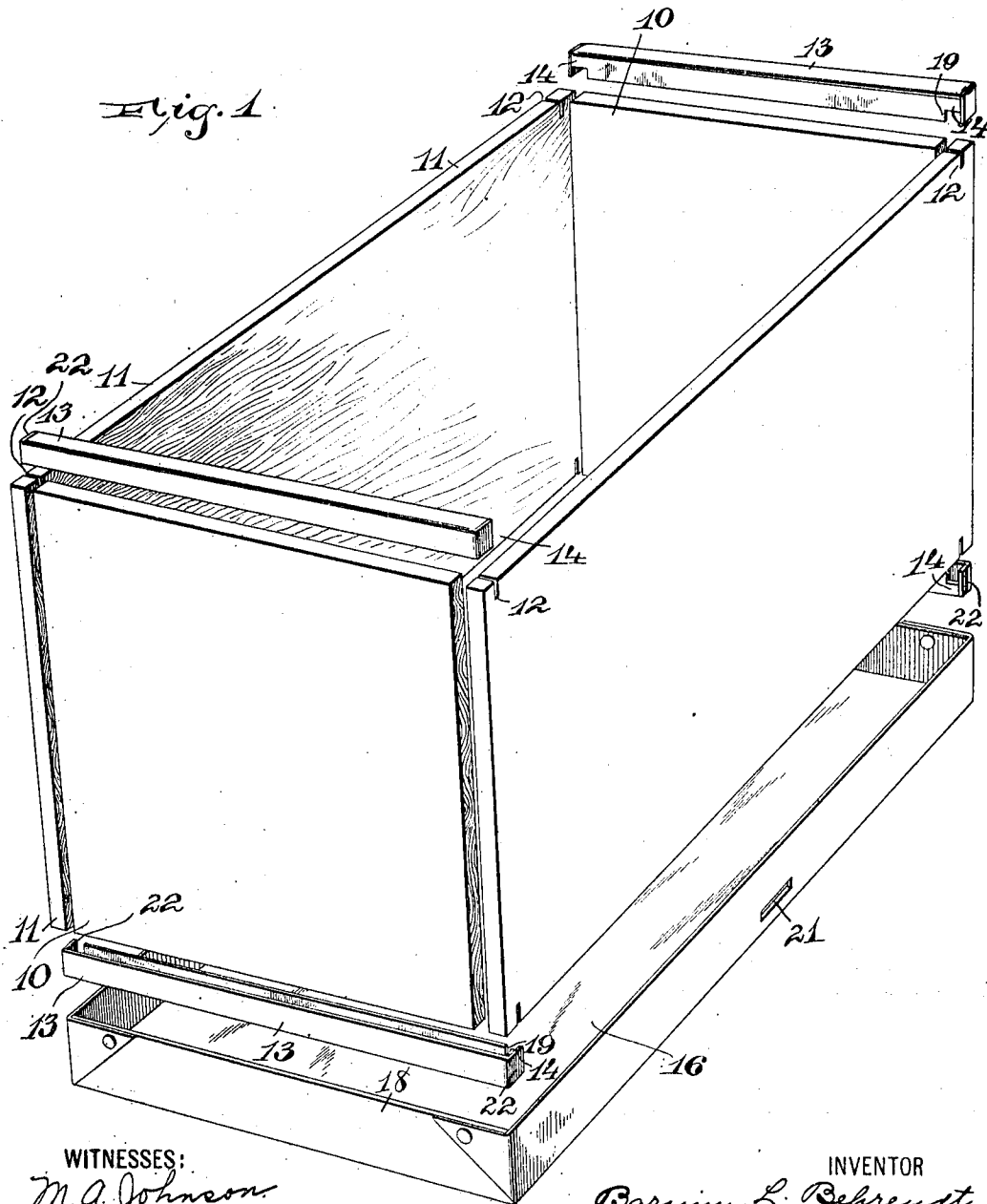


B. L. BEHRENDT.
 KNOCKDOWN BOX.
 APPLICATION FILED NOV. 6, 1911.

1,040,492.

Patented Oct. 8, 1912.

2 SHEETS—SHEET 1.



WITNESSES:
M. A. Johnson.
W. E. Norton.

