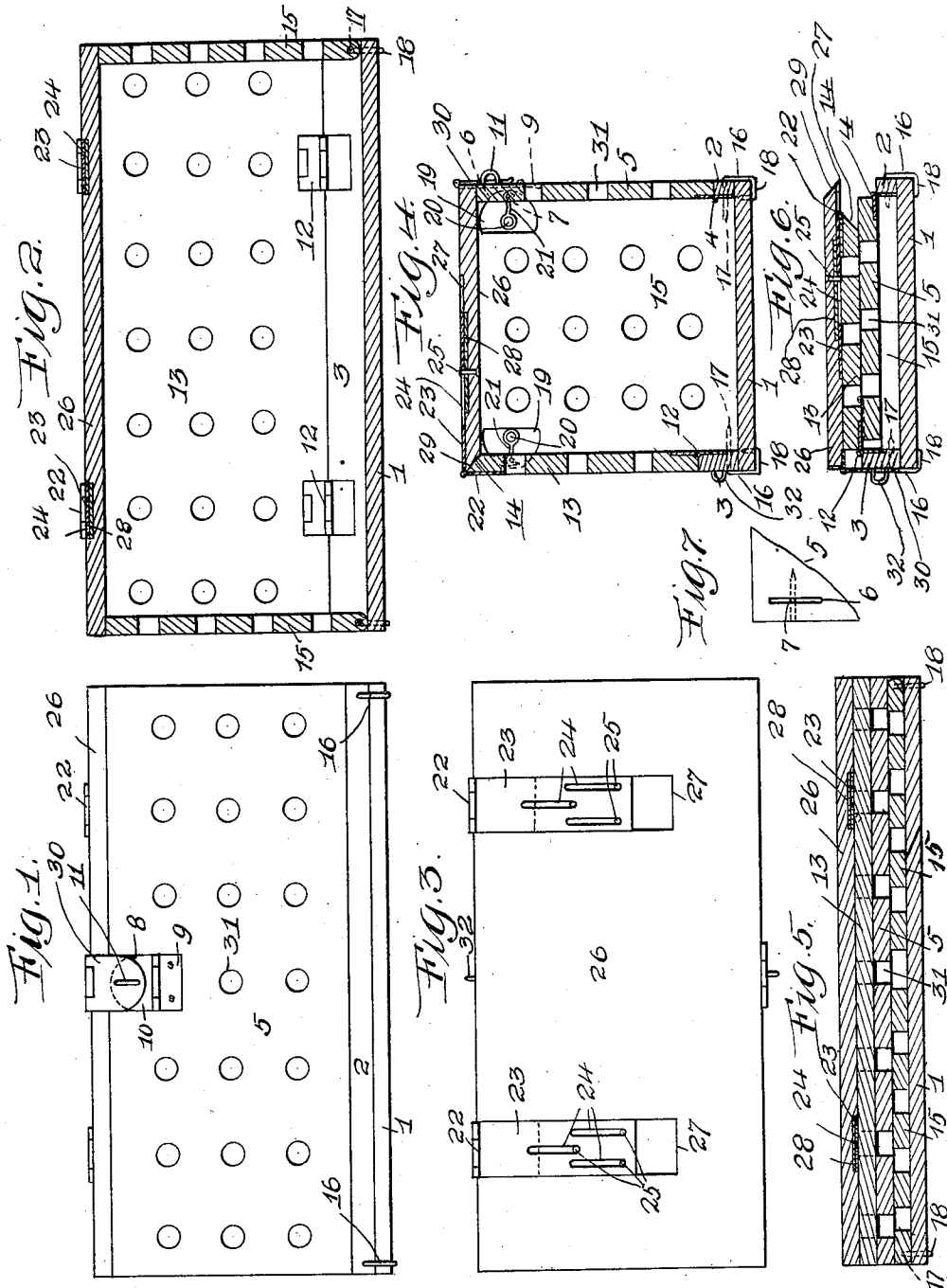


F. S. McKEEVER & H. C. SCHUCK.
FOLDING SHIPPING CRATE OR BOX.
APPLICATION FILED NOV. 3, 1910.

1,013,196.

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WITNESSES

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UNITED STATES PATENT OFFICE.

FRANCIS S. MCKEEVER AND HENRY C. SCHUCK, OF PITTSBURGH, PENNSYLVANIA.

FOLDING SHIPPING CRATE OR BOX.

1,013,196.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed November 3, 1910. Serial No. 590,431.

To all whom it may concern:

Be it known that we, FRANCIS S. MCKEEVER and HENRY C. SCHUCK, citizens of the United States of America, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Folding Shipping Crates or Boxes, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to folding shipping crates or boxes, and the objects of our invention are, first, to provide a crate or box consisting of comparatively few parts easily and quickly assembled; second, to furnish a box with novel means whereby the parts thereof can be collapsed to occupy a comparatively small space in storage or during return shipment, third, to furnish a folding box with simple and effective means for retaining the same in a set up and rigid position, and fourth, to accomplish the above results by a box that is durable, inexpensive to manufacture and efficient for the purposes for which it is intended.

