

243. PNEUMATIC DESPATCH
Carrier, 6 in. dia.
End opening.

REGISTERED

No. 842,419.

PATENTED JAN. 29, 1907.

J. S. PALMER.
CARRIER FOR PNEUMATIC DESPATCH TUBE APPARATUS.

APPLICATION FILED FEB. 28, 1906.

2 SHEETS—SHEET 1.

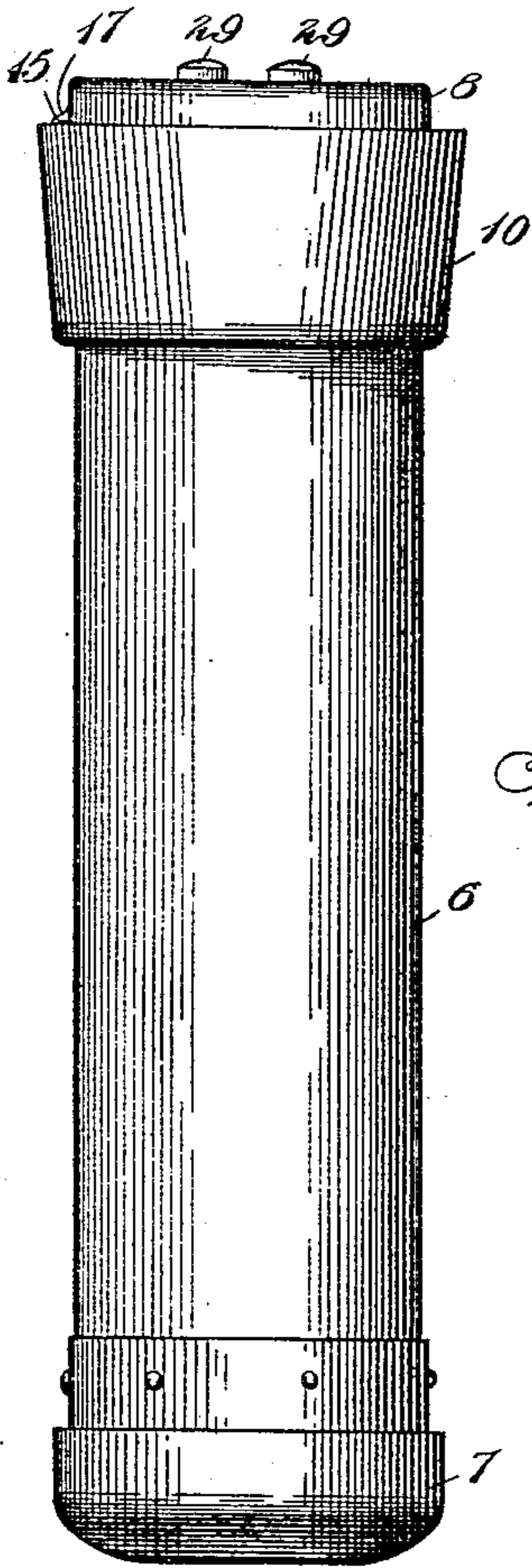


Fig. 1.

