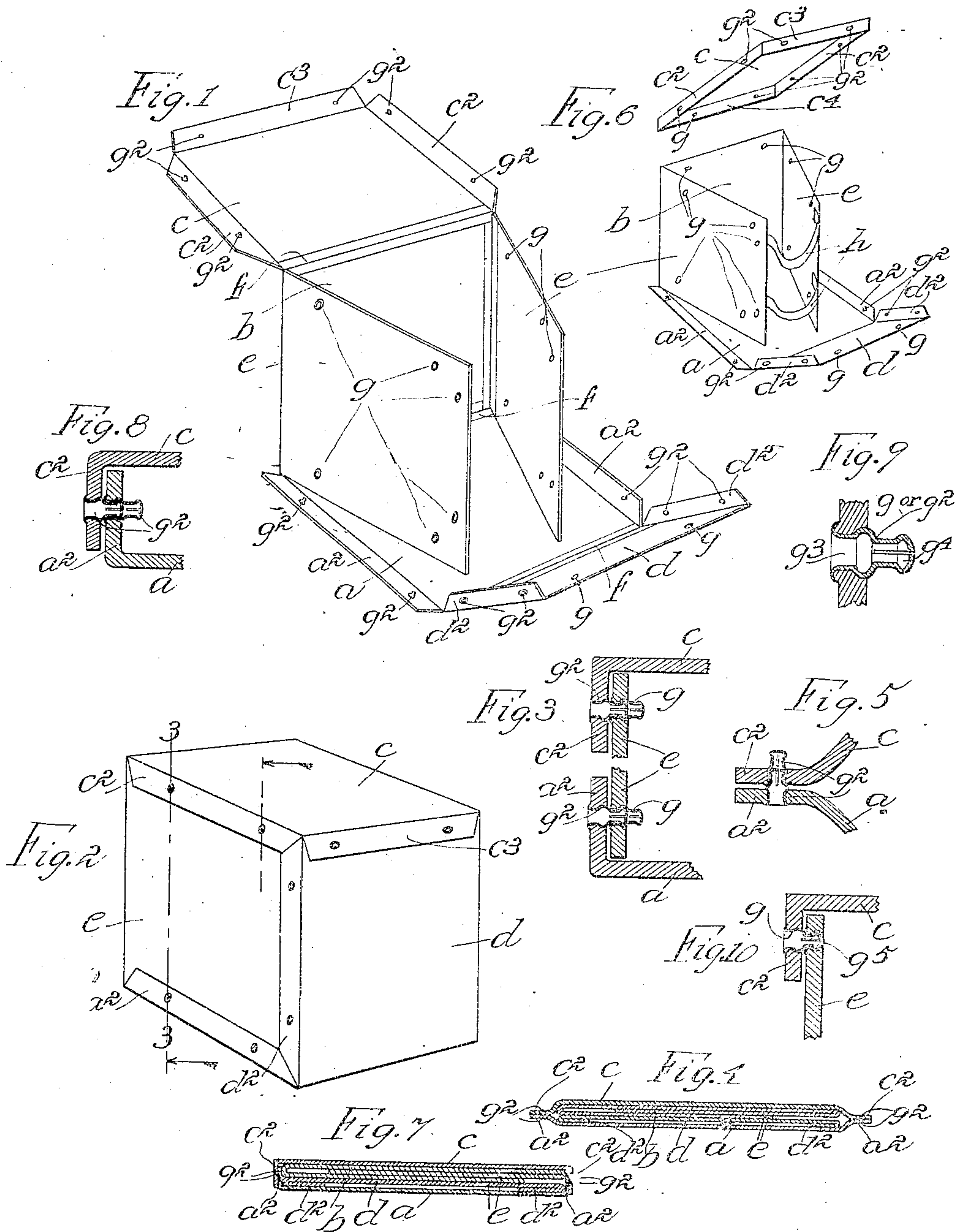


J. F. ADAMS.
 KNOCKDOWN BOX.
 APPLICATION FILED FEB. 1, 1909

930,113.

Patented Aug. 3, 1909.



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UNITED STATES PATENT OFFICE.

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KNOCKDOWN BOX.

No. 930,113.

Specification of Letters Patent.

