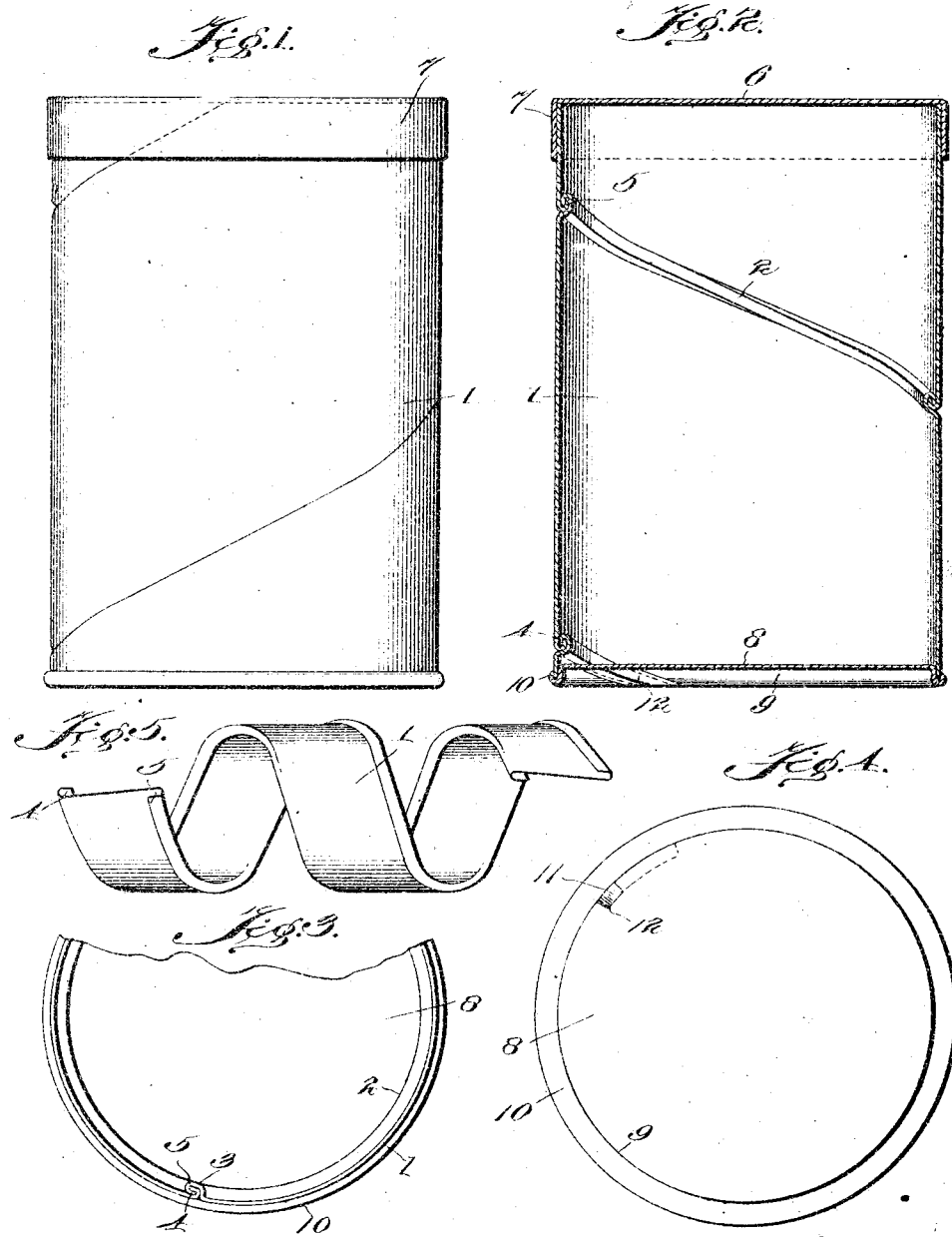


G. W. BEADLE.
 PERMANENT END CLOSURE FOR CARTONS.
 APPLICATION FILED MAY 9, 1911.

1,023,659.