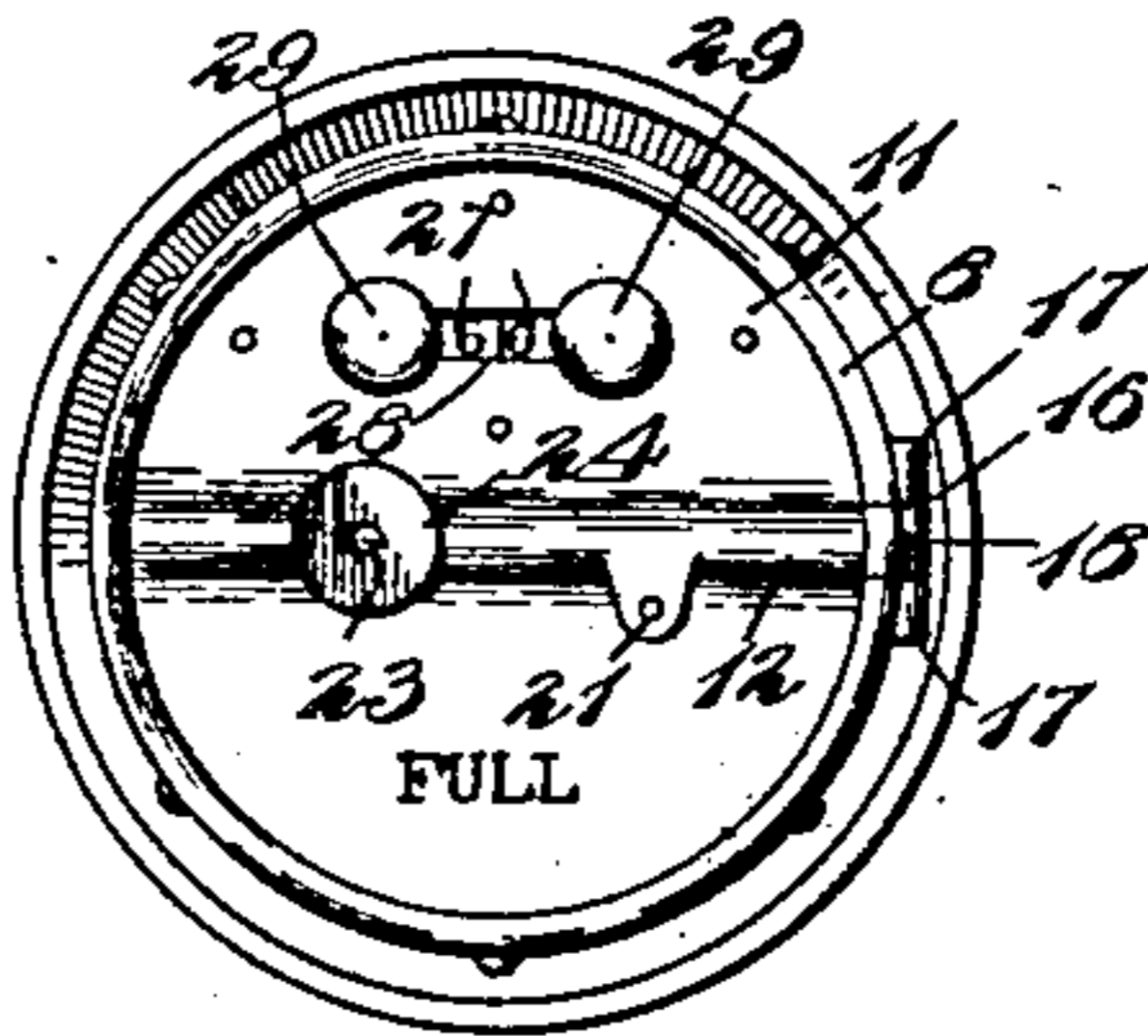


Fig. 3.

