

No. 682,408.

Patented Sept. 10, 1901.

H. W. FORSLUND.
CARRIER FOR PNEUMATIC DESPATCH TUBES.

(Application filed Sept. 15, 1899.)

(No Model.)

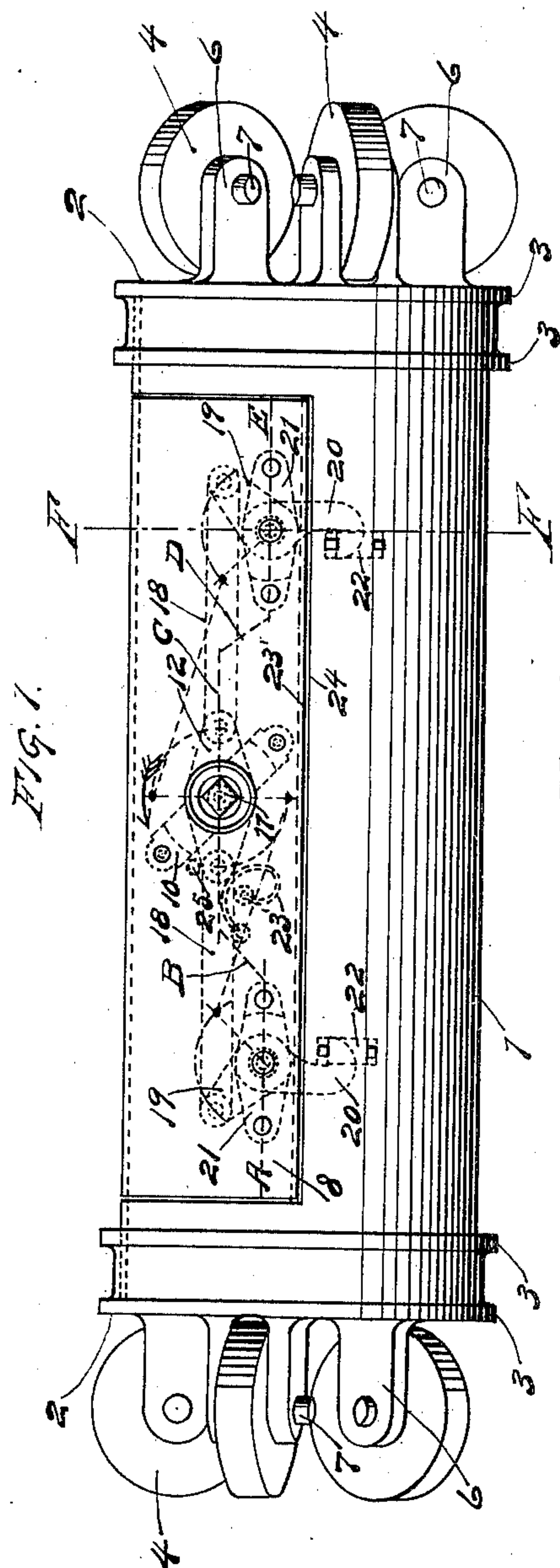


FIG. 2.

