March 16, 1954 A. J. KOMENAK 2,672,040

LOCKABLE HASP FASTENER

Filed Feb. 19, 1949

Fig. 1

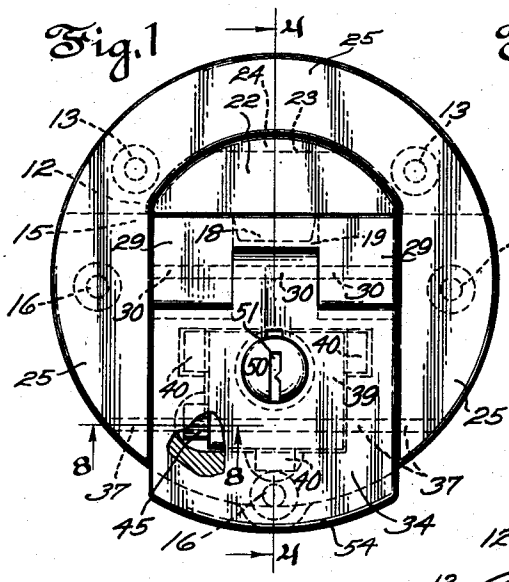


Fig. 4

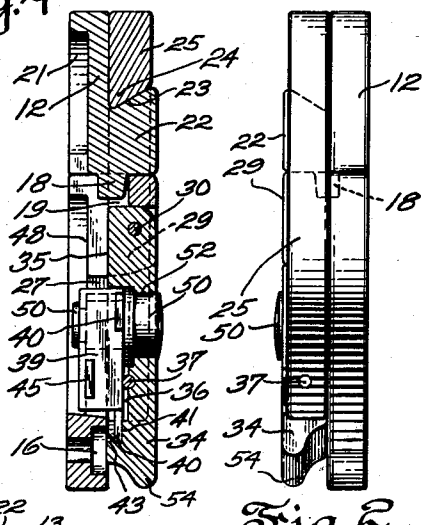


Fig. 2

Fig. 7

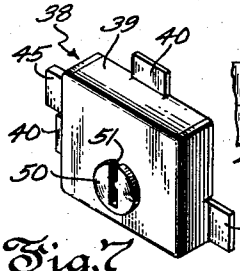


Fig. 8

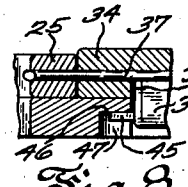


Fig. 3

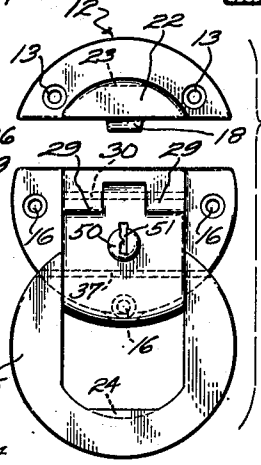


Fig. 6

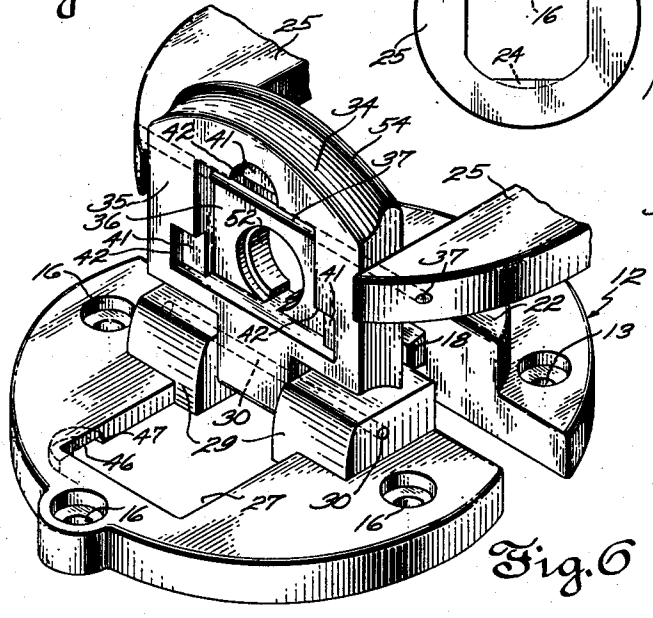
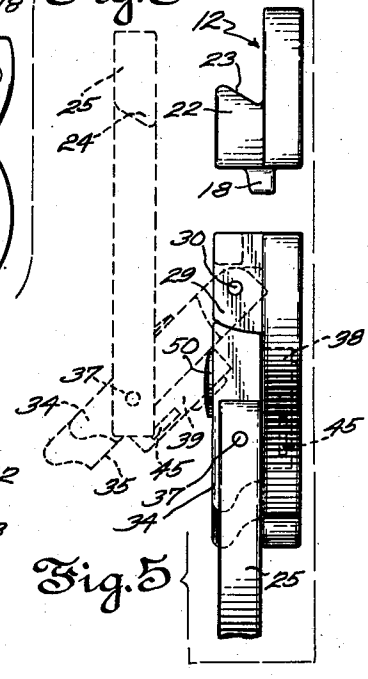


Fig. 5



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LOCKABLE HASP FASTENER

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4 Claims. (Cl. 70—76)

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This invention relates to closure fasteners in general and particularly to lockable hasp fasteners of comely appearance for travelers' luggage and the like.

