2. The combination of the rope and handles each composed of an inner rotatable and an 35 outer non-rotatable section and antifriction-balls bearing both on the rope and on the outer section.

3. The combination of the reel, the rope having its upper end wound on the reel, the 40 handles wound on the reel with the rope end, a pawl whereby the reel is held with a part of the rope-carrying handles and whereby the handles may be successively released and the reel and rope with remaining handles held in 45 reserve, elastic washers fixed to the handles and of less diameter than the rope and closely embracing the same to prevent slipping when the handles are released.

In testimony whereof I have signed this 50 specification in the presence of two subscribing witnesses.

MARY RINN.

Witnesses:

CHARLES VISEBY,
FANNIE SANDNER.