(No Model.)

P. L. KIMBALL.

BOX FASTENER.

No. 457,741. Patented Aug. 11, 1891.

Fig. 1.

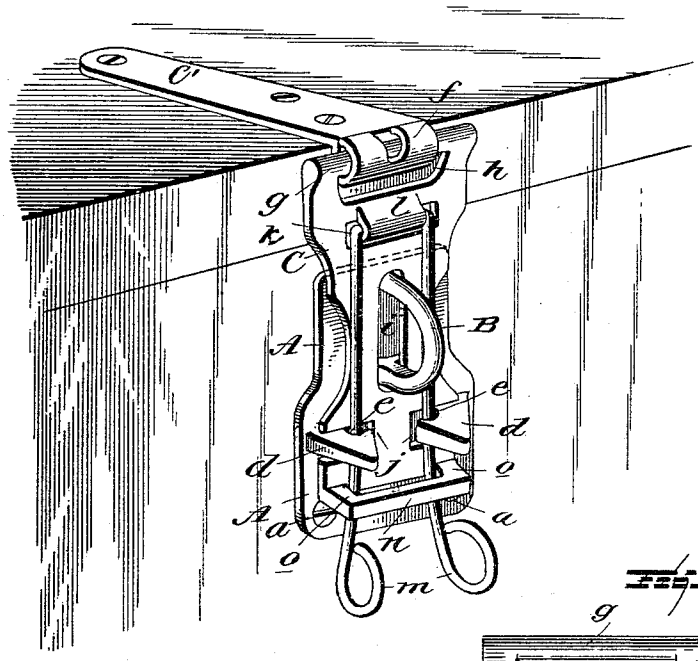


Fig. 3.

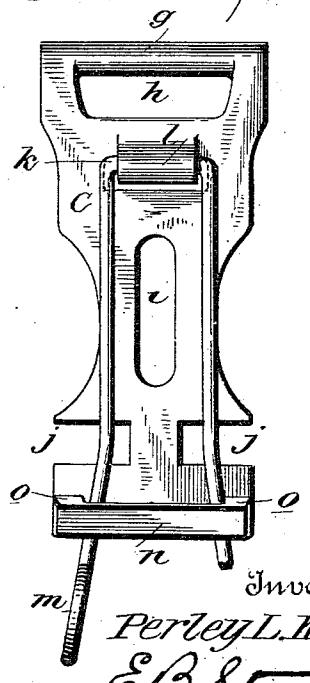
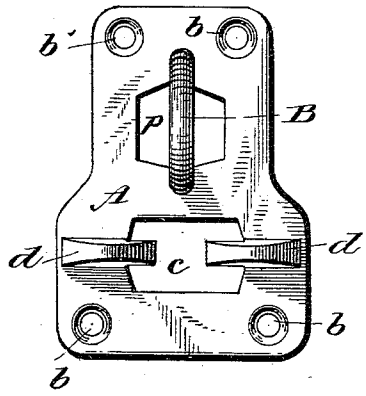


Fig. 2.



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PERLEY L. KIMBALL, OF BELLOWS FALLS, VERMONT, ASSIGNOR TO THE VERMONT FARM MACHINE COMPANY, OF SAME PLACE.

BOX-FASTENER.

SPECIFICATION forming part of Letters Patent No. 457,741, dated August 11, 1891.

Application filed January 24, 1891. Serial No. 378,896. (No model.)

To all whom it may concern:

Be it known that I, PERLEY L. KIMBALL, a citizen of the United States, residing at Bellows Falls, in the county of Windham, State of Vermont, have invented certain new and useful Improvements in Fastenings for Boxes, &c., of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in fastenings designed for use upon various devices—such as shipping-cases, print-butter carriers, egg-cases, berry and fruit crates, and the like—and is also applicable for use upon doors, gates, and for other analogous uses.

The invention has for its objects, among others, to provide a simple, cheap, and efficient fastening, which may be used either with or without a padlock, which will not be accidentally unfastened during the transportation of the crate or other receptacle upon which it is used or by movement of the parts fastened thereby.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, in which—

Figure 1 is a perspective view showing my improved fastening applied to a box with the lid closed and fastened in position. Fig. 2 is a face view of one part detached. Fig. 3 is a like view of the other part of the fastening detached.

Like letters of reference indicate like parts in all the views where they occur.