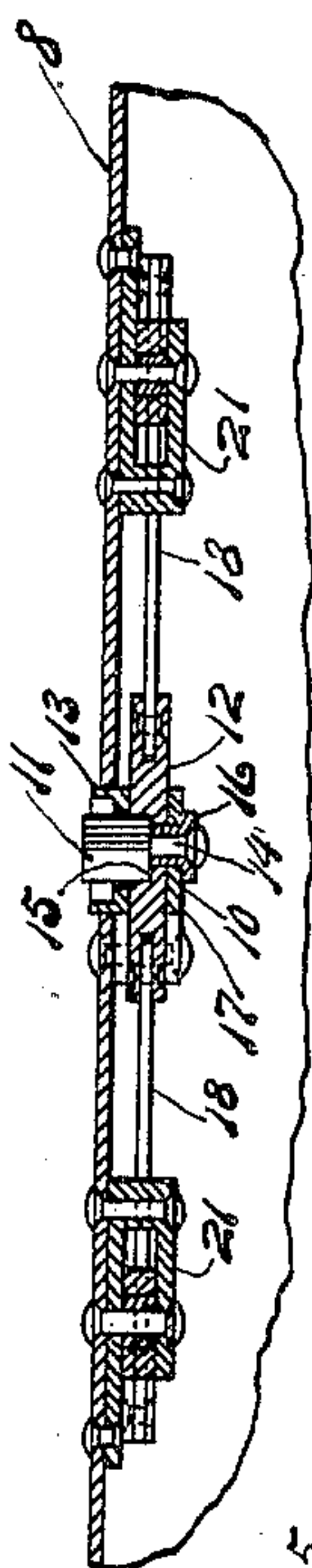
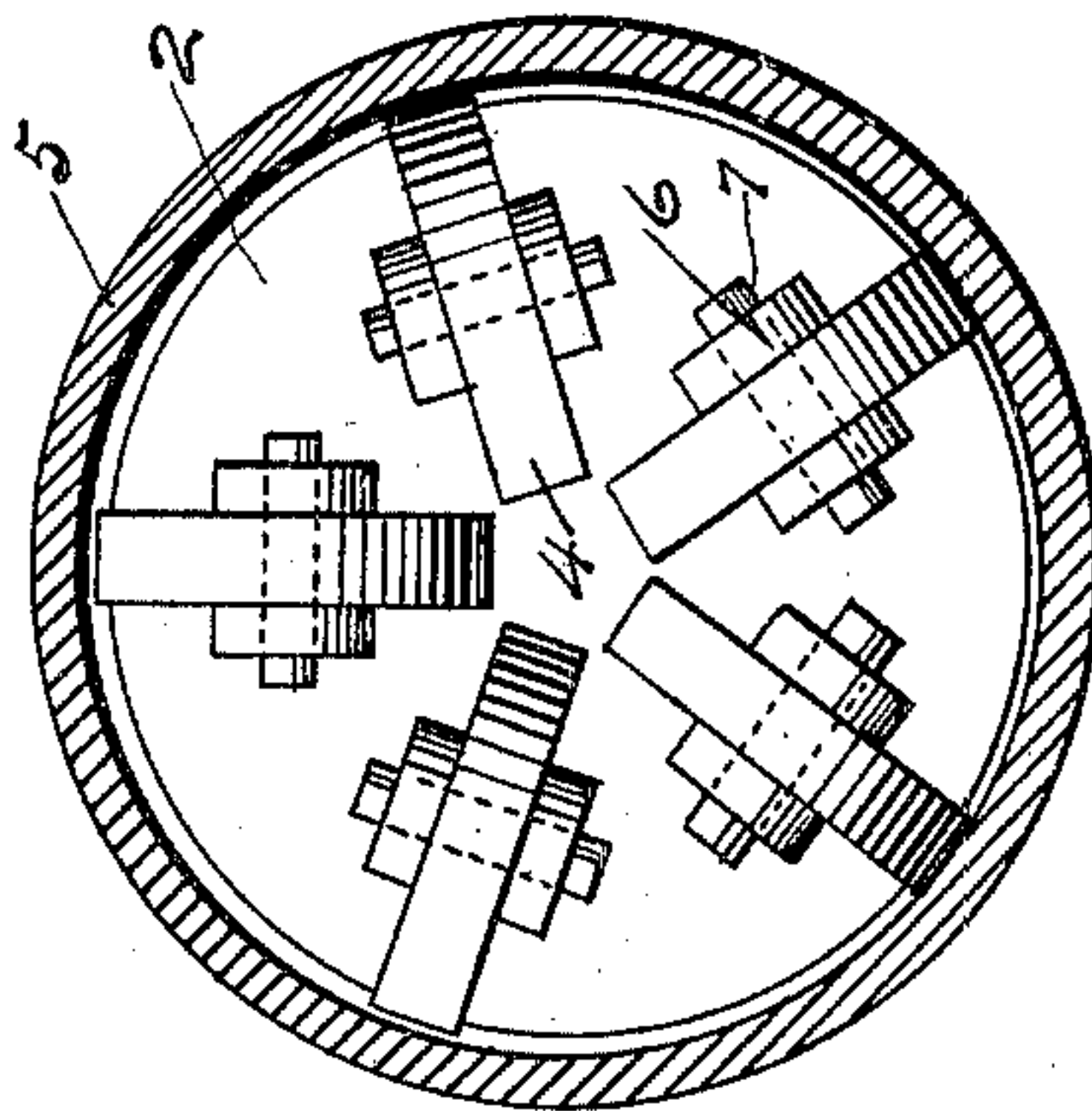
