

No. 811,915.

PATENTED FEB. 6, 1906.

D. S. HAGER.
PNEUMATIC TUBE CASH CARRIER.
APPLICATION FILED NOV. 9, 1905.

Fig. 1.

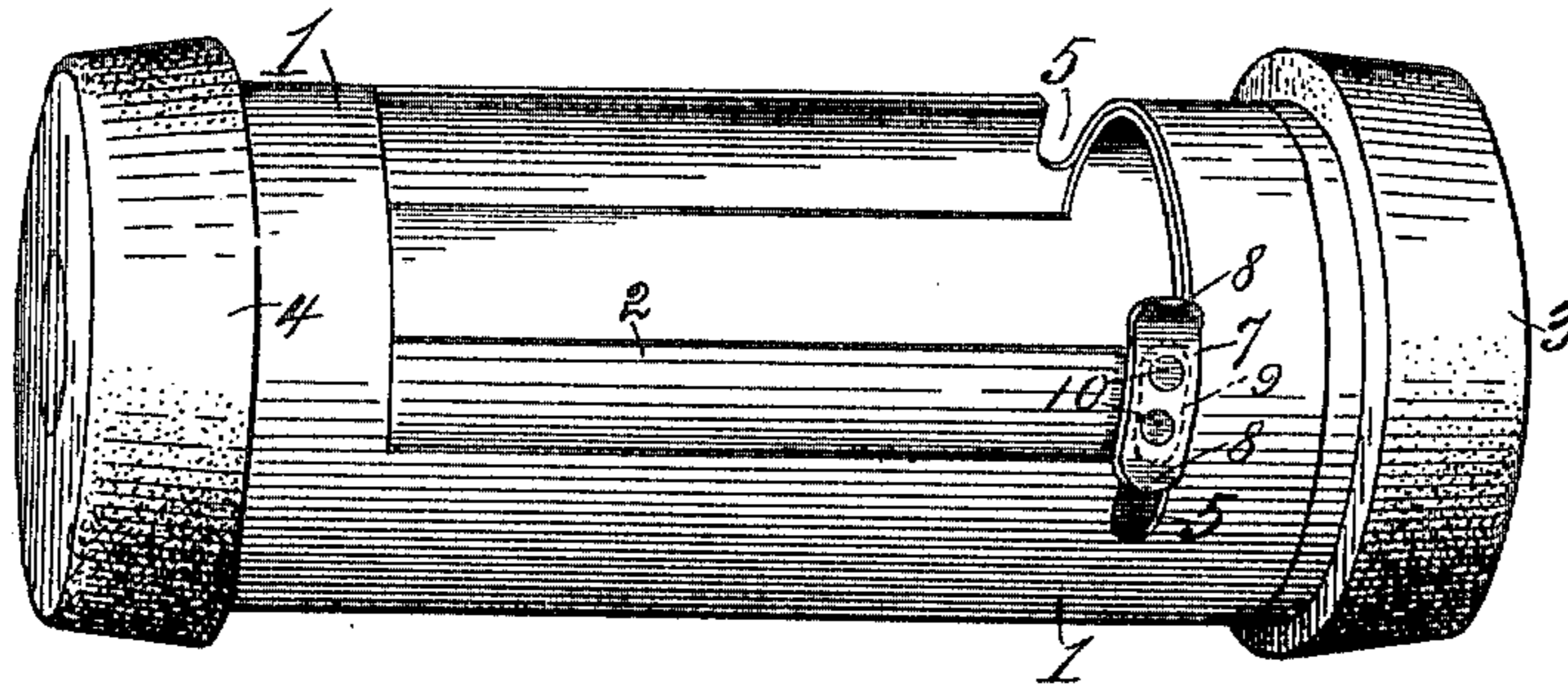


Fig. 2.

