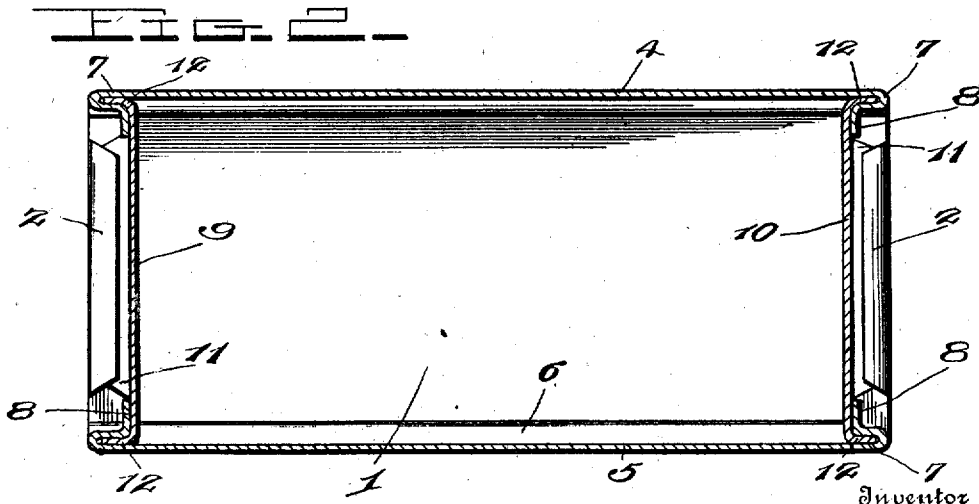
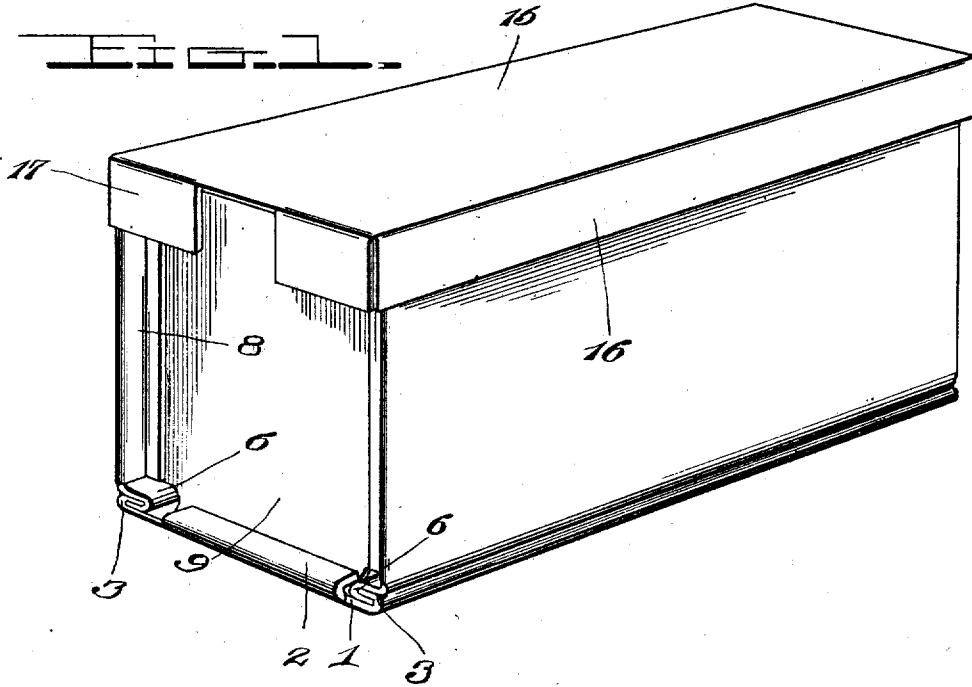


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 COLLAPSIBLE CRATE.
 APPLICATION FILED JAN. 10, 1912.

1,023,577.

Patented Apr. 16, 1912.
 2 SHEETS-SHEET 1.



Witnesses

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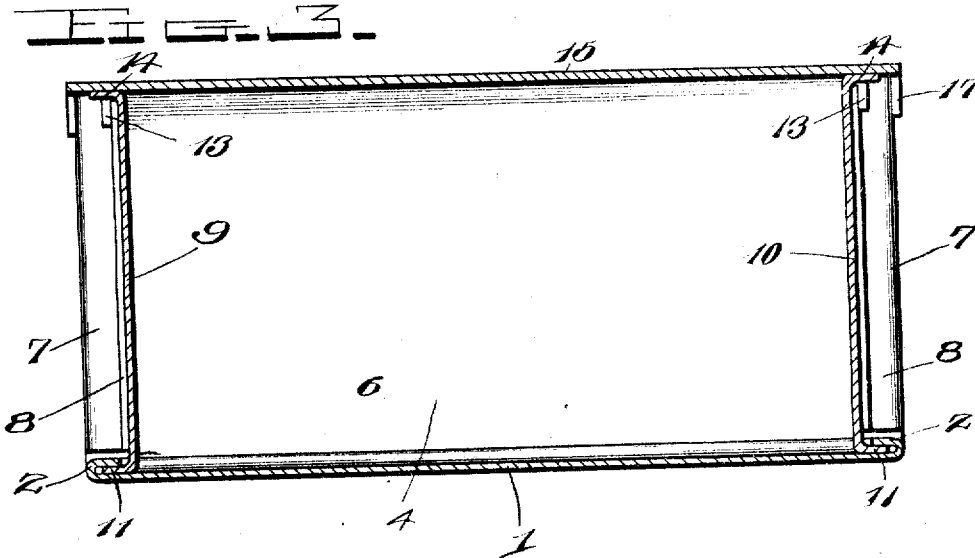


