No. 886,530. PATENTED MAY 5, 1908.

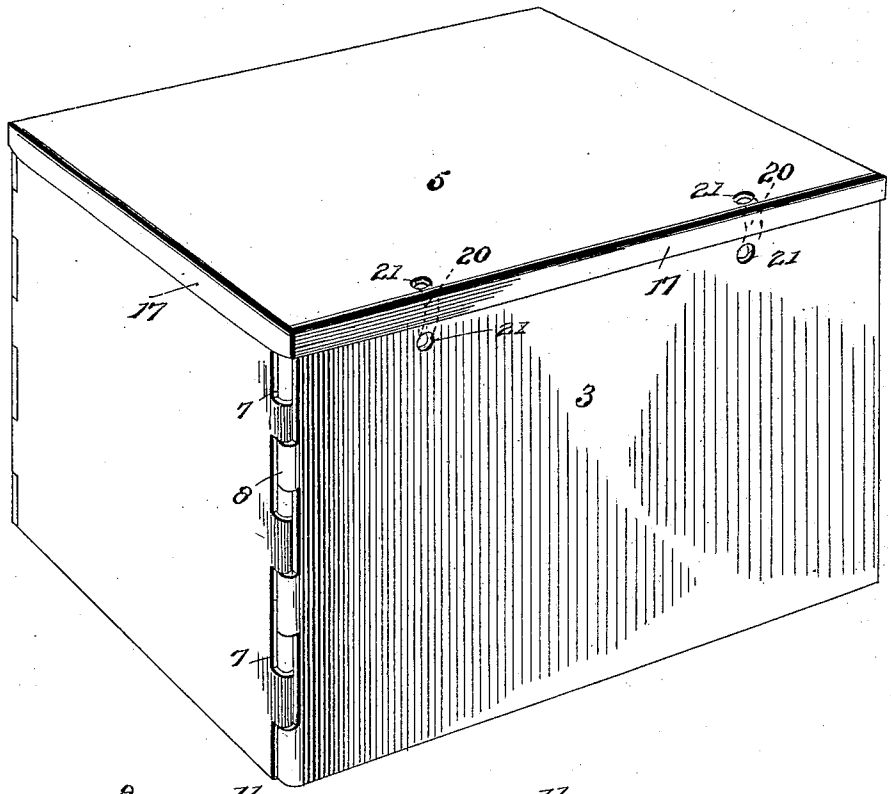
W. F. MESTEMACHER.

COLLAPSIBLE BOX.

APPLICATION FILED JUNE 4, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



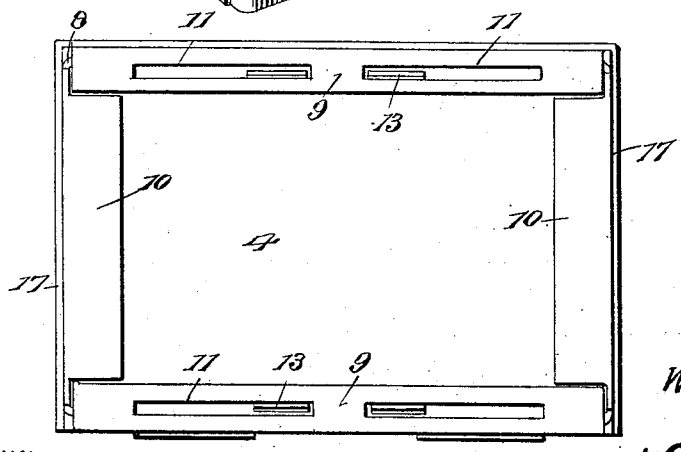


Fig. 2.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

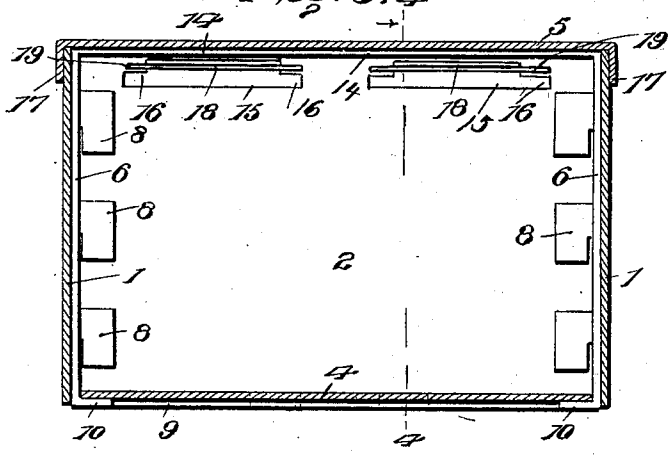


Fig. 4.

