E. C. GRANT.

BOX.

APPLICATION FILED AUG. 24, 1917.

1,270,286.

Patented June 25, 1918.

2 SHEETS—SHEET 1.

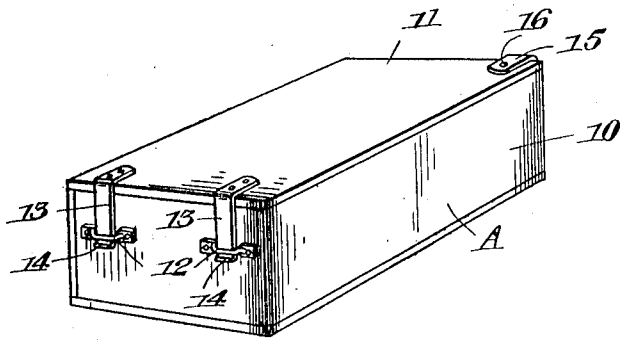


Fig. 1.

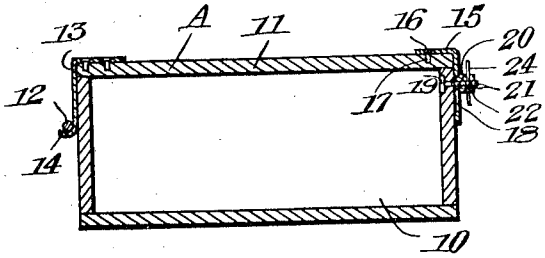


Fig. 2.

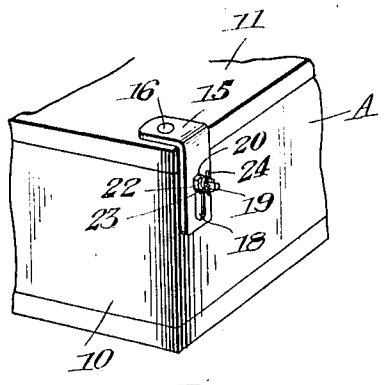


Fig. 3.

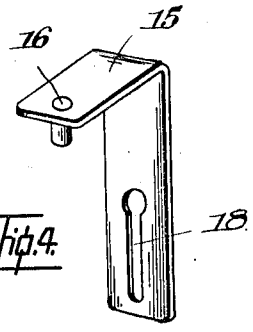


Fig. 4.

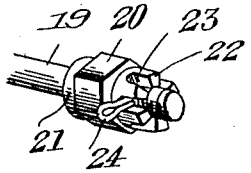


Fig. 5.

WITNESSES

Arthur Middleton

INVENTOR
E. C. GRANT.

BY Fatherstonhaugh & Co.

ATTYS.

E. C. GRANT.

BOX.

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2 SHEETS—SHEET 2.

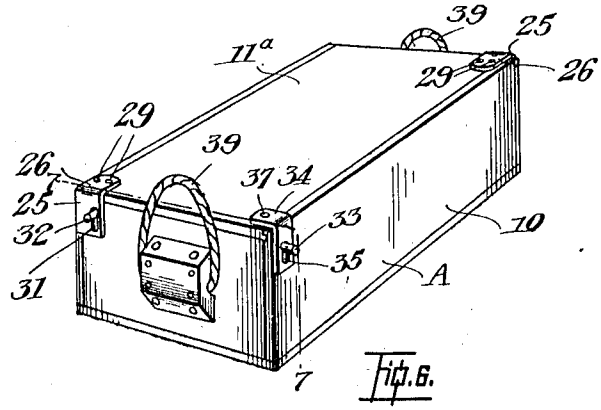


Fig. 6.

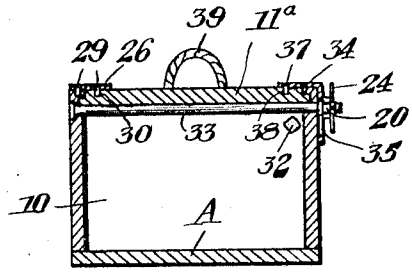


Fig. 7.

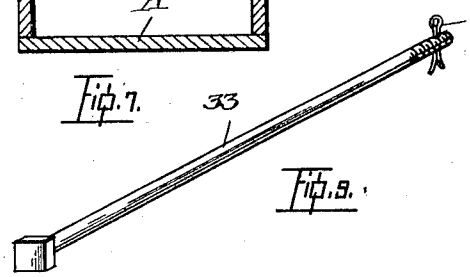


Fig. 9.