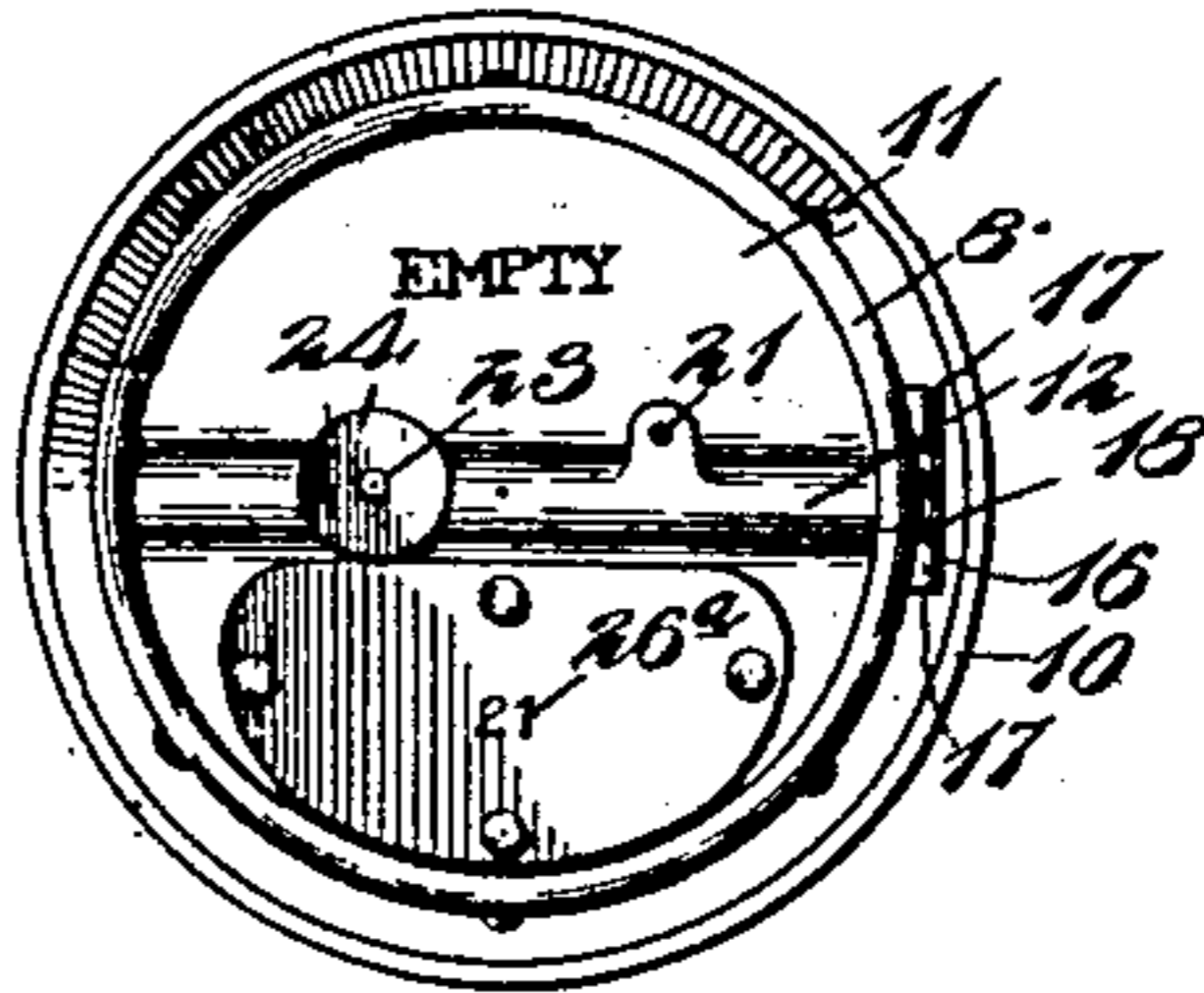


Fig. 4.

