No. 686,808. Patented Nov. 19, 1901.

M. L. HIRSCH.

BOX.

(Application filed Sept. 9, 1901.)

(No Model.)

Fig. 1.

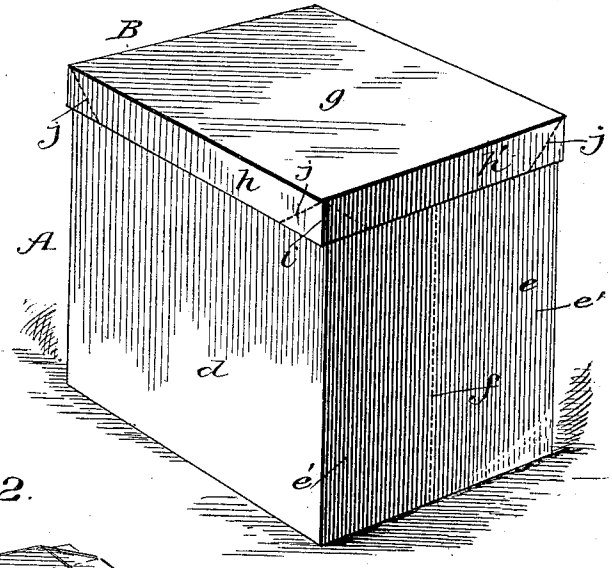


Fig. 2.

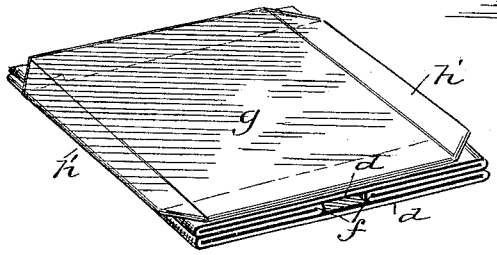


Fig. 3.

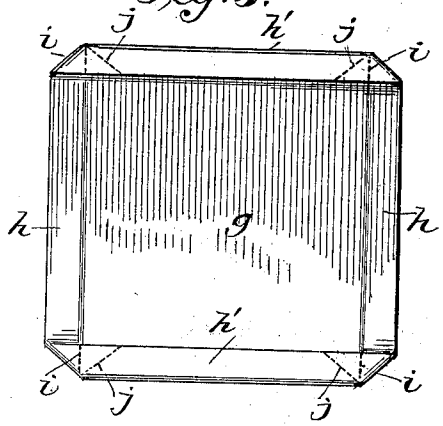


Fig. 4.

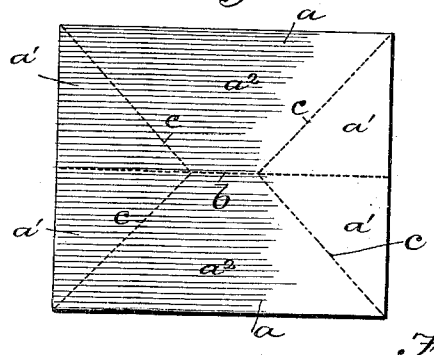
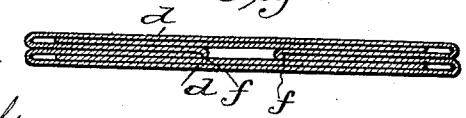


Fig. 5.



WITNESSES:

Jos. A. Ryan

N. C. Healy

INVENTOR

M. L. Hirsch

BY James J. Shechy

ATTORNEY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MONTEFIORE L. HIRSCH, OF ATLANTA, GEORGIA.

BOX.

SPECIFICATION forming part of Letters Patent No. 686,808, dated November 19, 1901.

Application filed September 9, 1901. Serial No. 74,834. (No model.)

To all whom it may concern:

Be it known that I, MONTEFIORE L. HIRSCH, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented new and useful Improvements in Boxes, of which the following is a specification.

This invention relates to improvements in foldable or collapsible boxes, such as are ordinarily formed of pasteboard; and it consists in a box-body and a cover therefor which are peculiar and advantageous in that they are adapted to be compactly folded and superposed, so as to take up but a minimum amount of space in shipment or storage, and are also adapted when opened to assist each other in remaining in such position.

With the foregoing in mind the invention will be fully understood from the following description and claim when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a perspective view illustrating my improved box-body and cover as open and the latter in its proper operative position on the former. Fig. 2 is a perspective view, on a reduced scale, illustrating the body and cover as collapsed or folded and superposed ready for storage or shipment. Fig. 3 is an inverted plan view of the cover as it appears when folded or collapsed. Fig. 4 is an inverted plan view of the body when opened, and Fig. 5 is a horizontal cross-section taken through the lower portion of the body when the same is collapsed or folded.

