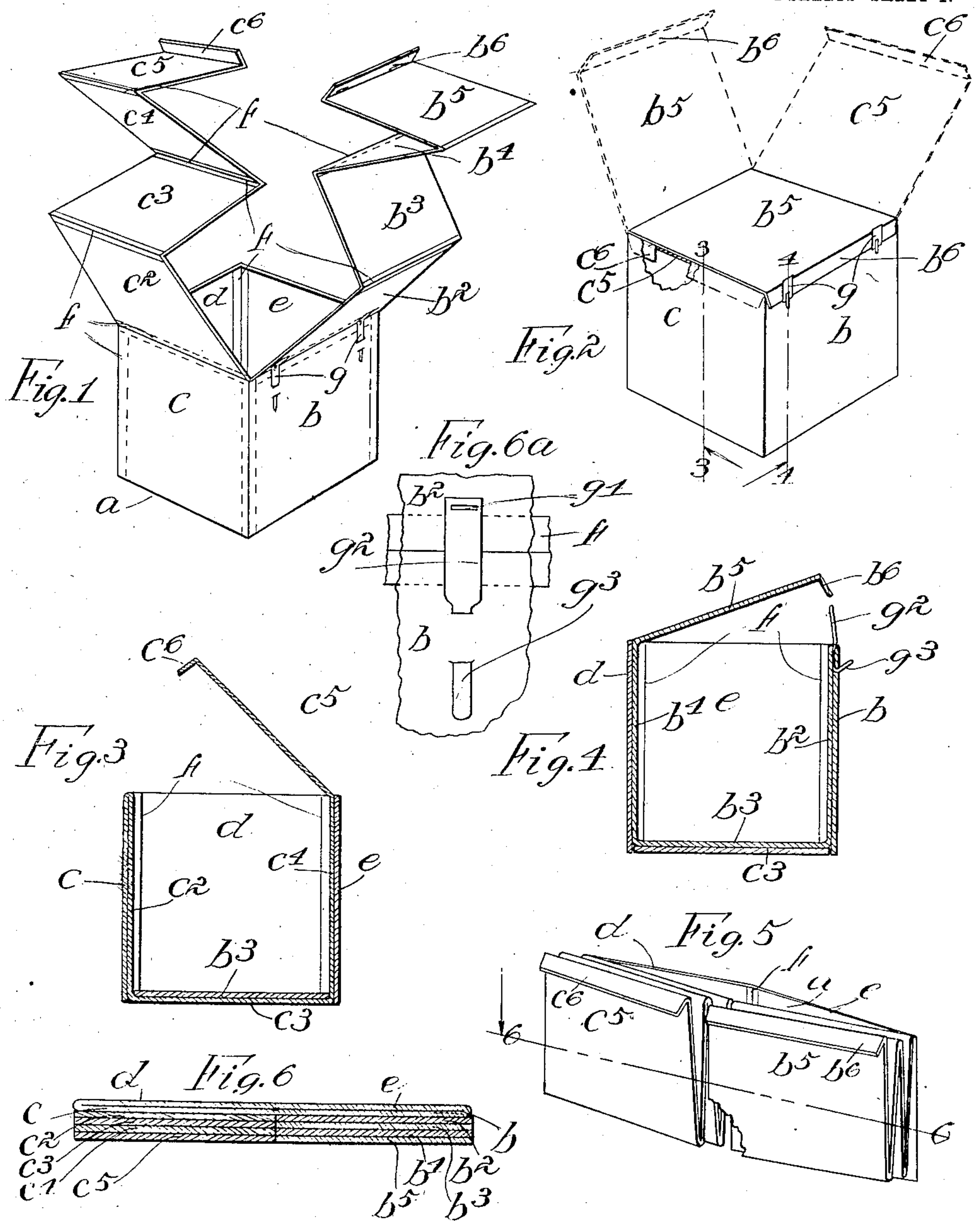


J. F. ADAMS.
 KNOCKDOWN BOX.
 APPLICATION FILED MAR. 8, 1909.

930,114.

Patented Aug. 3, 1909.
 2 SHEETS—SHEET 1.