It is an object of the invention to avoid the elongated proportions which have characterized such fasteners particularly when of the type employing a finger operated lever and a link or hasp loop swung therefrom to engage a keeper on the lid of the closure. Such finger operated lever commonly performs an over-centering, or toggle action, in forcibly drawing together the lid and body of the closure before the fastener is locked in closed condition.

The elongated proportions mentioned have been occasioned by placing the lock at or near the end of the finger operated lever that carries the hasp. This has necessitated a considerable lengthening of the finger lever beyond and in addition to the necessary length of the hasp.

A contributory object of the invention is to organize conventionally operating parts of a hasp fastener so that a lock may be carried by the finger lever and so disposed that its mechanism is operable by key or otherwise at a location intermediate the fixed pivotal axis on which the finger lever swings and the floating pivotal axis on which the hasp loop swings relatively to the finger lever.

Another object is to provide a draw-lever type of lockable hasp fastener that shall be substantially no greater in length than is its permissible width, without sacrificing any structural sturdiness in the working parts of the hasp whereby, the mounting space required by the hasp shall be reduced to a minimum area of the luggage surface.

A further object is to provide a fastener whose overall thickness becomes compacted to a minimum dimension in closed condition owing to entire absence of waste space between the parts.

A still further object is to obtain the greatest possible sturdiness of the assemblage of working parts of a fastener when shaped to produce a circular outline of the overall structure.

The above and other objects of these improvements will appear in fuller particular from the following description of a successful embodiment of the invention in which description reference is made to the appended drawings, wherein:

Fig. 1 is a front face view of a complete fastener embodying the invention showing the parts in closed relationship and locked.

Fig. 2 is an edgewise view looking from the right at Fig. 1.

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Fig. 3 is an exploded view drawn on a smaller scale than Fig. 1 showing the fastener parts in open relation.

Fig. 4 is a view taken in section on the plane 4—4 in Fig. 1 looking in the direction of the arrows.

Fig. 5 is a view similar to Fig. 2 showing the parts of the fastener in open position as in Fig. 3.

Fig. 6 is a fragmentary perspective view drawn on an enlarged scale showing the lock removed from the toggle lever.

Fig. 7 is a perspective detail view of the lock removed from the toggle lever of Fig. 6 positioned to accord with the showing of parts in the latter figure.

Fig. 8 is a fragmentary sectional view taken on the plane 8—8 in Fig. 1 looking in the direction of the arrows.

As shown in the drawings the complete fastener includes a keeper 12 having holes 13 for screws or rivets (not shown) by means of which the keeper may be secured permanently against the front face of a closure lid (not shown). Thus the keeper meets in edge-to-edge relation a mounting plate 15 having holes 16 therein for screws or rivets (not shown) by means of which the mounting plate may be secured to the front face of a closure body (not shown). A dowel lug 18 on the keeper enters and fits a pocketing space 19 in the mounting plate for assuring and maintaining proper broadside and edgewise alignment of the keeper and the mounting plate.

Keeper 12 may be hollowed out as at 21 in its rear face that abuts against the closure and there is a V-grooved anchorage lug 22 on its front face that affords a retaining seat 23 for a beveled lip 24 on the loop hasp 25 whose exterior outlines may be circular and in conformity with the circular outline of the combined mounting plate and keeper. Thus this loop hasp in the closed condition of the fastener shown in Fig. 1 covers and renders inaccessible the screws or rivets (not shown) that occupy holes 13 and 16 for securing the fastener parts to the closure.

To achieve the objectives stated hereinbefore, mounting plate 15 is provided with an opening 27 contiguous to which there is a hinge abutment for swingably supporting a finger operated lever structure 34 to which hasp 25 is pivotally coupled. Such abutment in the form herein illustrated comprises two bosses 29 which outstand forwardly from the front surface of the mounting plate and hold a pivot pin 30. This pin spans the space between bosses 29 in a position offset forwardly from the mounting plate, thereby to establish a

fixed axis in said position about which the lever structure **34** swings. One face **35** of the lever structure is thereby enabled to swing into close overlapping relation to mounting plate **15** at the borders of the opening **27**. Loop hasp **25** is pivotally coupled to lever structure **34** by means of a pivot pin **37** which establishes a floating axis about which the hasp is free to swing relatively to the lever structure.

