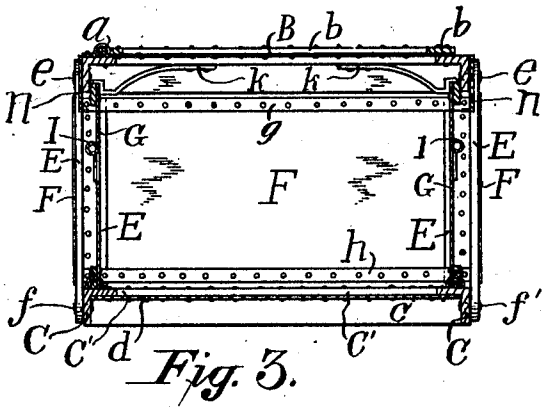
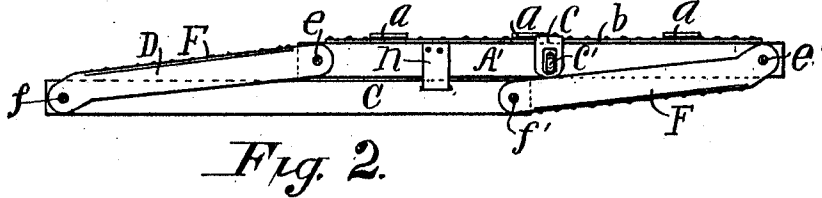
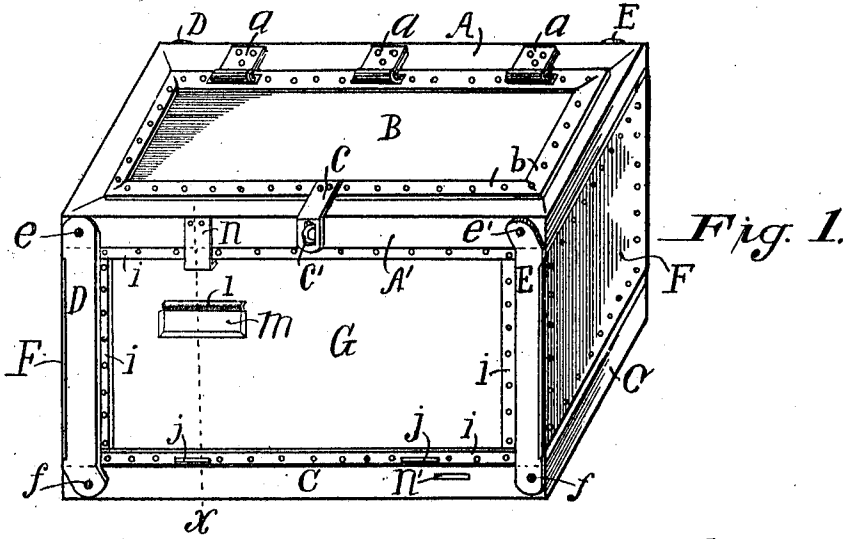


L. D. FOWLER.
 COLLAPSIBLE SHIPPING BOX.
 APPLICATION FILED FEB. 2, 1909.

945,228.

Patented Jan. 4, 1910.



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UNITED STATES PATENT OFFICE.

LEWIS D. FOWLER, OF OKLAHOMA, OKLAHOMA, ASSIGNOR OF ONE-THIRD TO A. D. MARBLE, OF OKLAHOMA, OKLAHOMA.

COLLAPSIBLE SHIPPING-BOX.

945,228.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed February 2, 1909. Serial No. 475,564.

To all whom it may concern:

Be it known that I, LEWIS D. FOWLER, a citizen of the United States, residing at 117 Frisco street, Oklahoma city, in the county of Oklahoma and State of Oklahoma, have invented certain new and useful Improvements in Collapsible Shipping-Boxes, of which the following is a specification.

My invention relates to collapsible boxes for transporting merchandise, in which the sides of the box are hinged to the side sills to fold down upon the floor and one end together with the roof fold down upon the sides, during disuse, all of which will hereinafter be fully explained.

The objects of my invention are; first, to provide a light, strong and durable box for shipping and transporting various goods and articles of merchandise; second, to construct a box for transporting merchandise that will fold or collapse during disuse; third, one that will occupy a minimum amount of space during storage and empty transportation; fourth, to construct a shipping box in such a manner that it will save expenses by being returned to the owner, by freight or express. I attain these objects by the mechanism illustrated in the accompanying drawings, forming a part of this specification, in which:

Figure 1 is a perspective view of my collapsible box for shipping merchandise, shown as in active service; Fig. 2 is a side elevation of the box collapsed for storage or return shipment; Fig. 3 is a vertical sectional view on line *x* Fig. 1.

Similar letters refer to similar parts in the several views.

Referring to the drawings, A designates the inner flange member of the angle-iron top frame of the box and A' designates the vertical member of the said frame; the said flange member A is normally, horizontal and forms the support of the box lid B which is hinged to said flange member by the hinges *a*; the said lid being intended to afford access to the interior of the box for packing and unpacking the same, the body portion of said door being, preferably as in the present case, sheet metal having secured thereto around its border a reinforcing strip *b*; and to secure the said lid against intrusion a hasp *c* is secured to the edge opposite the hinges of the lid, the said hasp being adapted to fit the staple *c'* provided for a lock, said

staple being secured in the face of the downwardly projecting or vertical member A' of the top frame. See Fig. 1.

