

Oct. 12, 1943.

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2,331,754

FASTENER

Filed Dec. 1, 1941

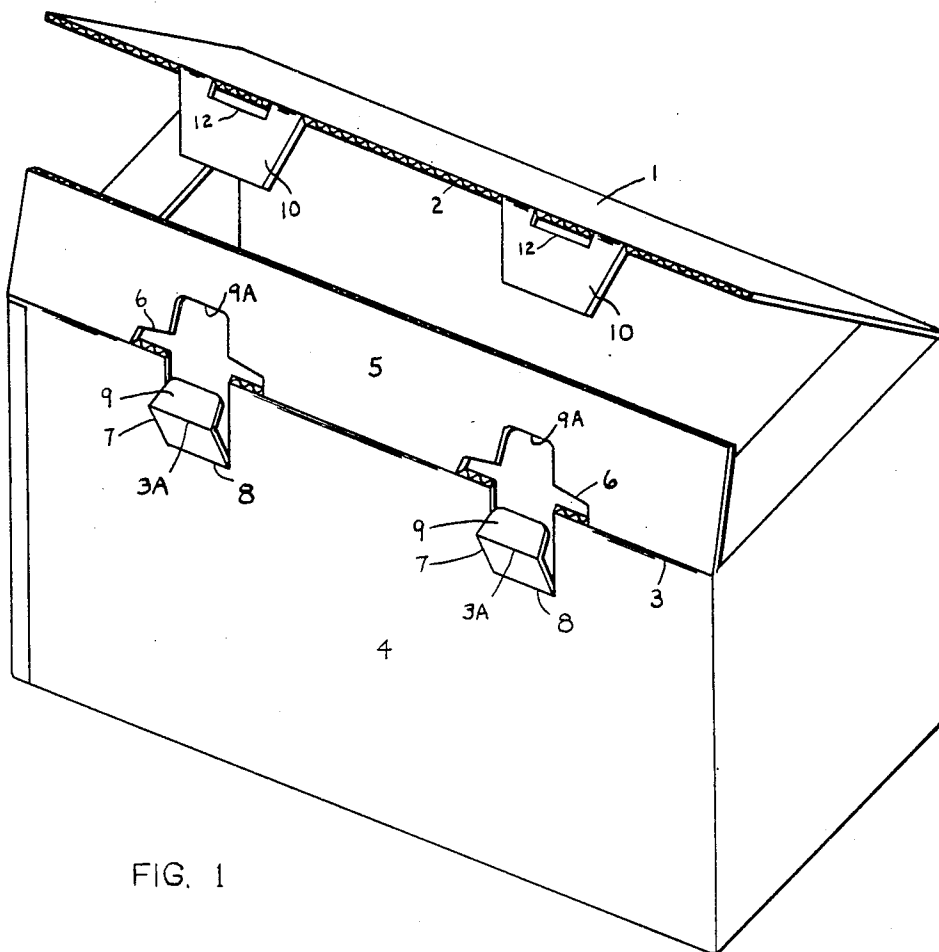


FIG. 1

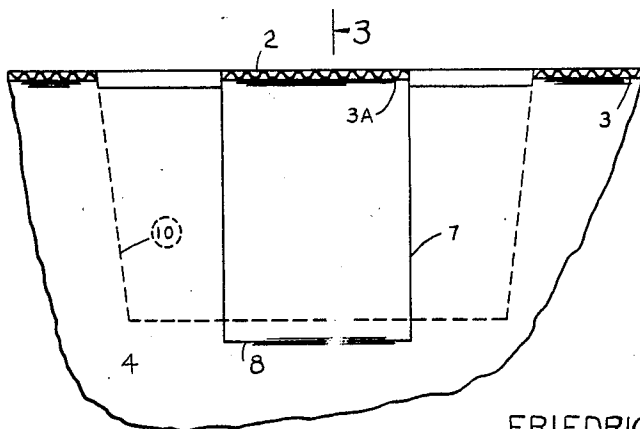


FIG. 2

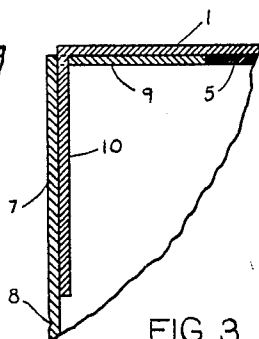


FIG. 3

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Patented Oct. 12, 1943

2,331,754

UNITED STATES PATENT OFFICE

2,331,754

FASTENER

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Application December 1, 1941, Serial No. 421,183

3 Claims. (Cl. 229—39)

This invention relates to boxes of fiber board and similar materials, particularly corrugated board, and is particularly directed to a box for the shipping of textile skeins, having an integral fastener composed of two elements locking 5 against one another at right angles at an edge of the box so that the fastener cannot become open accidentally without shearing off the locking elements. The fastener when closed does not increase the thickness of the lid, but folds flush 10 with the outside surface of the box without tape or adhesive, thus permitting such boxes to be slid one upon another without catching or tearing, and is made integral with the box blank.

To the accomplishment of the foregoing and related ends, the preferred embodiment of said invention consists of means hereinafter fully set forth in the annexed drawing and the following description of certain structures embodying the invention, such disclosed means constituting, 20 however, but one of the structural forms in which the principle of the invention may be used.

