E. W. STAMM.

BOX FASTENER.

APPLICATION FILED JUNE 16, 1919.

1,346,566. Patented July 13, 1920.

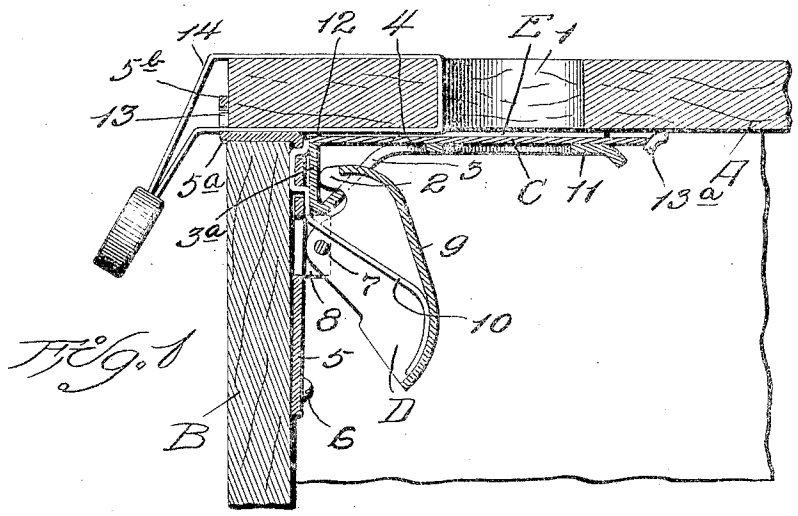


FIG. 1

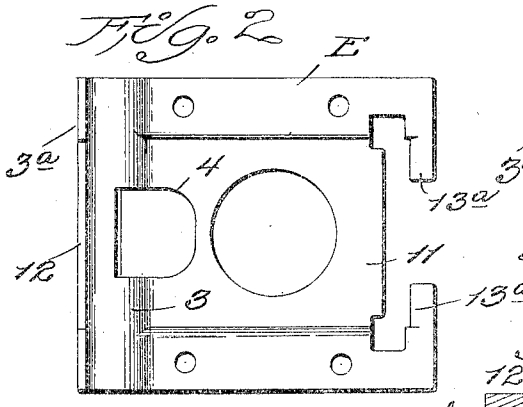


FIG. 2

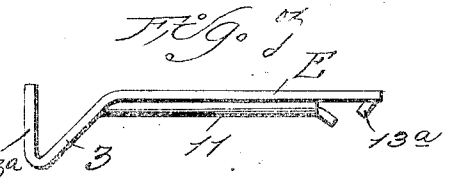


FIG. 3

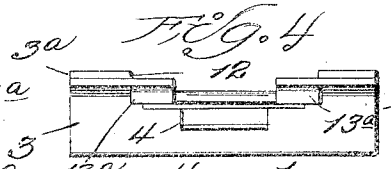


FIG. 4

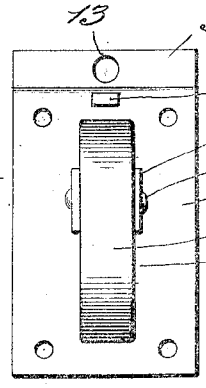


FIG. 5

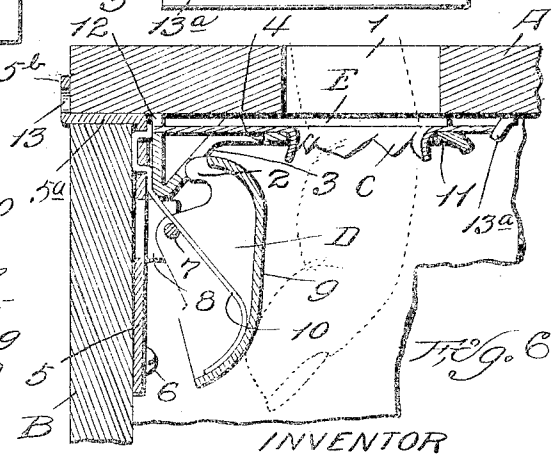


FIG. 6

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ERNEST W. STAMM, OF ST. LOUIS, MISSOURI.

BOX-FASTENER.

1,346,566. Specification of Letters Patent. Patented July 13, 1920.

Application filed June 16, 1919. Serial No. 304,445.