Patented July 23, 1912.



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UNITED STATES PATENT OFFICE.

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PERMANENT END CLOSURE FOR CARTONS.

1,033,659.

Specification of Letters Patent.

Patented July 23, 1912.

Application filed May 9, 1911. Serial No. 626,023.

To all whom it may concern:

Be it known that I, GEORGE W. BEADLE, a citizen of the United States, residing at Bayonne, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Permanent End Closures for Cartons; 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.

The present invention relates to vessels of the spirally wound type wherein the uniting seam or rib is arranged internally, and has for its purpose to provide a permanent end closure for such vessels which will give a secure and liquid tight joint with the wall of the vessel and with the uniting seam thereof.

To these ends the invention consists in the novel details of construction and combination of parts more fully hereinafter disclosed and particularly pointed out in the claims.

Referring to the accompanying drawings forming a part of this specification, in which like numerals designate like parts in all of the views:—Figure 1 is a side elevation of a vessel made in accordance with this invention. Fig. 2 is a central vertical section of the vessel showing the internal uniting seam, and the manner of applying the permanent end closure. Fig. 3 is a top plan view, partly broken away, of the vessel shown in Fig. 1, with the cover removed. Fig. 4 is a top plan view of the permanent end closure before its application to the vessel, and, Fig. 5 is a perspective view of the strip, partially wound, from which the vessel body is formed.

Referring to the structure in detail the vessel consists of a single strip 1 that is wound on a mandrel to form a tube and which in the process of making has the side edges thereof united to form a locked seam 2. The uniting seam 2 consists of an inset flange 3 having an interned portion 4, on one edge of the strip; and on the opposite edge of said strip a flange 5 which is infolded between the flange portions 3 and 4. It results from this construction that the uniting seam of the strip provides a liquid tight joint, and leaves the exterior surface of the wall of the vessel substantially flush

throughout, thus particularly adapting the surface to receive a label or wrapper without liability of breaking.

One end of the vessel is provided with a removable closure 6 having the usual circumferentially fitting flange 7, as shown in Fig. 2. The permanent end closure or bot- tom of the vessel consists of a disk 8 formed with a flange 9 fitting within the vessel in close contact with and longitudinally of the inner surface thereof. The closure is secured by having the marginal flange or rim thereof crimped against the marginal edge of the wall of the vessel by a suitable spinning tool.

To the end that a secure and liquid tight joint be obtained between the closure and vessel, and with the interior spiral seam 2 thereof, the flange 9 of the closure and a like portion of the disk part 8 is formed with a depression or recess 11, which is of the same dimension in cross section as that of the seam 2; and the walls 12 of said recess are disposed diagonally of the flange 9 to accommodate the inclination of said seam. It results from this construction that said diagonally disposed walls 12 perform the further function of reinforcing the permanent end closure, and in addition thereto provide means for resisting end thrusts on the sustaining surface 8 from within the vessel thereby affording a maximum resistance from the stock employed.

For certain purposes it may be desirable to have a permanent closure at both ends of the vessel, in which event the removable cover 6 would be replaced by a duplicate of the permanent end closure shown herein.

It is within the purview of the present invention to include the depressed feature 11 which accommodates the inner projecting seam, in any other form of permanent closure. It is also evident that the vessel may be made from either a single strip or from a plurality of strips. When it is made of sheet steel the vessel may be dipped in a bath of tin, and thereby further close its seam.

What I claim is:—

A cylindrical vessel comprising a spirally wound strip having an internal, uniting seam, and a fixed end closure therefor, comprising a disk having an axially-depending flange adapted to fit snugly within said ves-

sel, said disk and flange being provided
across their periphery with a spiral depres-
sion for threadingly engaging a portion of
said seam, and an offset from said flange
5 clamped about the outer periphery of said
vessel for firmly clamping the cylindrical
vessel wall against said closure flange.

In testimony whereof, I affix my signa-
ture, in presence of two witnesses.

GEORGE W. BEADLE.

Witnesses:

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