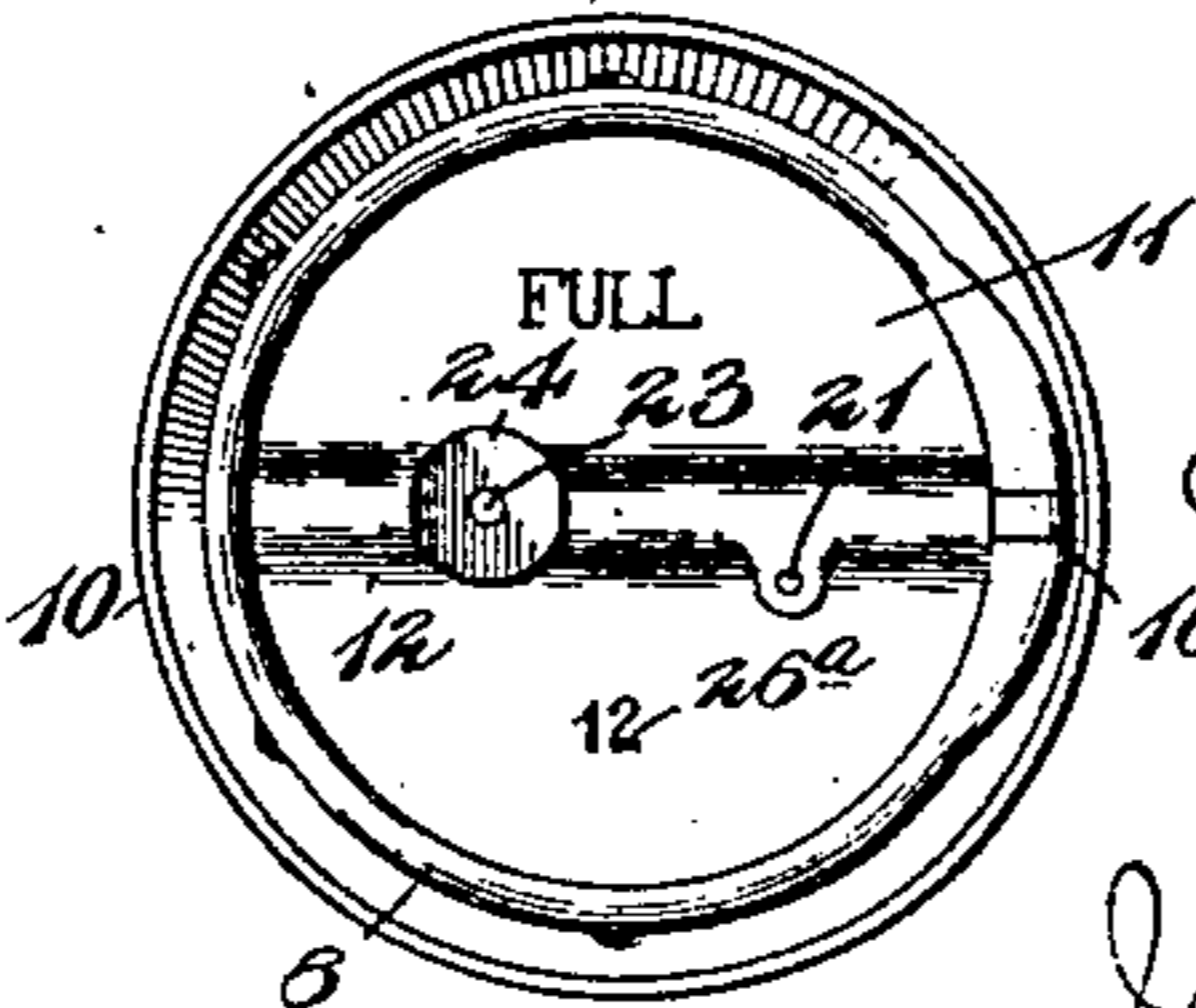


Fig. 7.

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2 SHEETS—SHEET 2.

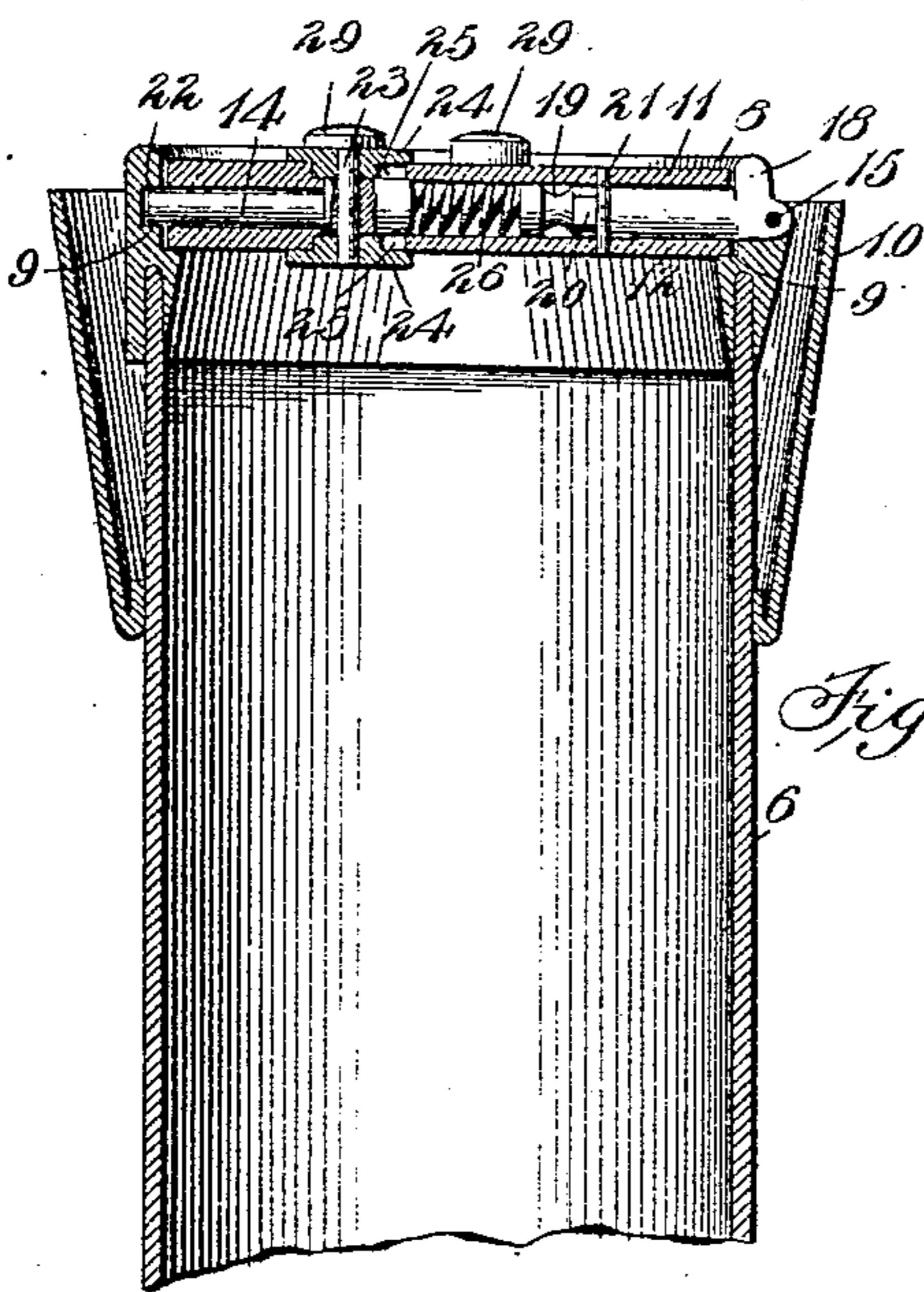


Fig. 2.

