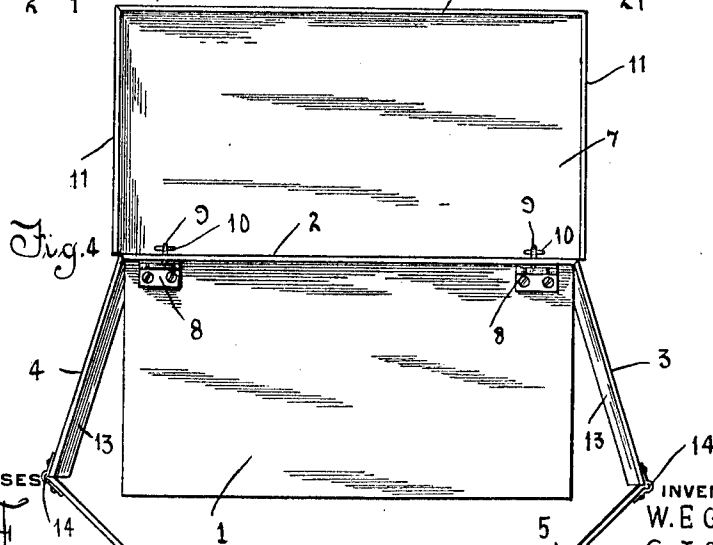
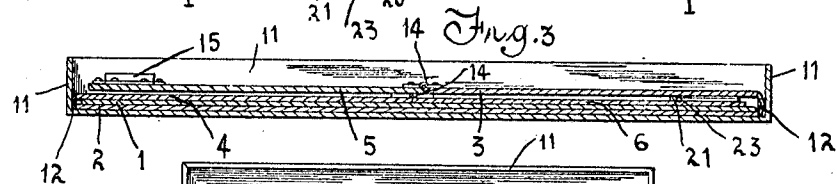
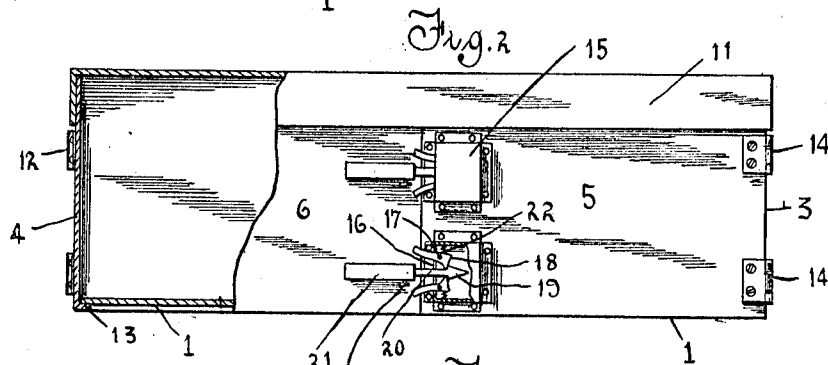
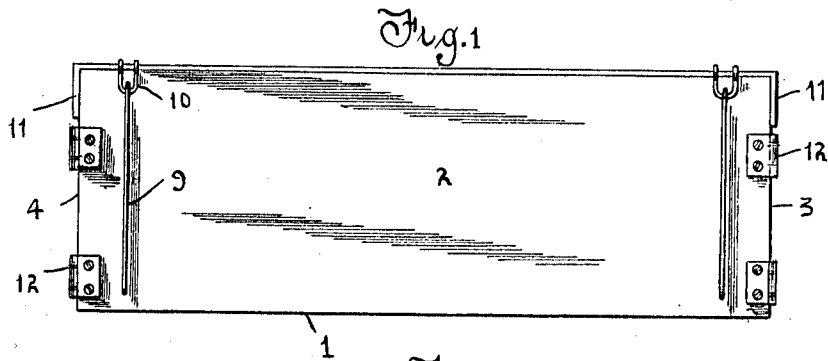


W. E. & C. J. GRAZER.
FOLDING SHIPPING BOX AND CRATE.
APPLICATION FILED MAY 21, 1910.

969,751.

Patented Sept. 6, 1910.



WITNESSES
Edmund Fry
K. A. Butler

INVENTORS
W. E. GRAZER
C. J. GRAZER
By *A. C. Evans & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM E. GRAZER, OF PITTSBURG, AND CHARLES J. GRAZER, OF FAIRHAVEN,
PENNSYLVANIA.

FOLDING SHIPPING BOX AND CRATE.

969,751.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed May 21, 1910. Serial No. 562,713.

