April 8, 1930. E. F. HULBERT 1,753,929

REENFORCED CONTAINER

Filed Feb. 17, 1928

Fig. 1.

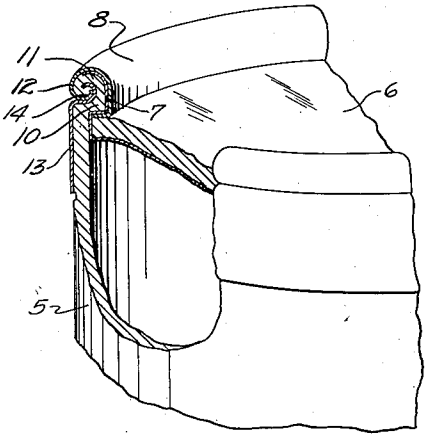


Fig. 2.

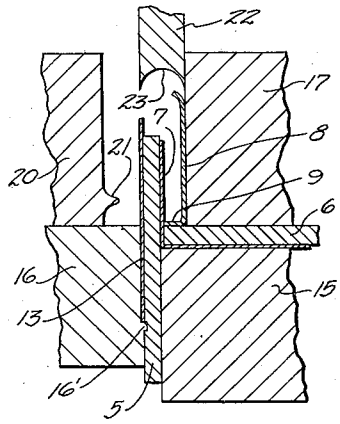


Fig. 3.

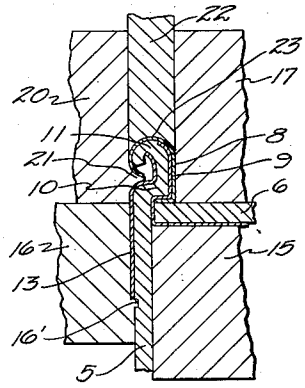
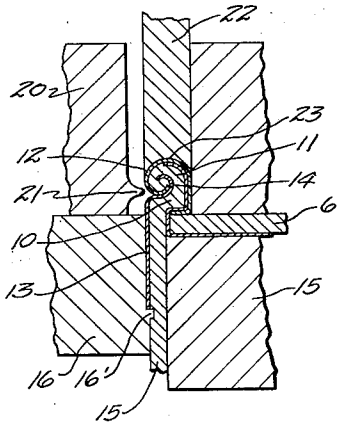


Fig. 4.



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UNITED STATES PATENT OFFICE

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REENFORCED CONTAINER

Application filed February 17, 1928. Serial No. 255,086.

The invention relates to containers.

The object of the invention is to provide a closure for fibre bodied containers in which the head is firmly affixed to the siding which is reenforced on both sides by a pair of metal bands which have interlocking engagement with each other, these bands being interlocked in such a way that the free edges of the tubular body wall and heading or closure members are solidly compressed and bonded within the inclosed grip of the interlocking bands. The compression of the fibre portions and the tubular form which the steel takes in its final position form a solid, hard, shock-resisting, metal shod edge that is very desirable in shipping drums or containers used in transporting products in freight shipments or where the package is subjected to rough handling or abuse.

The invention further consists in the several features hereinafter set forth and more particularly defined by claims at the conclusion hereof.

In the drawings Fig. 1 is a detailed perspective view of a container embodying the invention, parts being broken away and parts being shown in section;

Fig. 2 is a detail sectional view showing the container parts in their initial position and associated with apparatus for forming the closure;

Fig. 3 is a view similar to Fig. 2 showing the parts in an intermediate position;

Fig. 4 is a view similar to Fig. 2 showing the parts in final position.

The subject matter of the invention relates to the construction employed for connecting the head to the siding of the container or its cover, and since it is equally applicable for either the cover or body of the container the container alone has been shown in detail for the purpose of explaining the invention.

The siding 5 of the container is of fibre tubing, either of pressed pulp or a number of wrappings of paper or fibre sheets and is generally in the form of cylindrical or conical tubing.

The head 6 is of fibre, consisting of one or more paper or fibre sheets or laminations with one or more of these laminations, as here shown, bent at an angle adjacent its edge to form a dished head having a flange 7, though it will be understood that the invention is not to be limited to a dished head container.