WITNESSES:

H. P. Confield
 b. E. Chubrey

INVENTOR

James F. Adams

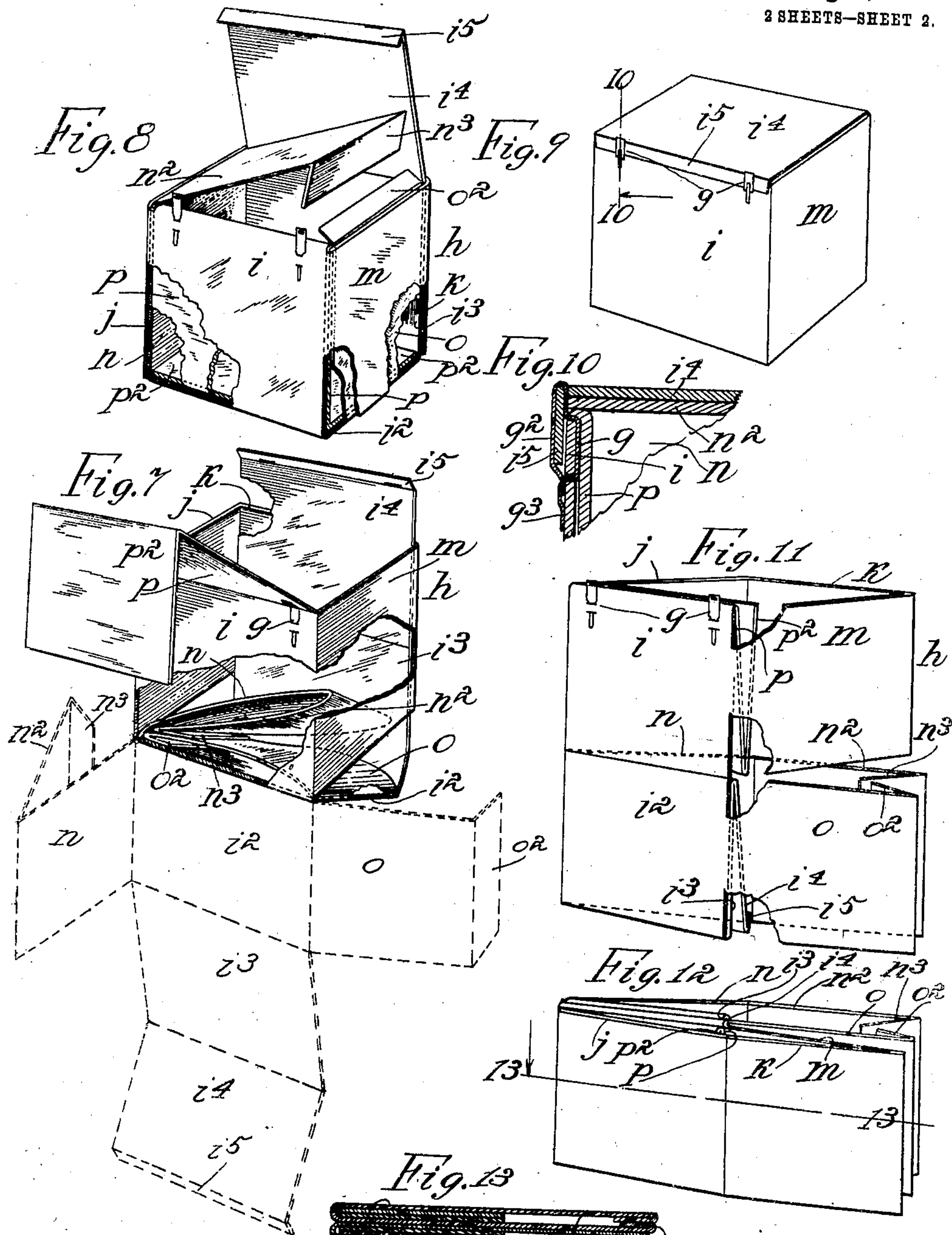
BY

Edgar Patent Co.

ATTORNEYS.

930,114.

Patented Aug. 3, 1909.
 2 SHEETS—SHEET 2.



WITNESSES:
 H. P. Confield
 L. E. Mulcahy.

Fig. 13
 n¹ i¹ i² i³ i⁴ i⁵ n² n³ o¹ o² o³ p p¹ p² j k h m r
 INVENTOR James F. Adams
 BY Edgar T. Co. ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES F. ADAMS, OF PHILLIPSBURG, NEW JERSEY.