Referring now to the details of the drawings by letter, A designates a plate which is designed to be attached to one of the parts to be secured by the fastening. In Fig. 1 it is shown as attached to the side of the body of a box by means of suitable fastenings, as screws *a*, which pass through the openings *b*, provided therefor, as seen best in Fig. 2. This plate is provided with a slot or opening *c* near one end, and at opposite sides of this slot or opening there are arranged the lugs *d*, the adjacent faces of which are beveled toward each other, as shown in Fig. 1, and their inner or under faces are preferably provided with undercut portions or notches, as shown at *e* in Fig. 1. This plate is also shown as provided with a loop or hook B, which serves as a guide for the hasp-plate and also permits of the locking of the parts by a padlock, when desired, in addition to the fastening. This loop or staple may, however, be omitted without in the least affecting the operation of the other parts.

C is the hasp-plate. In the present instance it is shown as hinged to a plate C′, which is attached to the lid of the box and projects slightly beyond the edge thereof, the projecting end being formed with a socket portion *f*, which forms a bearing for the pintle of the hinge connection between the said hasp-plate and the plate C′. Other forms of connection between the lid of the box and the hasp-plate may, however, be provided. That shown is the one which has suggested itself as the most expedient. When so connected, the hasp-plate is formed with a bar *g* at one end to serve as the pintle of the hinge connection, and a slot *h* to allow of free movement of the parts. The hasp-plate is formed with a slot *i*, extending lengthwise thereof, to receive the staple or hook B when one is employed. Near its free end it is provided upon opposite sides with notches *j*, designed to allow of its passing by the lugs on the plate A when the parts are brought into position to fasten.

To the hasp-plate is affixed the catch, which in this instance is shown as formed of a single piece of wire of suitable size, having its cross-bar *k*, which is provided at the center, held in a suitable lug *l* on the hasp-plate, as seen in Figs. 1 and 3, the free ends of the wire being somewhat diverged, as seen in said Figs. 1 and 3, and this, aided by the resiliency of the wire, forms a spring-catch. The free ends of the wire are preferably formed into loops *m*, by which they are more easily manipulated.

The operation of my improved fastener will be readily understood from the above description, when taken in connection with the an-

nexed drawings. As shown in Fig. 1, the lid is fastened to the box-body. When it is desired to remove the lid all that is necessary to do is to grasp the free ends of the catch by a thumb and finger, and by pressing them toward each other the arms of the catch will be drawn from their engagement with the lugs of the plate A and into the passage between the said lugs. The fingers may then be removed, and as the tendency of the arms of the catch is to separate, as they do so they will ride up the inclines of the adjacent faces of the lugs, and thus constitute an automatically unlocking fastening—that is, automatic after the arms of the catch are removed from their engagement with the under or inner faces of the lugs—that is, it is not necessary to lift the arms of the catch out from between the lugs. This is done automatically by the natural outward spring of the arms of the catch. With the parts unfastened and it being desired to fasten them, all that it is necessary to do is to force the arms of the catch between the lugs, pressing the free ends of the said arms together, if necessary, and when they have been forced inward to the undercut portions of the under faces of the lugs the arms spring outward and are engaged by the said undercut portions or notches of the lugs and the parts are fastened.

In order to guide the arms of the catch and prevent their undue separation, I sometimes provide upon the hasp-plate a holder for the said arms. Such holder or guide is shown in Figs. 1 and 3. It consists of a raised bar *n* at the free end of the hasp-plate, and beneath which the free ends of the arms of the catch are arranged. The lugs *o*, which connect this bar with the hasp-plate, serve as stops to prevent the separation of the said arms, and the cross-bar prevents them from coming outward.

Various modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

The plate A may be lightened by removing a portion of the material thereof, as shown at *p*; but this, as well as the opening *c*, may be absent.

What I claim as new is—

1. A fastening consisting of a plate provided with lugs having inclined adjacent faces and a hasp-plate having side notches to receive the lugs, a spring-catch, and a guide for the free ends of the catch, as set forth.

2. A fastening consisting, essentially, of a plate having lugs and a hasp-plate having side notches, a lug or tongue, a spring-wire catch held in said tongue and provided with spring-arms, and a cross-bar forming a guide and stop for said arms, substantially as specified.

3. A fastening having a hasp-plate provided with side notches, a slot at right angles thereto, a spring-catch and a guide-bar for the free ends of the said catch, said hasp-plate being combined and adapted for co-operation with a plate having separated lugs, and a loop or staple to engage the slot in the hasp-plate, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

PERLEY L. KIMBALL.

Witnesses:

PRESTON H. HADLEY,

JOSEPH T. WILLSON.