In the accompanying drawing:

Fig. 1 is a perspective view of a corrugated board box employing my improved integral fasteners in unlocked position and with the box 25 partially open;

Fig. 2 is a detail front elevation of one integral fastener in closed position; and

Fig. 3 is a cross sectional detail of Fig. 2 as 30 indicated by the line 3—3 on Fig. 2.

Such terms as front, rear, top, bottom, sides and ends, are used in the specification and in the claims for identification, not as limitations, and are used from the point of view of Fig. 1.

As here illustrated, my fastener is applied to a box of generally conventional construction, having a full lap lid 1, the front edge 2 of which overlies the top edge fold 3 of the front wall 4 when the box is closed. A flap 5 hinged along the edge 3 turns in under the lid 1. This flap 40 is slotted along its fold line 3 as shown at 6, the slots preferably narrowing toward their respective ends to a width perhaps slightly less than the thickness of the material. Keepers, generally indicated by reference character 7, are cut from the material of the box front 4 and flap 5, remaining bendably attached at their bases along lines 8. A tongue 9, preferably tapered, is set off on the free end of each keeper 50 by the fold line 3, which line is designated as 3A on the keepers.

The front edge 2 of the lid 1 carries tucks 10 corresponding to the slots 6. Such tucks are preferably tapered for easy entrance into the 55

slots 6 and for tight fit when shoved home. Slots 12 in the tucks 10, along the edge 2, receive the keeper tongues 9 when the box is closed, whereby a reciprocal locking action of parts 9, 5 and 10 results, such that the lid cannot open without tearing some part, unless the fastening elements are intentionally opened by successive disengagement of parts. When the box is closed the tongues 9 fit snugly in the notches 9A from which they were cut, thereby preventing the edges of such tongues from contact with, and possible injury to or by the contents of the box.

It will be noted that when the box is in closed position that part of each keeper 7 which is between lines 3A and 8 is flush with the front wall 4, while the tongues 9, flap 5 and tucks 10 are all inside the box. Thus there are no projections from the smooth outer surface of the box to interfere with sliding one such box endwise into a pile, or to catch and tear when handling.

If desired the box can be sealed by a tape or sticker on the front 4 over the keeper, whereby breaking of such seal will indicate that the box has been opened.

From the foregoing it will be seen that I have invented a lock adapted to various forms of boxes which is flush with the outer surface of the box, which firmly secures the parts of the box in their closed relation, and also firmly secures itself from unlocking so that it cannot be opened accidentally without shearing off the lock itself. My invention also offers the advantages of being readily closed, and readily opened by the user.

Other modes of applying the principles of my invention may be employed instead of the one explained, change being made as regards the structure herein disclosed provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I claim:

1. A box comprising an outer lap with tucks hinged along the free edge thereof, a flap hinged to the edge of a wall of said box along a line which said free edge overlies when the box is closed, keepers cut from said wall and from said flap, each keeper including a body portion hinged at its base to said wall along a line parallel to said flap hinge line and adapted when the box is fastened to be in the plane of said wall, each keeper including a tongue cut from said flap and hinged to said body portion along said flap hinge line and adapted when the box is closed to underlie entirely the top lap and to lie entirely in the plane of said flap and thereby to underlie

the top lap entirely, slots in said flap extending along said flap fold line on both sides away from the respective positions of said keepers and adapted to receive said tucks before said keepers are pushed in, and slots in said tucks along the tuck fold lines adapted to be entered respectively by said keeper tongues when the box is fastened.

2. A box having side walls, a lap lid hinged to the top edge of one side wall and having a free edge adapted to overlie the top edge of the opposite side wall, a flap hinged to the upper edge of said opposite side wall and adapted to underlie said lid, a slot extending across the hinge connection between said flap and wall, a keeper hinged to the slotted side wall at the lower end of said slot and having a body portion adapted to occupy the portion of the slot in the side wall and a free end portion hinged to the body portion and adapted to occupy the portion of the slot in the flap, said flap having narrow slots extending laterally from the keeper slot along its hinge line, and a tuck wider than said keeper hinged to the free edge of said lid and adapted to enter said lateral slots, said tuck having a slot along its hinge line adapted to register with the keeper receiving slot and to receive the free end of said keeper.

3. A box having side walls, a lap lid hinged to the top edge of one side wall and having a free edge adapted to overlie the top edge of the opposite side wall, a flap hinged to the upper edge of said opposite side wall and adapted to underlie said lid, a slot extending across the hinge connection between said flap and wall, a keeper hinged to the slotted side wall at the lower end of said slot and having a body portion adapted to occupy the portion of the slot in the side wall and a free end portion hinged to the body portion and adapted to occupy the portion of the slot in the flap, said flap having narrow slots extending laterally from the keeper slot along its hinge line, and a tuck wider than said keeper hinged to the free edge of said lid and adapted to enter said lateral slots, said tuck having a slot along its hinge line adapted to register with the keeper receiving slot and to receive the free end of said keeper, said tuck tapering toward its free end and said tuck receiving slots narrowing toward their outer ends to less than the thickness of the tuck whereby said tuck has wedging engagement with said flap.

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