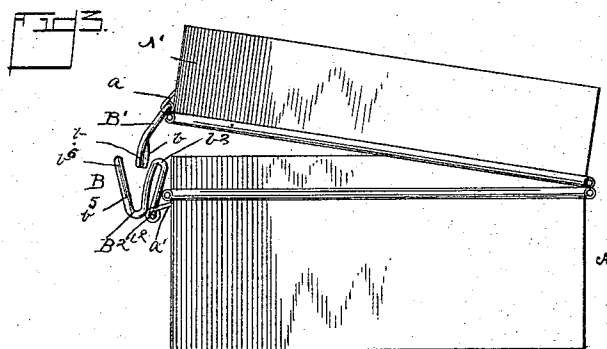
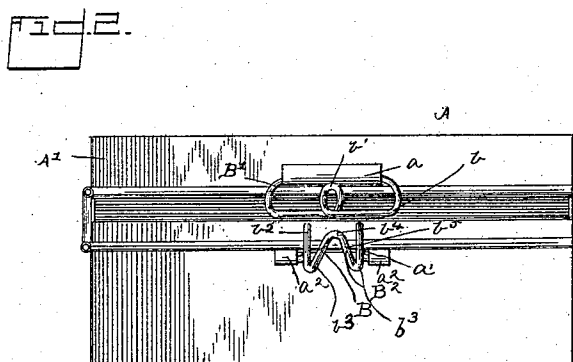
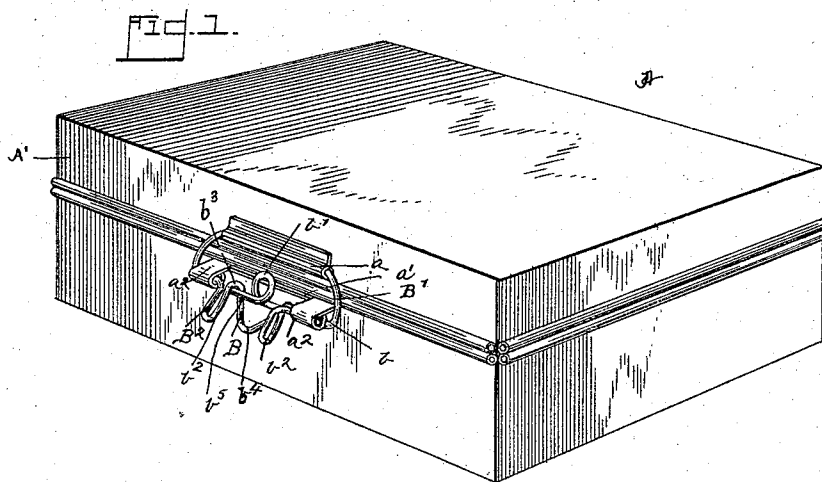


(No Model.)

W. S. GROVE.
BOX FASTENER.

No. 460,437.

Patented Sept. 29, 1891.



Witnesses

Charles Ford
H. T. Riley

Inventor

Willis S. Grove.

By his Attorneys,

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UNITED STATES PATENT OFFICE.

WILLIS S. GROVE, OF EAST HARRISBURG, PENNSYLVANIA.

BOX-FASTENER.

SPECIFICATION forming part of Letters Patent No. 460,437, dated September 29, 1891.

Application filed May 1, 1891. Serial No. 391,184. (No model.)

To all whom it may concern:

Be it known that I, WILLIS S. GROVE, a citizen of the United States, residing at East Harrisburg, in the county of Dauphin and State of Pennsylvania, have invented a new and useful Box-Fastener, of which the following is a specification.

This invention is an improvement in cover-fasteners for boxes, cans, and the like, and has for its objects to provide a cover-fastener by the use of which vessels may be securely closed and fastened, and which will be simple, inexpensive, and durable.

Furthermore, the invention has for its objects to provide a box-fastener which will lock itself without the aid of separate devices, which will consist of but two parts, and which may be easily operated.

With these objects in view the invention resides in the various novel details of construction and in the combination of parts hereinafter fully described, and particularly pointed out in the claims.