To all whom it may concern:

Be it known that I, ERNEST W. STAMM, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Box-Fasteners, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to box fasteners of the general type shown in my prior United States Patent No. 1,235,075, dated July 31, 1917.

The main object of my present invention is to provide a box fastener which is so constructed that the catch can be released by pressing downwardly on a portion of the catch which is arranged in such a position that the finger of the person who is opening the box naturally comes in contact with the catch during the operation of inserting the finger through the hole in the lid of the box.

Another object is to provide a box fastener that embodies the principal desirable characteristics of the box fastener described in my prior patent above referred to, but which is so constructed that it is more simple, stronger and less expensive to manufacture than my prior box fastener. Other objects and desirable features of my invention will be hereinafter pointed out.

Figure 1 of the drawings is a vertical sectional view of a box or shipping case provided with a fastener constructed in accordance with my invention.

Fig. 2 is a top plan view of the member on the underside of the lid with which the catch coöperates.

Figs. 3 and 4 are a side elevational view and a rear elevational view, respectively, of the member on the lid.

Fig. 5 is an elevational view of the catch that is adapted to be mounted on the front wall of the box; and

Fig. 6 is a view similar to Fig. 1, illustrating the method of releasing the catch.

Referring to the drawings which illustrate the preferred form of my invention, A designates the movable lid or cover of a box or shipping case, and B designates the front wall of the box. Coöperating members are arranged on the inside of the front wall and on the underside of the lid for locking the lid in its closed position, and an opening 1 is formed in the lid so as to permit said coöperating members to be disengaged to release the lid. A seal C, which preferably consists of a piece of cardboard or other suitable material, is arranged on the inside of the lid over the opening 1 therein, so as to prevent the lid from being released and raised without first breaking the seal C.

The coöperating members on the inside of the box that hold the lid A closed consist of a catch D pivotally mounted on the inner side of the front wall B of the box and provided at its upper end with a hook 2 and a member E arranged on the underside of the lid in proximity to the front wall of the box and provided at its front end with a wedge-shaped portion 3 that has a hole or notch 4 therein for receiving the hook 2 on the upper end of the catch D. The member E is so arranged that when the lid is moved into its closed position the wedge-shaped portion 3 on said member will pass between the front wall of the box and the hook 2 on the upper end of the catch D and rock said catch D downwardly sufficiently to permit the hook 2 thereon to snap into the opening 4 in the wedge-shaped portion 3 on the member E when the lid of the box reaches its closed position. The catch D can be formed in various ways without departing from the spirit of my invention, but it is pivotally mounted on the front wall B of the box and is so designed that the lower end portion of same will normally occupy such a position that when the person who opens the box forces his finger downwardly through the seal C, said finger will engage the lower end portion of the catch, and thus rock the catch sufficiently to disengage the hook 2 on same from its coöperating part 3 on the lid member E, as shown in Fig. 6. This is a very desirable feature of a box fastener, as it overcomes the necessity of the user exerting upward pressure on a device arranged inside of the box to release the lid after the user's finger has been inserted through the seal C. In other words, the catch D of my present fastener is so constructed that it can be released by moving it in the same direction that the user's finger moves during the operation of breaking the seal C that protects the fastener for the lid of the box.

The catch D is formed from rigid material, preferably sheet metal, and said catch is preferably connected to the front wall B of the box by means of a plate 5 that is connected to the inner side of said front wall

by nails or other suitable fastening devices 6, and to which the catch D is pivotally connected by a pin 7 that passes transversely through the catch D and through ears 8 on the plate 5 that embrace said catch. In the form of my invention herein shown the catch D is substantially channel-shaped in cross section and is so formed that the rear edge 9 of same is curved or of substantially cam shape, the pivot 7 being so arranged that the catch D will normally occupy an inclined position, as shown in Fig. 1, with its lower end portion extending in approximately vertical alinement with the front side of the hole 1 in the lid of the box. The catch D is held in its normal position by means of a leaf spring 10 arranged on the inside of same and connected at its upper end to the plate 5 preferably by interlacing the upper end portion of said spring through two parallel holes formed in the plate 5 at a point above the pivot 7, as shown in Fig. 1.

