T. H. KANE.

METAL PACKAGE.

APPLICATION FILED JAN. 25, 1911.

994,468. Patented June 6, 1911.

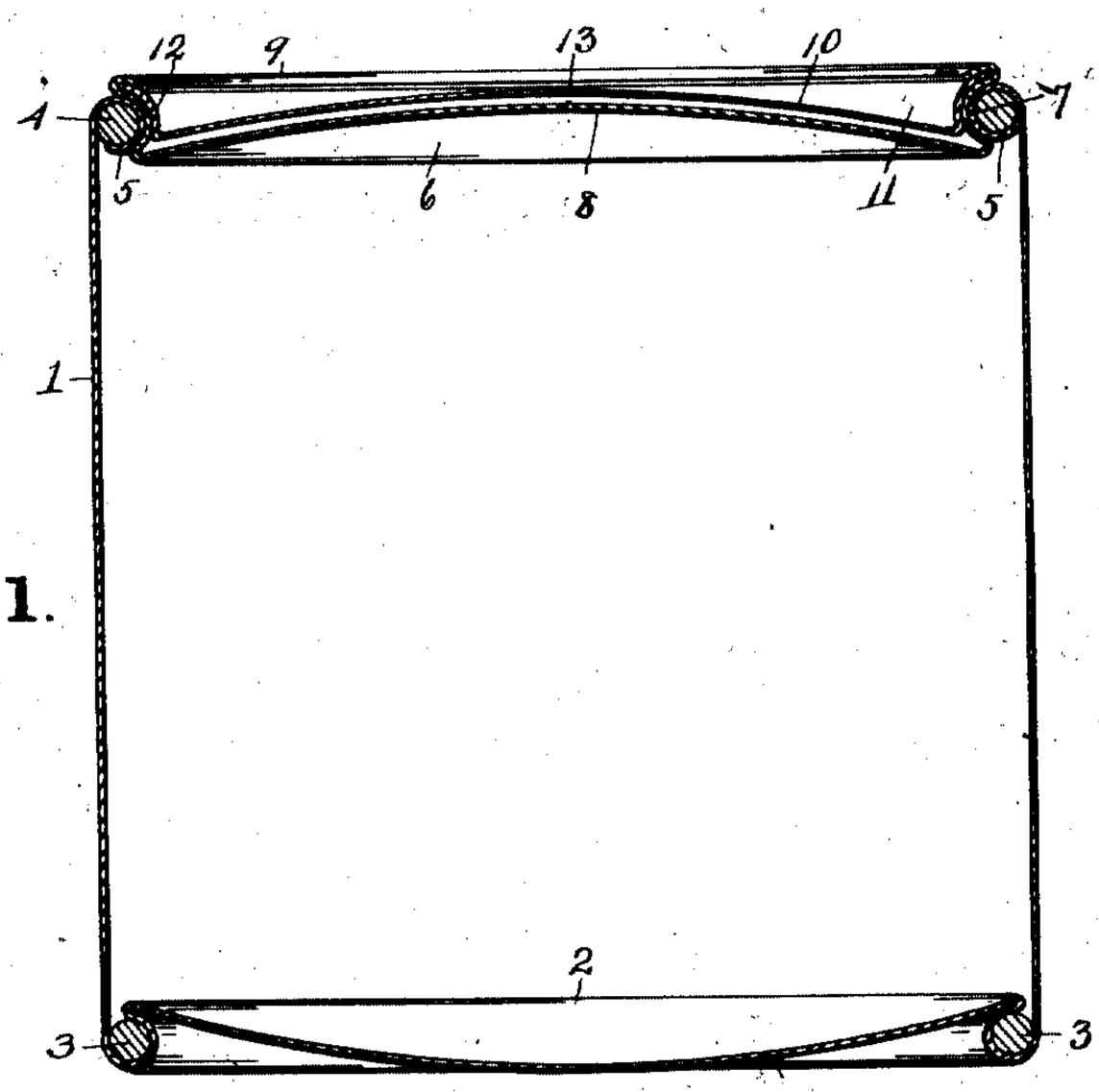


Fig. 1.

