April 14, 1942. F. W. MAGNUSON 2,279,757

FASTENING DEVICE FOR SUITCASES

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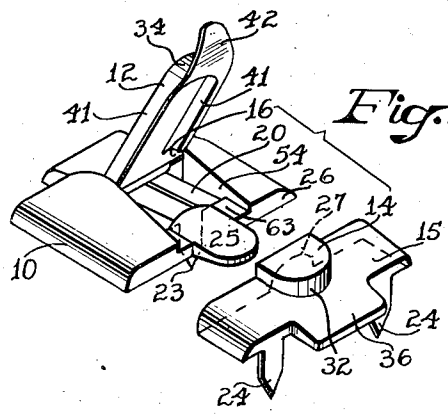


Fig. 1.

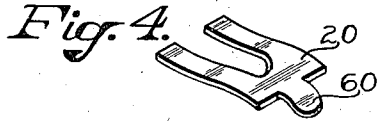


Fig. 4.

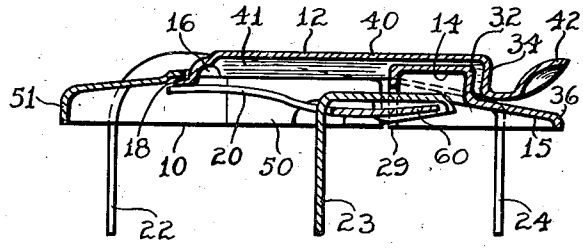


Fig. 2.

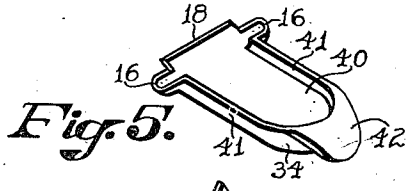


Fig. 5.

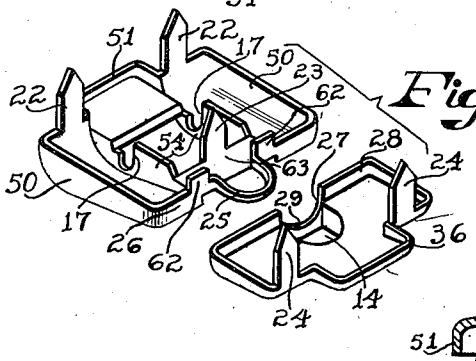


Fig. 3.

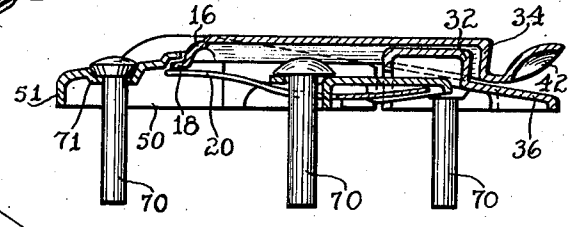


Fig. 6.

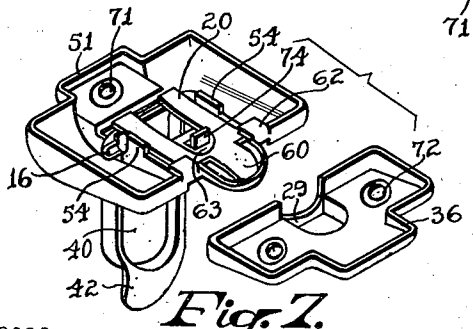


Fig. 7.

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FASTENING DEVICE FOR SUITCASES

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5 Claims. (Cl. 292—228)

This invention relates to fastening devices and more particularly to a fastening device for suitcases and other receptacles which comprises a spring pressed hasp and an associated catch so arranged as to hold the receptacle in a closed condition.

The primary object of this invention is to provide a fastening device for suitcases, bags and other types of hand receptacles, as well as trunks and other stationary receptacles having closeable lids or tops, which may be economically manufactured and assembled and which will give an efficient and long life of service.

A further object of the invention is to provide a fastening device of the type described having a spring pressed hasp pivotally mounted on a supporting shell in such a manner that if the spring should break the hasp will remain in position.