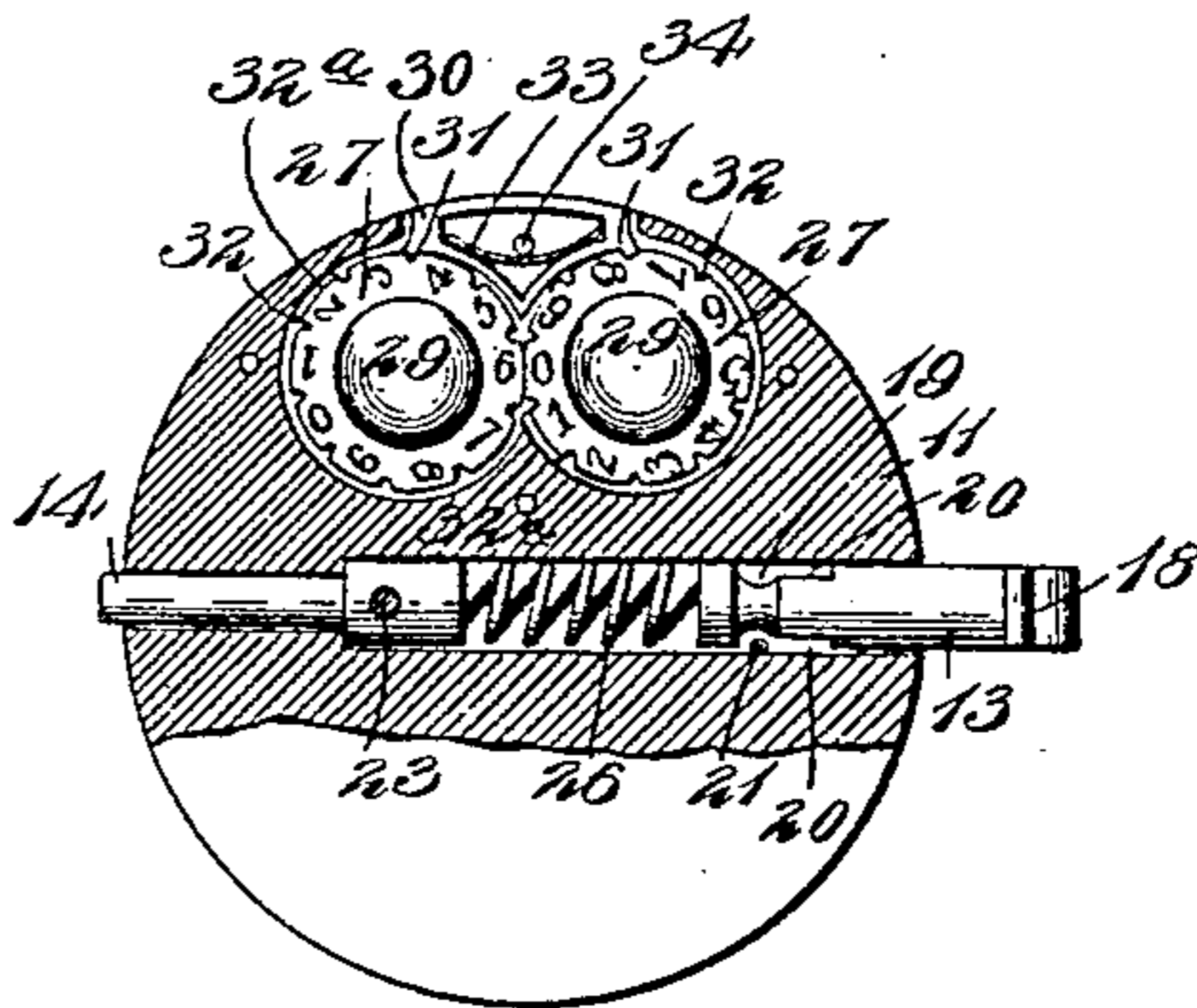


Fig. 5.

