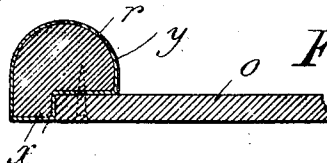
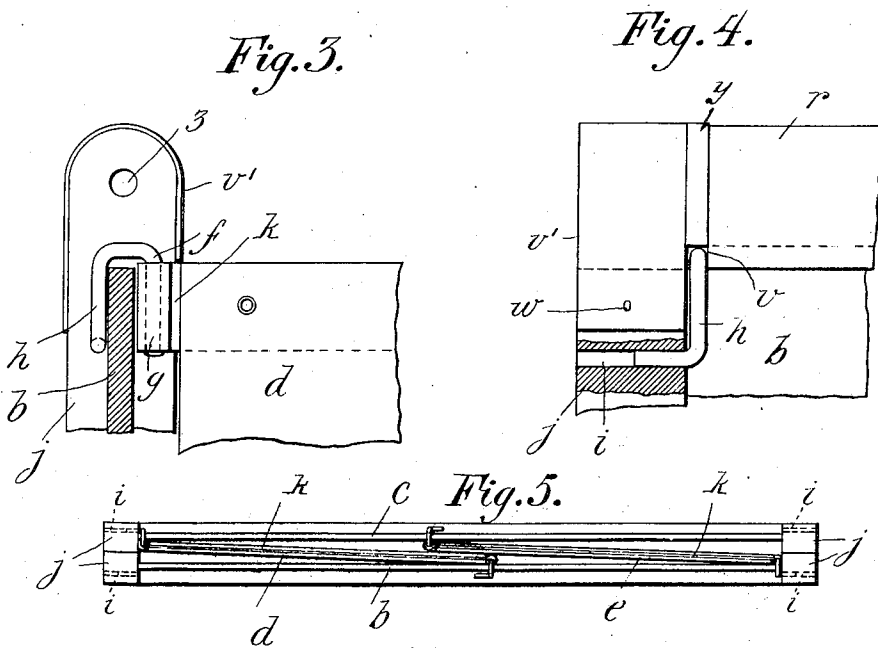
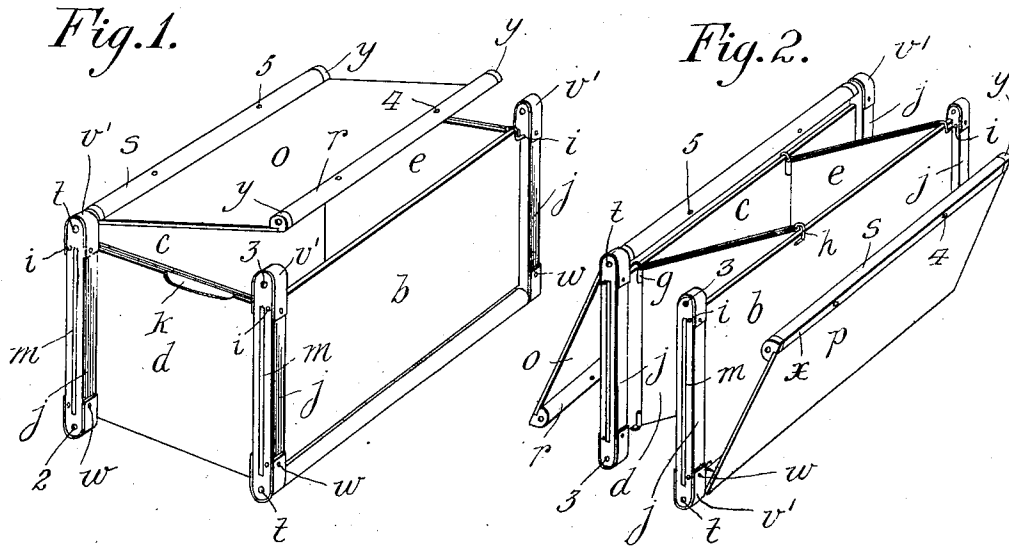


H. L. GULLINE.
FOLDING BOX.
APPLICATION FILED DEC. 29, 1906.

933,554.

