No. 677,683. Patented July 2, 1901.

W. P. MURPHY.

FOLDING CRATE.

(Application filed Apr. 18, 1901.)

(No Model.)

Fig. 1.

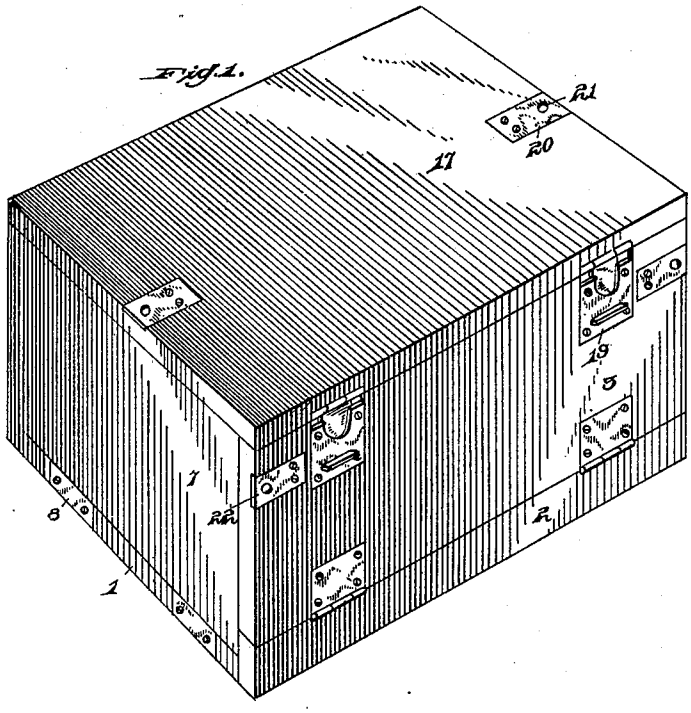


Fig. 2.

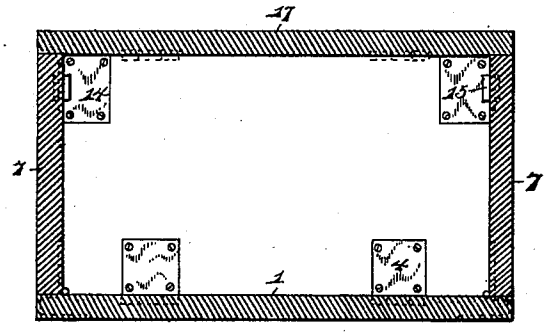


Fig. 3.

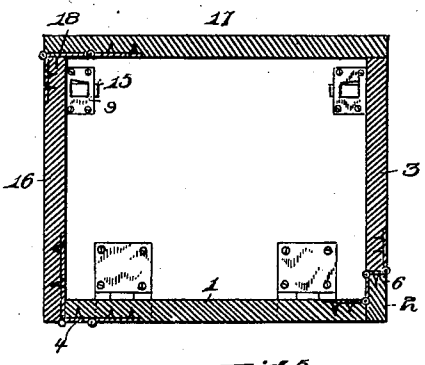


Fig. 4.

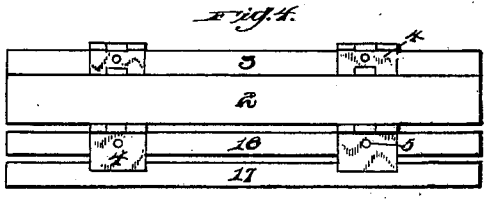
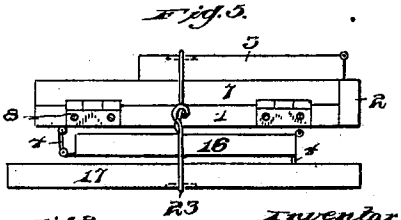


Fig. 5.



Witnesses:

J. P. Appleman

E. C. Potter.

Fig. 6.

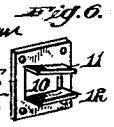


Fig. 7.

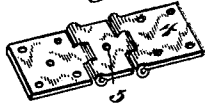
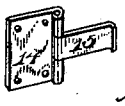


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM P. MURPHY, OF McKEESPORT, PENNSYLVANIA.

FOLDING CRATE.

SPECIFICATION forming part of Letters Patent No. 677,683, dated July 2, 1901.

Application filed April 18, 1901. Serial No. 56,477. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. MURPHY, a citizen of the United States of America, residing at McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Folding Crates, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in folding crates, and has for its object to provide a crate such as is used for various purposes and may be conveniently folded for returning as an "empty."

In the accompanying drawings, Figure 1 is a detail perspective view of my improved crate in a built-up form. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse vertical sectional view. Fig. 4 is a detail side elevation of the crate in a folded form. Fig. 5 is an end elevation of the same. Fig. 6 is a detail perspective view of one of the fastening-plates carried by the end pieces. Fig. 7 is a like view of one of the double hinges which are employed for connecting the front wall in position and also for connecting the lid or cover to the rear wall. Fig. 8 is a like view of one of the hasps employed for securing the box in the built-up form.

