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DRUM OR CONTAINER

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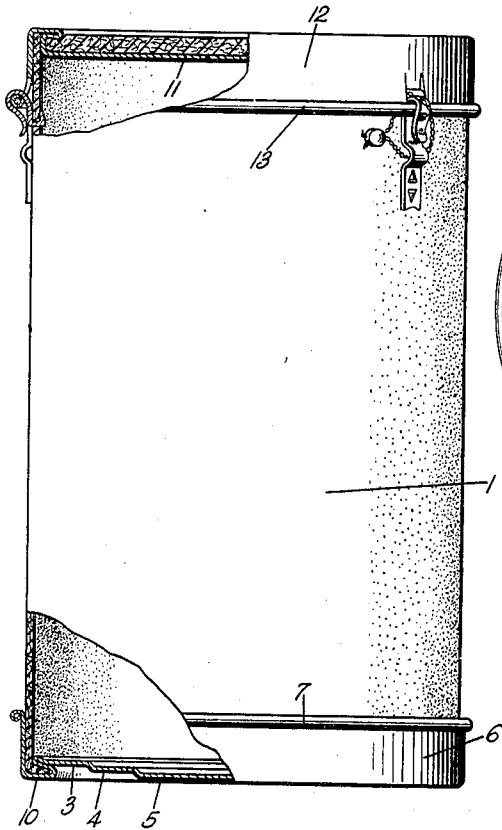


Fig. 1

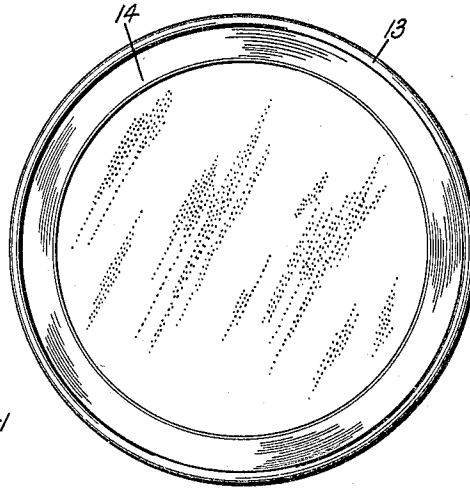


Fig. 2

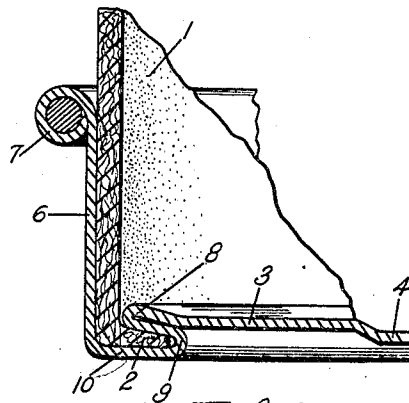


Fig. 3

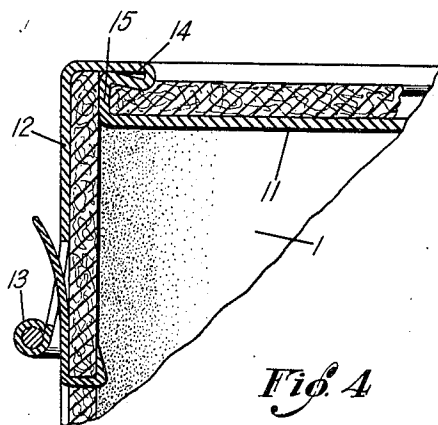


Fig. 4

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DRUM OR CONTAINER

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8 Claims. (Cl. 229—5.6)

My invention relates to drums or containers. It has to do particularly with receptacles of this type which are especially useful in connection with the transportation of products in bulk, although it is not necessarily limited thereto.

In the past, drums or containers of this type have been constructed in various ways. In some cases, they have been constructed with the body portion of cylindrical form and made of fiber board or similar material, with the ends of this body portion being closed by metallic closures. In other cases the ends of the cylindrical body portion of fiber board have been closed either by wooden disks or by fiber closures. In these prior art structures, it has usually been necessary to provide independent means for securing the end closures in position or, at least, for maintaining the disks which form a part thereof in proper position.

One of the objects of this invention is to provide a drum or container wherein the cylindrical body portion is preferably of fiber board and wherein the end closures therefor may be held in position either without independent securing means or with the required number of securing means reduced to a minimum.

