

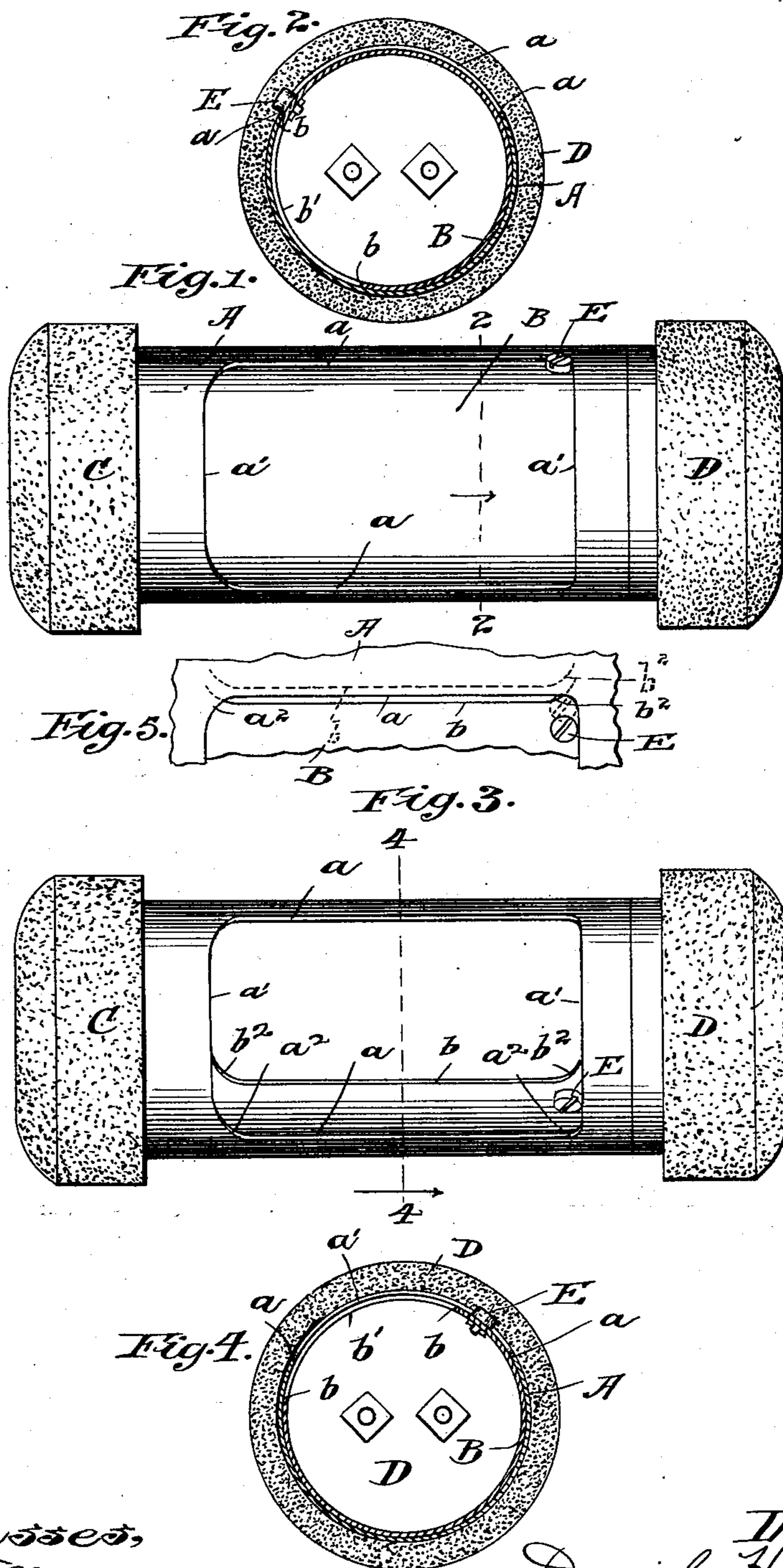
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D. H. JACKMAN.
CARRIER FOR PNEUMATIC TUBES.

APPLICATION FILED NOV. 9, 1903.

NO MODEL.



Witnesses,
J. E. Mann,
J. W. Ford

Inventor,
Daniel H. Jackman,
By *Offield, Towle & Lenthicum*
Attys.

UNITED STATES PATENT OFFICE.

DANIEL H. JACKMAN, OF MAYWOOD, ILLINOIS.

CARRIER FOR PNEUMATIC TUBES.

SPECIFICATION forming part of Letters Patent No. 755,878, dated March 29, 1904.

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To all whom it may concern:

Be it known that I, DANIEL H. JACKMAN, a citizen of the United States, residing at Maywood, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carriers for Pneumatic Tubes, of which the following is a specification.

My invention relates to carriers for pneumatic tubes such as are employed for the transmission of cash-sales slips, &c., in pneumatic store-service systems; and my invention has reference more particularly to that type of carrier characterized by the provision of a pair of telescoping cylinders or shells having heads of felt or similar impact material at their opposite ends, respectively, and openings formed in the walls of their shells, which by a relative rotary movement of the two shells are carried into and out of register to open and close the carrier. Heretofore, so far as I am aware, carriers of this type have been provided with rectangular openings having squarely-cut corners at one or both ends of the opening with a stop or locking pin projecting from the surface of one shell just back of one of the longitudinal margins of its opening and frequently with a notch cut in the opposite margin or margins of the opening of the other shell to coöperate with the stop or locking pin and limit the relative rotation of the shells between points at which the opening in the side of the carrier-body is opened and closed. An extended practical experience with carriers constructed as above described has disclosed the existence therein under the severe handling and impacts to which these devices are subjected in practical use of a weakness in point of construction, as evidenced by the facility with which the material of the shells cracks, splits, and breaks at the corners of the rectangular openings therein, thereby producing more or less sharp and ragged points and edges, which are liable to injure the hands of the operatives as well as to catch and tear other objects and materials with which they may come in contact, besides interfering with the perfect closing of the carrier. Furthermore, these notches or recesses weaken the shell and render it more readily subject to deflection from its true cylindrical form.