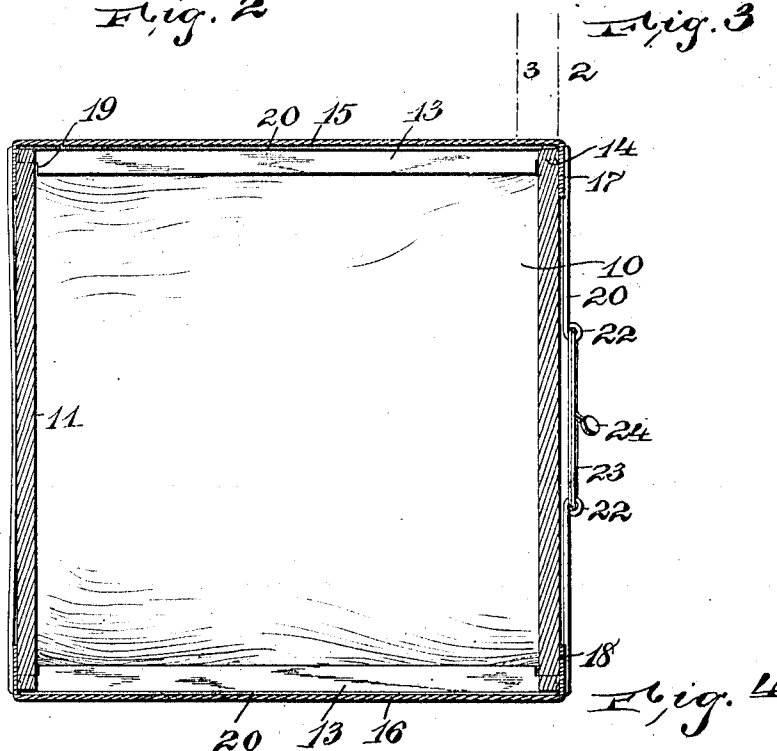
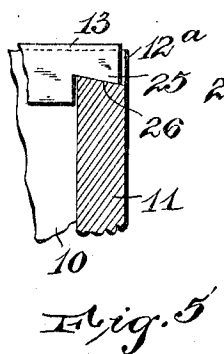
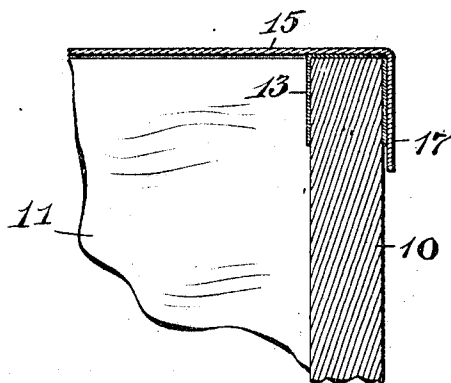
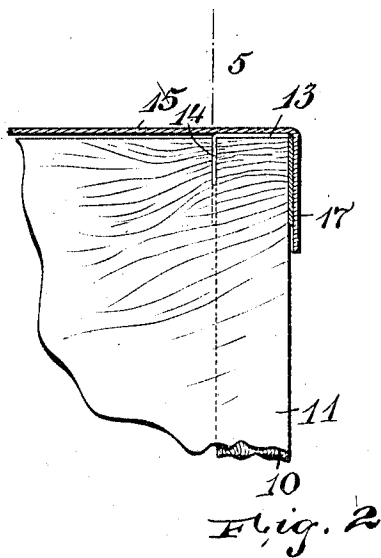
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2 SHEETS—SHEET 2.



WITNESSES:
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W. E. Norton.

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UNITED STATES PATENT OFFICE.

BARNIM L. BEHRENDT, OF NEWARK, NEW JERSEY.

KNOCKDOWN BOX.

1,040,492.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed November 6, 1911. Serial No. 658,773.

To all whom it may concern:

Be it known that I, BARNIM L. BEHRENDT, a subject of the Emperor of Germany, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Knock-down Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to an improved knockdown box that is adapted to be assembled or taken apart quickly and without any great exertion, and provides a box or chest that is convenient for transportation or storage. A box of this kind can be used for packing or storing goods, and when empty, can be knocked down or taken apart and laid away in a compact form, taking up but little room and it can be used over and over again.

The box herein described is one that requires no nails, or screws, or similar fastening elements that penetrate the material in putting it together, being made up of side and end walls, or similar surrounding walls, which are keyed together and which are held at their top and bottom edges by marginal flanges on the top and bottom covers or plates.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the box with its parts separated, the cover being omitted. Fig. 2 is an enlarged section on line 2, in Fig. 4. Fig. 3 is an enlarged section on line 3, in Fig. 4, and Fig. 4 is a cross-section of the box when put together. Fig. 5 is a section of a modified form taken at a point indicated by line 5 in Fig. 2.