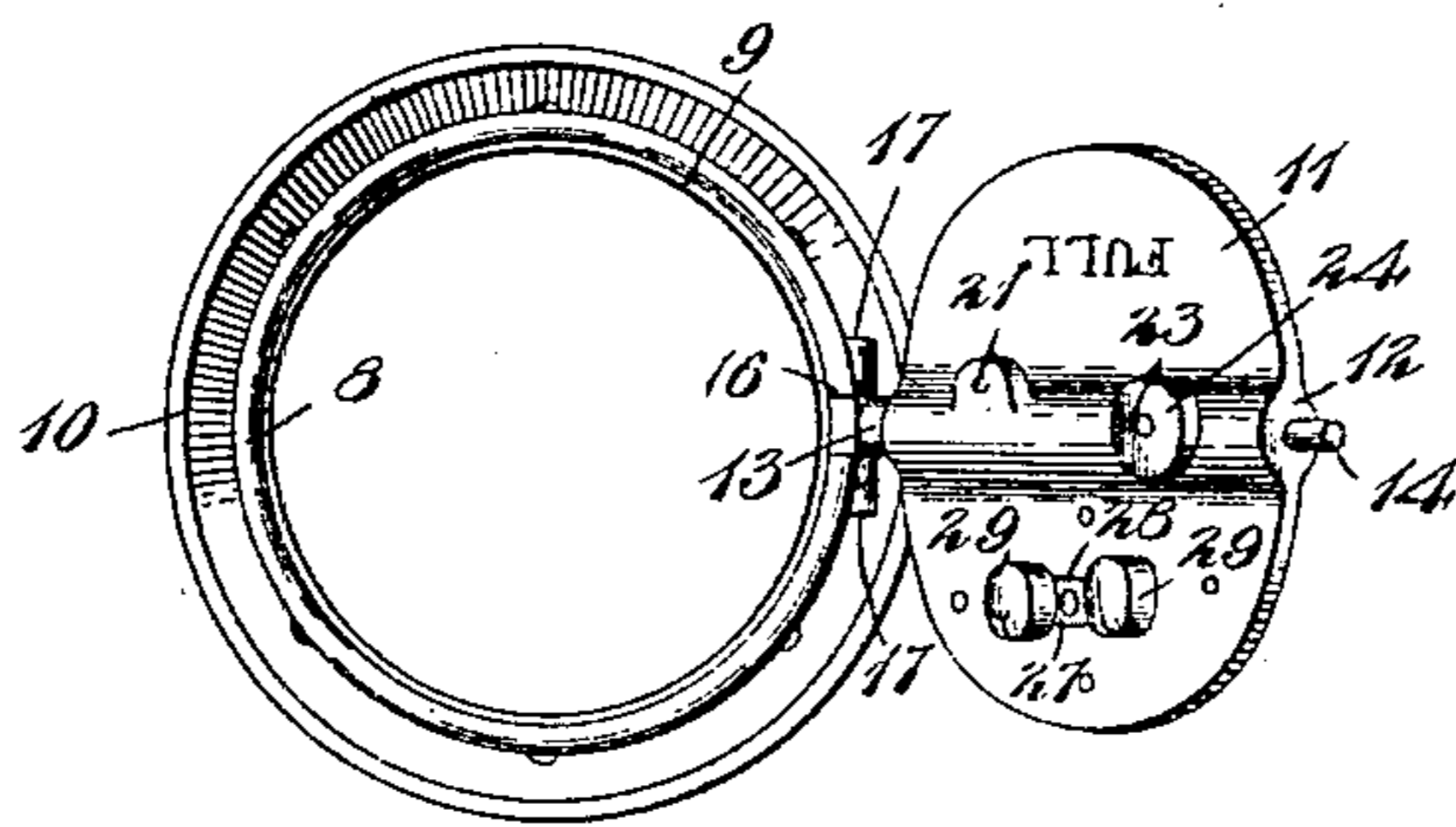


Fig. 6.

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CARRIER FOR PNEUMATIC-DESPATCH-TUBE APPARATUS.

No. 842,419.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed February 28, 1906. Serial No. 303,450.

To all whom it may concern:

Be it known that I, JOHN S. PALMER, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Carriers for Pneumatic-Despatch-Tube Apparatus, of which the following is a specification.

This invention relates to a carrier for pneumatic-despatch-tube apparatus.

The object of the invention is to provide a carrier with improved means for insuring the transmission of the same in the tube.

A further object is to provide an improved cover for the carrier characterized particularly by the fact that it may be rotated on its hinge so as to expose either side thereof, one side being marked "Full" and the other side being marked "Empty," so as to indicate whether or not the carrier contains anything.

A further object of the invention is to provide an improved hinge and latch for the cover.

A further object is to provide an improved indicator on the cover to show the destination of the carrier.