It is the primary object of my present invention to eliminate these faults, which to my personal knowledge has caused in commercial usage the discarding of many hundreds of otherwise serviceable carriers, and I have discovered that this defective construction may be satisfactorily remedied by a change in the form and construction of the openings in the telescoping shells which make up the body of the carrier so as to entirely eliminate the square corners of said openings, as well as to eliminate all slots, notches, and similar edge-wise recessions or projections which interrupt the continuity of the margins of the openings, and the present invention therefore possesses as its leading characteristic such a formation of the margins of the openings of the telescoping shells making up the body of the carrier as preserves their continuity throughout and effects a reinforcement at the corners.

My invention will be better understood when considered in connection with the accompanying drawings, wherein—

Figure 1 is a plan view of a carrier embodying my invention, the same being shown in a closed position. Fig. 2 is a cross-sectional view on the line 2 2 of Fig. 1 looking in the direction of the arrow. Fig. 3 is a view similar to Fig. 1 of the carrier as it appears when opened nearly to its full extent. Fig. 4 is a cross-sectional view on the line 4 4 of Fig. 3 looking in the direction of the arrow, and Fig. 5 is a detail fragmentary view illustrating the manner in which the overlapping longitudinal margins of the inner and outer shells pass each other in the final stage of the closing movement.

Referring to the drawings, A designates the outer cylindrical shell, and B the inner cylindrical shell, constituting the body of the carrier, the former being provided with the usual felt head C and the latter with a similar head D. The outer shell A has formed therein a generally rectangular opening bounded by straight continuous longitudinal margins a and end margins a' , while the inner shell B has a corresponding opening bounded by the similar longitudinal margins b and end margins b' . The meeting ends of the longitudinal and end margins of these openings unite

in curved oblique marginal portions, (indicated at a^2 in connection with the shell A and at b^2 in connection with the shell B,) and where the openings in the shells of the carrier are thus
 5 formed with continuous and uninterrupted margins and oblique reinforced corners the cracking, splitting, and breaking of the metal along the margins of the openings, and more particularly at the corners, is entirely obvi-
 10 ated, owing to the fact that this construction affords fillets constituting, in effect, reinforcing-braces against strains and shocks which tend to and actually do break and split the metal at these points when the corners are
 15 formed square or with sharp angles, and especially where the continuity of the margins of the openings is interrupted by notches, slots, and the like, which produce weakened points in the metal. Another advantage resulting
 20 from the rounded or oblique formation of the margins at the openings at the corners or angles thereof resides in the perfect closure of the carrier, which may be effected by a relative rotation of the shells to bring a solid portion of
 25 the inner shell opposite the opening of the outer shell, this advantage resulting by reason of the fact that as the overlapping opposite longitudinal margins approach each other in the final closing operation the oblique end por-
 30 tions or fillets of these margins cross and intersect each other as they pass with a shear-like action, as clearly shown in Fig. 5, instead of passing while occupying positions which are always parallel. When the latter construction
 35 is employed, if the metal at or near the corner of the opening of the inner shell becomes upset or if the metal at a corresponding point on the outer shell becomes indented or depressed the two margins will contact or collide in-
 40 stead of passing each other and overlapping, thus preventing the perfect closing of the opening; but in my improved construction herein presented this fault is entirely elimi-
 45 nated by reason of the fact that the angular reinforcements or fillets at the corners of the openings prevent such accidental deflection of the metal at these points, and even if the latter should occur to a slight extent the oblique margins, by reason of the fact that they cross

or intersect in the final closing, will ride past each other to the perfectly-closed position. 50

E designates the usual stop-pin inserted in and projecting from the inner shell B just behind one of the longitudinal margins of its opening, the rounded periphery of this stop-
 55 pin engaging and seating against the curved corner of the opposite margin of the outer shell when the carrier is closed, all as plainly indicated in Fig. 1.

I claim— 60

1. A cash-carrier for pneumatic tubes comprising a pair of telescoped relatively rotatable cylindrical shells each having a generally rectangular opening formed therein with continuous and uninterrupted margins united
 65 by integral oblique marginal portions at the corners, substantially as described.

2. A cash-carrier for pneumatic tubes comprising a pair of telescoped relatively rotatable cylindrical shells each having a gener-
 70 ally rectangular opening formed therein characterized by straight continuous longitudinal and transverse margins united at the corners by oblique marginal portions constituting re-
 75 inforcements of the metal of the shell at such points, substantially as described.

3. A cash-carrier for pneumatic tubes comprising a pair of telescoped relatively rotatable cylindrical shells each having a gener-
 80 ally rectangular opening formed therein characterized by straight continuous longitudinal and transverse margins united at the corners by concave curved marginal portions consti-
 85 tuting reinforcements of the metal of the shell at such points, and a stop-pin inserted in and projecting from the inner shell behind one of
 90 said longitudinal margins and cooperating with the curved end portions of the longitudinal margins of the outer shell, substantially as described.

In testimony that I claim the foregoing as my invention I have hereunto subscribed my name in the presence of two witnesses.

DANIEL H. JACKMAN.

Witnesses:

SAMUEL N. POND,
 JENNIE NORBY.