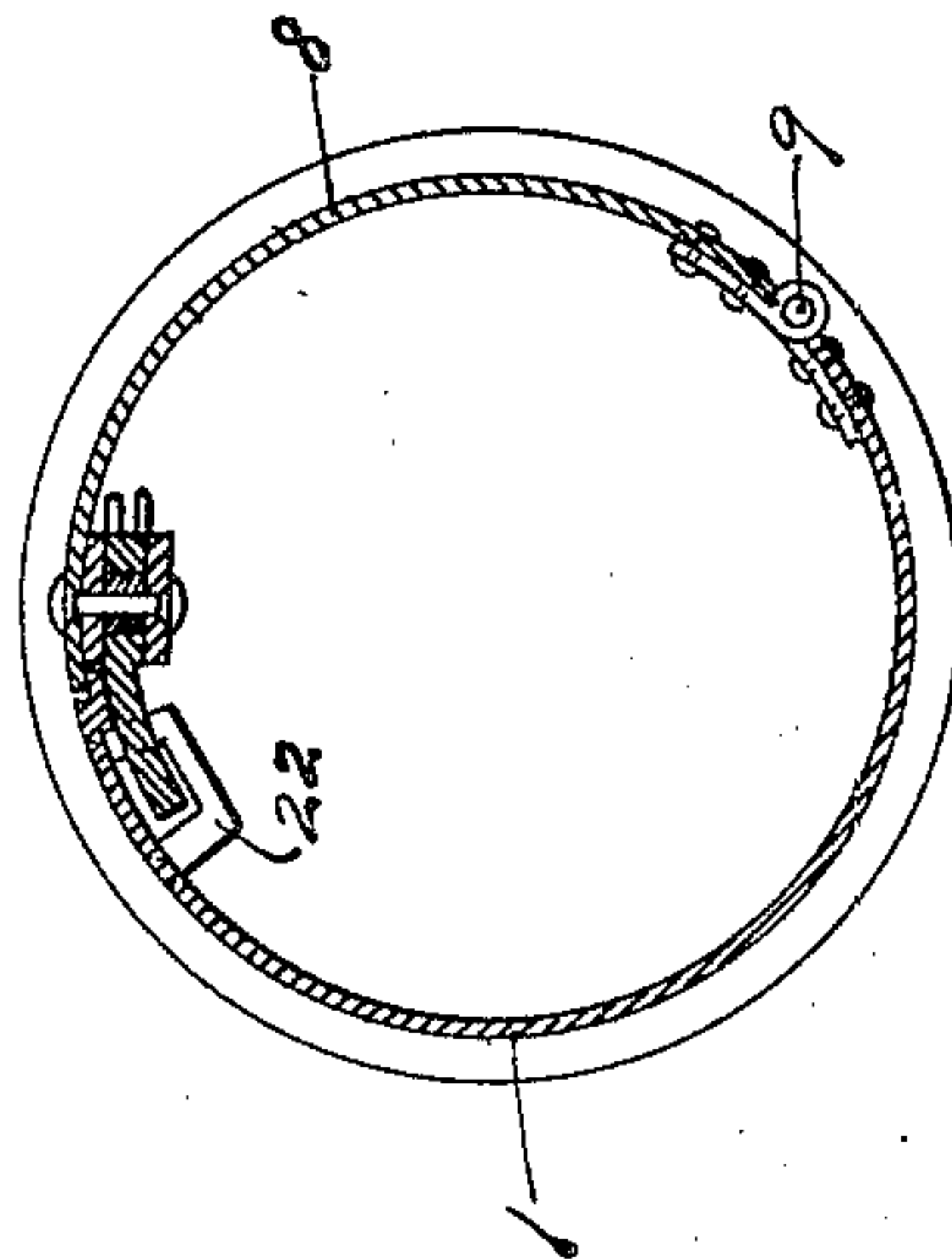