Another object is to provide a fastener construction for a suit-case in which the hasp is automatically aligned with the catch when the parts are closed together and the parts will not be disengaged as a result of lifting the suit-case by its handle.

A further object is to provide a fastener of the type described in which the operating parts are so shaped and arranged that the outer surface of the device is substantially streamlined and presents a pleasing appearance and wherein the parts are so constructed that the hasp is laterally supported in a required position by the shell carrying the same.

Referring to the drawing illustrating the preferred embodiments of this invention:

Fig. 1 is a perspective view of the two parts of the fastening device in positions just prior to locking engagement thereof;

Fig. 2 is a central sectional view of the parts in a locked arrangement;

Fig. 3 is a perspective view of the under sides of the parts shown in Fig. 1 but with the spring removed;

Fig. 4 is a perspective view of the spring;

Fig. 5 is a perspective view of the under side of the pivoted hasp;

Fig. 6 is a view corresponding with Fig. 2 but employing rivets instead of bendable prongs for securing the same to a receptacle; and

Fig. 7 is a perspective view of the under sides of the shell and catch with the parts shown in an open hasp position.

The suit-case fastener shown in the drawing comprises a shell or base 10 carrying a spring pressed hasp 12 shaped to interlock with a lug 14 on a catch 15. The hasp has two aligned pivots 16 shaped to be mounted in two aligned bearing slots 17 formed on an appropriate part of the shell. The pivots are so positioned that the hasp is a lever of the first degree and has a short arm or cam 18 adapted to engage a spring 20 fixedly mounted in the shell. The cam and the spring are so located and positioned that the hasp is held in either a locking or an open position. The shell may be provided with prongs 22 and 23 (Figs. 1 to 3) which are arranged to be forced through the leather or other body material of the suitcase on which the part is to be fastened and then bent over into position to hold the shell in place. Similarly the catch may be provided with prongs 24 shaped and arranged for the purpose.

One feature of this construction involves so arranging the hasp and the catch that when the parts are brought together, they are automatically positioned and the hasp is located correctly for locking with the catch lug. To this end, the shell is provided with a tongue 25 projecting beyond the vertical front side 26 of the shell and into a position where closing of the suit-case cover will thrust that tongue through an opening 27 in the side peripheral wall 28 of the catch. The wall 28 is a continuation of the front wall 29 of the locking lug 14, so that the tongue 25 is located beneath that lug.

The catch is preferably formed of a piece of stamped metal as a cup shaped or hollow member having the continuous peripheral rim 28 forming a strengthening flange, and the prongs 24 may be shaped as a part of that rim. The rear wall 32 of the lug 14 is shaped as a partial cylindrical surface adapted to interfit with the front curved wall 34 of the hasp. The hasp wall is made just enough larger than the locking lug 14 so that the parts fit together snugly. The catch also has a rearwardly projecting lug 36 which engages the surface of the suit-case and aids in steadying the catch under the forces involved in closing the suit-case and carrying the same. The catch member may, however, be otherwise suitably shaped as deemed advisable.

The hasp is similarly made of pressed sheet metal as a cup shaped body having the top and substantially plane portion 40 and the two side ribs or flanges 41 formed as continuations of the curved flange 34 which engages the locking lug. A thumb hold 42 may be provided as a forwardly projecting plate shaped and arranged to aid the user in raising the hasp readily from its locked position. The back wall of the hasp is extended and shaped to provide the curved cam lip 18,

Each pivot 16 (Fig. 5) is preferably formed as a continuation of the side flanges 41 and is substantially cup shaped in that it is shaped somewhat as a quarter section of a sphere. The curved surface of the pivot rides in the slot 17 which forms a bearing therefor.

Another feature of this invention involves so mounting the hasp that it may be readily assembled and cannot be removed inadvertently from the shell even if the spring 20 should break. Also, it is supported against lateral movement so as to provide a strong structure. To this end, the shell 10 is formed as a substantially cup shaped member having its peripheral flange composed of the sides 50 integral with the front flange or wall 26 and a rear flange 51 formed as a continuation thereof. The shell is made of a sheet metal blank pressed to the desired shape and it has an outer surface provided with a suitable metal plating. The prongs 22 are continuations of the rear wall of the shell and the parts are made of metal capable of being bent and shaped as desired.

