

April 28, 1925.

1,535,522

F. J. DOLAN

TUBULAR BOX

Filed April 5, 1922

Fig. 1,

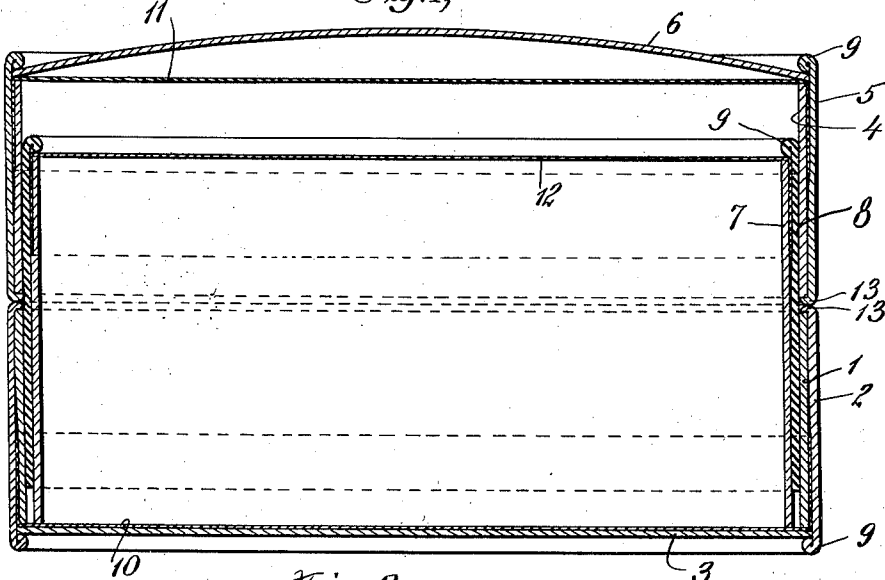


Fig. 2,

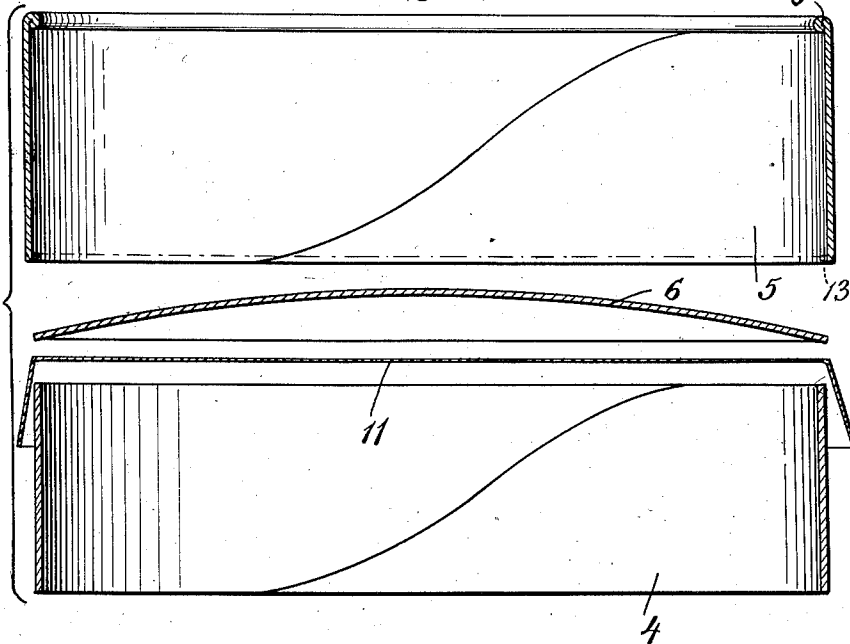
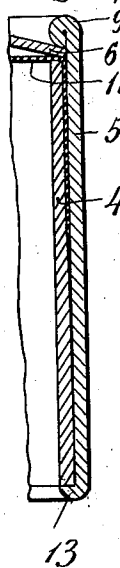


Fig. 3,



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UNITED STATES PATENT OFFICE.

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TUBULAR BOX.

Application filed April 5, 1922. Serial No. 549,686.

