C. L. ARNOLD.

SHIPPING BOX.

APPLICATION FILED JUNE 19, 1911.

1,038,816.

Patented Sept. 17, 1912.

2 SHEETS—SHEET 1.

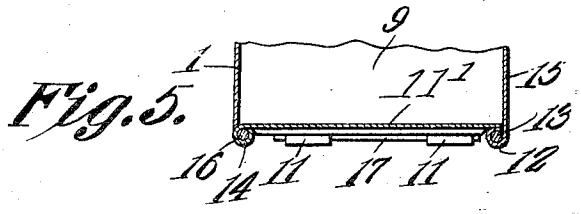

Fig. 5.

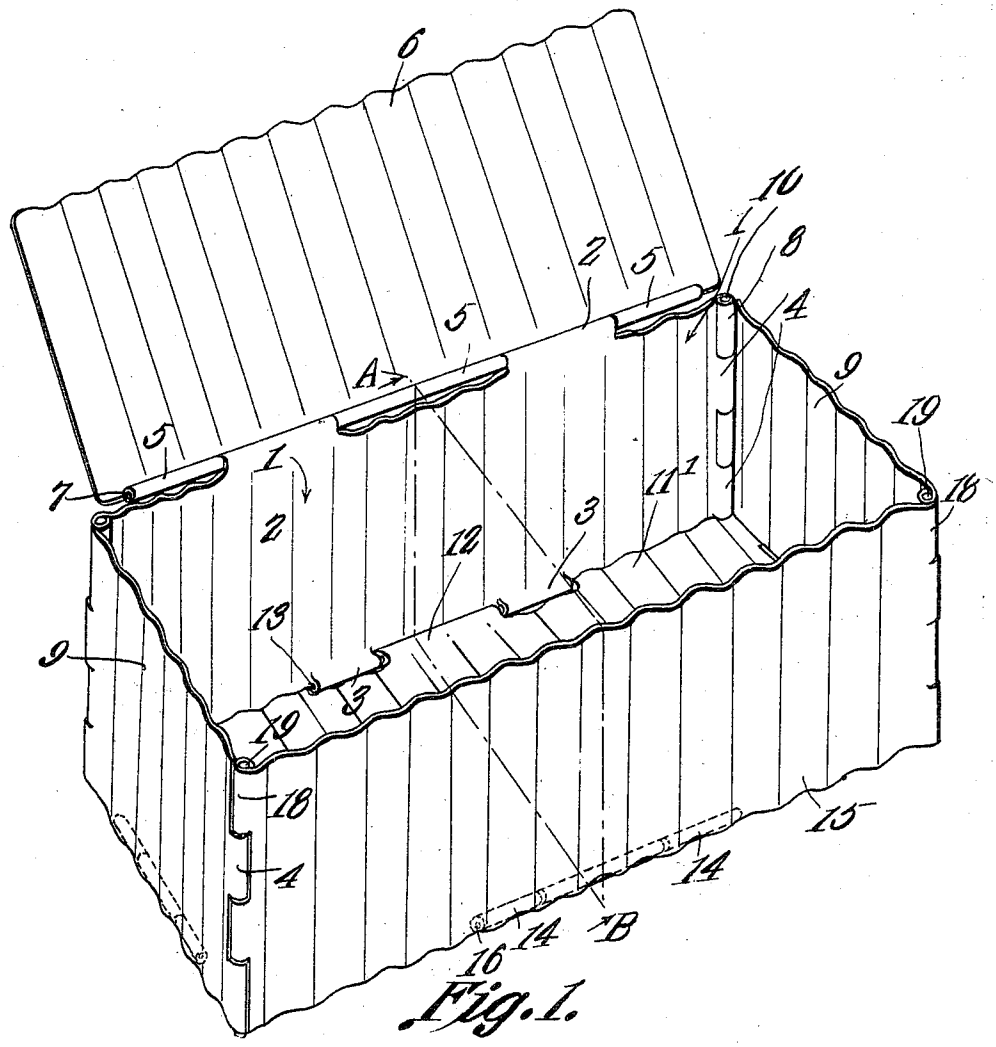

Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

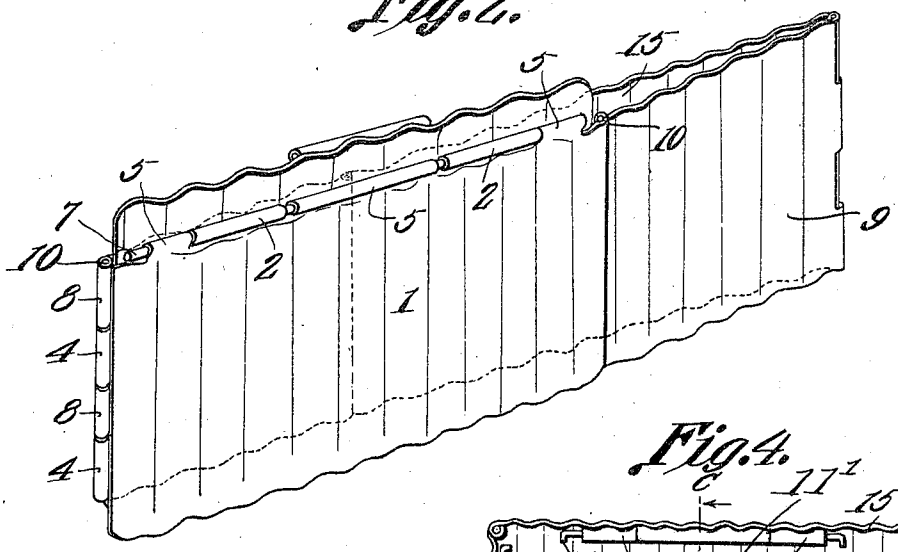
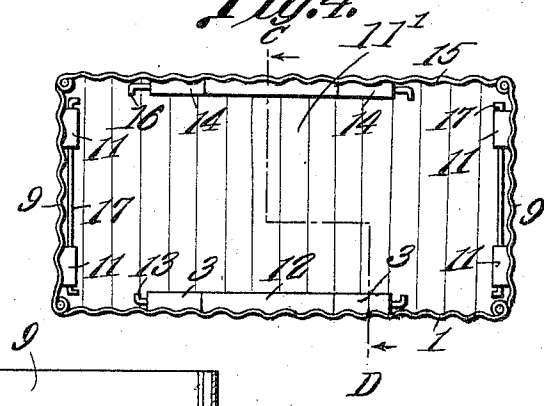


Fig. 4.



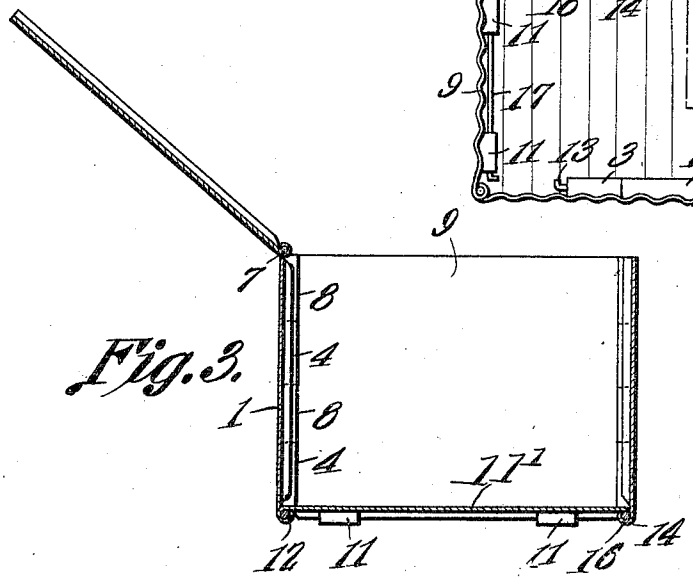


Fig. 3.

Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES L. ARNOLD, OF BARDSTOWN, KENTUCKY.

SHIPPING-BOX.

1,038,816. Specification of Letters Patent. Patented Sept. 17, 1912.

Application filed June 19, 1911. Serial No. 634,041.

To all whom it may concern:

Be it known that I, CHARLES L. ARNOLD, a citizen of the United States, residing at Bardstown, in the county of Nelson and State of Kentucky, have invented a new and useful Shipping-Box, of which the following is a specification.

This invention relates to shipping crates or boxes and its primary object is to provide an all metal box which can be readily collapsed, when not in use, and which, when set up, will form a strong receptacle the parts of which will not become accidentally displaced.

A further object is to provide a device of this character formed of but few parts and which is made up of thin panels corrugated so as to constitute both a light and a durable structure.

