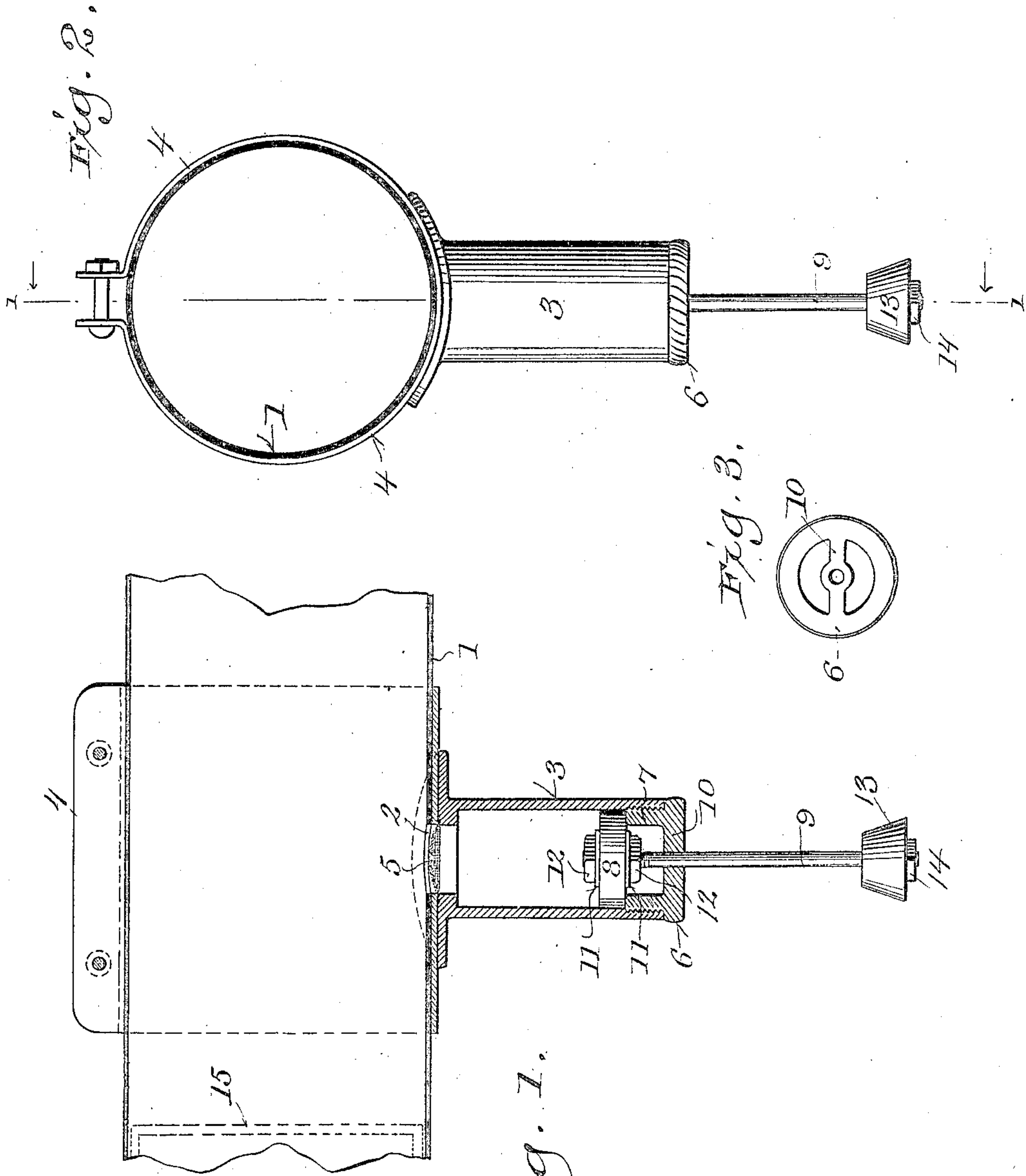


No. 818,471.

PATENTED APR. 24, 1906.

H. W. ROTTEL.
INDICATOR FOR PNEUMATIC CARRIERS.
APPLICATION FILED JULY 5, 1904.



Witnesses
Geo. W. Young,
George Felber.

Fig. 1.

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UNITED STATES PATENT OFFICE.

HERMAN W. ROTTEL, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO JOSEPH McCANN, OF MILWAUKEE, WISCONSIN.

INDICATOR FOR PNEUMATIC CARRIERS.

No. 818,471.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed July 5, 1904. Serial No. 215,425.