Patented Aug. 3, 1909

Application filed February 1, 1909. Serial No. 475,326.

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 Knockdown 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 particularly designed for use as hat boxes and for containing other kinds or classes of merchandise, and which may be compactly folded together when not in use so as to occupy but small space.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms 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 one form of my improved knockdown box and showing the same partly set up, Fig. 2 a similar view showing the box completely set up and closed, Fig. 3 a partial section on the line 3—3 of Fig. 2, and on an enlarged scale, Fig. 4 a transverse section showing the method of folding the box together when not in use with part of the details of the construction omitted, Fig. 5 a view on an enlarged scale of a detail of the construction shown in Fig. 4, Fig. 6 a view similar to Fig. 1, but showing a modification, Fig. 7 a view similar to Fig. 4 of the box shown in Fig. 6, Fig. 8 a view similar to Fig. 5 of the construction of box shown in Figs. 6 and 7, Fig. 9 a sectional view showing in detail and on an enlarged scale a fastening device which I employ, and;—Fig. 10 a view similar to Fig. 3 but showing a modified form of fastening device.

My improved box is preferably made of card board, paste board or other suitable fibrous material, and in the construction shown in Figs. 1, 2, 3 and 4 it comprises a bottom *a*, a back *b* connected with the bottom *a*, a cover *c* connected with the back *b*, a front *d* connected with the bottom *a* and sides *e* connected with the back *b*, and the connections between the bottom *a*, back *b*, cover *c*, front *d* and sides *e* are flexible connections which operate in the manner of

hinges and which may consist of strips of cloth pasted to said parts at *f* or which may be made in any desired manner.

The cover *c* is provided with side flaps *c*² and with a front flap *c*³, and the bottom *a* is provided with side flaps *a*², and the front *d* is provided with side flaps *d*², and the flaps *a*² and *c*² and *c*³ and *d*² may be connected with the parts *a*, *c* and *d* in any desired manner which will permit their folding on said parts, and said flaps may be formed integrally with said parts, and said parts may be provided with score lines along which said flaps will fold.

The side members *e* are provided adjacent to the top, bottom and front edges thereof with fastening devices *g* as is also the front member *d* adjacent to its top edge, while the flaps *a*², *c*², *c*³ and *d*² are provided with similar fastening devices *g*². These fastening devices *g* and *g*² are the same in form and construction and one of them is shown in section and detail in Fig. 9, and each consists of a socket or female member *g*³ and a male member *g*⁴, the male member of one and the socket member of the other operating in the manner of ordinary glove fastening devices.

When the parts of the box shown in Figs. 1, 2, 3, 4 and 5 are set up for use the fastening devices of the flaps *c*² and *c*³ of the cover *c* are made to engage the corresponding fastening devices *g*² in the side members *e* and front member *d* of the box as indicated in Fig. 3, the front member *d* being not shown in said figure, and when the separate parts of the box are folded together as indicated in Figs. 4 and 5 the fastening devices *g*² of the flaps *a*² of the bottom of the box engage the fastening devices *g*² of the flaps *c*² of the cover *c* of the box.

The fastening devices *g* and *g*² are not shown in detail in Fig. 4, this figure of the drawing being intended only to indicate the method of folding the separate parts of the box together, but a detail of this construction is shown in Fig. 5 on an enlarged scale in which this operation is clearly shown.

From the foregoing description, it will be seen, that the same fastening devices which hold the box in position for use as shown in Fig. 2 are employed for holding the separate parts of the box together when folded together as shown in Figs. 4 and 5.

The construction shown in Figs. 6, 7 and 8 is the same as that shown in Figs. 1, 2, 3, 4 and 5 except that the cover *c* is not connected

with the back of the box, but is formed separate and provided with a back flap c^4 , and the front or free edges of the side members e are connected by flexible straps h which
 5 are secured thereto and which serve to give the box when set up for use greater strength. With this form of construction the sides e , front d and back b are provided with fastening devices g , while the flaps a^2 , d^2 , c^2 , c^3 and c^4
 10 are provided with similar fastening devices g^2 the same as the flaps or corresponding parts in the construction shown in Fig. 1, and when the box is set up for use the operation will be the same as with the construction shown in Fig. 1 except that the fasten-
 15 ing devices g^2 in the back flap c^4 of the cover c will be engaged with the corresponding fastening devices g in the back b of the box. The separate parts of this form of box are
 20 folded together as shown in Fig. 7, and the fastening devices g^2 of the flaps c^2 of the cover c engage the fastening devices g^2 of the flaps a^2 of the bottom a .