In register with plate opening **27** lever structure **34** contains a recess in sunken relation to the rear face **35** thereof which recess receives at least a part of the thickness of a lock **38** shown removed therefrom in Fig. 7. The mechanism of this lock may be conventional and contained mostly within the sheet metal case **39** from which three mounting tabs **40** are bent outward to seat on pads **41** forming the floors of marginal niches **42** at the borders of recess **36**. Case tabs **40** are retained in said niches by peaning over the metal edges of the niches as indicated at **43** in Fig. 4.

Lock **38** includes a tongue or bolt **45** that may be projected and retracted by the lock mechanism that is in case **39**. Bolt **45** when projected can engage with a strike surface **46** afforded by the floor of a niche **47** sunk from the hollowed-out rear surface **48** of mounting plate **15**. Lock **38** further includes as part of the bolt operating mechanism means for rendering such mechanism operably accessible from the exterior of lever structure **34**. Such means might comprise a manually operable dialing handle in the case of a combination lock, or might comprise a push button or throw lever or other form of manipulative agent in the case of a snap action or latch type of lock, but there is herein shown, to illustrate one of the various possible lock manipulative means, a key barrel **50** containing the key hole **51** and which occupies and is turnable in the bearing hole **52** in lever structure **34** so that the key hole **51** of barrel **50** is accessible outside the lever structure in a location newly devised by these improvements to be intermediate the fixed axis of pivot pin **30** and the floating axis of pivot pin **37**.

In operation relative movement of the parts to their closure fastening positions in Figs. 1 and 2 compacts the parts into such relationship that the outline of keeper **12** and mounting plate **15**, combined, is that of a circle with which the similar circular outline of hasp **25** registers, while nearly all of the lever structure **34** is confined in size and location to an area within and substantially smaller than such circle and the lock **38** is substantially smaller in size and confined entirely to an area within said circle. Merely the liftable lip **54** of the lever **34** overhangs at all the boundaries of the circular outline referred to and this is for rendering such lip more conspicuous and accessible for manipulation.

Thus to all purposes and effects the present improved construction makes possible all the elements and operating advantages of a lockable draw hasp type of fastener in the form of sturdy parts compacted into a minimum overall size not requiring to be any longer than it is wide.

As many departures are possible from the exact details of shapes and arrangement of parts chosen to illustrate the invention, the following claims will be understood as directed to and intended to cover all structural equivalents which come within the broadest interpretation of their terms.

I claim:

1. A hasp fastener including, a mounting plate, a lever structure at the front of said plate pivotally mounted thereon in a manner to be swingable about a fixed axis, a hasp pivotally mounted on said swingable lever structure in a manner to be swingable relatively to the latter about a floating axis, and a lock carried on said lever structure including lever locking mechanism disposed to be operably accessible from the outside of said lever structure, said mounting plate containing an opening positioned to receive the said lock at least in part.

2. A hasp fastener including, a mounting plate, a lever structure at the front of said plate pivotally mounted thereon in a manner to be swingable about a fixed axis, a hasp pivotally mounted on said swingable lever structure in a manner to be swingable relatively to the latter about a floating axis, and a lock carried on said lever structure including a bolt projectable from the latter into engagement with said mounting plate, said lock further including mechanism for operating said bolt disposed to be operably accessible from the outside of said lever structure, and said mounting plate containing an opening receptive to the said lock presenting a striking surface contiguous to said opening positioned to be lockingly engaged by the said bolt when said lock occupies said opening.

3. A hasp fastener including, a mounting plate, a lever structure at the front of said plate having a pivotal mounting thereon permitting said lever to be swingable about a fixed axis, a hasp pivotally mounted on said swingable lever structure in a manner to be swingable relatively to the latter about a floating axis, a lock carried on said lever structure including lever locking mechanism disposed to be operably accessible from the outside of said lever structure, said mounting plate containing an opening receptive to said lock and being overlapped by said lever, and a hinge abutment carried by and projecting forward from said mounting plate beside said opening affording said pivotal mounting for said lever and offsetting said fixed axis forwardly from said plate.

4. A hasp fastener including, a mounting plate, a lever structure at the front of said plate pivotally mounted thereon in a manner to be swingable about a fixed axis, a hasp pivotally mounted on said swingable lever structure in a manner to be swingable relatively to the latter about a floating axis, and a lock carried on said lever structure including lever locking mechanism disposed to be operably accessible from the outside of said lever structure, said lever having a face swingable into overlapping relation to the said mounting plate and containing a recess in sunken relation to said face occupied by a portion of the said lock, and said mounting plate containing an opening receptive to the remaining portion of said lock when said lever face overlaps said mounting plate.

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