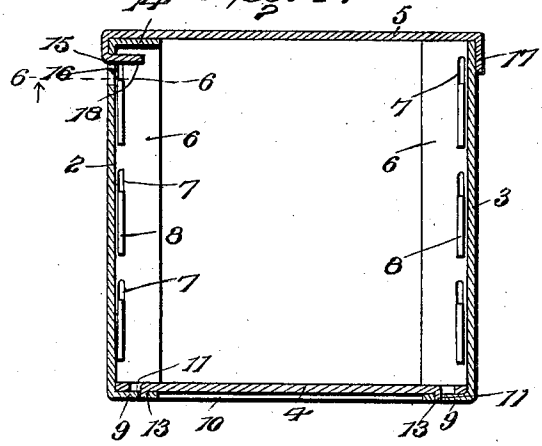


Fig. 7.

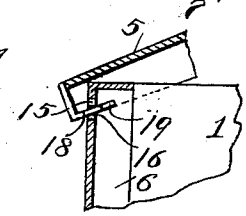


Fig. 6.

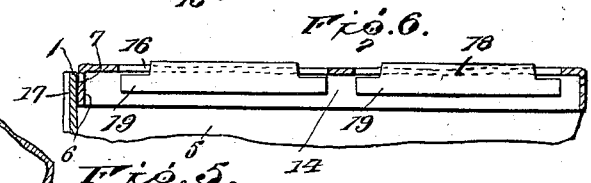
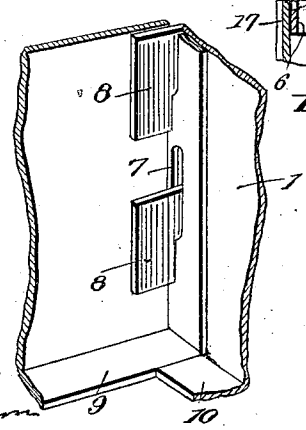


Fig. 5.



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UNITED STATES PATENT OFFICE.

WILLIAM F. MESTEMACHER, OF HAWK POINT, MISSOURI.

COLLAPSIBLE BOX.

No. 886,530. Specification of Letters Patent. Patented May 5, 1908.

Application filed June 4, 1907. Serial No. 377,227.

To all whom it may concern:

Be it known that I, WILLIAM F. MESTEMACHER, citizen of the United States, residing at Hawk Point, in the county of Lincoln and State of Missouri, have invented certain new and useful Improvements in Collapsible Boxes, of which the following is a specification.

The present invention relates to certain new and useful improvements in boxes or crates of that type which are so constructed as to be readily collapsed and stored in a comparatively small amount of space when not in use.

One of the objects of the invention is to provide a folding box comprising a plurality of sections having a detachable and interlocking connection and peculiarly designed to enable the box to be assembled or dismounted without the use of a tool.

The invention also aims to design a light and durable box which can be cheaply formed of sheet metal or like material.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a box embodying the invention. Fig. 2 is a bottom plan view of the same. Fig. 3 is a longitudinal sectional view through the box. Fig. 4 is a transverse sectional view on the line 4—4 of Fig. 3. Fig. 5 is a detail view of one corner of the box. Fig. 6 is a horizontal sectional view on the line 6—6 of Fig. 4, looking in the direction of the arrow. Fig. 7 is a transverse sectional view through a portion of the box, the cover being swung upwardly in the position assumed when being detached from or applied to the box.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

A box or receptacle embodying the present invention comprises the two end pieces 1 having a detachable and interlocking connection with the sides 2 and 3, a bottom 4, and a top or cover 5 which is detachably hinged to one of the sides, in the annexed drawing to the rear side of the box, and when in a closed position serves to hold the sides and ends of the box securely in engagement with each other. The sides 2 and 3 of the box are each provided at their opposite ends with the inwardly extended flanges 6, the said flanges being formed with a plurality of longitudinally disposed openings or slots 7. The two ends 1 of the box are provided along opposite edges with the inwardly extended hook members 8 corresponding to and designed to be received within the slots 7 in the flanges 6. These hook members 8 have a limited amount of vertical play within the slots 7 to enable them to be moved into or out of engagement with the lower end of the slots 7 and when the said hooks are in engagement with the slots the upper and lower edges of the sides and ends are even with each other.