To all whom it may concern:

Be it known that I, FRANK J. DOLAN, a citizen of the United States, residing at Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Tubular Boxes; and I do hereby 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.

My invention is an improvement in tubular paper boxes, and relates particularly to boxes of the type wherein the bodies and covers are formed of interfitting rings. In the manufacture of tubular paper boxes of the character used for holding candy, cosmetics and the like, it is usual to make the boxes of interfitting rings, which are cut from formed tubes of appropriate diameter. The tubes are preferably made by winding strips of material spirally upon a mandrel of suitable size, and three layers of material are ordinarily used, namely a base or intermediate layer of relatively heavy cheap material, and finishing or facing sheets of finer material, which may be ornamented if desired. The material is so wound that the joints of the several layers are staggered, and since the tube is finished before the rings are cut, it will be obvious that such rings will have raw unfinished edges. The raw edges when exposed in the completed box are unsightly, and become more so with use, since the removal and replacement of the cover have a tendency to scuff the edge and to strip down the facing sheets. To provide a box of slightly appearance, and which will not leak when filled with granular or pulverulent material, the rings from which the box is formed must fit smoothly and closely one within the other. This is especially true of the fit between the tubular member which connects the body to the cover, and the said body and cover, it being understood that the boxes are usually composed of a cup shaped body, and a cup shaped cover, connected by a tubular member, held within the body, and extending beyond the same to engage within the cover. In my prior application, Serial No. 542,635, filed March 10, 1922, I show and describe a construction of box, wherein the finish for the exposed raw edges of the rings is provided for by turning the end or ends of

the ring in upon the inner face of the ring, to form an annular bead at the end or ends of the ring. This finish covers and conceals the raw edge, without increasing the overall external diameter of the ring, and in addition to providing a finish for the ring end, the bead provides an abutment against which the disc shaped head of the box may engage to hold the head in place. In my prior application, Serial No. 542,636, filed March 10, 1922, I show a construction wherein the box body and cover are alike, each being formed by two interfitting rings, the outer of which has the inturned bead above mentioned, between which and the end of the inner ring the head is clamped. This method of finishing the exposed end of the ring is not however, suitable for those ends of the body and cover which engage the tubular member. Since the bead reduces the internal diameter of the ring, only the bead would fit closely about the tubular member, and the contents of the box, when of a granular or pulverulent nature, would sift between the tubular member and the cover, to be spilled when the box were open.

In the present invention I provide a finish for the said ends, by inturning the end of the outer ring of the body or cover, not on the inner face of the ring, as in my prior above mentioned applications, but at substantially a right angle to the said face, to overlie the adjacent end of the inner ring, and to form an abutment for engagement by the said inner ring.

In the drawings;

Figure 1 is a diametrical vertical section of a box constructed in accordance with the invention,

Figure 2 is a similar view of the cover with the parts detached,

Figure 3 is an enlarged partial section of the cover.

In the present embodiment of the invention, the improved box includes a body composed of an inner ring 1, an outer ring 2, and a head 3, and a cover composed of an inner ring 4, an outer ring 5, and a head 6, and the said body and cover are connected by a tubular member consisting of inner and outer rings 7 and 8. The outer rings 2 and 5 of the body and cover respectively, are beaded as indicated at 9, at their remote ends, that is at the top and bottom of the box. The heads 3 and 6 of the body and