Patented Sept. 7, 1909.



Witnesses
J. E. Page.
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Fig. 6. Henry L. Gulline

Inventor
By Attorney
John W. Mann

UNITED STATES PATENT OFFICE.

HENRY LAWRENCE GULLINE, OF GRANBY, QUEBEC, CANADA.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY LAWRENCE GULLINE, of Granby, Province of Quebec, Canada, have invented certain new and useful Improvements in Folding Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention may be said briefly to consist of a folding box the ends whereof are adapted to both at the same time fold within the limits of the same side of the box.

A further feature consists of the particular manner of reinforcing the corner posts, and the side edges of the top and bottom, and the side bars to which such side edges are secured; and another feature consists of means for securing the members together when folded. For full comprehension, however, of my invention, reference must be had to the accompanying drawings forming a part of this specification and in which similar reference characters indicate the same parts and wherein—

Figure 1 is a perspective view of a box constructed according to my invention; Fig. 2 is a similar view of the box partially folded; Fig. 3 is a detail view of the connection between the ends and sides; Fig. 4 illustrates the same means as Fig. 3 in a view taken at right angles; Fig. 5 is a side elevation of the box folded; Fig. 6 illustrates the connection between the top and bottom and their side bars.

My improved box comprises sides *b* and *c* ends *d* and *e* adapted to each swing bodily into position lying flat against one of the sides and in so doing slide along the other side for the purpose of enabling the box to be folded within its own length. This is effected by means of hinge pins of U-form the legs, *f*, of which are secured rotatably in eyes *g* carried by the opposite ends of each side edge of each end, the other leg *h* of each of these pins slidably clasping the side edges of the sides *b* and *c* of the box. The ends of these legs *h* are bent at right angles and when the box is being set up are inserted into holes *i* in the corner posts *j*. The position of these bent ends relatively to the main length of the U-form insuring their entering the holes. These eyes *g* are formed, preferably, at the opposite ends of comparatively rigid metallic straps *k* embedded in the top and bottom edges of the ends *d* and *e* and extending in a single piece from side to side of such ends.

The sides of the box are set and rigidly secured in longitudinal slots *m* in the corner posts *j* about midway of the width of such posts in order to provide spaces at opposite sides of these box-sides to accommodate the box-ends when swung to fold the box, and the top and bottom, or lids, *o* and *p* which are then swung back upon the sides. The side edges of these lids have side bars *r*, *s*, attached thereto and one of the bars of one lid is permanently pivotally connected (as at *t*) to two of the posts, and a bar of the other lid is similarly connected to the other pair of posts at the diagonally opposite corner of the box. The corners of these lids are notched to provide shoulders *v* adapted to have the U-pins bear thereon when the box is set up, for the purpose of preventing inward displacement of the slidable ends.

The ends of the corner posts are rounded and reinforced with metal straps *v'* held in place preferably by the end nail *w* securing the box-sides in the slots of the corner posts, and the side edges of the lids are counter sunk into their side bars *r*, *s*, thus providing ribs *x* which reinforce and protect the said side edges of the lids, while the bars are rounded to conform (when the box is set up) to the rounded ends of the posts, and their ends are reinforced with encircling straps *y*.

The main advantage attendant upon the above connection of the ends to the sides is that each end can hinge on one side and slide along the other thus allowing both ends to at the same time fold within the same side of the box.

When the box is set up the lids are secured closed by screws *2* screwed through holes *3* in the free ends of the corner posts into the ends of the side bars at the free sides of the lids, and when the box is folded or knocked down such screws are screwed into holes *4* and *5* in the side bars, the holes *4* being completely through the side bars in which they are located, while the holes *5* extend only partially through their side bars. The advantage of utilizing holes of different depths is that it insures the screws being inserted always the same way.