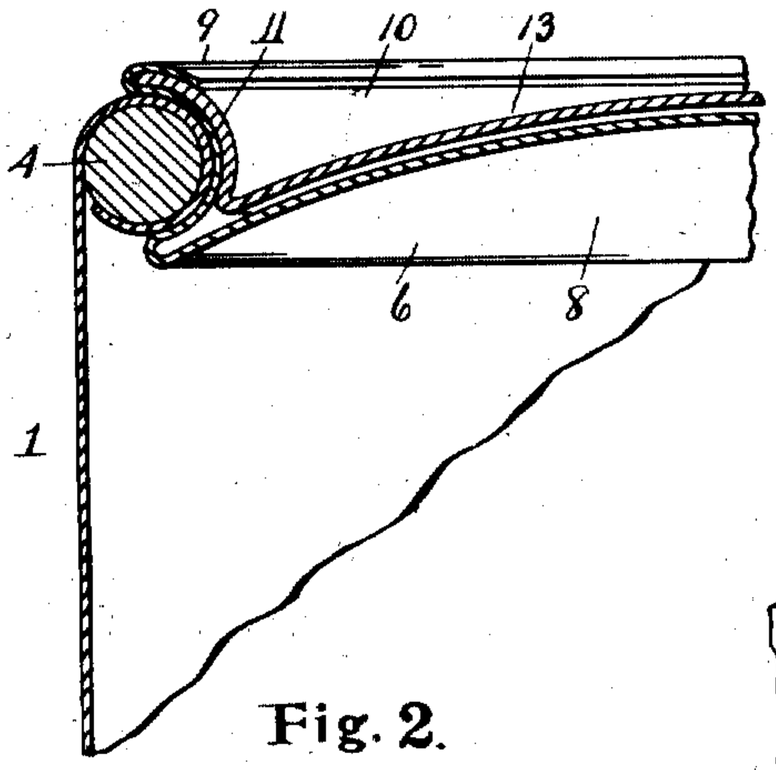


Fig. 2.

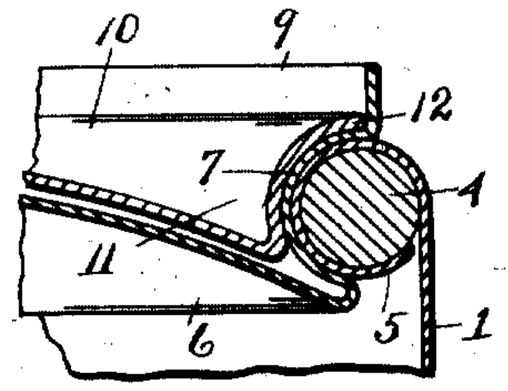


Fig. 3.

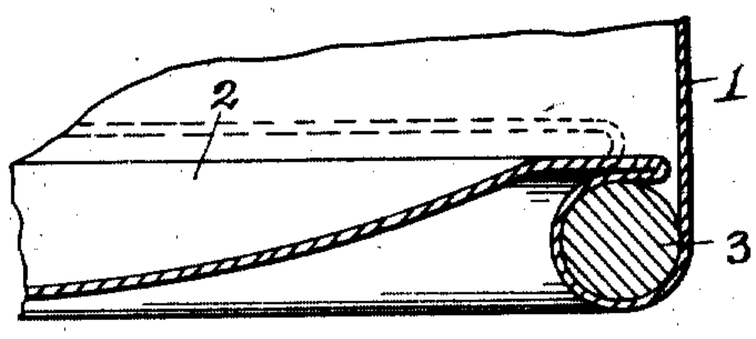


Fig. 4.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## METAL PACKAGE.

994,468. Specification of Letters Patent. **Patented June 6, 1911.**

Original application filed April 4, 1908, Serial No. 425,113. Divided and this application filed January 25, 1911. Serial No. 604,531.

*To all whom it may concern:*

Be it known that I, THOMAS HENRY KANE, a citizen of the United States, and a resident of Youngstown, in the county of Mahoning and State of Ohio, have invented a new and useful Metal Package, of which the following is a specification.

This is a division of my former application filed April 4th 1908, Serial Number 425,113, for metal package.

The invention relates to a metallic package for white lead, liquids and the like, and has for its object to provide a strong and durable package of the kind and for the purpose, that is of inexpensive construction and non-absorbent of liquid contained therein.

A further object is to provide a package of the kind that is constructed from sheet metal, of few parts that are readily assembled and locked and secured together without solder, in strong and durable form, secure against leakage.

A further object is to provide a hollow cylindrical body, press drawn from sheet metal, having an integral recessed and outwardly convexed end closure, with an attachable closure for the opposite end of the body, that is adapted to be readily inserted and securely locked to the rim portion of the open end of the body and form a liquid tight closure therefor after the body is filled with liquid or semi-liquid material.

I accomplish these objects by the construction and combination of parts as hereinafter described and illustrated in the drawings, in which—

Figure 1 is a vertical section of the metal package constructed and assembled in accordance with my invention. Fig. 2 is a longitudinal section of a portion of one end of the same on a larger scale, showing the end closure in position. Fig. 3 shows another portion of the same before the closing operation is completed. Fig. 4 is a vertical section of one corner of the bottom on the same larger scale.