KNOCKDOWN BOX.

No. 930,114.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed March 8, 1909. Serial No. 481,995.

To all whom it may concern:

Be it known that I, JAMES F. ADAMS, a citizen of the United States, and residing at Phillipsburg, in the county of Warren and State of New Jersey, have invented certain new and useful Improvements in Knock-down Boxes, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to knockdown boxes; and the object thereof is to provide an improved device of this class composed of fibrous material and which may be conveniently set up for use whenever desired and also compactly folded together for packing or other purposes whenever necessary; a further object being to provide a box of the class specified, all the parts of which, or the various sides or front, back and ends of which together with the top and bottom are composed of double thicknesses of material whereby the box when in use is made much stronger and more substantial than boxes of this class as ordinarily constructed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which;—

Figure 1 is a perspective view of my improved box showing the same partially prepared for use, Fig. 2 a view showing the box closed in full lines and partly closed in dotted lines, Fig. 3 a section on the line 3—3 of Fig. 2, but showing the parts in a different position, Fig. 4 a section on the line 4—4 of Fig. 2, but showing the parts in a different position, Fig. 5 a perspective view showing the separate parts of the box folded together, Fig. 6 a section on the line 6—6 of Fig. 5, Fig. 6^a a front view showing a part of the front of the box and showing a fastening device which I employ connected therewith, Fig. 7 a view similar to Fig. 1, but showing a modification with parts of the construction broken away, and some of the parts in different positions, Fig. 8 a perspective view of the construction shown in Fig. 7, and showing the box partly closed and parts broken away, Fig. 9 a perspective view of the box shown in Fig. 8 but showing said box completely closed, Fig. 10 a partial section on the line 10—10 of Fig. 9 and on

an enlarged scale, Fig. 11 a perspective view showing the box that is shown in Figs. 7 to 9 inclusive partly collapsed, or the separate parts thereof partly folded together and with parts of the construction broken away, Fig. 12 a perspective view showing the box shown in Figs. 7 to 11 completely folded together, and;—Fig. 13 a section on the line 13—13 of Fig. 12.

In the practice of my invention as shown in Figs. 1 to 5 inclusive, I provide a box of the class specified which is composed of a main box member *a* open at the top and bottom and comprising separate side members *b*, *c*, *d* and *e*, and for the purposes of this description the side member *b* will be called the front, the opposite side member *d* the back and the parts *c* and *e* the sides of the box. The parts *b*, *c*, *d* and *e* of the main box member *a* are foldably connected at the corners in any desired manner, but preferably by means of canvas strips *f* in the usual manner, and the front *b* is provided at the top edge thereof, as shown in the drawings, with a folding member *b*² provided with supplemental folding members *b*³, *b*⁴ and *b*⁵, and the folding member *b*⁵ is provided at its free edge with a flap *b*⁶. The top edge of the side member *c* of the body of the box is provided with a folding member *c*² having supplemental folding members *c*³, *c*⁴ and *c*⁵, and the folding member *c*⁵ is provided at its free edge with a flap *c*⁶. The folding members *b*² and *c*² are connected with the main box member *a* and the separate parts *b*², *b*³, *b*⁴ and *b*⁵, and *c*², *c*³, *c*⁴ and *c*⁵ are foldably connected by means of canvas strips *f* in the usual or any preferred manner.

As shown in Fig. 1, the top and bottom of the box are open, and in preparing the box for use one of the folding side members *c*² or *b*² is first folded in the following manner. Beginning with the folding side member *c*² the said member and the parts connected therewith are folded as shown in Fig. 3, the parts *c*² being folded downwardly and inwardly to form a double thickness for the side *c*, the part *c*³ is then folded to form the bottom thickness of the box as shown in Fig. 3 and then upwardly to form the inner thickness of the side *e*, and this leaves the part *c*⁵ free as shown in Fig. 3. The folding member *b*² is then folded inwardly and downwardly as shown in Fig. 4 to form the

inner thickness of the front b and then transversely to form the inner thickness of the bottom, and then upwardly to form the inner thickness of the back d , and the part b^5 is left free as shown in Fig. 4. The box is now in condition for use or to receive the desired contents, and after said contents have been placed therein the folding member c^5 is closed down as shown in full lines and broken away in Fig. 2, after which the folding member b^5 is closed down and secured by means of fastening devices g which are connected with the front b and operate in connection with the flap b^6 , and in this operation the flap c^6 of the folding part c^5 preferably fits within the top of the box while the flap b^6 overlaps the front b , and the top of the box is composed of two thicknesses of material as are all the sides and bottom thereof.