The sides of the hasp are confined against lateral movement by two substantially parallel, vertical ribs 54 formed by cutting through the shell and bending the shell material into positions which are perpendicular to the surface of the suit-case on which the shell is fastened. That is, these ribs 54 are substantially parallel with the side flanges 41 of the hasp and define the sides of the central opening through the shell. Likewise, the prong 23 is formed from stock bent up from that central portion of the shell. The peripheral flange portions 26, 50 and 51 and the ribs 54 have their bottom edges lying in a common plane so that each will engage the surface of the suit-case on which the shell is mounted and thus give a full and common support for the shell. The ribs 54 are cut away to form the two semi-circular grooves or slots 17 which thus serve as bearings for the pivots 16. The ribs 41 of the hasp will thus lie close to the ribs 54 when in a locked position and the pivots 16 will be supported only on these ribs.

The hasp is held in either of its end positions by the spring 20, and this spring is preferably made U-shaped as shown in Fig. 4 with a projecting lip 60 which lies within the hollow of the projecting tongue 25 of the base plate. The tongue is bulged outwardly for the purpose of both strengthening the tongue and of providing the required space for the end of the spring. The lip 60 is held in position by the flanged walls of the tongue 25 so that the spring will not move at that point. The spring rests on a portion 63 of the uncut part of the shell, and it is of such a size that it lies snugly between the ribs 54 with its U-shaped portion against the prong 23; hence the support 63, the prong 23, the ribs 54 and the walls of the tongue 25 hold the spring in its proper position. After the spring has been dropped into place, the lugs 62 projecting as a continuation of the flange 26 of the shell are bent down over the adjacent portions of the spring and thus serve to hold the spring tightly in position. The cam or lip 18 of the locking hasp is of such size and arrangement that the spring will hold the hasp securely in either a locked or a wide open position. Any intermediate position of the locking hasp causes the cam 18 to bend the spring downwardly and thus impart a reactant force against movement of the hasp.

The pivots 16 of the hasp and all of the operating parts are hidden inside of the shell and there are no bearings visible from the outside. The outer faces of the shell and the closed hasp lie in almost the same plane or are streamlined to produce a pleasing effect. This results from having the hasps sunk into the shell when in a closed position as is provided by the space between the ribs 54.

It will now be appreciated that the various parts may be suitably modified as required by one skilled in the art, within the knowledge imparted by the above disclosure. For example, as shown in Figs. 6 and 7, the shell and the catch may be secured to the suit-case by means of rivets 70 inserted through countersunk openings 71 and 72 punched in the shell and catch tops. In this construction, a further lug 74 (Fig. 7) is cut out and bent up to a position at right angles to the plate 63 forming the adjacent portion of the shell and the top edge of this lug 74 lies in the same plane with the two side lugs 54 and the flange walls of the shell. The edges of these various parts contact with the surface of the suitcase and thus give an added support to the shell. The lug 74 serves ilke the prong 23 of Fig. 1 for holding the spring in position. A rivet may be passed through the hole in the rear of the lug 74 and thus further aid in holding the shell in position. The other parts of this locking device may be as shown in the other figures and described above. The base 63 is raised above the under edges of the shell and serves on one side to support the spring 20 and on the other side to engage the side flanges 41 of the hasp in a closed position.

It will now be appreciated that the parts may be readily assembled by first dropping the hasp into position through the central opening of the shell which is just wider than the hasp. The aligned pivot posts 16 will fall into position in the semi-circular bottoms of the slots 17 forming their bearings. The spring 20 it put into place and the prongs 62 are bent over to secure the spring in its location. The parts are so mounted on the two movable portions of the suit-case or other suitable receptacle that the prong 25 of the shell 10 will fit into the slotted opening 27 of the catch and beneath the locking lug 14 and thus cause the portions 32 and 34 of the hasp and lug to be brought into locking engagement. Once the hasp 12 and spring have been put into position and the shell 10 mounted on a suitcase, the hasp cannot be thereafter removed even if the spring 20 should break. Neither the hasp nor the spring can be moved laterally because of the retaining side walls 54 engaging their sides. Lateral movement of the two parts of the suit-case is prevented by this double locking feature comprising both the prong 25 and the hasp 12 engaging the under and upper parts of the locking lug 14. It is to be noted that the shell 10 and the associated hasp are ordinarily located on the part of the suit-case which carries the handle, hence any upward pull of the handle cannot cause disengagement of the parts since the tongue 25 merely holds more tightly against the under side of the catch lug 14. Also, any lateral twisting of the case because of an uneven balance while being carried is taken up by the walls 54, the tongue 25 and the associated parts and cannot free the hasp from the catch. The pivots 16 are supported solely by the slotted bearings 17 of the vertical walls 54, and this obviates the necessity for pressing the shell to provide special bearing shapes to carry those pivots. That is, the shell