In the drawings the reference-numeral 1 indicates the bottom of the box or crate, to the front edge of which is secured a strip 2, which extends some distance upon the upper face of the bottom 1 and forms a part of the front 3. This front 3 is secured to the strip 2 and to the upper face of the bottom 1 by means of a pair of double or three-leaf hinges 4, the form of which is shown in detail in Fig. 7 of the drawings. The one end leaf of these hinges is countersunk in the upper face of the bottom 1, and the other leaf is countersunk in the outer face of the front 3, the central leaf having an aperture 5 to receive a screw which fastens the said leaf to the strip 2, as shown at 6 in Fig. 3. I provide these three-leaf hinges in order to permit the folding of the front 3 by the removal of the screw 6.

7 indicates the end pieces of the box, which are hinged to the bottom 1 by strap-hinges 8, the one leaf of which is countersunk in the inner faces of the ends and the other leaf of which is carried outwardly between the lower end of the end pieces and the bottom and around the end of the bottom and countersunk in the under face of the bottom. Two of these hinges may be provided for connecting each end piece to the bottom, or only one may be employed for each end, if desired. The end pieces carry on their inner face latch-plates 9, which are countersunk in the end pieces, so that the outer face of the plates may be flush with the inner face of the end pieces. These latch-plates are provided with a central opening 10 and with two flanges 11 12, which are formed by forcing the metal inwardly toward the end pieces. The flange 11 is at an incline to the plate, while the flange 12 is on a substantially horizontal line. Two of these latch-plates are provided in each end piece—one adjacent to each edge—and the end pieces back of the latch-plates are recessed to permit the entrance of the hasps, as will be described. The front piece 3 carries on its inner face two hasps, which comprise the leaf 14, which is countersunk in the one face of the front piece and carries a hasp 15. These hasps are hinged to the leaf, so that they will fold flat upon the same when it is desired to fold the box. When the box is set up, these hasps enter the recesses back of the latch-plates 9, the flange 11 serving as a guide for the hasps and the flange 12 serving as a support therefor when the hasps are engaged with the inner edge of the latch-plates. The back 16 is secured to the bottom 1 by means of double or three-leaf hinges 4 of the same form as those heretofore described and shown in detail in Fig. 7 of the drawings. The one leaf of these hinges is countersunk in the inner face of the back 16, and the other two leaves are countersunk in the under face of the bottom. This back 16 carries two leaves of the same form as those heretofore described for the front 3, which engage behind the latch-plates 9 and lock with said latch-plates when the back is in the upright position.

The lid or cover 17 is connected to the back 16 by means of double or three-leaf hinges of the same form as heretofore described and shown. The one leaf of these hinges is coun-

tersunk in the rear face of the back, and the other two leaves are countersunk in the under face of the lid or cover 17. An aperture in the central leaf of these hinges is adapted to receive a screw 18, which fastens this central leaf to the back 16, as shown in Fig. 3. When folding the box, it is necessary that the screw 18 be removed in order that the lid may fold compactly on the other parts of the box. This lid or cover 17 carries a pair of hasps of the same form as heretofore described. These hasps are adapted to enter latch-plates 19, secured in the front 3, said plates being provided with a slot near the lower end to receive the hook end of the hasps. At their upper ends these plates 19 are cut away, so as to permit the operator to insert his finger therein to depress the hasps 15 out of engagement with the slots and permit the elevation of the lid or cover. Countersunk in the upper face of the lid or cover 17 is a pair of plates 20, which are provided near their outer ends with apertures 21 and, like plates 22, are secured to the front 3 of the box. When the box is folded, the lid or cover forms the bottom thereon and the front 3 is on top of the other members of the box, so that a wire 23 may be passed through the openings in the plates 20 and 22 for binding the parts together, as shown in Fig. 5 of the drawings.

It will be observed that the attachment may be made of any suitable material and to conform to the capacity of the box or crate and may be attached to the box or crate now in general use. The crate may be of any desired size, and the attachment can be fastened with small screws or nails, according to the strength desired. By properly countersinking the attachment into the box or case it will be observed that the latter can be made perfectly air-tight when the box is desired to be so.

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

In a device of the character described, a bottom, a strip secured to the front edge thereof and extending above the said bottom, a front, a pair of three-leaf hinges countersunk and secured to the outer face of said front, to the upper edge of the said strip and to the upper face of the bottom, a removable screw securing said hinge to the upper edge of the said strip, hasps carried on the inner face of the front, end pieces mounted upon the bottom at each end thereof, strap-hinges countersunk and secured to the inner face of said end pieces, to the upper face, outer edge and lower face of the bottom, latch-plates countersunk in the inner face of said end pieces, a back piece, a hinge countersunk and secured to the inner face thereof and to the lower face of the bottom, hasps secured to the inner face of said back piece, a lid or cover, a three-leaf hinge countersunk and secured to the underneath face of the said lid or cover, and to the outer face and upper edge of said back piece, a screw for removably securing the said hinge to the said upper edge, hasps carried by the said lid or cover, and latch-plates carried by the front 3 to receive the hasps carried by the lid or cover to secure the said lid or cover in a locked position, substantially as described.

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

WILLIAM P. MURPHY.

Witnesses:
JOHN NOLAND,
E. E. POTTER.