In the drawings in which I have illustrated my invention, and in which like letters of reference indicate corresponding parts, Figure 1 is a perspective view showing a box provided with my fastener. Fig. 2 is a front elevation of the box, showing the lid slightly raised and the parts of the fastener separated; and Fig. 3 is a side elevation of the device, as shown in Fig. 2.

In the drawings, the letter A designates a box having a lid A' hinged to it. The lid A' has soldered to it, or otherwise secured to it, the sheet-metal loop a , and the box itself has secured to it in any suitable manner a U-shaped strip of metal a' , which has parallel forwardly-extending arms bent upon themselves to form the loops a^2 .

B designates the fastening device, which consists of an upper section B' and a lower section B², which lower section is adapted to catch and secure the upper section. The upper section B' consists of a single piece of wire having one of its ends inserted in one end of the loop a and extending beyond said loop a curved downwardly, as seen in front elevation, and outwardly, as seen in side elevation, to a point b , where the wire is bent substantially at a right angle and carried par-

allel to the loop a as far as a point opposite the center of the loop a , where the wire is bent upwardly and then downwardly, forming the loop b' , beyond which the wire is extended parallel again to the loop a as far as the point b' , where the wire is bent upwardly at substantially a right angle, and thence curved upwardly, as seen in front elevation, and inwardly, as seen in side elevation, and the other end of the wire inserted in the loop a . It will be seen from the description and from the drawings that the upper section B' is composed of a piece of wire bent on either side of its center in curves and angles similar to each other and which are symmetrical in shape. The section B² consists of a single piece of wire having one end inserted in one of the loops a^2 , near which the wire is bent at a right angle to itself and is extended away from the said loop until at a point b^2 it is bent upon itself and is returned parallel to itself to a point b^3 , where it curves outwardly and is carried further away from the loop a^2 to the point b^4 , where it is bent upon itself, brought down to a point corresponding with the point b^3 , brought upward, from thence curved again at b^3 , and brought down to a point opposite the other loop a^2 , where it is bent at a right angle to itself and its end inserted in the loop. It will be evident from this description and from the drawings that the section B² consists of a catch composed of a piece of wire bent upon itself to form the arms b^5 and the thumb-piece b^6 , and thus being of an approximate M shape.

Inspection of Figs. 1 and 3 of the drawings will show that when the device is closed the upper section B' will rest between the arms b^5 and the thumb-piece b^6 closer to the box than the loops a^2 —that is, the said section B' will be within the points of pivotal support for the section B²—and therefore the device will not open of itself, no matter how strong the pull may be which may be exerted to raise the lid from the box; but the fastener will only be released and the box allowed to open by exerting pressure upon the arms b^5 and turning the lower section B² into the position shown in Figs. 2 and 3.

This fastener may be used upon cash-boxes, lunch-boxes, milk-cans, or the like, and if it

be desired to lock the fastener a padlock or the like may be secured to the loop b' , thus preventing the section B^2 from being completely turned over the same.

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

1. In a box-fastener, the combination, with the box and the lid thereof, of loops or ears
10 secured to the box-body and the lid adjacent to their meeting-edges, an upper section or loop formed of a single piece of wire and pivotally engaging the loops or ears of the lid and having a central loop or coil, and the
15 lower section pivotally secured within the box, ears, or loops and having the oppositely-located arms and central thumb-piece and designed to engage said upper loops between said arms and thumb-piece on either side of
20 the central coil or loop, substantially as set forth.

2. In a box-fastener, the combination of the lower **M**-shaped section pivotally secured to the box and supported upon the box-body and

the upper looped section pivoted to the lid 25 of the box and adapted to engage between the arms of said **M**-shaped section and entirely inclose the pivotal support of the same, substantially as specified.

3. A box-fastener comprising the upper sec- 30 tion or loop designed to be hinged to the lid of a box and the lower section consisting of an **M**-shaped piece of wire having its ends bent at an angle and adapted to be hinged to the body of a box and having its sides bent upon
35 themselves to form the arms and bent outwardly to form a lip or thumb-piece, said lower section being adapted to receive the upper section in the crotches formed by the arms and the lip portion or thumb-piece, sub- 40 stantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIS S. GROVE.

Witnesses:

JOHN L. ELSER,
WM. WOLF.