In the said drawings similar letters of reference designate corresponding parts in all of the several views, referring to which—

A is the body, and B the cover, of my improved box.

The body A in the preferred embodiment of the invention is made of pasteboard and comprises a bottom wall *a*, having a longitudinal central bend *b* extended throughout its length and also having diagonal bends or hinges *c*, which extend from intermediate points in the length of the bend or hinge *b* to the corners of the body, flat side walls *d*, connected in a hinged manner to opposite edges of the bottom wall, and side or end walls *e*, connected in a hinged manner to opposite edges of the bottom wall and also to the adjacent vertical edges of the side walls *d*. Said side or end walls *e* differ from the side walls *d* in that they are provided with central vertical bends or hinges *f*.

When the body A is folded or collapsed, the bottom wall *a* by reason of its hinge *b* folds upwardly between the side walls *d*, the side or end walls *e* by reason of their hinges *f* fold inwardly between said side walls *d*, and the four corner portions *a'* of the bottom wall *a* by reason of the end portions of the hinge *b* and the hinges *c* fold upwardly and inwardly between the sections *e'* of the side or end walls *e* and the main portion a^2 of the bottom wall *a*, all as shown in Figs. 2 and 5. From this it follows that with the body folded or collapsed the flat side walls *d* rest parallel to each other and quite close together, and the remaining portions of the body are disposed between said side walls and entirely within the outline thereof, which is advantageous, because it permits of a large number of the bodies being packed in a small space.

Incident to opening or distending the body A more or less pressure is required to move the several portions of the bottom wall *a* into a horizontal position or slightly below the horizontal and the portions *e'* of the walls *e* outwardly into the same vertical planes or slightly beyond said planes, and the strain thus created will obviously tend to hold the body open or distended.

The cover B, like the body A, is preferably formed of pasteboard and comprises a top wall *g* and side walls *h h'*. The side walls are connected in a hinged manner to the four edges of the top wall, and their meeting ends are connected by hinges *i*. (Best shown in Figs. 1 and 3.) Said side walls are moreover provided with diagonal bends or hinges *j*, which extend from the corners of the top wall *g* to the free edges of the side walls. By virtue of this provision it will be seen that two of the side walls—the walls *h*, for instance—may be swung outwardly into the same plane as the top wall and the walls *h'* folded inwardly upon the inner side of the top wall after the manner shown in Fig. 3, this rendering the cover flat and very compact. I prefer to provide both pairs of walls *h h'* with the diagonal bends or hinges *j*; but it is obvious that when desired the walls *h* alone may

be provided without affecting the operation described.

When the cover B is opened—*i. e.*, its side walls are bent into positions at right angles to its top wall and the cover is placed on the body A after the manner shown in Fig. 1—the body will operate to retain the cover in its open position, and the cover in turn, by exerting pressure against the vertical corners of the body, will tend to prevent the inward flexing of the walls *e* of the body necessary to the collapsing or folding of the same.

Subsequent to the collapsing or folding of the body A and cover B they may be superposed after the manner shown in Fig. 2 and in such relative positions packed for storage or shipment. In such positions they occupy but a minimum amount of space, and hence it follows that a large number of bodies and their complementary covers may be packed in a small space.

When boxes constructed in accordance with my invention are put in use—that is, goods are packed in them ready for shipment—the boxes become absolutely stiff, the goods themselves acting to render the boxes perfectly rigid.

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

The folded box-body described comprising the bottom wall *a* divided by hinges *b* and *c* into a main portion a^2 and corner portions *a'*, the side walls *d* connected in a hinged manner to opposite edges of the bottom wall, and the end or side walls *e* connected in a hinged manner to the other opposite edges of the bottom wall and having the hinges *f* and sections *e'*; said side or end walls *e* being folded inwardly between the side walls *d*, and said bottom wall *a* being also folded inwardly between the side walls *d* with its corner portions *a'* interposed between the sections *e'* of the walls *e* and its main portion a^2, and all resting within the outline of the side walls *d*; in combination with the flat cover superposed on the folded body, and approximately corresponding in outline therewith, and comprising the top wall, and the side walls having their inner edges connected in a hinged manner to the edges of the top wall and their ends connected together in a hinged manner, two of said side walls also having diagonal bends or hinges *j* extending from the corners of the top wall to intermediate points in the length of their free edges.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MONTEFIORE L. HIRSCH.

Witnesses:
HENRY C. BESOR,
A. F. LIEBMAN.