Oct. 14, 1924. 1,511,310

C. E. WARREN

KNOCKDOWN SHIPPING DRUM

Filed Dec. 2. 1921

Fig. 1

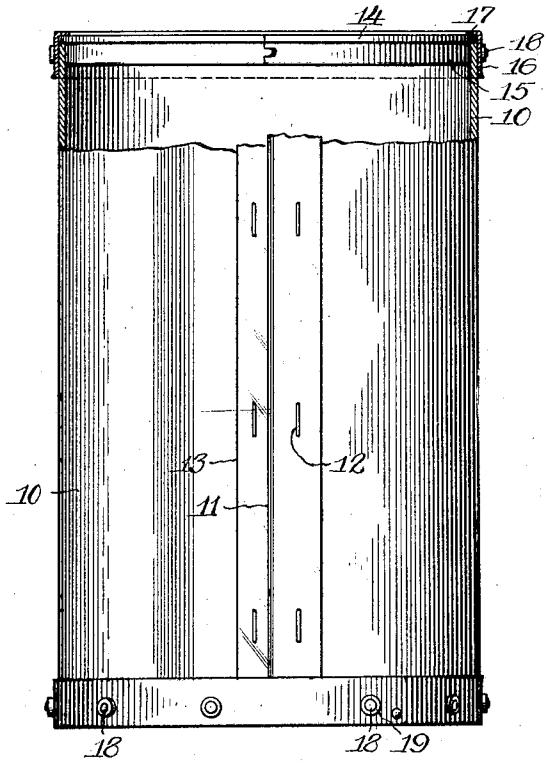


Fig. 3

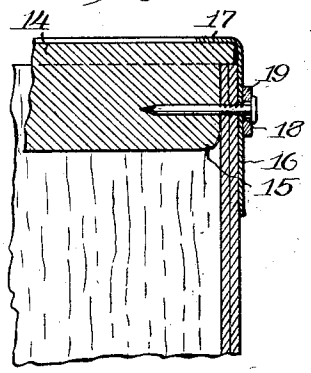
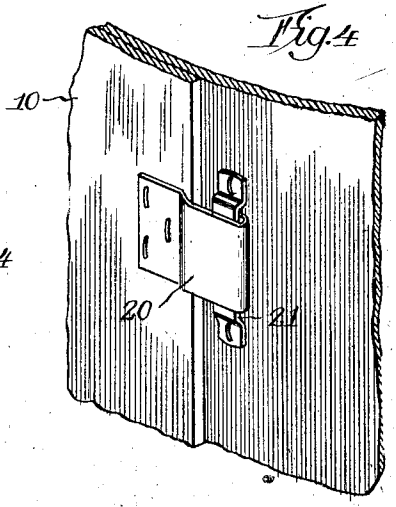


Fig. 4



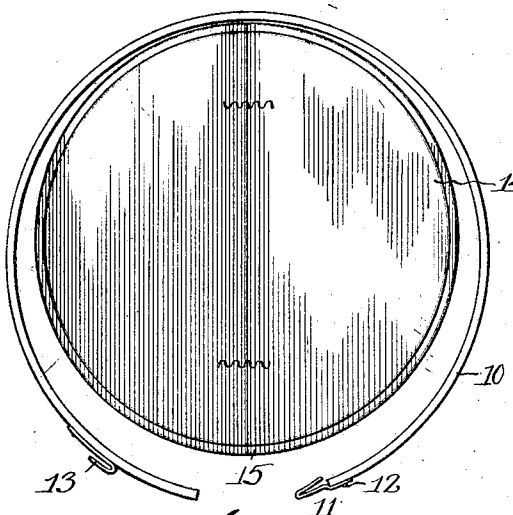


Fig. 2

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UNITED STATES PATENT OFFICE.

CLARKE E. WARREN, OF CHICAGO, ILLINOIS.

KNOCKDOWN SHIPPING DRUM.

Application filed December 2, 1921. Serial No. 519,318.

To all whom it may concern:

Be it known that I, CLARKE E. WARREN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Knockdown Shipping Drums, of which the following is a specification.

My invention relates to improvements in shipping drums and more particularly to a knock-down shipping drum.