To all whom it may concern:

Be it known that I, HERMAN W. ROTTEL, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Indicators for Pneumatic Carriers; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to pneumatic carriers employed for transmitting money and papers in store-service, and has especial reference to indicators to indicate the location of a carrier accidentally stopped in its course for any cause, to which end the said invention consists in certain peculiarities of construction and combination of parts, as will be fully set forth hereinafter in connection with the accompanying drawings and subsequently claimed.

In the said drawings, Figure 1 is a vertical sectional view of a portion of the carrier-tube and attached indicator, taken on line 1 1 of Fig. 2. Fig. 2 is an end elevation of the same, the tube only being in section. Fig. 3 is an under side plan view of the cylinder-cap.

Referring by numerals to the said drawings, 1 indicates a fragment of the tube (preferably of brass) through which the carriers are drawn by suction. The construction of these carriers is so well known (being usually closed cylindrical boxes of leather or similar material fitting closely within the pneumatic tube) that I have not deemed it necessary to fully illustrate the same. The said tube 1 is made in readily-separable sections of any desired length, and one of my indicators is attached to each section, as now described.

At any preferred point in each tube-section the latter is formed with an opening, as shown at 2, this opening being preferably guarded by a piece of wire-netting or other reticulated or minutely-perforated material 5, which is applied so as to be beyond the line of the inner circumference of the tube 1, and a cylinder 3 is secured to the tube in any suitable way at this point, as by clamps 4 4, attached to the said cylinder 3 and surrounding the tube 1, the clamps being held fast, preferably by bolt-and-nut connection, as shown, so that the cylinder 3 is held with its open upper or inner end in communication with the opening 2 in the tube-section and so as to carefully exclude the passage of air

elsewhere from the said parts. The cylinder 3 has a skeleton cap 6, formed with an annular upward-extending screw-threaded flange 7, meshing with interior screw-threads at the lower end of the cylinder for supporting a piston 8 when the latter is at rest, the piston-rod 9 passing through a central hole in the base-bar 10 of the said cap 6. Each end of the rod 9 is preferably screw-threaded, the piston 8 being held in place thereon by suitable washers 11 and nuts 12 at the upper end of the rod, while a weight 13 is held to the lower end, as by nut 14.

The operation of my device will be readily understood from the foregoing description of its construction, taken in connection with the accompanying drawings. Suction being applied at one end of the tube 1 and one of the carriers (as indicated by the dotted lines at 15) being inserted at the other end, the said carrier is quickly drawn through the tube in the usual manner to the required point; but if from any cause the carrier becomes stuck in its passage the suction failing to draw the carrier forward will draw upon the adjacent piston 8 till the latter is drawn up the whole length of its cylinder 3, and then the consequent elevation of the weight 13 on said piston-rod will at once instantly show the point at or near which the carrier is stuck, and this particular section of the pneumatic tube 1 is detached from connection with its adjacent sections and the carrier released, after which the said tube-section is restored to place without disturbing the balance of the tube or system. By making the said indicator at the end of the piston-rod a heavy weight the rod being vertical the piston will be drawn down to place the moment the suction is removed, and the said weight will prevent the piston from being raised so long as there is no obstruction to the passage of the carrier in the pipe.

If desired, the weight or other indicator at the outer end of the piston-rod need not be heavy enough to prevent the suction from drawing in the piston, and in this arrangement the pistons of all the indicators will be drawn in by the suction which moves the carriers; but in this instance as soon as the carriers have passed beyond each opening the suction at such point is thus cut off, and the adjacent piston will at once fall down.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a pneumatic store-service system, the combination of a pneumatic carrier-tube, a cylinder depending from the tube and open at its upper end in register with an opening in said tube, a piston within the cylinder, and a weighted rod extending from the piston through the lower end of said cylinder.
2. In a pneumatic store-service system, the combination of a pneumatic carrier-tube section having an opening through the lower side thereof, a piece of reticulated material applied beyond the line of the inner circumference of said tube-section, a vertically-arranged cylinder, clamped to said tube-section, and with its open upper end in communication with an opening therein; a skeleton cap secured to the open lower end of said cylinder, and having an inner piston-supporting flange; a piston fitting within said cylinder,

and having a depending piston-rod passing down and out through said cap; and a weight secured to the lower end of said piston-rod.

3. In a pneumatic store-service system, the combination with a pneumatic carrier-tube section, having an opening through the lower side thereof, of a vertically-arranged open-ended cylinder clamped to said tube, and with its upper end in communication with said opening therein; a piston supported within said cylinder; and a piston-rod depending from said piston, and weighted at its projecting lower end.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

HERMAN W. ROTTEL.

Witnesses:

H. G. UNDERWOOD,
GEORGE FELBER.