cover are held between the beads 9 and the inner rings 1 and 4 respectively, and the beads 9 are formed by turning the ends of the rings 2 and 5 in upon the inner faces of the rings. Liners 10 and 11 are arranged at the inner faces of the heads 3 and 6 in the present instance, each liner being in the form of a disc, whose edges are held between the inner and outer rings of the body and cover respectively. The liner 10 fits closely against the inner face of the head 3, but the head 6 is arched, so that the liner 11 is spaced away from the same, as clearly shown in Figures 1 and 2. The liners are of thin paper, and are held between the respective rings as shown. The tubular member 7—8 carries a cover sheet 12 of thin paper, and the said sheet is held between a bead 9 on the end of the outer ring 8, and the adjacent end of the inner ring 7. The edge thereof is between the rings 7 and 8, so that the covering is held in the same manner as the liners 10 and 11 are held. In this type of box, the material is placed in the inverted tubular member, on the covering 12, then the tubular member is placed in the body, so that the contents of the box are covered by the covering 12 until said covering is torn away. The beads 9 provide very satisfactory finishes for the outer ends of the body and cover, but I prefer to finish the inner ends in the manner shown in Figures 1 and 3. As shown in such figures, I cut the outer rings of a width such that after the inner ring is in place and abutted against the head, the outer ring will extend beyond the end of the inner ring. This extended end I bend over upon the adjacent end of the inner ring, at substantially a right angle, as shown at 13, so that the free edge of the inbent portion is substantially flush with the inner face of the inner ring. So arranged, the body and cover will fit smoothly over the tubular member, and will abut closely at their meeting ends. The arrangement also facilitates the placing of the cover on the tubular member.

I claim:

1. In a tubular box, a box member comprising an outer ring and an inner ring fitting within the outer ring, the outer ring being provided with an inturned marginal bead at one end overlying and concealing the adjacent end of the inner ring, and the other end of the outer ring also being inturned to overlie the end of the inner ring adjacent thereto, no part of this latter inturned portion of the outer ring extending beyond the inner surface of the inner ring.

2. In tubular boxes, a body, a cover and a tubular member over which said body and cover fit to connect the same, the body and cover including separate, preformed inner and outer rings telescoped together, and the outer rings of both body and cover at their

proximate ends being turned in over the ends of the inner rings associated therewith, with the inturned edge of these ends lying flush with the inner surface of said inner rings.

3. In tubular boxes, a box member comprising separate, preformed inner and outer rings telescoped together, and a head held between the ends of the rings at one end thereof, the outer ring at the outer end being turned in to overlie the end of the inner ring with the marginal edge of this inturned portion lying flush with the inner surface of the inner ring to provide a finish therefor.

4. In tubular boxes, a body, a cover and a tubular member over which said body and cover fit to connect the same, the body and cover including separate, preformed inner and outer rings telescoped together, the outer rings being internally beaded at their outer ends, and heads held between the beads and the ends of the inner rings, and a lining for each head of thin sheet material having its peripheral margin clamped between the rings.

5. In tubular boxes, a box member comprising a preformed inner ring and a preformed outer ring telescoping thereover, and having its terminal edges projecting beyond the edges of said inner rings, a bead formed along one terminal edge of said outer ring, a head having its peripheral margin supported against said bead by the adjacent edge of said inner ring, and a liner for the head having its peripheral margin clamped between the rings.

6. In a box of the type described, a box member comprising a preformed inner ring and a preformed outer ring telescoping thereover and having its terminal edges projecting beyond the edges of said inner ring, a bead formed on one terminal edge of said outer ring, a head having its peripheral margin held between said bead and the adjacent end of said inner ring, the other end of said outer ring being formed to overlie and conceal the end of the inner ring adjacent thereto, and a liner for the head having its peripheral margin held between the rings adjacent said head.

7. In tubular boxes, a box member comprising an inner ring and an outer ring telescoping thereover, the ends of the outer ring projecting beyond the ends of the inner ring, a head having a diameter substantially equal to the inner diameter of the outer ring lying across one end of the inner ring, and the end of the outer ring adjacent the head being inturned to overlie and secure the same in position against the end of the inner ring, and the other end of the outer ring being inturned to overlie and conceal the adjacent end of the inner ring, no portion of the latter inturned end of the outer ring lying inwardly beyond the inner surface of the inner ring.

8. In tubular boxes, a body, a cover, and a tubular member over which said body and cover fit to connect the same, the body and cover each comprising an outer ring, an inner ring fitting within the outer ring, and a head lying across the end of the inner ring, the outer ring being turned in at one end to overlie the peripheral margin of the head to hold the latter in position and also being inturned at the other end to overlie the end of the inner ring with no part of the latter inturned portion of the outer ring extending inwardly beyond the inner surface of the inner ring. 10

In testimony whereof I affix my signature.

FRANK J. DOLAN.