I employ surrounding walls, varying in number according to the shape of the box, but I have illustrated an oblong box having end walls 10 and side walls 11 which are adapted to engage each other on their ends. The side walls 11 in the illustration, or the end walls if they are to go over the outside of the ends of the side walls, are provided with slots 12 on their top and bottom edges at a distance from the end equal to the thickness of the adjacent end wall. Keys 13, U-shaped in cross-section, are constructed with

their channels as wide as the thickness of the end walls so that they fit over the end walls and have their ends 14 fit in the slots 12 and also embrace the ends of the side walls. Wings 22 extend beyond the open end of the keys and are bent over at the ends to fit against the outside of the side walls to hold them against the end walls. These keys fit in the slots 12 snugly and hold the walls against transverse movement or movement in the planes of the sides of the box. A cover 15 and a bottom plate 16 have marginal flanges 17 and 18 respectively, which flanges are adapted to fit over the sides of the end and side walls at the top and bottom and form closures for the box and also conceal the keys 13.

When the box is to be assembled, the bottom plate 16 is laid down, then keys 13 are put at each end, and the side walls are placed vertically on the bottom with their slots over the ends 14 of the keys and are held spaced apart by the shoulder 19 adjacent to the end 14 on the inner wall of each key. The end walls are then placed in the channels of the keys 13. Keys 13 are then placed at the top of each end wall with their ends in the slots 12 at the top of the side walls, and the box is held in place rigidly while it can be packed with material. The cover is then put over the top and forced down over the outside of the end and side walls.

If it is desired to lock the parts together I prefer to use a strap 20 fastened as at 21 to one of the side walls and adapted to embrace the box, and having hook ends 22, can be securely fastened together by any desired locking means. I show a strand 23, such as wire or cord, laced by a seal 24, but it will be evident that I can use any other form of locking means. The strap 20 passes through the slots 21 in the cover and bottom of the box, and when the box is without a cover, the strap provides the means for lifting the box without pulling it apart.

In Fig. 5 is shown a modification in which the end 25 of the inner wall is formed with a widened end, and the bottom of the slot 12 is inclined so that the side wall 11 is locked by the end 25 against movement away from the end wall, which might be necessary in case the flanges 18 are low.

Having thus described my invention, what I claim is:—

1. A knock-down box consisting of end

walls and side walls, the side walls having transverse slots in their top and bottom edges near their ends, keys embracing the top and bottom edges of the end walls and entering the slots of the side walls, the keys and the side walls having co-acting means for holding the side walls to the keys, and top and bottom closures embracing the side and end walls at the outside on the top and bottom.

2. A knock-down box consisting of end walls and side walls, the side walls having transverse slots in their top and bottom edges near their ends, U-shaped keys having their channels arranged over the top and bottom edges of the end walls and having their ends fitting over the ends of the side walls at the top and bottom and also entering the slots of the side walls, and top and bottom closures having flanges to cover the keys and the top and bottom edges respectively, of the side and end walls.

3. A knock-down box consisting of end walls and side walls, the side walls having transverse slots in their top and bottom edges near their ends, U-shaped keys having their channels arranged over the top and bottom edges of the end walls and having their ends fitting over the ends of the side walls at the top and bottom and also entering the slots of the side walls, top and bottom closures having flanges to cover the keys and the top and bottom edges respectively, of the side and end walls, a strap secured to and passing around the box, and fastening means on the strap for securing its ends together.

4. A knock-down box consisting of end walls and side walls, the side walls having transverse slots in their top and bottom edges near their ends, U-shaped keys having their channels arranged over the top and bottom edges of the end walls and having their ends fitting over the ends of the side walls at the top and bottom and also entering the slots of the side walls, wings on the

ends of the keys, said wings being bent over to bear on the outside edges of the side walls, and top and bottom closures having flanges to cover the keys and the top and bottom edges respectively.

5. A knock-down box consisting of end walls and side walls, the side walls having transverse slots in their top and bottom edges near their ends, U-shaped keys having their channels arranged over the top and bottom edges of the end walls and having their ends fitting over the ends of the side walls at the top and bottom and also entering the slots of the side walls, wings on the ends of the keys, said wings being bent over to bear on the outside edges of the side walls, top and bottom closures having flanges to cover the keys and the top and bottom edges respectively, the top and bottom closures having slots in the flanges near the bottom of said flanges, and a strap passing through the flanges and above and beneath the side walls and having means on its ends for securing the ends together.

6. A knock-down box consisting of end walls and side walls, a bottom closure, a top closure, the bottom and top closures having flanges to embrace the end and side walls, the flanges of the top and bottom closures being provided near the bottom of said flanges with slots, and a strap passing through the slots in the flanges, said strap passing between the top and bottom edges of the side walls and the inside faces of the top and bottom closures and adapted to bear on the inside face of the top and bottom closures for their entire width, whereby said strap is only exposed where it extends from one slot to the other at the sides.

In testimony, that I claim the foregoing, I have hereunto set my hand this 2nd day of November, 1911.

BARNIM L. BEHRENDT.

Witnesses:

WM. H. CAMFIELD,
M. A. JOHNSON.