May 19, 1925. 1,538,473

W. CROSS

BOX FASTENER

Filed Sept. 23, 1924

Fig. 1.

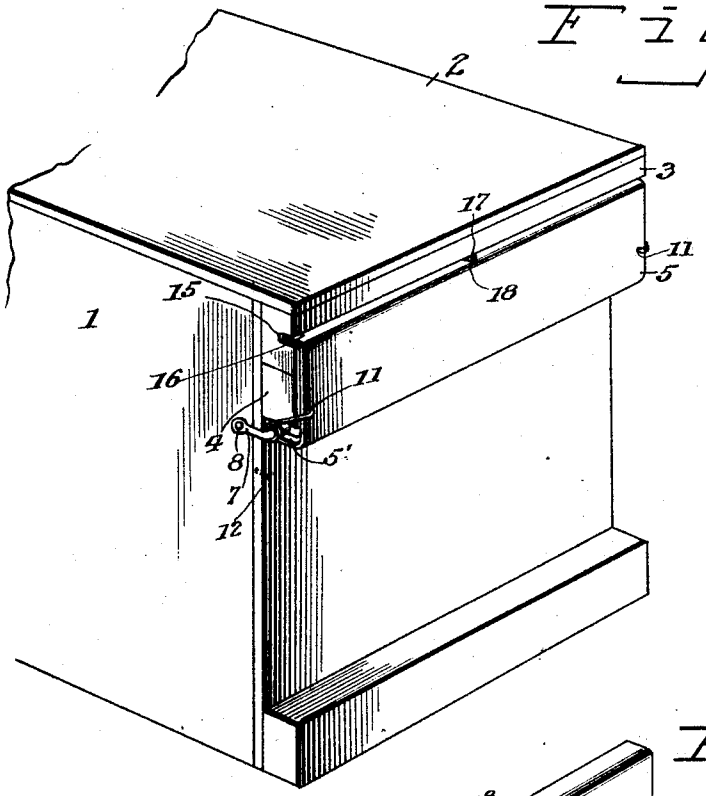


Fig. 2.

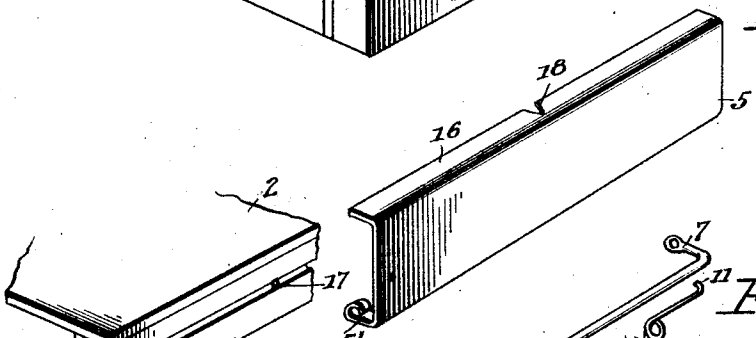


Fig. 3.

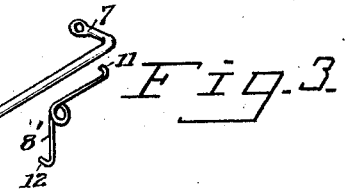
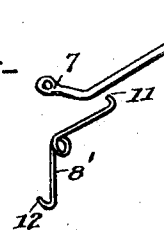


Fig. 4.



William Cross

INVENTOR

BY

Jaeobi & Jaeobi

ATTORNEYS

Patented May 19, 1925. 1,538,473

UNITED STATES PATENT OFFICE.

WILLIAM CROSS, OF POLO, ILLINOIS.

BOX FASTENER.

Application filed September 23, 1924. Serial No. 739,385.

To all whom it may concern:

Be it known that WILLIAM CROSS, a citizen of the United States, residing at Polo, in the county of Ogle and State of Illinois, has invented certain new and useful Improvements in Box Fasteners, of which the following is a specification.

This invention relates to box fasteners and is adapted primarily for use on egg cases when it is necessary to have a secure fastening means for the lid or top cover.

The principal object is to provide an efficient spring fastener for use on egg crates and similar articles but which may be applied to various uses in trade.

Another object of the invention is to provide a fastener of the above mentioned character, which can readily and quickly be engaged and disengaged from the lid or top.

A still further object of the invention is to provide a box fastener of the character described, which is simple in construction, inexpensive, strong, durable and well adapted for the purposes mentioned.

