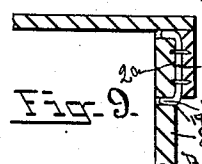
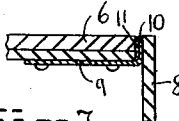
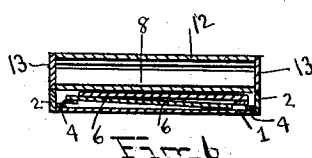
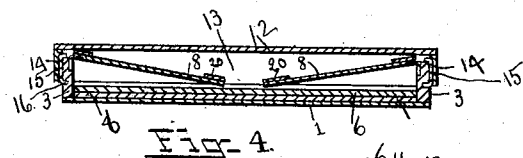
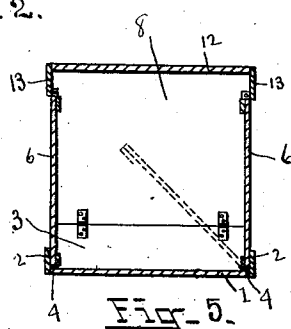
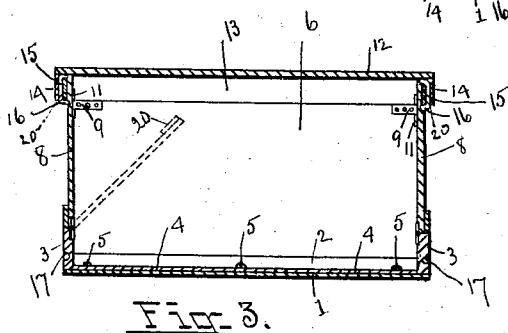
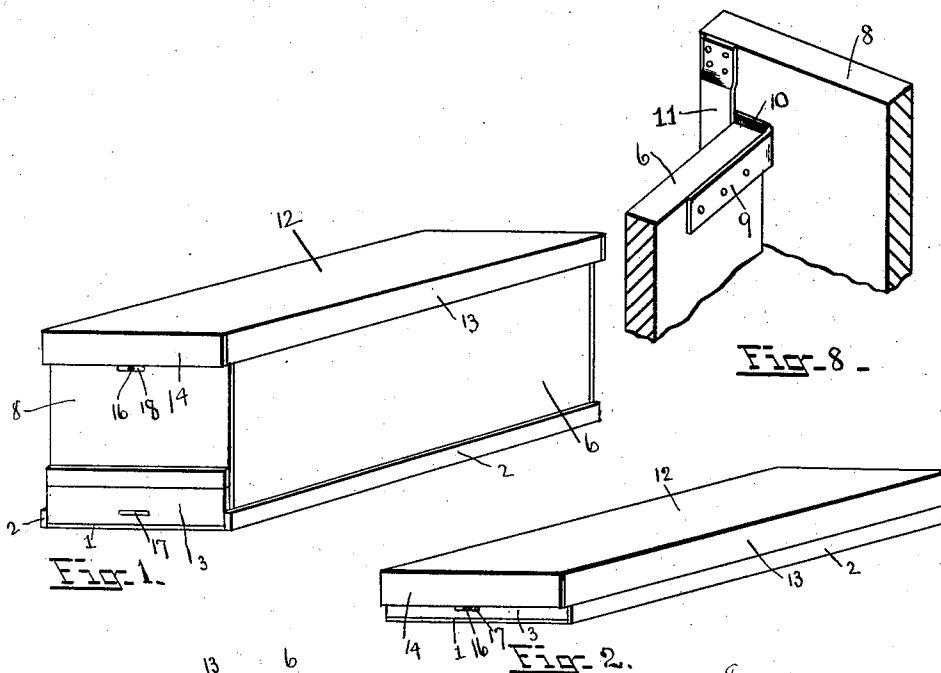


(No Model.)

J. G. FOX.
SHIPPING BOX.

No. 602,438.

Patented Apr. 19, 1898.



Attest:
Tillie Fluor,
H. Myrtle Day.

Fig. 7.

Fig. 9.

Inventor:
Jacob G. Fox
By Jas. E. Geo. P. Thomas
His Attys.

UNITED STATES PATENT OFFICE.

JACOB G. FOX, OF BAY CITY, MICHIGAN, ASSIGNOR TO RICHARD A. SMITH,
OF SAME PLACE.

SHIPPING-BOX.

SPECIFICATION forming part of Letters Patent No. 602,438, dated April 19, 1898.

Application filed June 25, 1897. Serial No. 642,326. (No model.)

To all whom it may concern:

Be it known that I, JACOB G. FOX, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Shipping-Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in shipping-boxes, and pertains more especially to that class of shipping-boxes which when the goods contained therein are removed the box is returned to the shipper or stored for further use; and the object of my invention is to provide a box for shipping goods of the nature of eggs, fruit, &c., which after the contents are removed can be folded together or collapsed and the parts arranged in a compact and reduced form, so that the whole will occupy about one-third of the original space when stored or when on the return shipment, whereby the cost of return shipment or cartage and storage expenses are greatly reduced and the liability of breakage is materially lessened.

Another object of the invention is to provide a cheap, strong, and durable box for shipping eggs, fruit, &c., that can be easily collapsed or folded together when empty and arranged in a reduced size for storage or return shipment and of which the several parts can be quickly and easily arranged in position for receiving the contents for shipping.

The invention consists in the combination and arrangement of the several parts of which the box is composed and in the construction and operation of the same, as will be hereinafter fully explained in detail and which will also be specifically pointed out in the claim of this specification.