To all whom it may concern:

Be it known that we, (1) WILLIAM E. GRAZER and (2) CHARLES J. GRAZER, citizens of the United States of America, residing at (1) Pittsburg, and (2) Fairhaven, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Folding Shipping Boxes and Crates, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to folding shipping boxes and crates, and the objects of our invention are to provide a box or crate that can be collapsed to occupy a comparatively small space during transportation, and to provide a box or crate which in a set-up position will be rigid, durable, and highly efficient for transporting various kinds of merchandise.

Further objects of our invention are to furnish a folding box or crate with novel locks for retaining the box or crate in a set-up position, and to accomplish the above objects by a mechanical construction that is simple, inexpensive to manufacture, and easy to handle.

With the above and such other objects in view as may hereinafter appear, the invention consists of the novel construction, combination, and arrangement of parts to be hereinafter specifically described and then claimed.

Reference will now be had to the drawing forming a part of this specification, wherein: Figure 1 is a rear elevation of the box or crate. Fig. 2 is a front elevation of the same partly broken away and partly in section. Fig. 3 is a longitudinal sectional view of the box or crate folded or collapsed, and Fig. 4 is a plan of the box or crate partly folded.

A box or crate in accordance with our invention comprises a bottom plate 1, a rear wall 2, end walls 3 and 4, a front wall comprising sections 5 and 6 carried by the end walls 3 and 4 respectively, and a lid 7. All of these parts can be made of wood or metal.

The bottom plate 1 is rectangular in plan and connected to the upper rear edge of said bottom plate by hinges 8 in the rear wall 2 which in size corresponds to the bottom plate 1. This rear wall has the rear side thereof adjacent to the ends provided with vertical links 9 and loosely connected to said links

by yokes 10 is the lid 7 of the box or crate, said yokes being connected to the rear edge of said lid, while the ends and front edge of said lid are provided with depending flanges 11. The lid 7 is slightly larger in area than the rear wall 2 and the bottom plate 1, whereby said wall and plate can be folded upon the lid 7, as will presently appear.

The end walls 3 and 4 are hinged, as at 12, 65 to the rear vertical edges of the wall 2, and these end walls have the lower edges thereof provided with lateral flanges 13 adapted to engage under the ends of the bottom plate 1.

The sections 5 and 6 of the front wall are 70 hinged, as at 14, to the front edges of the end walls 3 and 4, and these sections 5 and 6 have the confronting edges thereof provided with locks which are identical in construction.

Each lock comprises a casing 15 carried 75 by the section 5, said casing having one of the walls thereof slotted, as at 16. Pivotaly mounted in the casing, as at 17, are two spring-pressed pawls 18 adapted to engage a spear-shaped head 19, carried by a latch 80 20 slidably mounted in a casing 21, carried by the section 6. The pawls 18 are normally held in engagement with the spear-shaped head 19 by coiled springs 22. The latch 20 is moved within the casing 21 85 through the medium of a button 23 extending through a slot provided therefor in the lower side of the casing 21. The pawls 18 protrude through the slotted side of the casing 15 and the ends thereof can be compressed to release the latch 20, whereby said latch can be shifted out of the casing 15 and the sections 5 and 6 opened after the lid 7 has been raised.

To fold the box, the lid 7 is lowered to 95 the lower edge of the wall 2 and said wall folded inwardly upon the inner side of the lid 7. The bottom plate 1 is then folded inwardly upon the rear wall 2 and after the latches 20 have been unlocked, the end wall 2 and the section thereof is folded upon the bottom plate 1 within the lid and then the end wall 2 and the section 6 thereof folded upon the end wall 3 and the section 5, it being immaterial which one of the walls 3 105 or 4 is folded first.

It is thought that the operation of setting up the box or crate will be apparent without further description, and while in the drawings there is illustrated a preferred embodi- 110

ment of the invention, it is to be understood that the structural elements thereof can be varied or changed without departing from the scope of the appended claim.

5 What we claim, is:

10 A folding box or crate embodying a bottom plate, a rear wall hinged upon the upper rear edge of said bottom plate, vertical links carried by the rear side of said rear wall, a lid provided with yokes loosely connected to said links and adapted to receive when at the lower ends of said links said rear wall and said bottom plate, end walls hinged to the vertical edges of said rear wall and
15 adapted to fold inwardly, lateral flanges carried by the lower edges of said end walls

and adapted to support the ends of said bottom plate, front wall formed of a pair of sections hinged to the vertical front edges of said end walls a latch carried by one of the sections of the front wall, and means carried by the other of the sections of the front wall and adapted to be engaged by the latch for locking said sections together.

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

WILLIAM E. GRAZER.
CHARLES J. GRAZER.

Witnesses:

MAX H. SROLOVITZ,
KARL H. BUTLER.