Knock-down boxes have been made heretofore having flat sides which readily adapt themselves to packing in a flat, compact arrangement. Difficulty has been encountered, however, with cylindrical containers particularly if made of wood, as it has not been possible heretofore to flatten out the cylindrical sides for the purpose of return shipment in a compact space.

The object of the present invention is to provide a shipping drum made preferably of wood, which may be readily taken apart and the side opened or flattened sufficiently to permit return shipment in much less space than that occupied by the container when fully assembled.

In the accompanying drawings I have illustrated one embodiment of my invention, in which—

Figure 1 is an elevation, partly in section, of my improved shipping drum;

Fig. 2 is a plan view thereof with the drum partially opened and the top removed;

Fig. 3 is an enlarged sectional elevation of certain details.

Fig. 4 is a view of a modified lock.

The main body of the container is a wooden cylinder 10, which may be either two or three ply. It is shown as made of two layers of thin wood with the grain running at right angles, the two layers being glued together forming a thin, flexible wall. The wall is preferably from ⅛ to ¼ inch in thickness. This material is preferably gum wood, cotton wood, or other inexpensive wood, the cells of which, to a great extent, are filled with glue which has been forced into the green stock under great hydraulic pressure. This makes a tough, pliable veneer.

The edges of the cylindrical wall are caused to overlap and are held together by a metal fastener 11, secured to one edge of the wooden sheet by suitable fastening means 12, this fastener hooking over a metal strip 13, secured near the other edge of said wooden sheet. This wooden sheet is sufficiently flexible to enable it to be rolled by hand to cylindrical form with the edges overlapping and the metal fasteners interlocked. The metal strip 11 also reinforces the edge of the veneer. The ends or heads 14 are then inserted. Each head has a reduced, tapering portion forming an annular shoulder 15, which holds the wooden cylinder in place and prevents the catch from unfastening.

The edges or chimes are protected by a suitable sheet metal hoop 16 having an inwardly turned flange 17, and secured to the heads by nails 18. The flanged hoops assist in holding the ends in place. The nails are driven preferably through paper or cardboard washers 19 before passing through the hoop. With this arrangement, the consignee of the goods is enabled to remove the nails more readily after tearing out or forcing out the cardboard or paper washers, leaving the head of the nail protruding somewhat. These washers may be made of any other soft or easily destroyed material. The ends are readily lifted out and may be shipped flat and the cylindrical side may also be opened out until it is entirely flat and a number of such flattened wooden sheets superimposed one over the other and shipped in a crate. Walls having a thickness of about ⅛ of an inch may be readily flattened out in this manner without breaking or cracking them. Where they are somewhat thicker, namely ¼ of an inch thick, they are preferably sprung open a little, as in Fig. 2, but not flattened out and in this position they may be nested into each other for return shipment, the total number of knock-down cylinders occupying only a fraction of the original space.

The interlocking fastening device need not necessarily be a continuous strip of metal but may consist of one or more pairs of fasteners 20—21, such as shown in Fig. 4 for example. One such fastener at the middle of the vertical edge will suffice in many cases, supplemented by the hoops at each end, making a container which is sufficiently tight to hold granular material without leakage. Various other types of fasteners may be employed.

Numerous changes may be made in the construction described without departing from the invention as expressed in the appended claims.

What I claim is—

1. A device of the class described comprising a cylindrical wood veneer wall, a metal fastener secured near one edge thereof and reinforcing said edge, a metal catch secured near the other edge thereof and interlocking with said fastener, removable ends each having a tapered shoulder to fit into the ends of said cylinder, and a metal hoop having a flange protecting the chime at each end.

2. A device of the class described comprising a wall portion having overlapping edges, a catch secured adjacent one of said edges, a fastener secured adjacent to the other edge and being adapted to reinforce the same and to coact with said catch to retain the edges in overlapping relation, and a head in each end of said wall.

3. A device of the class described comprising a wall portion having overlapping edges, means secured to said wall adjacent said edges and holding the same in overlapping relation, a head in each end of said wall to close the same, headed nails for securing said heads in position in said wall, and spacing members beneath said nail heads for suitably spacing the same from said wall to permit of their convenient withdrawal therefrom.

In testimony whereof, I have subscribed my name.

CLARKE E. WARREN.