We attain the above objects by a mechanical construction that will be hereinafter specifically described and then claimed, and reference will now be had to the drawing forming a part of this specification, wherein like reference numerals denote corresponding parts throughout the several views, and in which:—

Figure 1 is a front elevation of the crate or box in a set up position, Fig. 2 is a longitudinal sectional view of the same, Fig. 3 is a plan of the crate or box, Fig. 4 is a cross sectional view of the same, Fig. 5 is a longitudinal sectional view of the crate or box folded, Fig. 6 is a cross sectional view of the same, and Fig. 7 is an elevation of a portion of one of the walls of the crate or box.

A crate or box in accordance with this invention comprises a bottom plate 1 having the longitudinal upper edges thereof provided with cleats 2 and 3 corresponding in length to the bottom plate 1 with the cleat 3 of greater height than the cleat 2. Connected to the inner edges of the cleat 2 by hinges 4 is a front wall 5, and this front wall has the inner side thereof adjacent to the vertical and upper edges provided with vertical grooves 6 intersected by longitudinal pins 7, said pins being driven into the wall 5 from the ends thereof and constituting keepers within the vertical grooves 6.

The outer side of the front wall 5 at the upper edge thereof and at a point intermediate the ends of said wall is provided with a recess 8 and suitably mounted in said recess is a hinged member 9 having a hasp 10 provided with a staple 11. Connected to the inner edge of the cleat 3 by hinges 12 is a rear wall 13 and the upper edge of this wall is beveled, as at 14. The inner side of the wall has grooves and pins similar to the grooves 6 and the pins 7 of the front wall 5.

Pivotally mounted between the ends of the cleats 2 and 3 are the lower rounded edges of end walls 15, said walls being held by metallic pins 16 that extend through the cleats into the vertical edges of the walls 15, as at 17 and extend downwardly and enter the bottom plate 1 with the ends bent upwardly to engage in said plate, as at 18. The inner sides of the walls 15 adjacent to the upper and vertical edges thereof are provided with recesses 19 and pivotally mounted in said recesses, as at 20 are hooks 21 adapted to swing into the grooves 6 and engage the pins 7 to lock the walls 15 relatively to the walls 5 and 13. The upper outer edges of the wall 13 are provided with hinge members 22 having straps 23 and each strap is provided with a plurality of longitudinal slots 24. Extending through said slots are pins or rivets 25, carried by a lid 26, said lid being recessed, as at 27 to receive plates 28 upon which the straps 23 slide, said plates being retained in the recesses 27 by the rivets 25, these rivets also retaining the straps within said recesses whereby the upper faces of said straps will be flush with the upper face of the lid 26. The rear edge of the lid 26 is beveled, as at 29 and the front edge thereof is provided with a pivoted hasp 30 adapted to be swung into engagement with the staple 11 of the hasp 10. An ordinary lock or seal can be employed for connecting the hasps 10 and 30.

Assuming that the box is in a set up position, as shown in Figs. 1 to 4 inclusive, and that it is desired to fold the same, the hasps are opened and the lid 26 swung rearwardly upon the outer side of the wall 13. The hooks 21 are then swung out of the grooves 6 into the recesses 19 and the end walls folded inwardly upon the bottom plate 1 of the box. The front wall 5 is then swung inwardly upon the end walls 15 with the hasp 10 of the wall 5 swung back where-

by the staple 11 will extend into one of the openings or slots 31 of the front wall 5, thus permitting of the rear wall 13 being folded inwardly to lie flat upon the outer side of the front wall 5. As the lid 26 is of a greater width than the height of the rear wall 13, it is evident that the front edge of the lid would protrude beyond the cleat 3, therefore we have provided the slideable straps 23, whereby after the box has been folded in the manner above described, the lid 26 can be shifted forwardly toward the cleat 2, thus bringing the longitudinal edges of the lid in vertical alinement with the cleats 2 and 3. The outer side of the cleat 3 intermediate the ends thereof is provided with a staple 32, and the hasp 30 of the lid can be swung into engagement with this staple, whereby the folding shipping crate or box can be locked in a folded or collapsed position.

The folding shipping crate or box can be made of metal, wood or any other material, and while in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements thereof are susceptible to such changes as fall within the scope of the appended claim.

What we claim is:—

A foldable box comprising top, bottom, front, rear and end members secured together to permit folding, the rear member being in two parts hinged together, one of said parts being rigidly secured to the bottom, the other of said parts being hinged to the top with the connected edges complementally formed to permit adjacent edge faces of said part and top to contact when the box is expanded with the hinged members of said part and top on the outer sides when in such position, the hinge members for the top being movable relatively thereto laterally of the top to permit relative shifting of said complementary edges to cause the top complementary edge to overhang the part complementary edge with the hinge members therebetween, whereby the free edge of the top may be positioned to aline with the outer face of the fixed part when the box is folded.

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

FRANCIS S. McKEEVER.
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Witnesses:

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