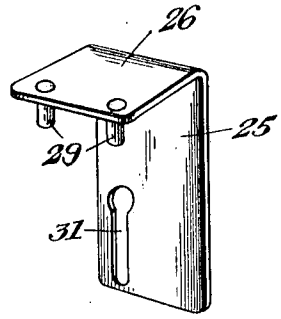


Fig. 8.

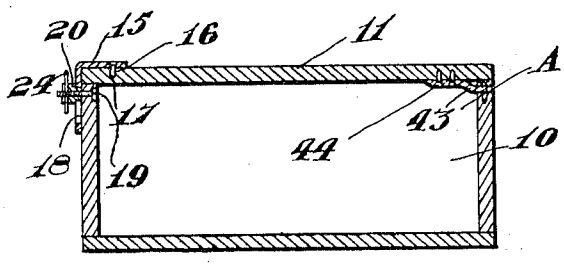


Fig. 10.

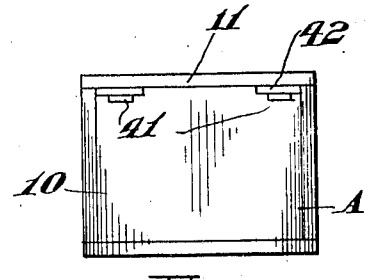


Fig. 11.

WITNESSES.

Wm. A. Wyman.

Arthur Middleton

INVENTOR
E. C. GRANT.

BY Dewey Donohaugh & Co

ATTYS.

UNITED STATES PATENT OFFICE.

EDWARD CRUIKSHANK GRANT, OF OTTAWA, ONTARIO, CANADA.

BOX.

1,270,286. Specification of Letters Patent. Patented June 25, 1918.

Application filed August 24, 1917. Serial No. 188,022.

To all whom it may concern:

Be it known that I, EDWARD CRUIKSHANK GRANT, a subject of the King of Great Britain, and a resident of the city of Ottawa, in the Province of Ontario and the Dominion of Canada, have invented certain new and useful Improvements in Boxes, of which the following is a specification.

This invention relates to improvements in boxes, and the objects of the invention are to facilitate removing or positioning the lid with a minimum of time and labor, to permit of the lid locking means being freely used without deterioration to the lid or box in any way, to simplify the arrangement of the several parts and generally to adapt them to better perform the functions required of them.

With these and other objects in view, the invention consists essentially of the improved construction particularly described and set forth in the following specification and accompanying drawings forming part of the same.

In the drawings,

Figure 1 is a perspective view of a box embodying the present invention.

Fig. 2 is a longitudinal section of the same.

Fig. 3 is a fragmentary perspective view of one corner of the box showing the locking means mounted thereon.

Fig. 4 is a perspective view of the locking means shown in Fig. 3.

Fig. 5 is a fragmentary perspective view of the bolt and co-acting nut.

Fig. 6 is a perspective view of a box fitted with an alternative form of the invention.

Fig. 7 is a transverse section through the line 7—7 of Fig. 6.

Fig. 8 is a perspective view of the locking member utilized in Fig. 6.

Fig. 9 is a perspective view of the bolt.

Fig. 10 is a longitudinal section of the box showing the alternative form of fastening means to the hinge illustrated in Fig. 1.

Fig. 11 is an end view of the box shown in Fig. 10.

Like characters of references refer to like parts in the several figures.

Referring to the drawings:

A represents a box of any usual description comprising the body portion 10 and the lid 11. The body portion 10 is provided at one end with a pair of straps 12, secured in position by screws or the like, while the lid 11 is provided with a pair of angle members 13 secured in position by screws or the like and having their free ends offset as shown at 14 to engage with the straps 12, and thus form hinges.

The means which I employ for locking the lid 11 in position is quite unique and consists of an angle plate 15 provided on one arm with a downwardly disposed pin 16 adapted to engage with the orifice 17 in the lid 11, the opposite arm of the angle member having a keyhole slot 18 therein.

Co-acting with the keyhole slot 18 is a bolt 19 which is counter sunk into the side of the body portion 10, the point of the bolt extending through the keyhole slot 18 to engage with the nut 20.

This nut is reduced in its inner face to form a cylindrical shoulder 21, which is adapted to engage with the upper circular portion of the keyhole slot 18, while the outer face of the nut is reduced to form a cylindrical portion 22 having a plurality of peripheral slots 23 therein for adjustment with which the cotter pin 24 designed to pass through the point of the bolt 19, is adapted to engage.

In that form of the invention illustrated in Fig. 6, the lid 11^a makes sliding engagement with the body portion 10 and the said lid is secured in position by a pair of locking members 25 arranged on diagonally opposite corners of the box, each of the members consisting of an angle plate 26, the shorter upper arm of which is provided with a pair of pins 29 designed to engage with orifices 30 in the lid 11^a and the side wall of the body 10 respectively.