FIG. 3.



WITNESSES:
Henning Friedrich Wallmann.
Frederick Roederer

Hugo W. Forslund.
INVENTOR.

UNITED STATES PATENT OFFICE.

HUGO W. FORSLUND, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE LAKE STREET MANUFACTURING COMPANY, OF SAME PLACE.

CARRIER FOR PNEUMATIC-DESPATCH TUBES.

SPECIFICATION forming part of Letters Patent No. 682,408, dated September 10, 1901.

Application filed September 15, 1899. Serial No. 730,547. (No model.)

To all whom it may concern:

Be it known that I, HUGO W. FORSLUND, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carriers for Pneumatic-Despatch Tubes, of which the following is a specification.

This invention relates to an improved form of locking device for the doors of carriers for pneumatic-despatch apparatus, and particularly for that class in which the carrier is mounted on wheels and having the door to the interior located in the side of and forming a part of the body of the carrier.

The objects of my improved lock are, first, to securely lock the door to the body of the carrier, and, second, to draw the opening edge of the door tightly to the contiguous edge of the body or shell, so as to prevent the contents within from driving or buckling the center of the door beyond the true circumference of the body of the carrier, thereby guarding against any loss of its contents through openings at the ends of the door otherwise caused by the said outward buckling of the door, which is due to centrifugal force when the carrier passes around curves and to other causes while the carrier is in transit. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the carrier for pneumatic-transit apparatus, showing part of the door and the locking device in dotted lines. Fig. 2 shows a section of the door and locking device of the carrier taken through the lines A B C D E. Fig. 3 is a transverse section through the body of the carrier on the line F F. Fig. 4 is an end view of the carrier within the transit-tube, which is shown in transverse section.

Similar numerals refer to similar parts throughout the several views.

The numeral 1 indicates the cylindrical shell of the carrier, which may be made of sheet metal or other suitable material and of any size or shape to conform to its use. The shell is inserted into the heads 2 2 and is secured thereto by rivets or other suitable means. These heads inclose the ends of the

shell 1. The heads 2 2 have flanges 3 3, which are used as packing-rings and are of a slightly less diameter than the diameter of the circle around the traction-wheels 4 at their extreme diameters. This permits the carrier to roll on the wheels 4 within the transit-tube 5 without interference from the packing-rings 3. The heads 2 2 have lugs 6 integral therewith, into which are journaled the wheels 4 by means of the shafts 7. The door 8 is hinged to the body 1 of the carrier by means of the hinges 9, of which there are two or more.

I will now describe the locking device, part of which is fastened to the inside of the door and part to the inside of the body of the carrier and along the contiguous opening edges thereof, as shown in Fig. 1.

The numeral 10 indicates the bracket or plate, fastened to the door 8 by means of rivets and carrying the key-shaft 11 and the double-armed operating-lever 12. The bracket 10 is slotted to receive the lever 12, as shown in Fig. 2. One side of said bracket has a circular projection 13, which is in the form of a ring and protrudes through the door to the outside thereof. In the center of said ring projection 13 is a round hole, of a size to permit the square end 14 of the key-shaft 11 to turn freely. The square portion 14 of the key-shaft 11 extends partly into the operating-lever 12 and fits tightly therein, so that the operating-lever 12 may be turned by means of the key-shaft 11 from the outside of the carrier. The square portion 14 terminates in a round pin 14', thus forming a shoulder 15. A cylindrical flanged bushing 16 is slipped over the pin 14' and against the shoulder 15. The outside of the bushing 16 finds a pivotal bearing in the under plate 17 of the bracket 10, and part of said bushing 16 fits tightly in the operating-lever 12. The length of the small part of the bushing 16 from its end to the flange is sufficient to permit it to turn freely in the plate 17 of the bracket 10 when the said bushing is riveted to the key-shaft 11, as shown in Fig. 2. Into the slotted ends of the operating-lever 12 are pivoted links 18, the other ends of which are pivoted into the slotted arms 19 of lock-hooks 20. These lock-hooks 20 are pivoted to the brackets 21, which are riveted to the