In the drawings will be found the same figures of reference indicating the same parts or elements in each of the several views.

Figure 1 represents an isometrical view of my improved shipping-box with the parts in position for receiving the contents for shipping. Fig. 2 is the same with the parts folded in position for return shipment. Fig. 3 is a vertical longitudinal section of Fig. 1. Fig. 4 is a vertical longitudinal section of Fig. 2. Fig. 5 is a vertical transverse section of Fig.

1. Fig. 6 is a vertical transverse section of Fig. 2. Fig. 7 is an enlarged detail view, in horizontal section, of one corner of the box, and showing the supporting-catches for retaining the sides in position. Fig. 8 is a view in perspective of the same and showing the inner sides of the parts. Fig. 9 is an enlarged detail view of the cover-fastening, with section of a portion of the end and cover.

1 represents the bottom of the box, and 2 are the permanent side sections, while 3 are the permanent end sections, which are secured to the sides 2 and the bottom 1 in the ordinary way, the end sections being slightly higher than the sides and the whole forming a permanent and solidly-constructed lower section of the box.

Secured to the bottom 1 and the permanent sides 2 of the box are the longitudinal strips 4, and hinged to these strips at their lower edges by staple-hinges 5 or other suitable means are the hinged side sections 6.

Hinged by their lower edges to the upper edges of the permanent end sections 3 in any suitable manner are the end sections 8, hung so as to swing inwardly, and these sections are of a width to extend to some distance above the upper edges of the hinged side sections 6 when the parts are in position for forming the extended box.

Secured to the inner sides of the side portions 6 and located at their upper corners are the horizontal strips 9, formed of a thin sheet metal and arranged with their outer ends bent at a right angle over the ends of the said side sections 6, so as to form hooks 10, which pass beneath the vertical strips 11, which are also formed of sheet metal and have their end portions secured to the inner sides of the hinged end sections 8 near the outer edges thereof.

12 is the lid or cover, which is provided with the downwardly-projecting side portions 13 and end portions 14, the portions 14 being arranged to fit closely over the outside of horizontal strips 20, which are secured to the outer sides of and near the upper edges of the end sections 8, while the side sections 13 are of a width to rest upon the upper edges of the hinged side sections 6 and close the box, so that the side sections 14 serve to retain the

hinged end sections rigidly in position and at the same time form projecting cleats for lifting the box.

15 are wire fasteners having their ends bent at a right angle and pivotally secured in transverse grooves on the inner sides of the ends 14 of the cover by staples, the upper bent ends of the wires preventing the fasteners from dropping out of place, while the lower bent ends 16 form hooks for turning inwardly and engaging with the grooves 17 in the outer sides of the end sections 3 or the grooves 18 in the end section 8 for holding the cover in position either when the box is in a collapsed or in an extended position.

To prepare the box for filling when in a collapsed position, the cover is first removed and the hinged end sections are raised to an upright position, and the hinged sides are then raised and the sheet-metal hooks 10 are then engaged with the strips 11 and hold the hinged sides and ends in position while the box is being filled, after which the cover 12 is placed in position and secured by turning the hooks 16 into engagement with the grooves 18 in the hinged end sections 8, and the parts are thereby held firmly in position and a strong and durable package for shipment is provided.

To collapse the box after the goods contained therein have been removed, the cover 12 is removed and the side sections 6 are turned inwardly on their hinges 5, which, being located at the bottom of the box, allows one of the sections 6 to rest on the bottom 1 of the box, while the other side section folds upon the first section, and the hinged end sections 8 are then turned inwardly on their hinges, which are connected to the upper edges of the permanent end sections and thereby allowed to fold over and rest upon the hinged side sections 6, and the cover 12 is then placed over the end sections 3 till the sides 13 rest upon the stationary sides 2 of the permanent box-section, and the hooks 16 are then turned into engagement with the grooves 17 in the permanent ends 3 for retaining the parts firmly in position, and the folded box is then ready for handling or shipment.

It will be seen, of course, that when all of the parts are packed closely together, as described, only about one-fourth of the space is occupied that would be needed for the box in its expanded position, which allows a much cheaper rate per box for freight, cartage, and storage charges and also provides a more convenient form of box for handling, as for shipping for a long distance several can be crated together and placed in a condition for handling a number at once instead of a single box, and at the same time when the parts are in position for receiving the contents a strong and durable packing-box is provided, which can be used in the same manner as an ordinary solid box, while the parts being attached to each other by hinges are not liable to become lost or broken when the box is not in use.

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

In a shipping-box, the combination of the permanent lower box-section consisting of the bottom, end and side sections secured together, with the supplemental end sections hinged by their lower edges to the upper edges of the said permanent end sections, and provided on the inner sides of their lateral edges with the metal strips 11, the supplemental side sections hinged by their lower edges to the bottom of the permanent box-section and provided on their ends with the outwardly-projecting metal hooks 10, adapted for engagement with the said strips 11, when the supplemental sides are in a vertical position, and a cover having downwardly-projecting end sections for passing over the upper edges of the said hinged end sections and with side sections projecting downwardly for resting upon the upper edges of said hinged side sections, and means for retaining said cover in position substantially as set forth.

In witness whereof I have hereunto affixed my signature this 17th day of June, 1897, at Bay City, Bay county, Michigan.

JACOB G. FOX.

Witnesses:

H. MYRTLE DAY,
GEO. P. THOMAS.