FIG. 3

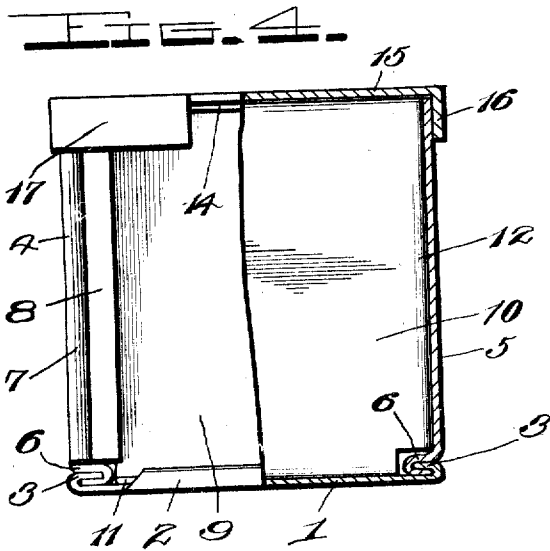


FIG. 4

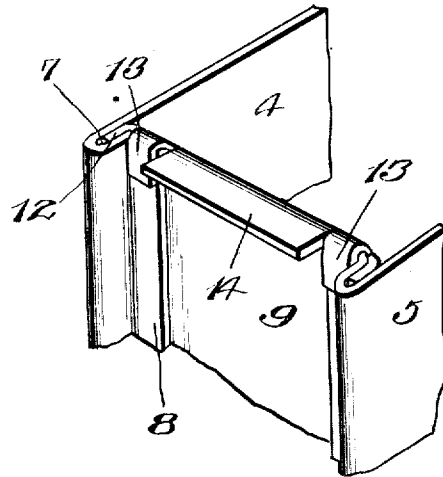


FIG. 5

Witnesses

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UNITED STATES PATENT OFFICE.

ADOLPH LIST AND WILLIAM A. DE MAINE, OF CAPE GIRARDEAU, MISSOURI.

COLLAPSIBLE CRATE.

1,023,577.

Specification of Letters Patent.

Patented Apr. 16, 1912.

Application filed January 10, 1912. Serial No. 670,471.

To all whom it may concern:

Be it known that we, ADOLPH LIST and WILLIAM A. DE MAINE, citizens of the United States, residing at Cape Girardeau, in the county of Cape Girardeau and State of Missouri, have invented certain new and useful Improvements in Collapsible Crates, of which the following is a specification, reference being had to the accompanying drawings.

Our invention relates to new and useful improvements in the art of metallic shipping and storing vessels and more particularly to a metallic collapsible crate, and our object is to provide a device of this character which may be readily and quickly set up for operation and compactly folded for shipment or storage when not in use.

A further object of the invention resides in providing a device, the walls and bottom of which are provided with interlocking means, whereby the parts of the device may be quickly and securely engaged with one another, and a still further object resides in providing a device which is extremely simple and durable in construction, inexpensive to manufacture, and one which will be very efficient and useful in operation.

With these and other objects in view, our invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawings forming a part of this application, Figure 1 is a perspective view of the device set up for operation. Fig. 2 is a horizontal section there-through. Fig. 3 is a vertical longitudinal section through the same. Fig. 4 is an end elevation of the device partly in section, and, Fig. 5 is a fragmentary perspective view of one end of the device with the cover removed.

In carrying out our invention, we shall refer to the drawings in which similar reference characters designate corresponding parts throughout the several views and in which—

1 indicates the bottom of our improved crate, the end edges of which are provided with overlying flanges 2 which extend to points adjacent the side edges of the bottom, while said side edges are also provided with inwardly bent overlying flanges 3 which extend the full length of the bottom.

4 and 5 indicate, respectively, the side

walls of the device, the lower edges of which are bent inwardly and thence outwardly, as shown at 6, to form channel-ways adapted to receive the overlying portions 3 of the side edges of the bottom, and the end edges of these side walls 4 and 5 are first bent inwardly, as shown at 7, to form channels, the free ends of these inwardly bent portions being then disposed outwardly at substantially right angles to the plane of the walls to form the stop flanges 8.

