June 18, 1946. R. S. WAGNER ET AL 2,402,309

HASP LOCK KEEPER

Original Filed April 19, 1943

Fig. 1.

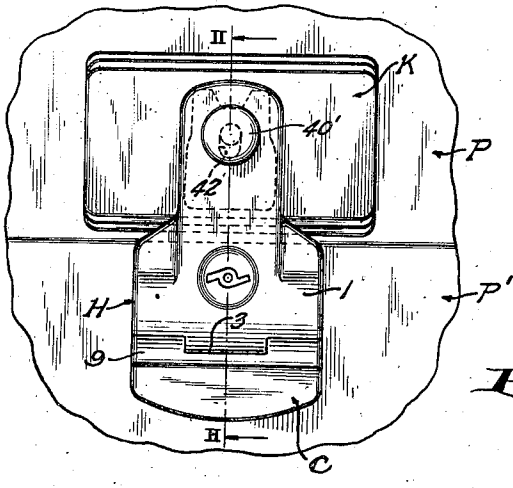


Fig. 2.

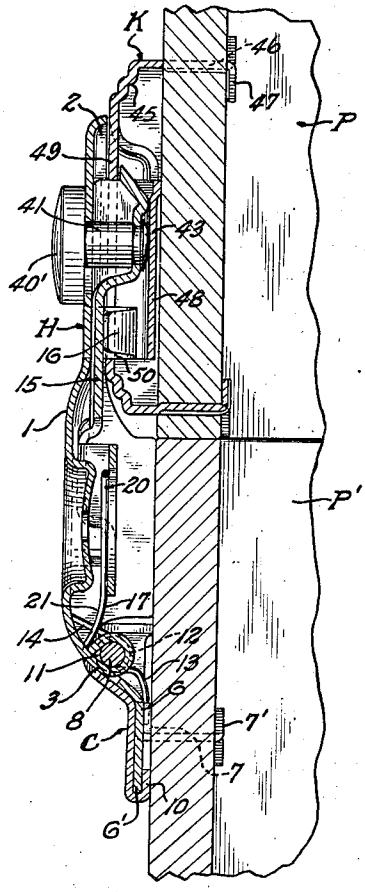
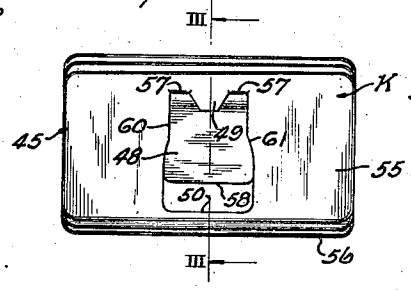


Fig. 4.



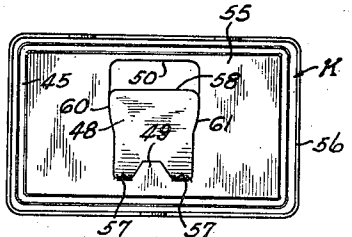
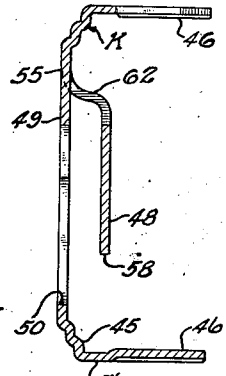


Fig. 5.

Fig. 3.



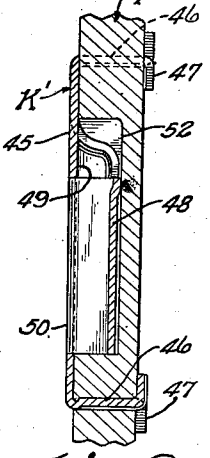


Fig. 6.

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HASP LOCK KEEPER

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Original application April 19, 1943, Serial No. 483,546. Divided and this application September 7, 1944, Serial No. 553,060

5 Claims. (Cl. 292—340)

1

This invention relates to a hasp lock of the type employing a hasp-carried latching bolt which may be locked. Such hasp lock is usually employed on suitcases, trunks, traveling bags, or the like, but, of course, may be employed for securing together any two contiguously disposed parts.

This application is a division from our application Serial Number 483,546, filed April 19, 1943, for "Hasp lock," now Patent No. 2,382,756, dated August 14, 1945.

The object of the invention is to provide a hasp lock which is extremely simple in construction in that it is constituted of very few parts and wherein the elements of the lock are closely and compactly organized in such way as to provide for smooth and effective action. The lock is constituted, except for springs, entirely of sheet metal stampings held assembled by appropriate holding or guide lugs so that no riveting or welding is necessary to maintain the major elements assembled in proper cooperative relation.