The fastening device or devices g consist of an oblong strip g^2 of flexible material preferably metal and provided at one end with a tongue g^3 , and this tongue, in practice, is passed through the top portion of the front b of the box from the top edge thereof downwardly and outwardly, and in securing the top part b^5 of the cover, the part g^2 of the fastening device g is passed through the folding connection of the flap b^6 with the part b^5 , and then bent downwardly and the tongue g^3 is passed through a transverse slot g^4 in the part g^2 and then bent downwardly as clearly indicated in Fig. 2. In opening the box the parts of the fastening device g are separated as will be readily understood, after which the folding members b^5 and c^5 are successively raised as will also be understood. My invention is not limited to the particular form of fastening devices g herein shown and described, and any desired form of devices of this class may be employed.

In Figs. 5 and 6 I have shown the separate parts of the box hereinbefore described folded compactly together for packing or other purposes.

In the construction shown in Figs. 7 to 13 inclusive, I provide a main box member h composed of sides i , j , k and m and for the purposes of this description the part i will be called the front of the box, the part k the back and the parts j and m the sides of the main box member h . The main box member h is open at the top and bottom, and the front i is provided at the bottom edge thereof with a folding member i^2 provided with supplemental folding members i^3 and i^4 , and the folding member i^4 is provided with a flap i^5 . The folding member i^2 is provided at one of its lateral side edges with a folding member n having a supplemental folding member n^2 provided with a flap n^3 , and said folding member i^2 is provided at its opposite lateral or side edge

with a folding member o having a flap o^2 . The top edge of the front i of the main box member h is also provided with a folding member p having a supplemental folding member p^2 .

The method of folding the parts of the box so as to close the bottom and prepare said box for use is clearly shown in Figs. 7 and 8, Fig. 7 showing said parts partly folded in full lines, and Fig. 8 completely folded into position for use in full lines, the folding members i^2 , i^3 , i^4 and i^5 , and the folding members n , n^2 and n^3 and o and o^2 being also shown in dotted lines in Fig. 7. In this operation all the sides or the front, back and sides of the box together with the top and bottom thereof are composed of two thicknesses of material as will be clearly seen, and the operation of closing the box is clearly shown in Figs. 9 and 10 and is substantially the same as that shown in Figs. 1 to 6^a inclusive and hereinbefore described. In Fig. 11 I have shown this form of box partially folded together for packing purposes, and in Fig. 12 completely folded together, and in Fig. 13 a transverse section on the line 13—13 of Fig. 12 is given, and this operation will be readily understood from the lettering of the parts shown in said figures.

In both the forms of construction herein shown and described only one of the sides of the box, the front side as shown in the drawings, is provided with fastening devices, but as hereinbefore stated my invention is not limited to the exact means shown and described for fastening or securing the box; and various changes in and modifications of these features of the construction, together with other details thereof, as herein shown and described may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A knockdown box of the class described comprising a main box member open at the top and bottom, and folding members connected with the main box member and adapted to be folded so as to close the top and bottom and to form said top and bottom and all the sides of the box of double thicknesses of material, all the parts of said knockdown box being adapted to be folded together.

2. A knockdown box of the class described comprising a main box member open at the top and bottom, and folding members connected with the main box member and adapted to be folded so as to close the top and bottom and to form said top and bottom and all the sides of the box of double thicknesses of material, all the parts of said

knockdown box being adapted to be folded together and being also composed of a single blank or piece of material.

3. A knockdown box of the class described
5 comprising a main box member open at the top and bottom, and folding members connected with the main box member and adapted to be folded so as to close the top and bottom and to form said top and bot-
10 tom and all the sides of the box of double thicknesses of material, all the parts of said

knockdown box being adapted to be folded together, and means for securing the parts of the box in a closed position.

In testimony that I claim the foregoing 15
as my invention I have signed my name in presence of the subscribing witnesses this fifth day of March 1909.

JAMES F. ADAMS.

Witnesses:

STOGDELL STOKES,

SAMUEL BACHMAN.