door 8, as shown. The hook-sockets 22 are riveted on the inside of the carrier-body to the shell thereof, as shown in Figs. 1 and 2. The spiral-shaped spring 23 is pivoted at its ends to the inside of the door 8, and its location, as shown, is such that it presses the end of the operating-lever 12 against the stop-pin 25, secured to the inside of the door 8, and its use is to prevent the locking device from jarring open when the carrier is in transit.

I will now describe the operation of the locking device. In the accompanying drawings, the locking device is in a position showing the door locked to the body of the carrier, and also that the opening edge 23' of the door 8 is drawn firmly to the edge 24 of shell 1, thereby forming a uniform contour of the door and the body of the carrier, which contour is unalterably maintained while the door is locked, as is evident by means of the locking-hooks 20 being firmly held in the sockets 22 by means of the connecting-links 18, the operating-lever 12 and the pressure of the spring 23 acting in the direction of keeping the device in a locked position and by holding the operating-lever 12 against the pin 25, as shown in Fig. 1. To unlock the device to permit the opening of the door 8, place a socket wrench or key over the protruding end of the square key-shaft 11 and turn same in the direction of arrow, as shown, until the locking-hooks 20 have been turned ninety degrees, when they will be clear of the opening edge 24 of the carrier-body and the door 8 may be freely opened. It will be noticed that the spring 23 will be deflected by the end of the operating-lever 12 when turned to unlock the door 8.

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

1. In a carrier adapted for transit in a despatch-tube, the combination with the shell of the carrier and the heads closing the ends of the same, of a door hinged to the shell intermediate of its ends, locking-hooks pivotally attached to inside of the door, hook-sockets secured to the inside of the shell of the carrier so that when the hooks are pulled into said sockets the door is locked and simulta-

neously the opening edge of the door is securely drawn against the contiguous edge of the shell of the carrier, thereby unalterably preserving a uniform contour of the shell and door of the carrier, of connecting-links pivotally connecting the locking-hooks and the operating-lever, an operating-lever pivotally secured to the inside of the door of the carrier whereby the locking-hooks are simultaneously operated, a key-shaft by which the locking device may be operated from the inside of the carrier, a stop adapted to arrest the operative parts in locking position and a spring arranged to act upon said locking mechanism to normally force the latter into position to hold the door locked, substantially as described.

2. In a carrier adapted for transit in a despatch-tube, the combination with the shell of the carrier and the heads closing the ends of the same, of a door hinged to the shell intermediate of its ends, of locking-hooks pivotally attached to inside of the door, of hook-sockets secured to the inside of the shell of the carrier so that when the hooks are pulled into said sockets the door is locked and simultaneously the opening edge of the door is securely drawn against the contiguous edge of the shell of the carrier, thereby unalterably preserving a uniform contour of the shell and door of the carrier, of connecting-links pivotally connecting the locking-hooks and the operating-lever, of an operating-lever pivotally secured to the inside of the door of the carrier whereby the locking-hooks are simultaneously operated, of a key-shaft by which the locking device may be operated from the outside of the carrier, of a stop-pin against which the operating-lever is pressed when the locking device is locked, of a spiral spring pivotally attached at each end on the inside of the door and located so as to press the operating-arm against the stop-pin thereby preventing the locking device from unlocking except by voluntary means, substantially as described.

HUGO W. FORSLUND.

Witnesses:

FREDERICK ROEDERER,
HENNING FRIEDRICH WALLMANN.