Another object of this invention is to provide a drum or container wherein the ends of the drum are closed by means which render unnecessary the use of adhesive material or staples and, in fact, which renders unnecessary the puncturing of the fiber board of the drum or container.

Another object of this invention is to provide a drum or container with metal ends that become rigid and effective closing devices while maintaining these metal closures of such form that the drums or containers may be readily stacked and will not tilt when stacked.

In the preferred form of my invention, my drum or container is provided with a cylindrical body portion of fiber board or similar material whose lower edge is inwardly bent. Cooperating with this lower edge is a metal cap or head having a disk-like center and having an upstanding annular flange. The disk-like portion of this metal bottom is joined to the upstanding annular flange by an S-shaped bend whose upper loop is squeezed together and whose lower loop receives and embraces the inturned lower edge of the cylindrical fiber board body portion, being squeezed into clamping relation thereto.

In this preferred form, the upper end of the drum or container is provided with a closure constructed of a metal disk which is connected with a downwardly turned metal portion by means of

an S-shaped bend whose upper loop is squeezed together and whose lower loop receives a strengthening disk of fiber board, wood or other suitable material.

This closure for the upper end may be held in position in any suitable manner.

The preferred embodiment of my invention is shown in the accompanying drawings wherein similar characters of reference designate corresponding parts, and wherein:

Figure 1 is a side elevation, partially in section, of a drum or container embodying my invention.

Figure 2 is a top plan view of the structure shown in Figure 1.

Figure 3 is a detail in section, illustrating the bottom construction of my drum or container.

Figure 4 is a detail in section showing the lid construction of my container.

In the drawing I have shown a body portion 1 which is mainly of cylindrical form and which is preferably constructed of several overlapping plies of fiber board or similar material. At its lower end, this body portion is provided with an inturned edge 2.

Cooperating with the lower edge of this body portion 1 of my container, I have provided a bottom closure which is preferably made entirely of steel. This bottom closure comprises a disk 3 that may have an inner annular shelf 4 and a central circular portion 5. The disk 3 is connected by an S-shaped bend to an upstanding flange 6 that may be rolled at its upper edge, as at 7.

The S-shaped bend preferably comprises a loop 8 and a loop 9. The loop 8 is squeezed together as shown in Figure 3 while the loop 9 receives and embraces the inturned edge 2 of the fiber board body portion of the container. Furthermore, this loop 9 is squeezed into firm gripping contact with this inturned edge 2 of the body portion. The squeezing of this loop 9 into gripping relation to the inturned edge 2 is, however, effected in such a way that the lower leg 10 of the loop presents a flat annular supporting surface which is preferably substantially in alignment with the circular central portion of the disk 3.

The lid construction of my container, as shown best in Figure 4, is comprised mainly of steel and embodies a central disk 11 that is likewise joined by means of an S-shaped bend to a downwardly turned annular portion 12. The annular portion 12 may be rolled at its lower end as at 13 to increase the strength thereof.

The S-shaped bend for the lid construction has its upper loop 14 squeezed together and has

its lower loop 15 disposed in embracing relation to a disk which may be of heavy cardboard or of wood. This lower loop 15 of the S-shaped bend not only embraces but tightly grips the cardboard or wood disk which, in turn, assists in maintaining the upper bend of the loop 14 substantially in a flat plane so that, when the lid is in position on a container, other containers may be stacked thereon without danger of tilting.

By reference to Figure 4 of the drawing, it will be noted that the lower loop 15 of the S-shaped bend of the lid cooperates with the wall 12 of this lid to produce a socket for the reception of the upper edge of the cylindrical body portion. This upper edge, therefore, fits within this socket snugly and further accentuates the bracing and rigidity of the lid construction.

It will be understood that the lid of my drum or container may be removed as desired and that it may be held in position by various types of means. One type of means is illustrated in Figure 1 of the drawing but need not be described in detail.

The body portion of my container may be made of fiber board, straw board, pulp board, or any similar material. The disk which is mounted in the lid of my container may be of the same material or may be of wood if desired.

It will be apparent that I have provided a drum or container wherein the bottom of the drum is secured to the side walls thereof by a formation of unusual strength without the necessity for using latches or other types of securing means. Any pressure tending to separate the bottom from the side walls is resisted by three plies of metal reinforced with an interposed portion of fibrous material which is integral with the body portion of the container.