What I claim is as follows:—

1. In a folding box the combination of the sides and ends thereof such ends being each pivoted at one side edge only to diagonally opposite ends of the sides, and devices hinged to the opposite side edges of the ends and each slidably clasping the side to which

the other end of the box is pivoted, for the purpose of providing a sliding connection between the ends and sides.

2. In a folding box the combination with the sides and ends thereof, of means effecting a sliding pivotal connection between the ends and sides of the box and comprising a pair of eyes at the opposite ends of each side edge of the said ends of the box, and pins of U-form each having one leg pivoted in one of the eyes and its other leg slidably clasping the adjacent edge of the side of the box for the purpose of providing a sliding connection between the ends and sides.

3. In a folding box the combination with the sides and ends thereof, of metallic strips secured to the top and bottom edges of the ends and having their opposite ends formed with eyes, and bent pins each having one end pivoted in one of the eyes and its other end free and slidably clasping the adjacent edge of the side of the box for the purpose of providing a sliding connection between the ends and sides.

4. In a folding box the combination with the sides and ends thereof, of metallic strips secured to the top and bottom edges of the ends and having their opposite ends formed with eyes, and pins of U-form each having one leg pivoted in one of the eyes and its other leg free and slidably clasping the adjacent edge of the side of the box for the purpose of providing a sliding connection between the ends and sides.

5. In a folding box comprising ends, sides, and top, and bottom, of means effecting a sliding pivotal connection between the ends and sides of the box and comprising a pair of eyes at the opposite ends of each side edge of the said ends of the box, pins of U-form each having one leg pivoted in one of the eyes and its other leg free and slidably clasping the adjacent edge of one of the sides of the box for the purpose of providing a sliding connection between the ends and sides, and shoulders upon the top and bottom preventing displacement of the said U-pins when the box is set up.

6. In a folding box comprising ends, sides, corner posts and top and bottom, of means effecting a sliding pivotal connection between the ends and sides of the box and comprising a pair of eyes at the opposite ends of each side edge of the said ends of the box, pins of U-form having one leg pivoted in the eyes and their other legs free and slidably clasping the sides of the box for

the purpose of providing a sliding connection between the ends and sides, the last mentioned legs being bent at right angles to their main length and entering holes in the corner posts, and means preventing displacement of the said ends when the box is set up.

7. In a folding box comprising a body portion consisting of corner posts, sides rigidly secured to the corner posts, and ends hinged to the corner posts; and top and bottom having reinforcing strips *r* and *s* secured thereto and pivoted in the ends of the corner posts; the said corner posts having their ends rounded, and metallic straps reinforcing the said rounded ends, for the purpose set forth.

8. In a folding box comprising a body portion consisting of corner posts, sides rigidly secured to the corner posts, and ends hinged to the corner posts; and top and bottom having reinforcing strips *r* and *s* secured thereto and pivoted in the ends of the corner posts; the said top and bottom each consisting of a main piece with rounded side bars, for the purpose set forth.

9. In a folding box comprising a body portion consisting of corner posts, sides rigidly secured to the corner posts, and ends hinged to the corner posts; and top and bottom having reinforcing strips *r* and *s* secured thereto and pivoted in the ends of the corner posts; the said corner posts having their ends rounded, and metallic straps reinforcing the said rounded ends, and the top and bottom each consisting of a main piece with side bars rounded to conform to the rounded ends of the corner posts, for the purpose set forth.

10. A folding box comprising corner posts, sides secured to the corner posts, ends hinged to the sides top and bottom hinged to the corner posts, the said posts having holes 3, and the top and bottom each having side bars *r*, *s*; screws 2 for securing the said top and bottom closed, and the said side bars which coincide when the box is folded having screw holes 4, 5, whereby the said screws secure the members of the box together when folded, such screw holes 4 and 5 being of different lengths, as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HENRY LAWRENCE GULLINE.

Witnesses:

WILLIAM P. McFEAT,
FRED J. SEARS.