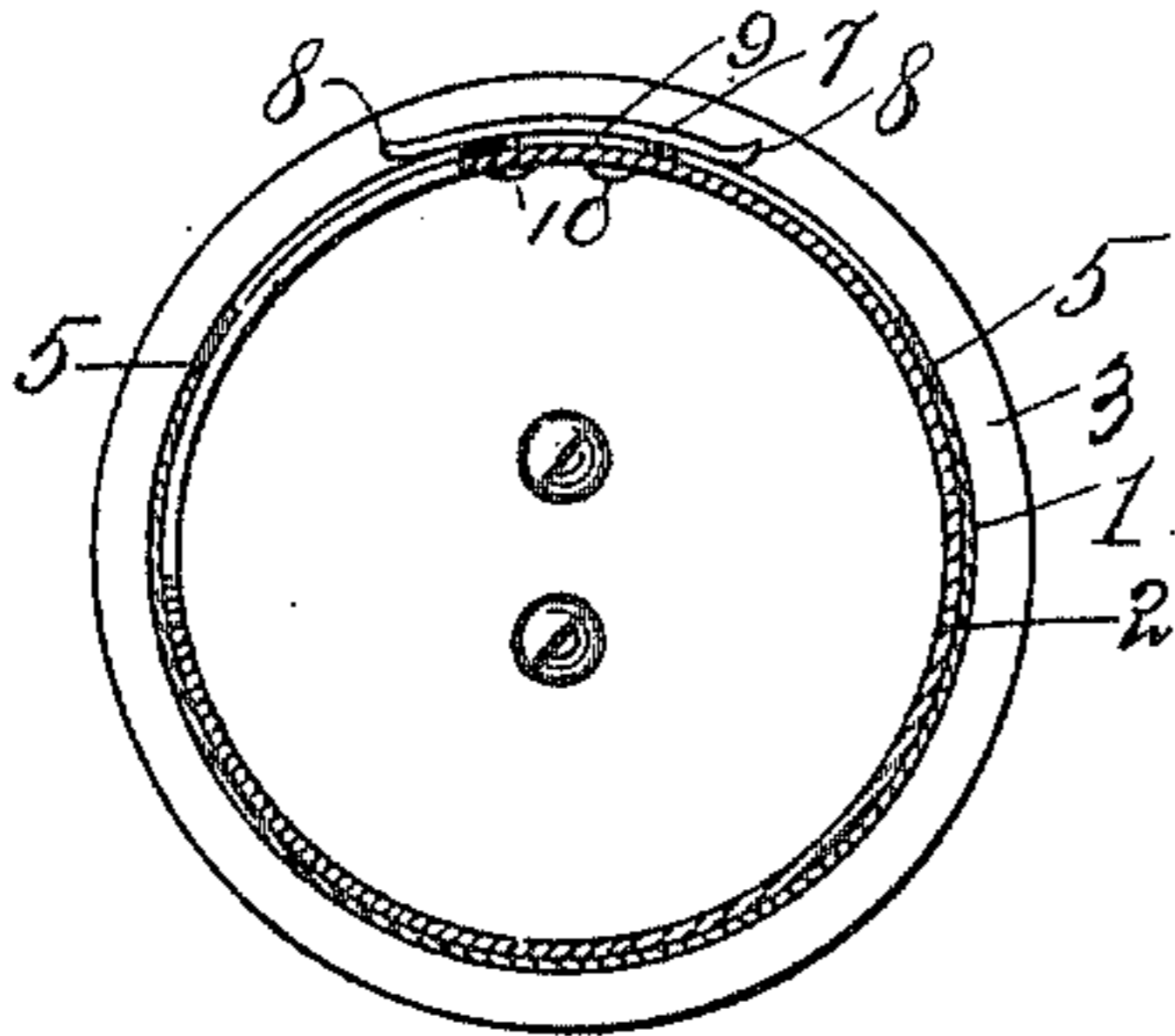