A metal band 8, of thin sheet-steel or other suitable sheet metal, having an outwardly extending base flange 9 is secured to the siding and the head in the present instance by bending a part 10 of the extended end 11 of the siding over the head and bending the outer portion 12 of the band around the extended end 11 of said siding whereby the siding is firmly clamped to the head band 8 and in the present instance this head band also clamps the flange 7 of the head between it and the extended end of the siding. While this is the preferred construction, as regards the head band 8 and its association with the head, reference is here made to my prior United States Letters Patent Nos. 1,590,751, 1,590,752 and 1,590,756, of June 29, 1926, as to other specific forms of connection between the head band and the head and which may be used in place of the detailed construction here shown and described without departing from the broad feature of the invention, which is the interlocking association of the head band with a sheet metal siding band 13, while the head is firmly held in place, and more particularly where such bands are associated with a portion of the siding offset inwardly over the head.

As shown the band 13 surrounds the siding proper and extends up over the outer side of the extended end 11 of the siding and is bent therewith into interlocking engagement with the internal edge 14 of the band 8, as shown in Figs. 1 and 4.

A method of forming the container is here shown in Figs. 2 to 4, inclusive. The siding 8 and band 13 are firmly held between an internal expanding chuck 15 and an external contracting chuck 16 which preferably has a small projecting bead 16′ that is embedded into the siding during the chucking operation so as to prevent any possibility of longitudinal movement thereof. The head 6, which is inserted into and fits within the siding, is clamped between the chuck 15 and a clamping

plunger 17 while the band 8 is positioned against the head and centered by said plunger 17, as shown in Fig. 2. With the parts thus positioned a contractible forming die 20 having an annular curved rib portion 21 is moved inwardly against the upper end of the band 13 and bends the same, together with the extended edge of the siding, over the head and against the band 8. Thereafter an annular forming die 22, having a curved face 23, is moved downwardly between the die 20 and the plunger 17 to bend or curl the upper edge of the band 8 over the extended edge of the siding to an intermediate position, shown in Fig. 3, and then to the final position shown in Fig. 4, the upper edge of the rib portion 21 assisting in curling the outer edge of the band 13 up into interlocking engagement with the rolled edge of the band 8 and siding.

This combination of the head, siding, and head and siding bands produces a very strong closure and one that may be distorted from its original form by rough handling when loaded without producing rupture or leakage of the contents of the container.

I desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except in so far as such limitations are specified in the claims.

What I claim as my invention is:

1. In a container, the combination with the head and fibre siding, of a reenforcing metal band associated with said head and siding, and a reenforcing metal band for the outer side of the siding having interlocking rolled, crimped engagement with said first-named band.

2. In a container, the combination with the fibre siding and a head fitting within the same, the end of said siding extending beyond the body of the head, of a reenforcing metal band engaging the head and the extended end of said siding, and a reenforcing metal band for the outer side of the siding having interlocking rolled, crimped engagement with said first-named band.

3. In a container, the combination with the fibre siding and a head fitting within the same, said siding having a portion extending over and beyond the head, of a reenforcing metal band engaging the head and the extended end of said siding, and a reenforcing metal band for the outer side of the siding having interlocking rolled, crimped engagement with said first-named band.

4. In a container, the combination of a fibre siding, a dished head fitting with the siding and having its flange portion associated with an extended end of said siding, a reenforcing metal head band in clamping engagement with said flange portion and the extended end of said siding, and a reenforcing metal band engaging the outer side of said siding and having rolled, crimped engagement with the extended end of said siding and said head band.

5. In a container, the combination of a fibre siding, a dished head fitting within the siding and having its flange portion associated with an extended end of said siding, a reenforcing metal head band bent with the extended end of said siding over a portion of said head and having clamping engagement with said flange portion and the extended end of said siding, and a reenforcing metal band engaging the outer side of said siding and having rolled, crimped engagement with the extended end of said siding and said head band.

In testimony whereof, I affix my signature.

EDWIN F. HULBERT.