The locking members 25 are provided on their longer arm with keyholes slots 31 with which the bolt 32 is designed to engage. This bolt is similar to that shown at 19 in Fig. 5, being provided with the same form of nut, so that it is not deemed necessary to further enlarge upon the same.

The end of the box 10 shown in Figs. 6 and 7 is reinforced by a transversely extending bolt 33 which co-acts with a locking member 34 similar to that shown in Fig. 1, being provided with a keyhole slot 35 with which the nut 36 co-acts, the locking member having a pin 37 adapted to engage with the orifice 38 in the lid 11^a.

The box is provided with a pair of handles 39 which will, when rotated into a vertical position, extend above the lid 11^a so that

they will act as a sling when a carrying rod is passed therethrough.

In that form of the box shown in Figs. 10 and 11, the locking members are substantially the same as that described with regard to Figs. 1 to 5, but in this case the end of the box is provided with recesses 41 above which cover plates 42 are mounted. These recesses are designed to receive the offset ends 43 of the plates 44, which are secured to the lid 11 and this method of fastening the end of the lid is designed to replace the hinge shown in Fig. 1.

The assembly of the several parts will be readily understood from the foregoing description.

When that form of box shown in Fig. 1 is in use and it is desired to open the same, the cotter pin 24 is withdrawn from engagement with the bolt 19 and the nut 20 loosened to the desired extent to disengage the cylindrical shoulder 21 from engagement with the upper circular end of the keyhole slot 18, whereupon the locking member 15 may be slid upwardly to free the pin 16 from engagement with the orifice 17. The lid 11 is now rotated to an open position around the straps 12 and when the offset portions 14 coincide with the end of the box 10, they may be disengaged from the straps and the lid 11 thus bodily removed.

After the box has been packed, the offset ends 14 of the members 13 are engaged with the strap 12 and the lid 11 is then rotated into closed position, whereupon the locking member 15 is lowered until the pin 16 engages with the orifice 17, in which position the cylindrical shoulder 21 of the nut 20 is in alinement with the upper circular portion of the keyhole slot 18 and on tightening the nut 20, the cylindrical shoulder will engage with the slot and prevent the locking member from being forced upwardly under any pressure whatever.

In that form of the invention shown in Figs. 6, 7 and 8, the locking members 25 and 34 are slid upwardly after the nuts have been loosened on the bolts 32 and 33 and the locking members 25 may be rotated in a lateral direction to permit the lid 11^a being slid open and after the box has been filled, the lid 11^a is closed. The locking members 25 and 34 are then lowered, permitting the pins 29 and 37 to engage with the orifices 30 and 38 in the lid 11^a and the lateral walls of the body 10 of the box, and the pin 37 of the locking member 34 engages with the orifices 38, whereupon the nuts are tightened on the bolts 32 and 33 in the manner described with relation to the first form of the invention.

When the nuts have thus been tightened, it is quite impossible for force the locking member without loosening the nuts so that boxes of this nature when packed are not liable to be opened even though submitted to the roughest usage. The several locking members may be countersunk into the lid of the boxes if desired and the thickness of the lid permits.

In that form of the invention illustrated in Figs. 10 and 11, when the locking member 15 has been loosened to permit of the lid being unlocked, the lid 11 is slid longitudinally until the offset portions 43 of the plates 44 become disengaged from the recesses 41 so permitting the load being bodily removed.

When the box has been filled the offset portions 43 of the members 44 are engaged from the recesses 41 and the lid 11 is slid longitudinally until the ends are flush with the ends of the box whereupon the locking members 5, may be positioned in the manner described with respect to that form of the invention shown in Figs. 1 to 3.

As many changes could be made in the above description and many apparently widely different embodiments of my invention within the scope of the claim constructed without departing from the spirit or scope thereof, it is intended that all matter contained in the accompanying specification and drawings shall be interpreted as illustrative and not in a limited sense.

What I claim as my invention is:

A box comprising a body portion and a removable lid, a locking member co-acting with the box comprising an angle plate having a keyhole slot in one arm, pins in the other arm adapted to engage with the lid and lateral wall of the body portion of the box, a bolt engaging with the keyhole slot, and a nut engaging with the bolt having the inner end provided with a cylindrical shoulder to co-act with the upper end of the keyhole slot, the outer face of the nut having a cylindrical portion provided with peripheral slots and a cotter pin engaging with the bolt adapted to be embraced by the said slots.

EDWARD CRUIKSHANK GRANT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."