Another feature of the lock resides in the special manner in which the hasp and keeper are constituted and cooperatively interrelated, the structure being such that the two lugs which guide the latching bolt, and retain it assembled with the hasp body plate, positively though releasably interlock with a locking shoulder on the keeper plate (in the locked position of the parts) to take the stress of holding the contiguously disposed parts with which the hasp and keeper are associated against movement away from each other, the latching bolt serving only to exert its latching or locking function.

Other objects and advantages reside in certain novel features of the construction, arrangement, and combination of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawing forming a part of this specification, and in which:

Fig. 1 is a view in top plan showing a hasp lock embodying the present invention;

Fig. 2 is an enlarged view in cross section taken on line II—II of Fig. 1 and illustrating the hasp latched to the keeper;

Fig. 3 is an enlarged sectional view on the line III—III of Fig. 4 of the keeper alone, prior to attachment thereof to the surface of a suitcase part;

Fig. 4 is a front view of the keeper;

Fig. 5 is a rear view of the keeper; and

Fig. 6 is a sectional view similar to Fig. 3 but showing the keeper of the present invention recessed into the wall of a suitcase part.

2

Referring to the drawing, and more particularly to Figs. 1 and 2, P and P' designate two contiguously related parts, for example, the sections of a suitcase or the body and lid of any other similar receptacle. The hasp which is applied to the part P' is designated generally at H and is pivotally or hingedly interconnected with the part P' by connecting means designated as a whole at C. The hasp H cooperates with a keeper designated generally at K, which is applied and secured to the part P.

The hasp H comprises a body plate 1 constituted of a sheet metal stamping which is provided with a marginal flange 2 to encase and guide a latching bolt and a lock (not herein described). The enlarged end of the body plate 1 is provided wth a curled or rolled extension providing a hinge barrel 3 centrally and symmetrically disposed with respect to the enlarged end of the body plate. The hinge barrel 3 is fitted between correspondingly formed although shorter hinge barrels integrally formed with an attaching plate 6. The attaching plate 6 is disposed against the outer surface of the part P' and it has attaching prongs 7 integral with its rear edge on the opposite sides of a tailpiece or extension 6' also integral with the attaching plate and giving it a broader bearing on the part P'. The attaching prongs 7 are driven through the part P' and staked over as at 7' (see Fig. 2) to securely and rigidly fasten the attaching plate 6 to the part P'. A hinge pin 8 is fitted in the alined hinge barrels to pivotally interconnect the body plate 1 of the hasp to the attaching plate 6. A casing 9 is provided for the attaching plate hinge barrels, the hinge pin 8, and the attaching plate 6. The casing 9 is fastened to the attaching plate by means of securing tabs or lugs 10, which are clinched or bent around the ends of the attaching plate and under and around the tailpiece 6', as shown in Fig. 2. The hasp H is biased to swing into open position by means of a spring designated generally at 11, the spring 11 having coils 12 wrapped around the hinge pin and having the terminals 13 and 14 projecting from the coils and engaging the attaching plate 6 and the body plate 1 of the hasp H, respectively.

A latching bolt, designated generally at 15, is slidably fitted in the flanged body plate 1 of the hasp H. This latching bolt is also constituted of a sheet metal stamping and in general conforms in outline to the outline of the body plate 1 of the hasp, although, of course, it is appropriately smaller so that it may be slidably interfitted therewith, as illustrated in Fig. 2.

The side edges of the latching bolt 15 have a free sliding engagement with the opposed inner surfaces of the marginal flanges 2 of the body plate 1 of the hasp. For maintaining the latching bolt 15 assembled with the body plate 1 of the hasp H, and in proper sliding engagement therewith, a pair of lugs 16 are formed integrally with the opposed portions of the marginal flange 2 of the body plate 1 of the hasp H, and these lugs 16 are bent over the latching bolt 15 and have their inner ends extended in wiping contact with the underlying portions of the latching bolt to serve as the primary means which maintains all of the parts of the hasp assembled.

The latching bolt 15 is biased to latching position by a latch spring 17. This spring comprises a piece of appropriately shaped or bent and stiffly resilient spring wire. An end of the spring 17 is anchored or fixed to the latching bolt and beyond its point of attachment to the latching bolt is bowed or curved as at 20 and terminates in a leg 21 extending lengthwise of the hasp but tensioned and consequently transversely flexed or bowed. The end of the leg 21 bears against a suitable, fixed structure of the body plate of the hasp H and in the construction shown bears against the juncture of the body plate with the extension thereof that is formed into the hinge barrel 3.