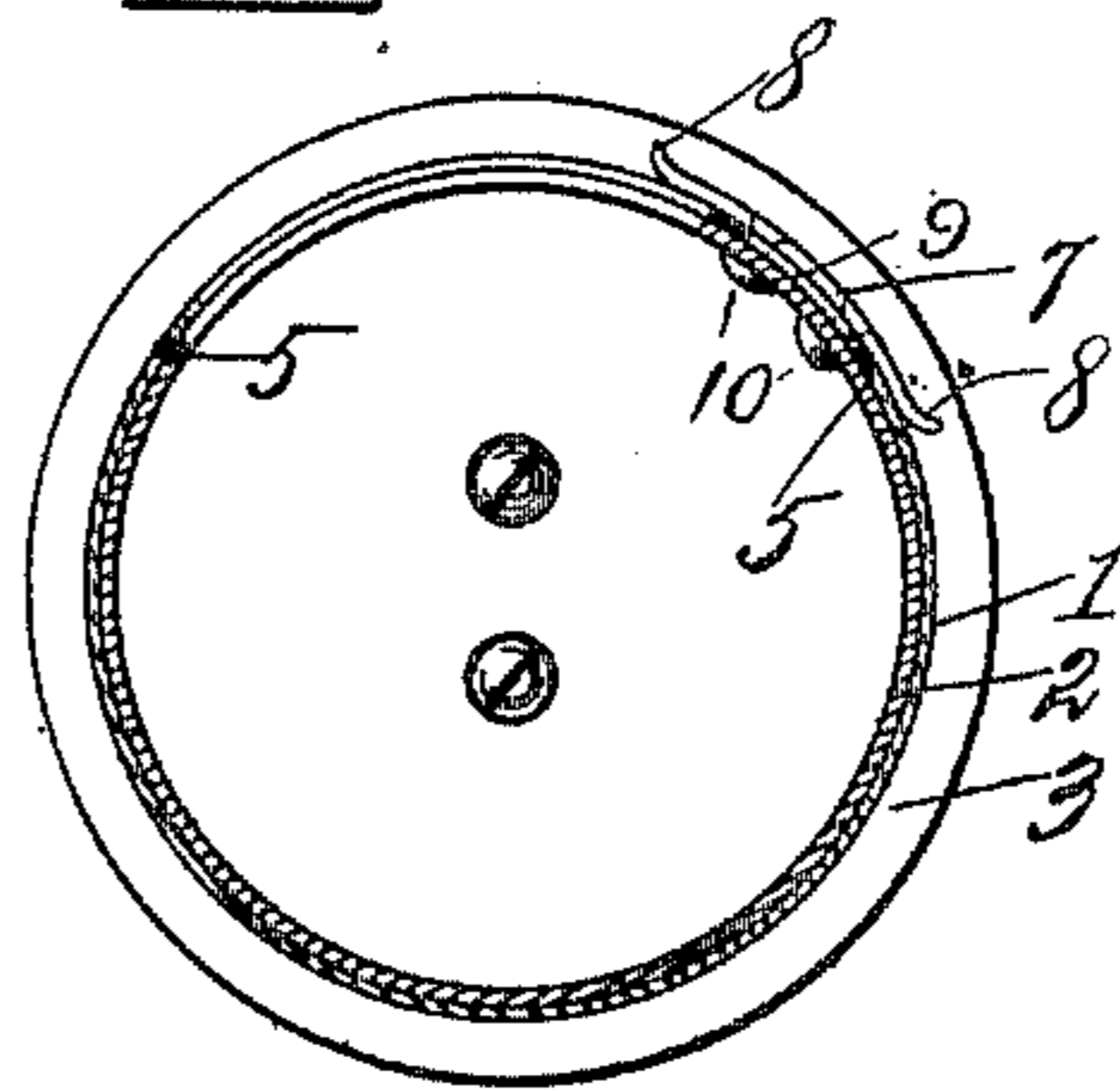