Other objects and advantages will become apparent during the course of the following description.

Referring to the drawing wherein for the purpose of illustration is shown the preferred embodiment of my invention,—

Figure 1 is a perspective view of a portion of an egg case showing my improved latch attached.

Figure 2 shows the lower portion of the latch attached.

Figures 3 and 4 show details of the latch members.

Referring to the drawing in which similar reference characters designate corresponding parts throughout the several views, 1 represents a box or egg crate of the usual or any preferred type and 2 designates the removable lid or top therefor. The end walls of the box or crate have secured thereto adjacent their upper edges the cleats 4 and secured to the under face of the lid or top 2 at its ends are the cleats 3, the latter cleats being adapted to rest upon the cleats 4 when the lid is in position, as shown in Fig. 1. In the drawing I have shown a fragmentary view of the crate wherein only one end is disclosed, but it will be understood that while reference is made to but one end of the crate, the opposite end thereof is similarly constructed.

I provide a new and novel means for removably securing the lid in position on the crate and to this end a metallic plate 5 is provided, said plate being of elongated rectangular design and having its lower edge at the ends thereof formed with inwardly bent tongues or extensions 5′, said tongues or extensions having the ends thereof curved or bent, as clearly shown in Fig. 2 of the drawing, the purpose thereof being hereinafter and more fully described.

A rod 6 is provided the ends of which are bent at right angles and the free ends of said bent portions are provided with eyes 7 and pivoted to the side walls of the crate, as shown at 8, in a plane just below the cleat 4. The extensions or tongues 5′ of the plate 5 are bent around the rod 6 to be hingedly connected thereto.

A wire spring 8′ is bent around the rod 6 adjacent its ends and has the one leg portion thereof bent outwardly and the free end 11 thereof engaged with the outer face of the plate 5, as shown in Fig. 1 of the drawing. The opposite end of the spring 8′ designated as 12 contacts with the end wall of the crate. The tendency of this spring obviously is to force the plate 5 inwardly against the cleats.

The cleat 3 is provided with a longitudinal groove 15 formed in the outer face thereof and the upper edge of the plate 5 is bent at right angles to form a flange 16 which is adapted to be received in the groove 15 when said plate 5 is properly acted upon by the springs 8′. In this manner it is obvious wherein the lid or top 2 may be removably secured in position on the box when the upper edge of the plate 5 is properly engaged with the groove and the cleat 3. In order to prevent lateral movement of the lid or top on the box when engaged by the plate 5, the cleat 3 is provided with a staple 17 within the groove 15 while the flange 16 of the plate 5 is provided with a notch 18 to receive said staple.

From the foregoing description of the construction of my improved apparatus, it will be seen that I have provided a simple, inexpensive and efficient means for carrying out the objects of the invention, and while I have particularly described the elements best adapted to perform the functions set forth, it is obvious that various changes in form, proportion, and in the minor details of construction may be resorted to,

without departing from the spirit or sacrificing any of the principles of the invention.

What I claim is:—

1. In combination with a crate provided with a cleat on its end wall below the top thereof and a lid therefor provided with a depending cleat adapted to rest on the first mentioned cleat, the cleat on said lid being provided with a longitudinal groove in its outer face; of a plate pivotally carried on said crate and provided with an inwardly projecting flange adapted to be received in the groove of the last mentioned cleat, and spring means to normally retain said locking plate in engaging position.

2. In combination with a crate provided with a cleat on its end wall below the top thereof and a lid therefor provided with a depending cleat adapted to rest on the first mentioned cleat, the cleat on said lid being provided with a longitudinal groove in its outer face; of a plate pivotally carried on said crate and provided with an inwardly projecting flange adapted to be received in the groove of the last mentioned cleat, and means for preventing lateral movement of the lid with respect to said locking plate.

3. In combination with a crate provided with a cleat on its end wall below the top thereof and a lid therefor provided with a depending cleat adapted to rest on the first mentioned cleat, the cleat on said lid being provided with a longitudinal groove in its outer face; of a transverse rod extending across the end of said crate below the cleat thereon, a locking plate pivotally carried on said rod and having its upper edge provided with an inwardly projecting flange adapted for reception in the groove of the cleat on said lid, spring means in connection with said plate to normally retain the latter in effective engaging position, and means in connection with said plate and lid to prevent lateral movement of the latter with respect to the crate when the locking plate is in effective position.

In testimony whereof I affix my signature.

WILLIAM CROSS.