The end walls 9 and 10 each have the bottom edges thereof provided with an outwardly bent flange 11 which is adapted to be received in the channel formed by the overlying flange 2 of the bottom 1, said bottom flanges 11 extending to points adjacent the side edges of said end walls, and said side edges of each of the end walls are provided with the outwardly bent flanges 12 which are adapted to enter the channel-ways 7 formed on the end edges of the side walls 4 and 5. The end walls are also provided on their upper edges immediately adjacent the side flanges 12, with downwardly bent tongues 13 which extend over the outer faces of said end walls and are adapted to receive thereunder, the outer faces of the stop flanges 8 of the side walls 4 and 5, when the end walls are properly engaged therewith, and the upper edges of each of said end walls are also provided with outwardly extending flanges 14 which form rests or the like for a cover 15. This cover 15 is of a size equal to the greatest dimensions of the walls of the device, the same being provided with depending side and end flanges 16 and 17, respectively, which snugly engage portions of the device and complete the same.

In setting up the device, the side walls 4 and 5 are first brought over the bottom 1 and slipped into position so that the overlying flanges 3 of the side edges of the bottom will snugly fit within the channel-ways formed by the inwardly and outwardly bent portions 6 of the lower edges of the side walls 4 and 5, it being obvious that the space between the flanges 2 at the end edges of the bottom and the flanges 3 at the side edges thereof, will permit of said side walls being readily slipped into position. The side walls 9 and 10 are then brought into position and the side flanges 12 thereof disposed in the channel-ways 7 of the side walls and said end walls moved vertically so that the tongues 13 at the upper edges thereof will

overlap the stop flanges 8 of said side walls, whereupon the lower portions of the end walls are forced outwardly so that the lower flanges 11 thereon will engage under the
 5 overlying flanges 2 of the bottom. When these flanges, as above described, are properly interlocked, the end and side walls will be securely locked together and locked to the bottom and will not be adapted for
 10 casual disengagement so that various articles may be placed therein and shipped from place to place with assurance of perfect safety.

After the walls and bottom are engaged
 15 with one another, as above described, the top 15, of course, may be placed in position on the device and may be locked in position thereon in any desired manner, whatsoever, it being convenient to provide such means as
 20 may be readily engaged with the outwardly bent flanges 14 of the end walls of the device, although no such means has been shown in the drawings. When all articles have been removed from the device and it is not
 25 desired to retain the same in its upright position, the parts of the same may be readily collapsed in a manner reverse to the manner above described for the setting up of the same, and the parts may be placed on one
 30 another and within the top 15 so as to be compactly folded and placed out of the way for use at some further time.

From the foregoing, it will be seen that we have provided an improved metallic
 35 shipping and storing vessel which is of the collapsible type wherein locking means is provided on the various walls of the device and the bottom thereof, which locking means is formed integral therewith and may be
 40 readily and quickly engaged and disengaged with one another. It will further be seen that the device, when set up for use, will be securely held together, but may be readily and quickly collapsed, when desired. It will
 45 further be seen that the device is one which is extremely simple and durable in construction, inexpensive to manufacture, and one which will be very efficient and useful in operation.

50 While we have particularly described the elements which are most well adapted to perform the functions set forth, it is obvious that various changes in form, proportion and in the minor details of construction may
 55 be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described our invention, what we claim is:—

60 1. A collapsible crate, comprising a bottom section provided with overlying side and end flanges thereon, side wall sections, the lower edges of which are provided with

inwardly and outwardly bent flanges to engage the overlying side flanges of the bot- 65
 tom section, said side wall sections being also provided with end flanges bent to provide channel-ways thereon, said end flanges being also continued at right-angles to the
 70 general trend of the side walls to form lateral flanges, end wall sections having outwardly bent flanges at the lower ends thereof adapted for engagement with the over-
 lying end flanges of the bottom section, and also provided with outwardly bent side 75
 flanges adapted for engagement with the channel-ways formed at the ends of said side walls, downwardly bent tongues formed
 on the upper edges of said end wall sections adapted for engagement with said lateral 80
 flanges formed at the ends of said side walls, and a cover for the device.

2. A collapsible crate, comprising a bottom section having overlying flanges on the side edges thereof extending the full length 85
 of the same, said bottom section being also provided with overlying flanges at the end edges thereof extending to points adjacent the side edges of the same, side wall sections,
 90 the lower edges of which are provided with flanges bent inwardly and thence outwardly to engage the overlying side edge flanges of said bottom section, said side wall sections being also provided with inwardly bent
 flanges at the end edges thereof to provide 95
 channel-ways at such points, the latter flanges being continued at right angles to the plane of the side wall sections to form lateral stop flanges, end wall sections having
 100 outwardly bent flanges at the lower edges thereof adapted for engagement with the overlying end flanges of said bottom section, said end wall sections being also provided
 with outwardly bent flanges at the side 105
 edges thereof adapted for engagement with the channel-ways formed by the flanges at the ends of said side wall sections, downwardly bent tongues formed on the upper
 edges of said end wall sections adapted for engagement with the lateral stop flanges of 110
 said side wall sections, said end walls being also provided with outwardly bent flanges at the upper edges thereof to form rests thereon, and a cover for the device adapted
 to rest on the upper edges of the side wall 115
 sections and on the rests formed on said end wall sections.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

ADOLPH LIST.
 WILLIAM A. DE MAINE.

Witnesses:
 JOEL T. NUNN,
 L. F. POPP.