The member E on the lid of the box with which the catch C coöperates is preferably stamped from sheet metal, and the wedge-shaped portion 3 thereon is formed by bending the end portion of said member downwardly and then upwardly. The central portion of the member E is depressed so as to form a pocket 11 for the seal C, and the front side 3^a of the wedge-shaped portion 3 on the member E is provided at its upper edge with a notch 12, as shown in Fig. 2, so as to permit the seal to be slipped into said pocket from the front end of the member E, the bottom of said pocket 11 having a hole through which the user's finger passes during the operation of breaking the seal. On the rear end of the member E are depending flanges 13^a that prevent the seal C from being moved rearwardly out of the pocket 11 when the lid of the box is closed. If desired, the plate 5 on the front wall of the box that carries the catch can be provided with a forwardly-projecting flange 5^a that laps over the upper edge of the front wall B of the box and which is provided with an upwardly-projecting extension 5^b that has an opening 13 in same through which a sealing wire 14 can be inserted along the underside of the lid A and then upwardly through the opening 1 and over the top side of the lid, as shown in Fig. 1, thereby preventing the lid from being raised sufficiently to remove the contents of the box without breaking the sealing wire 14.

To open the box the operator inserts his finger through the opening 1 in the lid so as to break the seal C and rock the catch D downwardly and rearwardly sufficiently to disengage the hook 2 on the upper end of the catch from the member E on the lid. The upper edge of the hook 2 is inclined or curved slightly so that the wedge 3 on the lid member E will bear upon the upper end of the catch D and rock the catch sufficiently to permit the hook thereon to snap into the hole 4 in the lid member when the lid is depressed.

In addition to embodying the desirable features of the box fastener illustrated in my prior patent previously referred to, my present fastener is of such design that it is strong and rugged; it can be manufactured at a low cost; the cardboard seal C can be slipped in from the front side of the member E on the lid of the box and the catch D is so constructed and arranged that it can be released by exerting pressure on same in the same direction that the user's finger moves during the operation of breaking the cardboard seal that extends over the hole 1 in the lid of the box.

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

1. A box or shipping case provided with a hinged lid that has a hole in same through which the user inserts his finger to release the lid, and a pivotally mounted catch for said lid arranged on the inner side of the front wall of the box and provided with a portion arranged below its pivot, on which the operator presses downwardly so as to render said catch inoperative.

2. A box fastener, comprising a pivotally mounted catch adapted to be mounted on the inner side of the front wall of the box and provided at its upper end with a substantially hook shaped part, and a member adapted to be arranged on the underside of the lid of the box and provided with a coöperating part for said hook that lies between the front wall of the box and said hook when the lid of the box is fastened, said catch being provided with a portion on which pressure can be exerted downwardly so as to rock said catch in a direction to move the hook thereon rearwardly away from the front wall of the box.

3. A box fastener, comprising a pivotally mounted catch adapted to be arranged on the inside of the front wall of the box and provided at its upper end with a hook, a spring that exerts pressure on said catch in a direction tending to force the hook on same toward the front wall of the box and a lid member having a substantially wedge-shaped part positioned between said hook and the front wall of the box and provided with an opening into which the hook on said catch projects when the lid of the box is moved into its closed position, said catch having a portion on which the user places his finger and presses downwardly during the operation of releasing the lid.

4. A box fastener, comprising a pivotally mounted, spring-pressed catch adapted to be arranged on the front wall of the box and

provided with a rear edge that is curved, a substantially hook shaped part on the upper edge of said catch that projects toward the front wall of the box, and a member adapted to be arranged on the underside of the lid of the box and provided with a hole into which said hook projects when the lid of the box is moved into its closed position.

5. A box fastener, comprising a pivotally mounted catch adapted to be arranged on the inner side of the front wall of the box and being of substantially channel shape in transverse cross section, a hooked-shaped part at the upper end of said catch that projects toward the front wall of the box, a member adapted to be arranged on the underside of the lid and provided with a part that coöperates with the hook on said catch, and a leaf spring arranged inside of said catch and exerting pressure on same in a direction tending to hold said hook-shaped part in engagement with the lid member.

6. A box fastener, comprising a plate adapted to be arranged on the inside of the front wall of a box, a substantially cam shaped catch pivotally mounted on said plate and provided at its upper end with a hook that projects toward the front wall of the box, and a leaf spring connected to said plate for exerting pressure on said catch in a direction to press the hook on said catch toward said plate.

ERNEST W. STAMM.