A bottom flange 9 projects inwardly from the lower edge of each of the sides of the crate and the ends 1 are provided in a similar manner with the flanges 10 which are somewhat less wide than the ends and abut against the bottom flanges 9 when the various sections of the crate are assembled. It will be observed that each of the bottom flanges 9 is formed with a plurality of longitudinal slots 11, and the bottom 4 of the crate which is designed to rest loosely upon the flanges 10 is provided upon its sides with pendent lugs 13 received by the slots 11, thereby tending to produce an interlocking connection between the parts and increase the rigidity of the crate.

A flange 14 extends inwardly from the upper edge of the rear side 2 of the crate and the said side is provided immediately below the flange with a pair of longitudinally disposed rectangular slots 15, each of which is provided at its lower corners with notches 16. The cover 5 carries the pendent flanges 17 embracing the ends 1 and front side 3 and is provided at its rear edge with the hinge members 18 constituted by returned tongues spaced from and approximately parallel to the cover, said tongues being designed to be received within the slots 15. These tongues 18, constituting the hinge members of the cover are provided at their extremities with the oppositely extending lateral extensions 19, corresponding to the notches 16, whereby an interlocking connection is enabled to be brought about between the cover and the side 2. In connecting the cover to the rear side 2, the former is held at an obtuse angle to the side and the tongues 18 inserted through the lower portions of the slots 15, the lateral extensions 19 passing through the notches 16. Then when the cover 5 is swung into a

closed position and engages the upper edge of the box, the tongues 18 are moved upwardly within the slots 15 and the lateral extensions 19 moved above the notches 16. The ends 1 are then held securely against the vertical movement which would be required to disengage the hook members 8 from the slots 7 and the cover is itself held by the flanges 17 against lateral displacement. However, when the cover is swung upwardly, the extensions 19 of the returned tongues 18 are enabled to pass readily through the notches 16 and the cover can thereby be detached from the crate. After the cover has been removed, the ends can be lifted vertically, whereby the bottom is slightly lifted, to disengage the hook members 8 from the slots 7, and the sides 2 and 3 subsequently separated from the bottom 4. The various members can then be packed in a comparatively small amount of space. Any suitable means may be employed for locking the cover of the crate in a closed position when the crate is in use, and in the present instance this result is accomplished by means of wires or cords 20 passing through suitable openings 21 in the swinging edge of the cover and the upper portion of the side 3 of the crate.

Having thus described the invention, what is claimed as new, is:

1. A box comprising sides one of which is provided with a slot having the lower corners thereof in communication with notches, ends having a detachable and interlocking connection with the sides, a bottom supported by the sides and ends, and a cover provided with a returned tongue detachably received within the before mentioned slot in one of the sides, the said returned tongue being formed with lateral extensions corresponding to the notches at the lower corners of the said slot.

2. A box comprising sides one of which is provided with a slot having the lower corners thereof in communication with notches, ends having a detachable and interlocking connection with the sides, the said ends and sides being provided with bottom flanges, a bottom resting upon the said flanges, and a cover provided with a returned tongue detachably received within the before mentioned slot in one of the sides, the said returned tongue being formed with lateral extensions corresponding to the notches at the lower corners of the said slot.

3. A box comprising sides provided at their extremities with inwardly extending flanges having longitudinal slots formed therein, ends provided at their extremities with inwardly extending hook members adapted to be received within the said slots and to have an interlocking connection therewith, the hook members being disengaged or engaged with the slots by a vertical movement of the ends, a removable bottom supported by the sides and ends, and a cover detachably applied to one of the sides of the box and serving to lock the ends against vertical movement relative to the sides.

4. A box comprising sides provided with inwardly extended end flanges having slots therein, ends carrying inwardly extending hook members adapted to have an interlocking connection with the slots, the said hook members being adapted to be disengaged from or engaged with the slots by a vertical movement of the ends and the said ends and sides being provided with bottom flanges, a detachable bottom supported by the bottom flanges, and a cover detachably applied to the box and serving to lock the ends against vertical movement.

5. A box comprising sides formed with end flanges having slots therein, one of said sides being provided with a slot having the lower corners thereof in communication with notches, ends provided with hook members detachably engaging the before mentioned slots in the end flanges of the sides, a bottom supported by the ends and sides, and a cover provided with a returned tongue detachably received within the before mentioned slot in one of the sides, the said returned tongue being formed with lateral extensions corresponding to the notches at the lower corners of the said slot.

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

WILLIAM F. MESTEMACHER. [L. S.]

Witnesses:

GEORGE H. MIDDELKAMP,

JAMES B. WELLS.