J. A. COOK.

BOX FASTENER.

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1,046,442. Patented Dec. 10, 1912.

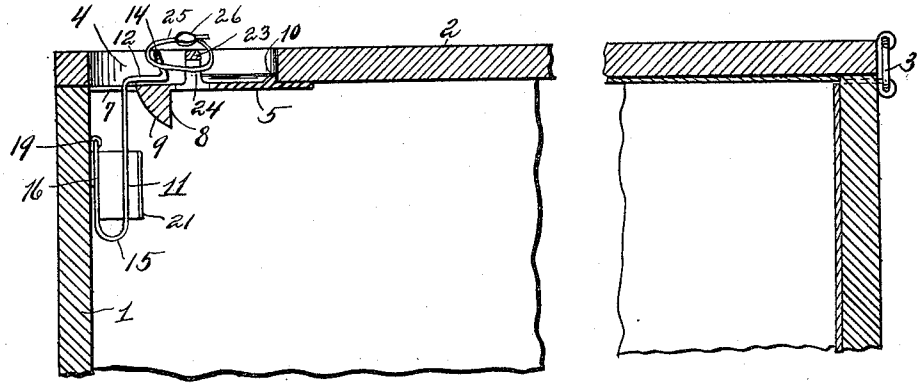

Fig. 1.

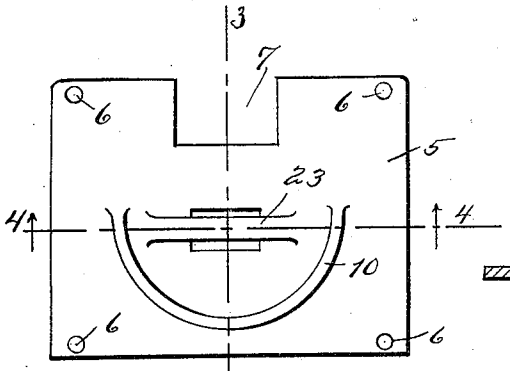

Fig. 2.

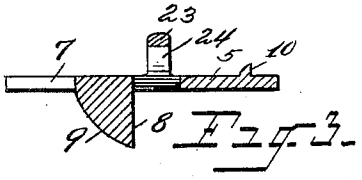

Fig. 3.

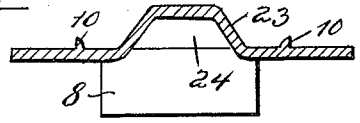

Fig. 4.

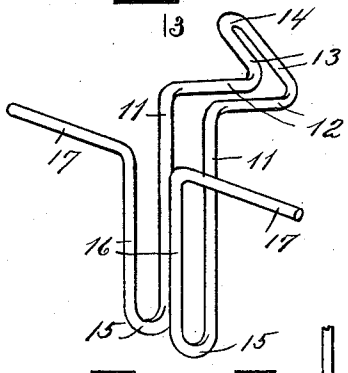

Fig. 5.

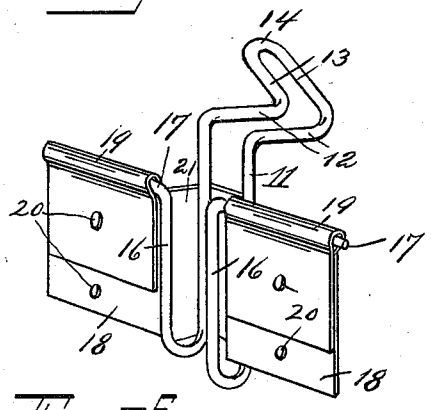

Fig. 6.

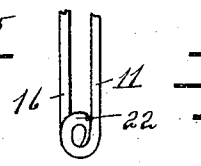

Fig. 7.

Witnesses

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BOX-FASTENER.

1,046,442. Specification of Letters Patent. Patented Dec. 10, 1912.

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To all whom it may concern:

Be it known that I, JOHN A. COOK, a citizen of the United States, residing at Marinette, in the county of Marinette, State of Wisconsin, have invented certain new and useful Improvements in Box-Fasteners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the characters of reference marked thereon, which form a part of this specification.

This invention relates to box fasteners, and consists in the construction and arrangement of parts hereinafter more fully set forth and pointed out more particularly in the claims.

The object of the invention is to provide a lock for securing the lids of covers of boxes, used for the shipment of beer and other bottled goods, that shall be simple, inexpensive and durable, and that shall be capable of being readily sealed with a wire seal, provision being made for locating the parts upon the interior of the box and for disposing the wire seal below the surface of the lid or cover.

The above object is attained by the construction illustrated in the accompanying drawings, in which:—

Figure 1 is a sectional view through a portion of a box and cover showing the application of my invention, the parts forming the lock being in section. Fig. 2 is a top plan of the cover plate. Fig. 3 is a transverse section through said plate as on line 3—3 of Fig. 2. Fig. 4 is a similar section at right angles to Fig. 3 as on line 4—4 of Fig. 2. Fig. 5 is an isometric view of the spring latch. Fig. 6 is a similar view showing the plate in which the spring latch is mounted. Fig. 7 is a detail illustrating the modified form of the spring latch.

