

Nov. 6, 1928.

N. T. HASENFLUE

1,690,408

HASP

Filed Oct. 25, 1926

Fig. 3.

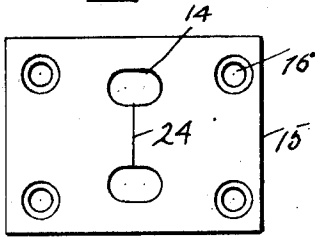


Fig. 4

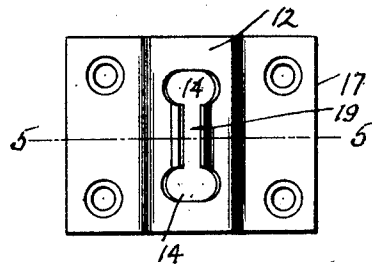


Fig. 5

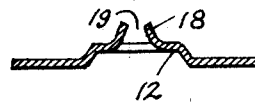


Fig. 7.

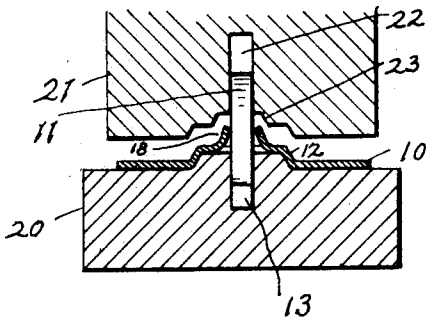
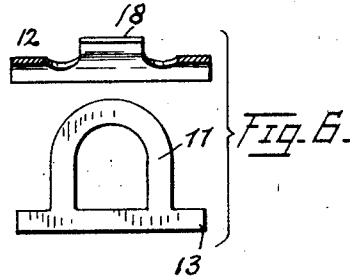


Fig. 1.

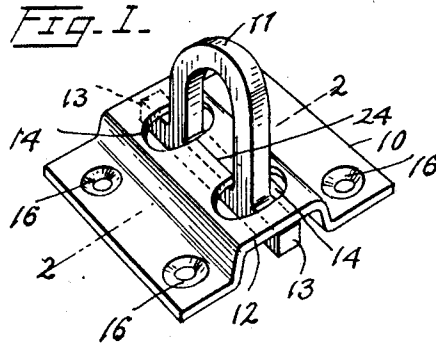
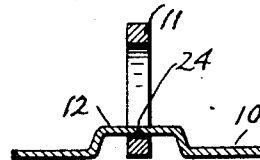


Fig. 2.



Inventor:
Nelson P. Hasenflue
Kerr Hudson Kent Atty.

Patented Nov. 6, 1928.

1,690,408

UNITED STATES PATENT OFFICE.

NELSON T. HASENFLUE, OF GENEVA, OHIO, ASSIGNOR TO THE CHAMPION HARDWARE COMPANY, OF GENEVA, OHIO, A CORPORATION OF OHIO.

HASP.

Application filed October 25, 1926 Serial No. 143 881.

This invention relates to hasps and more particularly to that portion of the hasp commonly known as the keeper, the invention residing particularly in the construction and combination of elements comprising the article and the method of making the same.

Keepers as at present manufactured and used are of two common types. One type embodies a keeper plate which has two spaced openings and through these openings are extended the legs of the looped portion or eye which has a retaining plate secured to the free ends on the back side of the keeper plate by riveting or peening the free ends which extend through the retaining plate. This type of keeper has one disadvantage in that the eye can be rather easily disengaged from the retaining plate by inserting a screw driver or bar through the eye and exerting outward pressure thereto and by so doing, the eye is disengaged from the keeper plate.

The other common type of keeper has a keeper plate similar in construction to the keeper plate heretofore described, except it is provided with an elongated slot through which the eye is extended from the back side of the keeper plate, the eye having an integral base behind the plate long enough to prevent the eye as a whole being pulled through the slot. The disadvantage of this type of keeper resides in the fact that the eye is readily disengaged from the keeper plate when being handled and very often becomes lost in shipment, the disadvantage described in the first mentioned keeper, however, being not present in this second type of keeper.

The principal object of the present invention is to provide a keeper which has the advantages of both forms of keepers above described, but does not possess their disadvantages.

This is accomplished by a new form of keeper and by a new process of making the same whereby the keeper plate in the finished product is, in effect, like the plate of the first described construction but wherein the eye is like that used in the second construction in the respect that it is composed of a loop and an integral base, the loop being inserted through the plate when the keeper is being formed, i. e., extended from the back side of the plate through the equivalent of a slot, but in the completion of the

product, the slot is eliminated or closed leaving spaced openings only through which the legs of the loop or eye extend.

The invention may be further briefly summarized as consisting in certain novel details of construction in the keeper itself and in certain novel steps of the method of producing the same.