With these and other objects in view the invention is hereinafter described and claimed and is illustrated in the accompanying drawings.

In the drawings, Figure 1 is a side elevation of the carrier. Fig. 2 is a central longitudinal section. Fig. 3 is a rear end view showing the cover in one position. Fig. 4 is a similar view showing the cover reversed. Fig. 5 is a plan view with the upper part of the cover removed, showing the indicating and locking mechanism. Fig. 6 is an end view with the cover swung open. Fig. 7 is an end view of a modification in which the settable indicator is not used, the cover being provided with a fixed indicator for direct service.

Referring specifically to the drawings, 6 indicates the cylindrical body or casing of the carrier, provided at its head or front end with a buffer 7 and at its rear end with a door or hinged cover, to be hereinafter described. The door fits within a metal rim 8, which has an internal shoulder 9, upon which the door rests when closed. At its rear end the carrier has a skirt 10 around the same. This is attached to the body of the carrier at

its front edge and is free to flare at its rear edge, so that the air-pressure will expand it against the sides of the transmission-tube and force the carrier along therein.

The cover consists of a plate 11, preferably made of metal and of proper size and shape to fit closely within the rim 8. It has a diametrical bore or cored recess within the boss 12, containing a round hinge-bolt 13 and a latch-bolt 14. The hinge-bolt is pivoted at its outer end by a pintle 15 in a notch 16 in the rim between knuckles 17 on opposite sides of the notch, and the bolt has a lateral projection 18, which stops against the rim at the bottom of the notch to limit the swing open of the lid. At its inner end the hinge-bolt has a circular groove 19 and on opposite sides thereof is flattened or cut away, as at 20. A pin 21 extends through the cover at one side of the hinge-bolt, and when the cover is closed lies against one of the flat surfaces 20. When the cover is open, the pin is opposite the groove 19.

The latch-bolt 14 is slidable in and out and when advanced engages at its outer end in a notch 22, made in the rim to receive it. At its inner end it is connected by a cross-pin 23 to buttons 24 on opposite surfaces of the lid. The pin 23 works in slots 25 in the cover.

26 indicates a coiled spring located in the bore between the inner ends of the hinge-bolt 13 and the latch-bolt 14. It has two functions. It tends to force out the latch-pin 14, and it also tends to lift or advance the cover along the hinge-bolt. The cover is rotatable on the hinge-bolt, so it may be turned to expose either side. It is also movable lengthwise on the hinge-bolt to the extent permitted by the pin 21. When in closed position, the cover is shoved in or down toward the pivot of the hinge, the pin 21 sliding along into one of the spaces 20. When the cover is unlatched and lifted, the spring immediately forces it outwardly, the pin 21 sliding along until it reaches the notch 19, where it stops against the far side of the notch. This action lifts or projects the cover out of engagement with the rim 8, as shown in Fig. 6, permitting the cover to be turned on the hinge-bolt. The pin 21 turns in the groove 19, and when the cover is reversed it may be again closed by pressing in or down thereon, at which time the pin 21 enters the space 20 on the opposite side of the hinge-bolt, the latch 14 being re-

tracted to allow the cover to close. These actions take place by one movement or manipulation of the button 24. When the button is pushed to close the door, its first action is to retract the latch. Continued pressure causes the sliding movement inwardly of the cover on the hinge-bolt until it is opposite its seat in the rim, when it will drop within the rim, and release of the button allows the catch to engage its notch. It will be noticed that when the cover is open the pin 21 is opposite the groove 19, and hence although the cover may be rotated on the bolt 13 it cannot be closed until it is in proper position—that is, with the pin 21 opposite one of the truncations 20—nor can it close accidentally, because should it fall to unintentionally it will strike upon the outside of the rim and be held there in consequence of its being extended out of position or off center by the spring 26. One movement or snap of the button 24 will both retract the latch and open or close the cover, the action being practically very quickly performed.