The top of the container is mainly of metal but it is reinforced with a heavy pad of cardboard, fiber board, wood or other suitable material. Any pressure upon the lid of the drum or container is also resisted adjacent the corners of the container by three plies of metal with an interposed layer of fibrous material.

It will be seen that both the bottom and the top of the container are so constructed that, for a substantial distance within the periphery of the container, an annular flat surface is produced which is sufficiently broad to permit stacking of the containers without danger of tilting.

Having thus described my invention, what I claim is:

1. A drum or container comprising a cylindrical body portion of fiber board, said body portion having a flange on one end thereof which is bent inwardly substantially at right angles thereto, and a metal closure for the said end of said body portion, said metal closure having an S-shaped bend with one loop thereof disposed in embracing and gripping relation to said flange, and the other loop thereof pressed together whereby separation of said end closure from said body portion is resisted by three plies of metal supplemented by a ply of fiber board.

2. A drum or container comprising a cylindrical body portion having one end thereof inwardly bent to form a horizontally disposed flange, a metallic closure for said end, said metallic closure comprising a peripheral flange having its edge reinforced, a body-portion, an S-shaped bend joining said body portion to said peripheral flange, said S-shaped bend having one loop thereof bent into gripping relation with said flange and the other loop pressed together, said

S-shaped bend being so disposed as to produce a flat annular supporting surface, a projecting portion on the body portion of said metallic closure, said projecting portion being adapted to form a central supporting surface, said central supporting surface being in alignment with said annular supporting surface.

3. A drum or container comprising a cylindrical body portion of fiber board, said body portion having a flange on one end thereof which is bent inwardly substantially at right-angles thereto, and a metal closure for the said end of said body portion, said metal closure having a portion bent in such a manner that three layers of metal will be produced which are disposed substantially at right-angles to said cylindrical body portion, said inwardly bent flange of said body portion being disposed between two of said layers of metal which are adapted to embrace and grip said flange.

4. A drum or container comprising a cylindrical body portion of fiber board, said body portion having a flange on one end thereof which is bent inwardly substantially at right-angles thereto, and a metal closure for the said end of said body portion, said metal closure having a portion bent in such a manner that three layers of metal will be produced which are disposed substantially at right-angles to said cylindrical body portion, said inwardly bent flange of said body portion being disposed between two of said layers of metal which are adapted to embrace and grip said flange, said metal closure having a flat annular portion immediately within its periphery and a centrally disposed disk-like projecting portion disposed substantially in alignment with said flat annular portion.

5. A drum or container comprising a cylindrical body portion, said body portion having one end thereof bent to form a substantially horizontally disposed flange, a metallic closure for said end, said metallic closure having an S-shaped bend therein, one loop of said S-shaped bend having said flange on said cylindrical body portion disposed therein, and being pressed into embracing and gripping relation to said flange.

6. A drum or container comprising a cylindrical body portion, said body portion having one end thereof inwardly bent to form a horizontally disposed flange projecting from the inner surface of said body portion, a metallic closure for said end, said metallic closure having an S-shaped bend therein, one loop of said S-shaped bend having said flange on said cylindrical body portion disposed therein, and being pressed into embracing and gripping relation to said flange, and the other loop of said S-shaped bend being pressed together.

7. A drum or container comprising a cylindrical body portion, said body portion having one end thereof inwardly bent to form a horizontally disposed flange projecting from the inner surface of said body portion, a metallic closure for said end, said metallic closure having an S-shaped bend therein, one loop of said S-shaped bend having said flange on said cylindrical body portion disposed therein and being pressed into embracing and gripping relation to said flange, the other loop of said S-shaped bend being pressed together, said closure member having a flat annular supporting surface which will be disposed at the extreme end of said container.

8. A drum or container comprising a cylindrical body portion having one end thereof in-

wardly bent to form a horizontally disposed flange projecting from the inner surface of said body portion, a metallic closure for said end, said metallic closure having an S-shaped bend therein, one loop of said S-shaped bend having said flange on said cylindrical body portion disposed therein and being pressed into embracing and gripping relation to said flange, the other loop of said S-shaped bend being pressed to-

gether, said closure member having a flat annular supporting surface which will be disposed at the extreme end of said container adjacent the periphery thereof, said metallic closure being provided with a projecting portion adapted to form a central supporting surface, said central supporting surface being in alignment with said annular supporting surface.

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