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PNEUMATIC-TUBE CASH-CARRIER.

No. 811,915.

Specification of Letters Patent.

Patented Feb 6, 1906.

Application filed November 9, 1905. Serial No. 286,450.

To all whom it may concern:

Be it known that I, DANIEL S. HAGER, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Pneumatic-Tube Cash-Carriers; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

In that class of carriers used for the transmission of cash, memoranda, and the like in pneumatic store-service systems the usual construction consists of two telescoped sheet-metal tubes which may be rotated independently of each other on a common axis and which have openings in their sides, which openings may by turning one or both of the tubes be thrown either into or out of coincidence. These tubes have at opposite ends disks of felt or leather, the projecting flanges of which fit the interior of the pneumatic tube for which the carriers are designed. The inner tube carries a stop which engages the outer tube to limit the rotation of the two tubes, so that they may not be turned farther than is necessary to throw the two apertures above referred to into open or closed position. In practice it is found that the stops here referred to cut and mar and ultimately break and destroy the thin sheet metal of which the outer tube is composed and that the life of these carriers as ordinarily constructed is brief. For this reason the renewals of spoiled carriers in extensive store-service systems are expensive and annoying.

My invention relates to means for overcoming the difficulty here indicated; and its object is more particularly to furnish a stop for limiting the rotatory movement of the two telescoping tubes of the carrier in such manner that the stop shall in no wise injure or mar the tube against which it contacts. I attain these objects by means of the devices and arrangement of parts hereinafter described and shown, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my carrier

partly closed; Fig. 2, a central transverse sectional elevation of the same, and Fig. 3, a like sectional elevation showing the carrier in open position.

Like numerals of reference indicate like parts throughout the drawings.

In the drawings, 1 is an outer, and 2 an inner, cylindrical sheet-metal shell. These two cylinders are closed at their ends and are secured together at their ends in the usual or in any preferred manner in such fashion as to permit them to be rotated axially relatively to each other. One of the cylinders is provided at one end with a felt disk 3, and the other cylinder is provided at the opposite end with a like felt disk 4, the two disks being designed to fit, with a sliding fit the interior of a pneumatic tube. In the side of each of the two cylinders is an elongated rectangular opening. These two openings, which are of corresponding size, may by moving the two cylinders axially be thrown into coincident open position or by the opposite movement of the two cylinders the two openings may be thrown nearly opposite each other, thus securely closing the interior chamber of the device. The opening in the outer cylinder is at one end and at opposite sides provided with notches 5 to receive stops secured to the inner cylinder, which stops limit the rotary movement of the two cylinders. The difficulty above indicated has heretofore been caused by the yielding of the outer shell and by the stop slipping under the outer shell instead of striking fairly the edge of the notch. This soon scores a channel on the inner side of the outer shell, with the invariable result that the shell becomes cracked, broken, and ragged along the part thus weakened, thus destroying the device.

7 is a stout strip of sheet metal curved to conform to the curve of the inner shell, but having outwardly-turned ends, as at 8. This strip of metal forms a guide-piece and rests upon a bit of sheet metal 9 of the thickness of the outer shell 1. The two pieces 7 and 9 are secured by rivets 10 or otherwise to the inner shell 2 in such position that the edge of the piece 7 overlaps the margin of the end of the opening in the outer shell and so that the outwardly-curved ends of the piece 7 will slip over the side and end margins of the notches 5 when the two cylinders are turned to the

limit fixed by the stop here described. If preferred, the parts 7 and 9 may be formed integral. It will be seen that the overlapping margins of the piece 7, together with its projecting inclined ends, form guides which engage and prevent the edges of the opening and the notches in the outer shell from yielding outwardly and which invariably cause the stop 9 to strike fairly against instead of slipping under the edge of the metal in notch 5, thus entirely removing the cause of the difficulty and objection above referred to.

If desired, my stops may be placed at opposite ends of the openings in the shells, and notches 5 may be formed, if desired, at both ends of the shell-openings. For the smaller sizes, however, a single stop is found sufficient.

Having described my invention, what I

claim, and desire to secure by Letters Patent, is—

In a device of the described character, a pair of cylindrical shells disposed one within the other and rotatable relatively to each other, said shells having corresponding openings in their sides adapted to be thrown into and out of coincidence, a stop secured to the inner shell and adapted to engage the edge of the opening in the outer shell, and a guide-piece upon the stop, said guide-piece being adapted and arranged to overlap and engage the margin of the opening in the outer shell.

In testimony whereof I affix my signature in presence of two witnesses.

DANIEL S. HAGER.

Witnesses:

CLEM V. WAGNER,
ADA LAW.