For the purpose of manually shifting the latching bolt 15 from its latched to its unlatched position, a finger button 40' is provided. The head of the button is disposed on the outside of the body plate 1 of the hasp H, and its shank 41 extends through an elongated slot 42 provided in the plate 1 and the inner end of the button is staked or riveted or otherwise suitably secured to the latching bolt 15, as indicated at 43. The button 40 may be readily grasped and may be utilized to press the latch to its unlatched position. Incidentally, this button 40' also supplements the guiding action of the flanges 2 of the hasp body and of its guiding lugs 16.

The hasp above described may be utilized with either a surface or recess type of keeper. In the form of the invention shown in Figs. 1 to 5, the surface type of keeper is disclosed, while Fig. 6 shows the recessed type of keeper. This keeper comprises a box-like housing 45 stamped or drawn from sheet metal with a front wall 55 and side walls 56 having integrally attached prongs 46 which are driven through the part P and are staked over as at 47 to rigidly secure the keeper in place. The front wall 55 of the keeper housing is incised and pressed inwardly to provide a floor 48, a keeper shoulder 49, and a locking shoulder 50.

The portion of the front wall 55 of the keeper used to form the floor 48 is substantially rectangular with the attached edge portions of the floor and the opposite edge being designated as horizontal edges 57 and 58, and the other edges being designated as vertical edges 60, 61. The keeper front wall incision is so made along the horizontal edge 57 as to leave two spaced portions attached to the front wall, the length of such portions being approximately one-half of the total length of the edge 57. The two attached portions of the floor are pressed to substantially right angles with the front wall 55, as shown at 62, much more readily than is possible with a single piece of the same width and with much less probability of undesired change in other portions of the front wall. As shown, the length of the floor portions 62, plus the floor thickness, are the same as the width of the marginal flange or side walls 56 of the keeper so that both the floor and the edges of the side walls rest on the surface of the suitcase part and cooperate in sustaining the front wall 55. The edge 58 of the floor is made slightly greater in length than the edge 57 to provide adequate surface resting on the suitcase surface to perform the desired front wall bracing or supporting function.

Due to the above construction, the keeper shoulder 49 is formed as an ear or tab extending from the front wall and of precisely the shape and size best suited to engage the end 51 of the bolt shown in our above application, for the purpose of preventing undesired side-play between the bolt and the keeper shoulder when engaged. It will be seen that the locking shoulder 50 is formed as a straight line so as to be engaged by the straight edge portions of the lugs 16 extending toward each other from the sides of the bolt 15.

In use, when the hasp H is swung to closed or latched position, the tapered or beveled end 51 of the latching bolt 15 moves below the keeper shoulder 49 and into latching engagement therewith, as illustrated in Fig. 2. At the same time, the lugs 16 also come into interlocking engagement with the locking shoulder 50, the lugs 16 and locking shoulder 50 holding the parts P and P' against movement away from each other so that the latching bolt may only take the stress of its latching action.

While we have shown and described several constructions in which the invention may be advantageously embodied, it is to be understood that various changes may be made therein without departing from the spirit of the invention or the scope of the subjoined claims.

We claim:

1. A keeper comprising a box-like housing having a front wall incised and pressed inwardly to form a floor, the floor remaining attached by two spaced portions along one edge of the front wall, the forming of the floor providing a keeper shoulder along one edge of the front wall and a locking shoulder along another edge of the housing front wall.

2. A keeper comprising a box-like housing having a front wall incised and pressed inwardly to form a floor, the floor remaining attached along one edge to the front wall by two spaced portions of approximately one-half the total width of the floor along the attached edge, the forming of the floor providing a keeper shoulder adjacent the attaching portions of the front wall and floor and a locking shoulder on the front wall opposite to the keeper shoulder.

3. A keeper comprising a housing having a front wall incised and pressed inwardly to form a floor, the floor being rectangular in shape and remaining attached by portions along one of the sides thereof, the front wall portion along such side and which is detached from the floor forming a keeper shoulder and another side of the front wall from which the side of the floor is wholly detached forming a locking shoulder.

4. A keeper comprising a housing having a front wall incised and pressed inwardly to form a floor, the floor being substantially rectangular in shape and remaining attached by spaced portions along one of the sides thereof, the front wall portion between the attached floor portions forming a keeper shoulder and another side of the front wall being wholly detached from the floor to form a locking shoulder.

5. A keeper comprising a housing having a front wall incised and pressed inwardly to form a floor, the floor being substantially rectangular in shape and remaining attached to the front wall by spaced portions along one of the sides thereof, the front wall portion between the attached floor portions forming a keeper shoulder and the edge of the front wall formed by detaching the side of the floor opposite the attached portions of the floor forming a locking shoulder.

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