In the accompanying sheet of drawings: Fig. 1 is a perspective view of the finished keeper; Fig. 2 is a sectional view substantially along the line 2—2 of Fig. 1; Figs. 3 and 4 are plan views of the keeper plate in different stages of the manufacture thereof; Fig. 5 is a sectional view substantially along the line 5—5 of Fig. 4; Fig. 6 shows a keeper plate and eye about to be assembled, the section through the keeper plate being at right angles to the section shown in Fig. 5; and Fig. 7 shows dies and the two parts of the keeper therein preparatory to the final operation which bends inwardly certain tongues into or through the loop of the eye to close the previously open slot through which the loop was extended.

Referring now to the drawings and first to Figs. 1 and 2, the keeper comprises a keeper plate 10 and the eye 11. The keeper plate has a transverse raised portion or channel 12 to accommodate the base 13 of the eye, the legs of which extend through spaced openings 14 in the channel. It will be noted from Figs. 1 and 6 that the base 13 of the eye is formed integral with the loop portion thereof, as in the second described prior construction but it will be observed also that the keeper plate does not have an open slot through which the loop extends, but between the openings 14 the metal is closed in, thus permanently interlocking the two parts at the time of their manufacture or assembly and providing a keeper which has the advantages of both mentioned prior constructions.

The keeper plates 10 are formed by a series of punch press operations from a strip of metal of the proper thickness and width and in Fig. 3, I have shown at 15, a partially formed keeper plate which can be produced from one or a series of punch press operations. The plate has near its corners screw receiving openings 16 and on its transverse center line, it has the openings 14, already referred to.

In Fig. 4, I have shown at 17 the keeper

plate in a further stage of manufacture. It will be observed that this plate has a transverse channel 12 already referred to, and that the metal previously bridging the openings 14 is bent outwardly in the form of lips 18, leaving between these lips a space or a slot 19 wide enough to receive the loop of the eye 11.

Next, the loop of the eye is extended through this slot so that the base portion of the eye will lie on the underside of the channel, and then the lips are bent inwardly and downwardly into engagement with each other at their edges, forming a flat bridging portion, as clearly indicated in Figs. 1 and 2. The flattening of the lips is preferably done in a pair of dies such as indicated in Fig. 7, wherein 20 represents the stationary die on which the assembled keeper and eye are placed and 21 represents the movable die having a slot 22 which receives the loop of the eye and having portions 23 which engage the upstanding lips 18 and drive them downwardly and inwardly so as to lie flat over the base 13 of the eye and through the loop thereof, thereby keeping the two parts of the keeper permanently interlocked against accidental displacement.

Any suitable punch press apparatus may be utilized to produce the keeper plate in the form indicated in Fig. 4 and it may be produced in different ways. Preferably, the screw openings 16 and the loop openings 14 are punched in one operation and in the same operation, the openings 16 are preferably countersunk so as to accommodate the heads of the attaching screws. These openings are generally punched in the strip before the plate 15 of Fig. 3 is severed therefrom.

The channel 12 is formed and the lips 18 are preferably bent outward in the same operation. Generally, the metal between the openings 14 is severed, as indicated at 24 in Fig. 3, before the operation in which the channel 12 is formed and the lips 18 are struck up. The cutting or severing of the metal at 24 may be done while the metal is still in strip form, either during the opera-

tion when the openings 14 and 16 are punched or subsequently thereto.

I do not regard it essential that the metal be actually severed prior to the operation which forms the channel and strikes up the lips for it may be possible to sever the metal and strike up the lips in the same operation, and it may be possible also to accomplish the above in the same operation wherein the openings 14 and 16 are punched; that is to say, the plate illustrated in Fig. 4 may be formed and severed from the strip in one operation.

The material part of the process is forming the slot to receive the loop of the eye by bending the metal outwardly so that it can be restored or bent back after the loop is extended therethrough, irrespective of the number of operations or steps in which this is done.

Having thus described my invention, what I claim is:

1. A keeper for a hasp comprising a keeper plate having a pair of spaced openings, an eye having its legs extending through the openings and having a continuous base portion integral with said legs on the underside of the plate, and extending laterally beyond the openings whereby separation of the keeper and eye by movement in any direction is prevented.

2. A keeper for a hasp comprising a keeper plate having a pair of spaced openings, an eye having its legs extending through the openings and having an integral base portion on the underside of the plate, and said plate having lips extending inwardly through the eye between said openings.

3. A keeper for hasps comprising a keeper plate having a pair of openings, an eye having its legs extending through said openings, a laterally extending base portion on said legs engaging the plate on the opposite side from said eye, and a severed bridging portion between the legs extending through said eye.

In testimony whereof, I hereunto affix my signature.

NELSON T. HASENFLUE.