In the drawings 1 designates a cylindrical body, press drawn from a single sheet of metal to form integral therewith the end 2, which by a second operation is drawn inward of the cylinder through the wire ring 3, and by a third operation is spun into the position shown by dotted lines in Fig. 4. By a fourth operation, the portion spun in above the wire in forming the head is pressed down against the wire and the bottom is formed into the finished concavo-convex form shown in full lines in Figs. 1 and 4.

The open end of the body 1, is beaded inward around a wire 4, to form a retaining bead 5 for attaching the inner closure member 6, which is formed of a suitable blank of sheet metal, press drawn to form, first, a cylindrical wall 7, having a diameter to telescopically enter the annular bead 5, and second a concavo-convex central portion 8, extending into the cavity of the wall 7. The inner closure member 6, after being thus formed, is telescopically inserted within the bead 5, after which the wall 7 is spun around the bead 5 to extend substantially half around its circumference and form an outer and enlarged cylindrical portion 9. Within and over the inner closure member 6 thus formed and secured, there is inserted the outer closure member 10, which is formed of sheet metal press drawn to form an out curved annular wall 11 of a diameter to telescopically enter the inner closure member and to seat upon the outer curved portion of the wall 7 that is curved around the bead 5, and have its outer edge 12 abut the cylindrical portion 9 of the wall 7 of the inner closure member 6. The central portion 13 of the outer closure member 10, is formed by the operation of press drawing, concavo-convex to seat over the concavo-convex central portion 8 of the inner closure member 6, and when the outer closure member 10 is thus seated over and within the inner closure member 6, the cylindrical wall 9 of the inner closure member 6 is beaded inward over the outer closure member 10, as shown in Fig. 1, whereby the two closure members are firmly secured to the bead 5 of the casing 1, and the final operation completes the package.

The operations of attaching the closure member 6 and 10 are made after the body 1 has been filled with the material which forms the contents of the package, and when the closure members 6 and 10 are attached as described the package is secure against leakage and is strong and durable and may be used as a substitute for the wooden keg and for like purposes.

It is manifest that the cylindrical body 1, instead of being press drawn and provided

with an integral closure at one end may have both ends open and beaded inwardly around annular wires 4, and each provided with closure members 6 and 10, constructed and secured therein as described. I therefore do not limit myself to a press drawn body having one end closure integral with the body.

Having now explained my improvements, what I claim as my invention and desire to secure by Letters Patent is:—

1. The combination with a receptacle having an opening therein which is contracted relative to the end of the receptacle in which it is disposed, of a member disposed within said opening and having a portion drawn under the inner margin of the opening wall and a portion extending outwardly through the opening in contact with its wall, and a closure for said opening adapted to frictionally seat within said member and to be positively retained therein by the outer edge of said member which is bent thereover.

2. The combination with a receptacle having an opening therein, the wall of which forms an inner marginal shoulder, of a supplemental closure for said opening, said closure comprising a disk of soft metal which is forced into said opening and having its marginal portion expanded to engage the inner marginal shoulder of the opening wall and then extending outwardly around the opening wall in contact therewith, and an outer closure fitted closely within the supplemental closure and positively retained therein by the edge of the supplemental closure which is bent over the edge of said outer closure.

3. In combination, a receptacle having an edge thereof rolled inwardly to form a bead, a reinforcing member in said bead, a supplemental closure disposed in the opening formed by said bead, said closure having its outer portion provided with a bulge which projects under said bead and a part which extends outwardly from said bulge and partially around the bead tightly hugging the same, and an outer closure fitted within the supplemental closure in frictional contact with said part and having its edge embraced by the outer edge of said part to prevent an accidental removal of the outer closure.

4. The combination with a receptacle having an end provided with an opening which is contracted relative to such end, a closure member pressed into the opening and having a marginal portion drawn to embrace the inner marginal portion of the opening wall to retain the closure therein, and a second closure member pressed within the first closure member and having its edge embraced by the edge of the first closure member to retain it in position.

5. The combination with a receptacle having an end provided with an opening which is contracted relative to such end, an inner and outer closure for the opening, the inner closure having its marginal portion drawn to engage the inner marginal edge of the opening wall and thence extending outwardly through the opening, and the outer closure being pressed into the inner closure and having its marginal portion extending outwardly in contact with the outwardly extending portion of the inner closure and its edge embraced by the edge of the inner closure to retain such outer closure in position.

6. In a metallic package, the combination with the inwardly wired and beaded end of a cylindrical body formed of sheet metal, of a closure for the end, comprising an inner closure member embracing the wired bead of the end, and an outer closure member seated within and over the inner closure member, and locked thereto by bending the outer rim portion of the inner closure member over the outer rim portion of the outer closure member.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS HENRY KANE.

Witnesses:
B. Earl Bowlus,
C. W. Malin.