Referring to the drawings by the characters of reference marked thereon, 1 designates the front wall of the box, and 2 the cover thereof which is hinged to the rear of the box as shown at 3, or in any other suitable manner. Through the cover of the box, near the front edge, is formed a circular aperture 4. Fitted over said aperture from the under side is a cover plate 5. This plate, as shown, is rectangular and is provided with apertures 6 at the corners for attachment to the cover. In the front edge of the plate a portion thereof is cut away forming an opening 7. Depending from the under face of said plate is a member 8 having an inclined face 9 which extends upwardly from the lower edge thereof and terminates at the inner margin of the opening 7 in said plate. Upon the upper face of the plate 5 is formed a semi-circular rib 10. This rib is adapted to fit within the circular opening 4, as shown in Fig. 1, and position the cover plate within said opening, so that the front edge of said plate will terminate flush with the front edge of said opening, so as to pass the top edge of the front side of the box as the cover is closed and opened. This positioning of the cover plate 5 will dispose it in a manner to properly coöperate with the spring latch which is mounted upon the inner face of the front wall of the box. Said latch, as will be seen on referring to Figs. 5 and 6 is formed of spring wire of proper tension, and consists of parallel members 11 whose upper ends are bent at right angles to form hooked or engaging terminal portions 12. From the outer ends of the hooked terminals 12 extend the upwardly inclined members 13 whose upper ends are joined by a loop 14. The lower ends of the parallel members 11 are joined by the loops 15 to the lower ends of the upwardly extending vertical members 16 which lie parallel to each other and to the parallel members 11, and which at their upper ends are provided with the lateral extensions 17. To mount the spring latch there is provided a plate 18 having turned eyes 19 at the upper margin thereof which embrace the lateral extensions 17 of the members 16 of the latch, as clearly shown in Fig. 6. Said plate is provided with apertures 20 through which fastening devices may be passed for attaching it to the inner face of the front wall of the box. Connecting the sides of the plate 18 is a housing 21 that embraces the members 16 of the latch and guides them in their movement.

In mounting the plate 18 it is so located upon the wall of the box as to cause the upper end of the spring latch to project into the path of travel of the inclined face 9 of the depending member 8 on the lid plate when the cover is swinging to the closed position. By this arrangement the inclined

face of the depending member 8 is caused to engage the inclined members 13 of the latch and spring the latch inwardly until the upper terminal of said inclined face passes the lower ends of the inclined members 13, when said latch will spring forward and cause the hooked or rectangular portions 12 thereof to engage over the upper face of the plate, an operation made possible by the opening 7 in the front edge of said plate, through which the upper end of the spring latch passes, as clearly shown in Fig. 1, in which position the cover is securely fastened. To add resiliency to the spring latch the lower ends of the members 11 may be connected to the lower ends of the members 16 by means of a coil 22, as shown in Fig. 7.

Provision is made for sealing the box when fastened by forming upon the upper edge of the plate 5 an arched bar 23, the terminals of which are integral with said plate. The shape of said bar affords an opening 24 (see Fig. 4). By passing a wire 25 through said opening and through the loop 14 at the upper end of the spring latch, and securing the terminals of said wire in a lead seal 26, the box may be readily sealed in a manner to prevent the opening of the lid except by breaking the seal.

To open the box pressure is applied to the inclined portion 13 of the spring latch to move the rectangular portions 12 thereof from engagement with the upper face of the plate, when the cover may be raised, as will be well understood in the art. The arrangement is such that the cover will be automatically locked when it is swung to the closed position.

The opening in the box cover renders the latch readily accessible for disengagement from the cover plate, and the recess afforded by said opening allows the seal and fastening parts to lie below the top of the cover free from accidental injury.

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

1. A box fastener, comprising a spring latch adapted to be mounted on the wall of the box and having an engaging member near its free end, and a flat plate secured to the under side of the cover over an opening therein, said plate having an aperture in its margin for the passage of the end of the latch, and also having a depending member provided with an inclined face terminating at the inner margin of the latch opening in said plate, the upper end of the latch member having an aperture, and said plate having a raised bar on its upper face coöperating with the aperture in the latch member to provide for sealing the parts when engaged.

2. A box fastener, comprising a spring latch, a flat plate having an opening in its margin for the passage of the latch, said plate extending across an opening in the cover, a depending member on the under face of said plate having an inclined plane which terminates at the inner margin of the latch opening, and a rib on the upper face of said plate fitting in the aperture in the cover to position said plate with respect to said aperture.

3. A box fastener, comprising a cover plate with an opening for the reception of the latch, and a depending member with an inclined face terminating at the inner margin of said opening, a latch comprising parallel members bent near their free ends to form an engaging hook, and having inclined portions leading from the hook terminals connected by a loop, said latch further comprising short vertical members yieldably connected at their lower ends with the lower ends of said parallel members, the short vertical members having lateral extensions from their upper terminals, and a plate having a housing embracing the latch members, and having eyes in its upper margin on each side of said housing in which said lateral terminals are confined.

In testimony whereof, I sign this specification in the presence of two witnesses.

JOHN A. COOK.

Witnesses:
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