Feb. 10, 1931. A. W. ROBINSON 1,792,397

FASTENER FOR CRATES AND THE LIKE

Filed April 15, 1930

Fig. 1.

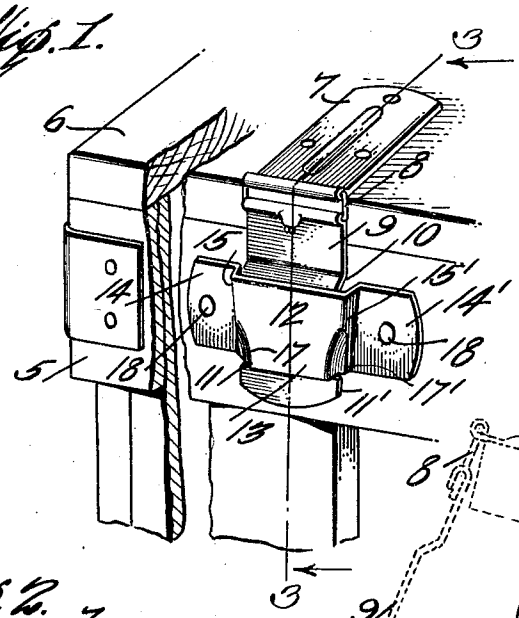


Fig. 3.

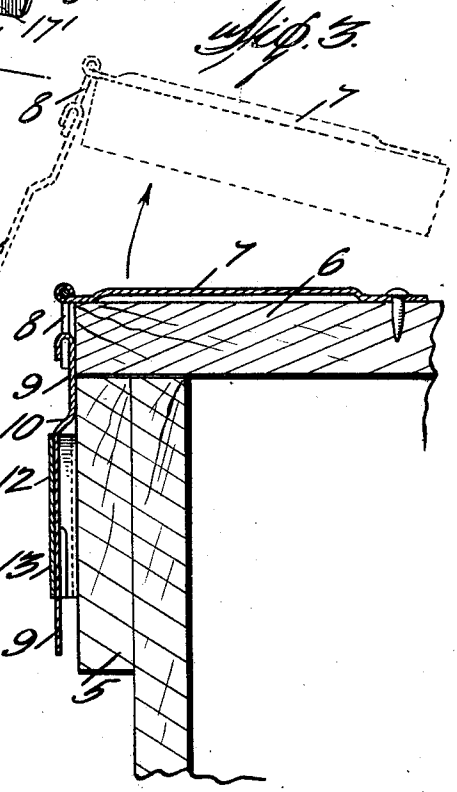


Fig. 2.

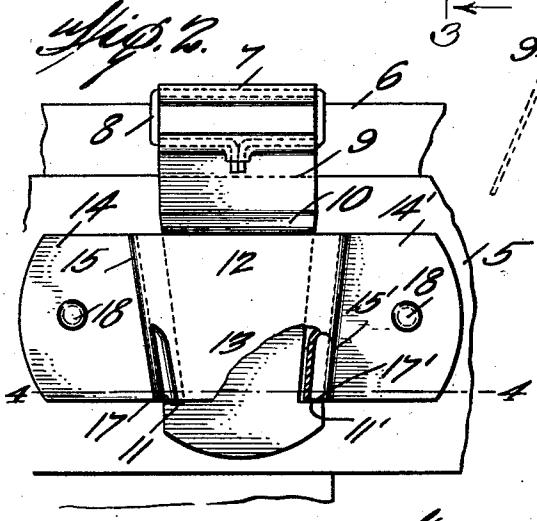
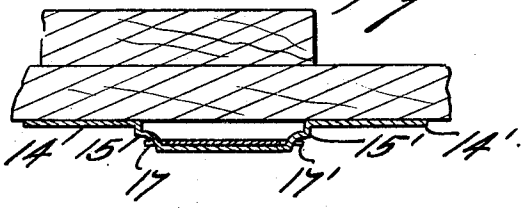


Fig. 4.



INVENTOR

ALBERT W. ROBINSON

BY James L. Norris

ATTORNEY

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UNITED STATES PATENT OFFICE

ALBERT W. ROBINSON, OF LAUREL, DELAWARE

FASTENER FOR CRATES AND THE LIKE

Application filed April 15, 1930. Serial No. 444,549.

This invention relates to a fastener specially adapted for use upon the hinged lid of the form of crate now in common use for the packing and shipment of a plurality of baskets of berries and other small fruits. Such form of crate usually embodies a body portion of a size to contain a plurality of boxes or baskets of berries or the like, a lid hinged on its longitudinal edge to the upper longitudinal edge of a side wall of such body, and a hasp hingedly connected to and depending from the opposite longitudinal edge of the lid so as to be engaged by a keeper carried by the other side wall of the crate.

One of the objects of the present invention is to provide a fastening device of the character just referred to comprising a hasp and a keeper, each of which may be formed from a strip of sheet metal of the same width, preferably by a single stamping operation.

Another object of the invention is to provide a fastener of the character just referred to comprising a hasp and a keeper, both formed of resilient sheet metal, for attachment, respectively, to the lid and the body portion of a crate or the like wherein the hasp, because of its inherent resiliency, will, when the lid to which it is attached is closed, automatically engage the keeper carried by the body of the crate and secure the lid in closed position during transporation of such crate, but which may be quickly and easily released to permit the lid to be raised.

A further object of the invention is to provide a fastener of the character referred to wherein the keeper has, not only means automatically engageable by the hasp, but also means for guiding the hasp into locking position as the lid of the crate or the like is moved into closed position.