The base or bottom frame is practically a duplicate of the top frame, being rectangular, of equal size, having a vertical flange member C and a horizontal inwardly extending flange member C' to the underside of which a sheet metal bottom *d* is securely riveted. See Fig. 3.

To provide means for supporting the top of the box and permit the said top to descend the two pairs of angle-iron corner posts D D and E E have their inner flange members cut away near their ends, which being perforated are pivotally hinged to the vertical flange members A' and C of the top and bottom frames of the box, being hinged by means of rivets *e*, *e'* and *f*, *f'* in the sides and near the corners of said frames. The pair of corner posts D, D have their lower ends bent toward the corner posts E, E which have their upper ends bent toward the said posts D D, to provide for the more complete folding or collapsing of the box. See Figs. 1 and 2.

To form the ends of the box, metallic strips *g* and *h* have their ends secured to the end flange members of each pair of corner posts and a body of sheet metal F is riveted securely to the said strips and the said flange members, the said sheet metal body having its vertical edges extending slightly around the said corner posts to produce additional firmness. See Figs. 1, 2 and 3. Each side of said box consists of a rectangular sheet of metal G having riveted to its border reinforcing strips *i* to add firmness and stability to the sides of the box, said sides being hinged to the horizontal flange member C' of the base or bottom frame, by means of slots *j* in the lower reinforcing strips *i* and metal strips *i'* passed through said slots and secured to said base or bottom frame in a manner to permit said sides to fold down upon the floor of the box; during active service the sides of the box stand vertical and are pressed against the inner surface of the side flange members of the said corner posts by means of four like latching springs *k* having their inner ends secured to the under surface of the horizontal flange member A of the ends of the top frame of the said box, the loose ends being lower and having a shoulder to abut against the top of the sides of

the box, the said springs ending in horizontal lips to rest on the upper edge of the said sides to prevent the ends of the said springs from dropping down. See Figs. 1 and 3. For convenience in handling these shipping boxes when filled with merchandise each side has a hand-hole *m* cut therein, a portion of the metal being rolled outward and upward as at *l*, to prevent cutting the hand, the balance of the metal forming the hole being doubled back upon itself. See Figs. 1 and 2.

To secure the shipping box in a folded or collapsed condition a thin flat spring *n* has its upper end secured to the flange member *A'* of the top frame on each side of the box, the lower end of said spring extending below the edge of said flange member and having its end inwardly turned forming a hook to latch into the latching slot *n'* provided therefor in the sides of the base or bottom frame. See Figs. 1, 2 and 3.

In operation, raise the lid *B* and pack the box with merchandise, close the lid and secure it by lock or otherwise; to fold or collapse the box for return shipment or storage raise the abutting ends of the latching springs *l*, fold the sides of the box down upon the floor which permits the top to descend to the position shown in Fig. 2, in which position it is ready for storage or return shipment.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is—

1. As an article of manufacture; a sheet metal collapsible shipping box; consisting of like rectangular top and bottom frames each having a horizontal and a vertical flange-like member to form the supporting basis of the box; four corner posts of equal length having their ends perforated and pivotally riveted to the vertical side members of the said top and bottom frames near their ends to support the top frame and permit it to descend; the ends of the box consisting of sheets of metal secured to the said corner posts to form the ends of the box; a sheet of metal secured to the bottom frame to form the bottom of the box; rectangular sheets of metal having their lower edges hinged to the said bottom frame in a manner to fold down upon the bottom of the box; four latch-springs having their ends secured

to the under side of the horizontal member of the ends of the top frame and having their opposite ends formed into vertical shoulders and horizontal lips to maintain the sides in an upright position during active service; a rectangular sheet metal lid resting upon and hinged to said top frame at one of its sides and having a hasp secured to the side of said lid by which to secure and lock the same, substantially as described.

2. As an article of manufacture; a sheet metal collapsible shipping box, consisting of like rectangular top and bottom frames each having a horizontal and a vertical flange-like member to form the supporting basis of the box; four corner posts of equal length having their ends perforated and pivotally riveted to the vertical side members of the said top and bottom frames near their ends to support the top frame and permit it to descend; the ends of the box consisting of sheets of metal secured to the said corner posts to form the ends of the box; a sheet of metal secured to the bottom frame to form the bottom of the box; rectangular sheets of metal having their lower edges hinged to the said bottom frame in a manner to fold down upon the bottom of the box; four latch-springs having their ends secured to the under side of the horizontal member of the ends of the top frame and having their opposite ends formed into vertical shoulders and horizontal lips to maintain the sides in an upright position during active service; a rectangular sheet metal lid resting upon and hinged to said top frame at one of its sides and having a hasp secured to the side of said lid by which to secure and lock the same; latch-springs secured to the outer surface of the vertical member of the top frame on each side of said box, said latching springs having their lower ends formed into inwardly turned hooks; latching slots in the base frame adapted to receive the said hooks to secure the said box in a closed position, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS D. FOWLER.

Witnesses:

STANTON A. HYER,
R. W. FINLEY.