One side of the cover is marked "Full" and the other "Empty." On the "Empty" side is a number or mark (indicated at 26^a) to tell the home station of the carrier, so that when the "Empty" side is exposed the operator by a glance at the number will be able to despatch the carrier to such station without further examination. When the side marked "Full" is exposed, the destination, primarily at least, is the central station. It is frequently desirable in pneumatic-tube systems to send papers or other matter from one station to another. For this purpose an indicator is provided, which may be set at the sending-station to indicate the receiving-station, so that when the carrier comes to "central" the operator may, by inspection of the indicator, transfer and despatch the carrier to the receiving-station without opening the same for examination of its contents. The indicator referred to consists of two dials 27, provided with numbers which may be exposed through a slot 28 in the "Full" side of the cover. These dials are located in a recess in the body of the cover and are turned by means of finger-pieces 29. To hold the dials as set, a lock therefor is provided consisting of a U-shaped piece 30, of flat thin metal, which is located in a recess in the cover communicating with the recess containing the dial. The recess containing the piece 30 opens at the edge of the cover, so that the outer edge of said piece is normally flush with the outer edge of the cover. The ends 31 of the U-shaped piece engage in notches 32 in the dials, and the piece is normally held in engagement therewith by a spring 33, bent in tension over a stud 34. When the cover is closed, the outer edge of the piece 30 is against the rim. Conse-

quently it cannot move or yield to allow the ends 31 to slip out of the notches 32. Hence the indicator cannot be changed until the cover is opened. Then the dials may be turned, because the piece 30 can yield outwardly, allowing the ends 31 to slip out of the notches.

The construction shown affords means for the rapid and convenient transportation and interchange of carriers in a pneumatic system with small chance of confusion or mistake. The cover cannot be closed or opened accidentally, and the necessary indications are all on the cover where they may be readily seen when the cover is opened or closed.

To prevent any station detaining carriers or successfully using any carriers other than its own, means are provided for preventing the indicator being set for the home station. These means consist of a lug 32^a on each indicating-wheel 27. These lugs are located at the numbers corresponding to the number 26^a of the home station and by their contact act as stops to prevent turn of the indicating-wheels and to prevent said wheels being set at the number of the home station. For example: Assuming that 21 is the home station and is sending papers to station 60. The attendant at 60 may know of matter in course of preparation to be sent to station 21 and may be tempted to hold the carrier for the time being. This is prevented, however, by the lugs referred to, which prevent the indicator being set at "21." Consequently the carrier must be returned empty, and the accumulation of carriers at any station not belonging thereto is prevented. The settable indicator may, if desired, be omitted, as shown in Fig. 7, and the destination simply marked on the "Full" face of the cover, as by number or by any letter, word, or color, the home station of the carrier being similarly indicated by a mark on the "Empty" side of the cover.

In addition to its function above mentioned the skirt 10 serves to cover the metallic parts at the rear end of the casing and so protect the same from injury in transmission and also protects the tubes of the system.

I claim—

1. The combination with a carrier-shell, of a lid fitting the end of the same, and a hinge connecting the shell and lid, the lid being movable outwardly on the hinge when open, so that it will not close except by manipulation.

2. The combination with a carrier-shell having a seat in the end thereof, of a lid hinged to the end of the shell and adapted to close within the same upon said seat, and means to move the lid out of register with the seat when open to prevent closure of the lid except by manipulation.

3. The combination with a carrier-shell, of a lid for the end thereof having a diametrical bore, a hinge connecting the shell and lid and

having a round member extending into one end of said bore, on which the lid is rotatable, and a latch-bolt slidable in the other end of said bore and arranged to engage the shell, to hold the lid closed.

4. The combination with a carrier-shell, of a lid fitting the end thereof and having a diametrical bore, and a hinge connecting the shell and lid and having a rod or bolt extending into the bore, the lid being rotatable and also movable in and out on said rod and having a projection extending into said bore, and the rod having a circumferential groove and recesses on opposite sides, into which said projection extends.

5. The combination with a carrier-shell, of a lid having a diametrical bore, a hinge connecting the shell and lid and having a rod extending into said bore, on which rod the lid is reversible to expose either side and also slidable to a limited extent, a latch having a bolt in the bore and finger-pieces accessible from both sides of the lid, and a spring in the bore between the inner ends of the latch-bolt and hinge-rod.

6. The combination with a carrier-shell, of a hinge attached thereto one member of which consists of a circular rod or bolt, and a

lid rotatable on said rod and also movable lengthwise thereon to a limited extent.

7. In a pneumatic-despatch system, a carrier having thereon an indicator changeable to indicate various stations of the system, and means to prevent the indicator being set to indicate a particular station thereof.

8. A lid for carriers having a changeable indicator thereon, and means to prevent change thereof when the lid is closed.

9. The combination with a carrier-shell having a lid which fits when closed within the end of the shell, of an indicator having a dial set in a recess in the lid, and a latch which engages the dial and is movable in a recess at the edge of the lid, the rear edge of the latch, when the dial is moved, projecting beyond the edge of the lid, so that movement of the latch and dial is prevented when the lid is closed.

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

JOHN S. PALMER.

Witnesses:

H. G. BATCHELOR,
WM. THEO. ABEL.