is smooth surfaced over the pivots and presents a pleasing effect. Many other advantages will be apparent in this construction to one who is skilled in the art.

It will also be appreciated that numerous modifications in this structure may be made and that the drawing and the above description are to be interpreted as illustrating the general principles of this invention and the preferred embodiments thereof and not as limitations on the invention except as are defined by the claims appended hereto.

I claim:

1. A fastening device comprising a spring pressed hasp and an associated catch, a pressed metal cup shaped shell having a peripheral flange and spaced walls whose edges lie substantially in a plane, means for pivotally mounting the hasp on the shell between said walls, a substantially U-shaped spring having spaced arms which is mounted between the walls and engages the hasp to hold it in its end positions and a fastening device secured to the shell which passes between the arms of the spring and serves to secure the shell to a suit-case with said edges engaging the same.

2. A fastening device comprising a hasp and an associated catch, a substantially cup shaped shell having a forwardly projecting hollow tongue providing a space on its under side, the catch having a locking lug for engaging the hasp and an opening therebeneath for insertion of the tongue, said shell having a smooth top face and a central opening, substantially vertical walls defining the sides of the opening which have pivot bearing slots therein, the hasp having aligned pivot posts engaging said bearings which are concealed within the shell, and a spring supported on the shell between said walls having one end engaging the under side of the hasp and the other end projecting into the space beneath said tongue which holds the hasp in an open or locked position, said hasp and tongue engaging the top and bottom surfaces of the lug when the fastener is locked.

3. A fastening device comprising a cup shaped hasp and an associated catch, a pressed metal shell providing two spaced top faces which bend inwardly and form vertical walls defining the sides of a central recess within which the hasp is mounted, pivot bearings on the shell walls supporting the hasp, said catch being formed of pressed metal having a projecting lug shaped for lockingly engaging said hasp and providing an open ended recess therebeneath, and a prong on the shell insertable into said recess and engaging the under side of the lug which serves to align the hasp and the locking lug for engagement and to prevent disengagement of the parts when the hasp is in a locking position.

4. A fastening device comprising a hasp and an associated catch lug, a pressed metal shell having spaced top faces bending at their inner and outer edges to form peripheral flanges and spaced vertical walls, the latter defining the sides of a central opening for the hasp and having aligned bearing slots therein, said hasp being a pressed metal body having a top wall bent to form peripheral flanges shaped to interfit with said lug, aligned pivot posts projecting laterally from the hasp, the hasp being so shaped that it may be inserted through said opening and the pivot posts enter the bearing slots, and a spring secured to the under side of the shell and projecting across said opening which holds the hasp in an open or closed position, said pivot posts being concealed by the top walls of the shell and the hasp flanges being held against lateral movement by said vertical walls.

5. A fastening device for a suit case comprising a projecting catch lug mounted on the suit case, a shell formed of a single sheet of pressed metal shaped to provide inwardly projecting outer flanges engageable with the suit case and two spaced top face portions which bend inwardly and provide spaced vertical walls defining a recess for a hasp, said walls having aligned pivot bearings, a hasp formed of pressed metal shaped to provide a top and inwardly turned flanges arranged to interlock with said lug, the hasp flanges being movable between and positioned by said spaced vertical walls of the shell when engaging the catch, aligned pivot posts on the hasp pivotally mounted on said bearings, and a spring mounted on the under side of the shell which engages the hasp and serves to hold it in position.

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