A further object of the invention is the provision of a fastening device for the hinged lids of crates or the like which will be simple in construction and operation and which may be produced at a low cost.

Other objects of the invention will appear as the description proceeds.

The invention will be described with reference to the accompanying drawing, wherein a preferred embodiment of the invention is illustrated, and wherein:

Figure 1 is a perspective view of portions of the hinged lid and body portion of a crate having the fastener attached thereto;

Figure 2 is a view in elevation of the same on a slightly larger scale;

Figure 3 is a vertical cross sectional view on the line 3—3, Figure 1; and

Figure 4 is a horizontal sectional view on the line 4—4, Figure 2.

Referring to the drawing, 5 designates the body of a fruit crate, 6 the hinged lid of such crate and 7 a plate for attachment to the upper face of the lid at the edge of the latter opposite the hinges. The forward end of the plate 7 is turned upon itself around a wire loop 8.

The hasp 9, which is formed of a strip of resilient sheet metal, has its upper end turned upon itself around the loop 8 and is thus hingedly attached to the plate. Preferably the hasp 9 is bent outwardly as at 10 between its ends and then downwardly so that its lower end will be in advance of its upper hinged end.

The hasp 9 has on each of its side edges adjacent its lower end a lateral shoulder 11 for a purpose to appear later on.

The keeper, designated generally as 12, is formed of a strip of sheet metal preferably of the same width and material as the hasp 9, bent to form a main portion 13 and end portions 14 and 14′ which extend substantially parallel to said main portion but in a plane rearwardly of said main portion and connected, respectively, to the latter by portions 15 and 15′. Preferably the portions 15 and 15′ diverge from their lower ends toward their upper ends.

The lower ends of the portions 15 and 15′ are spaced apart a distance slightly greater than the width of the hasp 9, whereas the space between the upper ends of said portions is considerably greater than the width of said hasp.

The keeper 12 is secured to a side wall of the crate by means of rivets or nails 18, passing through the end portions 14 and 14′ and engaging said side wall in such a position

that, when the hinged lid 6 is swung into closed position, the hasp 9 may enter the space between the portions 13, 15 and 15′ of the keeper and said side wall with its shoulders 11 and 11′ in alignment with the lower edge of the main portion 13 of the keeper.

The lower edge of the main portion 13 of the keeper 12 where its ends join the portions 15 and 15′, respectively, is bent rearwardly to form shoulders 17 and 17′ for engagement, respectively, by the shoulders 11 and 11′ of the hasp 9.

The plate 7 is secured to the hinged lid of the crate, preferably to the upper face of the latter with the upper portion of the rear face of the hasp 9 bearing against the edge of said lid and the greater portion of the hasp depending below the lower face of the lid. The lower end of the hasp 9 will accordingly project beyond the plane of the edge of the lid. The keeper 12 is secured to the outer face of a side wall of the crate with the lower ends of its portions 15 and 15′ in substantially vertical alignment, respectively, with the side edges of the hasp 9 and the lower edge of its main portion 13 substantially in horizontal alignment with the shoulders 11 and 11′ of the hasp when the lid 6 is in closed position.

When the lid is swung into closed position, the lower end of the hasp 9 will enter the space formed by the portions 13, 15 and 15′ of the keeper and the outer face of the side wall of the crate to which the keeper is attached. As the hasp 9 enters said space, the forward edge of its lower end will bear against the inner face of the main portion 13 of the keeper and, if the hasp 9 is not secured to the lid 6 with the corners of its lower edge exactly in alignment with the lower ends of the portions 15 and 15′ of the keeper, one or the other of said corners will ride along one or the other of the portions 15, 15′ so that the hasp 9 will be guided in its movement into said space and the inherent resiliency of the hasp 9 will cause the lower edge of the hasp to bear against the rear face of the portion 13 of the keeper until the lid 6 of the crate rests upon the upper edges of the side walls of the latter, at which time the lower end of the shoulders 11 and 11′ of the hasp 9 will pass below the lower edge of the keeper 12 and the lower end of the hasp 9 will be permitted to spring forwardly to cause its shoulders 11 and 11′ to engage the shoulders 17 and 17′, respectively, whereby said lid 6 is secured in closed position.

In order to open the crate it is only necessary to press the lower end of the hasp 9 toward the crate body to move the shoulders 11 and 11′ out of engagement with shoulders 17 and 17′ of the keeper. Thereupon the lid 6 may be raised or swung upwardly.

Various changes falling within the scope of the appended claims may be made in the device.

I claim as my invention:—

1. A fastener for crates or the like comprising a keeper having a forwardly offset portion having a front and a side wall extending inwardly at their junction to provide a shoulder, a hasp having a portion engageable in the rear of the first mentioned portion and held under tension thereby, said hasp having a shoulder to engage under said first shoulder through said tension as the hasp is moved to fastening position.

2. A fastener for crates or the like comprising a keeper having a forwardly offset portion with a front wall and side walls struck inwardly substantially diagonally at their junction to provide shoulders, a hasp insertible behind said portion and held under tension thereby, and shoulders on said hasp inwardly of said side edges to engage under said first shoulders through said tension as the hasp is moved to fastening position.

3. A fastener for crates or the like comprising a one-piece keeper having a forwardly offset portion with a front wall and downwardly and inwardly inclined side walls, instruck shoulder members at the junction of the front and side walls, a hasp having a forwardly offset portion applicable behind said front wall and adapted to be guided at its side edges into fastening position, and shoulders on said hasp inwardly of said side edges to engage under said shoulder members through said tension as the hasp is moved to fastening position.

In testimony whereof I have hereunto set my hand.

ALBERT W. ROBINSON.