In both these forms of construction, it
 25 will be seen, that only one form of fastening device is used for the main parts or body portions of the box a , b , d and e , while all the flaps of the parts a , c and d are provided with exactly similar fastening devices,
 30 and in the construction shown in Fig. 6 the parts b and c^4 are also provided with similar fastening devices. In Fig. 10 however I have represented a construction in which one side e of the box and a part of the cover
 35 c with one of its flaps c^2 is shown, and in this form of construction the flap c^2 is provided with one of the fastening devices g^2 , while the side of the box is provided with a different style of fastening device g^5 . This
 40 fastening device is what is known as a female fastener, and is adapted to receive the head of the combination male and female fastener g , and in practice all the main parts of the box or the parts a , b , d and e
 45 in the construction shown in Fig. 1 may be provided with the female fastening devices g^5 shown in Fig. 10, while the flat portions of the box may be provided with a fastening device g or g^2 , said fastening devices be-
 50 ing the same in form and construction.

With the form of construction employing the fastening devices g and g^2 there is a projection on the inner side of the box where each set of said fastening devices is employed, but with the construction shown in
 55 Fig. 10 there is no such projection. My invention however is not limited to the exact form of fastening devices herein shown and described, and various changes in and modifications of these features of the construction, together with other portions of the
 60 box as herein shown and described may be made, within the scope of the appended claims, without departing from the spirit of
 65 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 composed of a bottom, a back foldably connected with the bot- 70 tom, a front foldably connected with the bottom, and a cover, the bottom and front being provided with folding side flaps and the cover being also provided with side and front edge flaps, the sides being pro- 75 vided with fastening devices adjacent to the top and bottom edges and adjacent to the front edges thereof, the front being also provided with fastening devices adjacent to the top edge thereof, and the side flaps 80 of the cover being provided with fastening devices adapted to engage the fastening devices adjacent to the top edges of the sides, and the front edge flap of the cover being provided with fastening devices adapted to 85 engage the fastening devices adjacent to the top edge of the front, the flaps of the bottom being provided with fastening devices adapted to engage the fastening devices adjacent to the bottom edges of the sides, 90 and the flaps of the front being provided with fastening devices adapted to engage the fastening devices adjacent to the front edges of the sides when the box is set up for use, the fastening devices at the sides 95 of the cover being also adapted to engage the fastening devices at the sides of the bottom when the separate parts of the box are folded together.

2. A box of the class described comprising 100 a bottom, a back foldably connected with the bottom, a front foldably connected with the bottom, and a cover foldably connected with the back, the sides being provided adjacent to the top and bottom edges and 105 the front edges thereof with fastening devices, the front being provided adjacent to the top edge thereof with fastening devices, the cover being provided with side and front flaps having fastening devices and the bot- 110 tom and front with side flaps having fastening devices, the fastening devices of the side flaps of the cover being adapted to engage the fastening devices adjacent to the top edges of the sides, and the fastening 115 devices of the flap of the cover being adapted to engage the fastening devices adjacent to the top edge of the front, and the fastening devices of the flaps of the bottom being adapted to engage the fastening devices ad- 120 jacent to the bottoms of the sides, and the fastening devices of the side flaps of the front being adapted to engage the fastening devices adjacent to the front edges of the sides when the box is set up for use, the 125 fastening devices in the side flaps of the cover being also adapted to engage the fastening devices in the side flaps of the bottom when the separate parts of the box are folded together. 130

3. A knockdown box comprising a bottom
member having a back member foldably
connected therewith, two side members fold-
ably connected with the back member, a
5 front member foldably connected with the
bottom member, and a cover, said side mem-
bers, bottom and front members and the
cover being provided with means whereby
the box may be held in position for use and
10 whereby the separate parts thereof may be

secured together when said parts are folded
or collapsed.

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

JAMES F. ADAMS.

Witnesses:

JOHN I. BOWERS,
OLIVER VAN BILLIARD.