With the foregoing and other objects in view which will appear as the description proceeds the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a perspective view of the box or crate set up and with the top panel open. Fig. 2 is a perspective view of the device collapsed. Fig. 3 is a vertical transverse section on the line A—B Fig. 1. Fig. 4 is a bottom plan view. Fig. 5 is a section on line C—D Fig. 4. Fig. 6 is a vertical section through a portion of a slightly modified form of box or crate.

Referring to the figures by characters of reference 1 designates the back panel of the crate or box, the same being formed of thin sheet metal corrugated vertically and provided, at its upper edge, with alining rolled portions or eyes 2 while its lower edge has alining eyes or rolled portions 3, these last mentioned eyes being disposed above the plane occupied by the lower edge of the panel 1, as clearly indicated. Alining eyes or rolled portions 4 are formed at each end of the panel 1. The eyes 2 are designed to project between corresponding eyes 5 formed along one edge of a top panel 6 which is also formed of thin metal corrugated, the alining eyes 2 and 5 receiving a pivot rod or wire 7 whereby the panels 1 and 6 are hingedly connected.

Eyes 4 are designed to aline with corresponding eyes or rolled portions 8 formed at the rear ends of the end panels 9 which are formed of thin sheet metal corrugated vertically, the alining eyes 4 and 8 receiving pivot wires or rods 10. Eyes 11 extend inwardly from the lower edges of the panels 9 and are disposed above the plane occupied by the said lower edges, these eyes constituting supports on which rest the ends of the bottom panel 11′. Said bottom panel is formed of thin sheet metal corrugated from front to rear and having alining eyes or rolled portions 12 along the front and rear edges thereof. One of these rolled portions is adapted to project between the eyes 3 and to aline therewith so as to receive a pivot wire or rod 13 while the other rolled portion 12 projects between rolled portions or eyes 14 formed along the lower edge of the front panel 15 of the crate. This front panel is formed of thin sheet metal corrugated vertically and the eyes 14 and the eyes 12 alining therewith, are adapted to receive a connecting wire or rod 16. As heretofore stated the ends of the panel 11′ rest on the eyes or projections 11 and, if desired, these eyes may support rods 17 on which the ends of the panel 11′ may also rest. The front panel 15 has eyes 18 at its ends adapted to aline with the eyes 4 on the front ends of the end panels 9 and to receive connecting or pivot rods or wires 19.

It will be understood that the box or crate can be readily collapsed by removing either of the rods 16 and 13 so as to thus disengage either the front or the rear edge of the bottom panel from the corresponding wall of the crate. Said panel can then be folded against either the rear or the front wall of the crate and said walls can be swung together by reason of the hinge connections between the front, rear and end panels. The top panel 6 can then be folded onto the outer face of the rear panel 1 and a compact structure, such as shown in Fig. 2, will thus be produced. To set up the crate or box for use, the end panels 9 are swung until at right angles to the panels 1 and 15 after which the bottom panel 11′ is swung downwardly onto the eyes or rolled portions thereunder and attached thereto by means of a connecting rod. Cover or top panel 6 can then be

swung to closed position. If desired a rib 20 can be formed along the upper edge of the front panel 15, as shown in Fig. 6, so as to constitute a brace for said panel and also a rest for the top panel 6.

It will be apparent that a crate such as described is comparatively cheap to manufacture and is very endurable, it being especially advantageous because of the few parts necessary.

What is claimed is:—

1. A collapsible box or crate including hingedly connected front, back and end panels, a top panel hingedly connected to and foldable onto one of the first named panels, a bottom panel, spaced alining eyes extending inwardly from the lower edges of the front, back and end panels respectively, said bottom panel bearing downwardly at its front, rear and end edges upon the eyes, eyes upon the front and rear edges of the bottom panel and movable between the eyes on the front and back panels, separate connecting devices extending through the eyes upon the front and back panels respectively and through the eyes on the bottom panel, either of said devices being removable, the remaining device constituting a pivotal connection between the bottom panel and one of the other panels, and rods mounted in the eyes on the end panels and constituting supports for the ends of the bottom panel.

2. A collapsible box or crate including hingedly connected wall panels, eyes extending inwardly from the lower edge portions of said panels, the eyes on each panel being disposed in alinement, a bottom panel having outstanding eyes adapted to extend between eyes in opposed panels respectively, and to aline therewith, said bottom panel, when its eyes are thus located, being supported by the eyes on the wall panels, and rods extending through the alining eyes in the wall and bottom panels, either of said rods being removable to permit the bottom panel to swing upwardly upon the other rod.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES L. ARNOLD.

Witnesses:
MORGAN YEWELL,
WALLACE BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."