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3,391,553

CLOSURE DEVICE FOR TRUNKS, SUITCASES AND THE LIKE

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3 Sheets-Sheet 1

FIG. 1

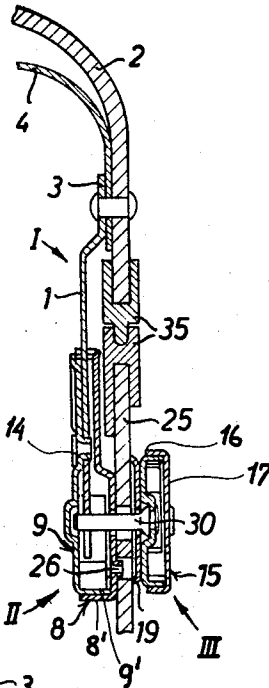


FIG. 3

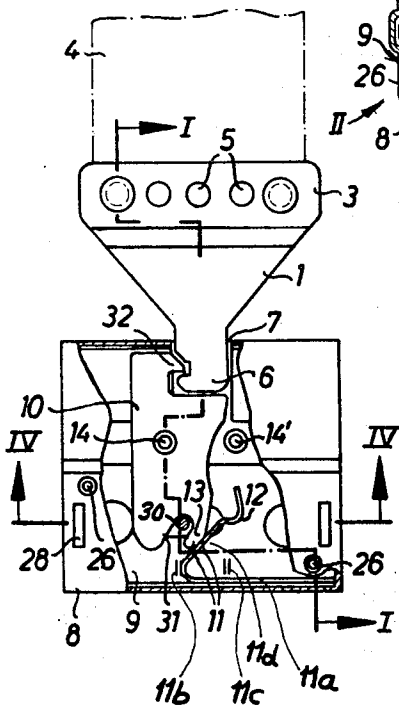
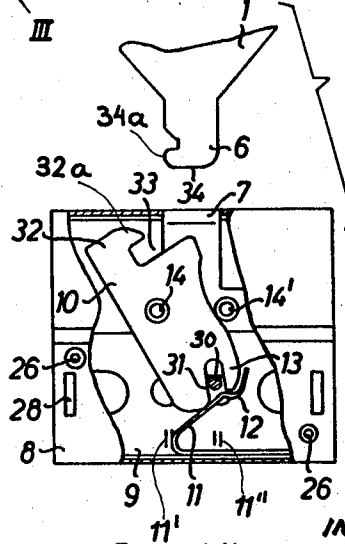


FIG. 2



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FIG. 4

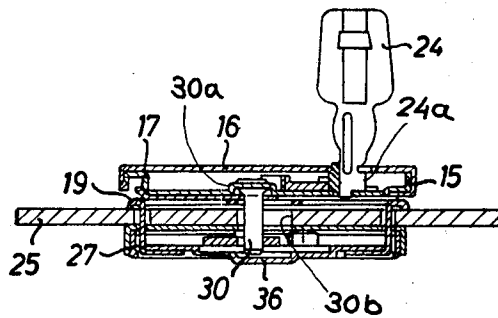
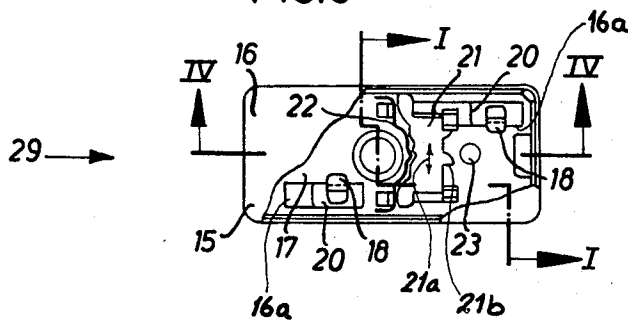


FIG. 5



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FIG. 6

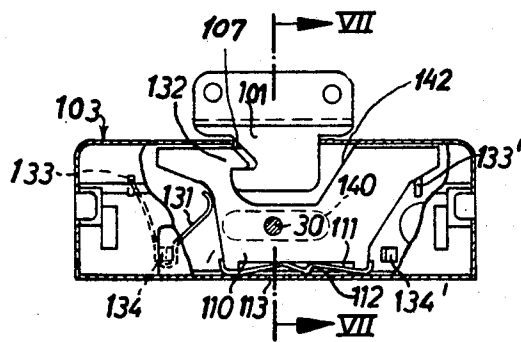


FIG. 7

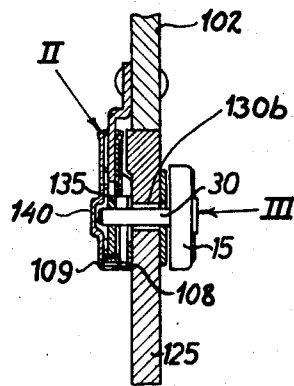
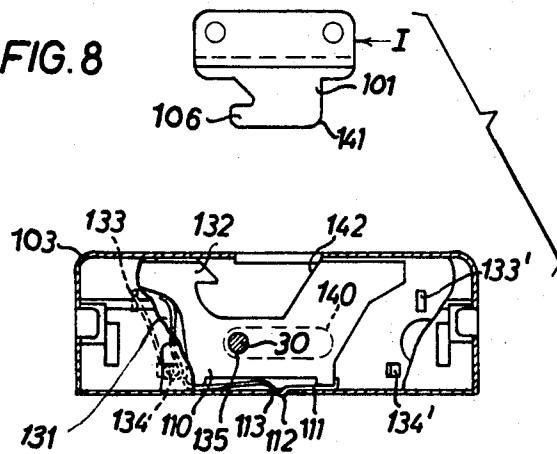


FIG. 8



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CLOSURE DEVICE FOR TRUNKS, SUITCASES AND THE LIKE

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S 91,953; Jan. 20, 1965, S 95,083

15 Claims. (Cl. 70—70)

ABSTRACT OF THE DISCLOSURE

Closure for suitcases and the like, with a female part supported on one member and a co-operating male part supported on another member of a receptacle to be closed thereby, the female part including a housing on an inner surface of a wall of its supporting member and a mounting plate on an outer surface of that wall, the mounting plate carrying a manually operable slider from which a pin extends through a slot in the wall into engagement with a latch bolt swingably or slidably held in the housing for co-operating with a tongue on the associated male part.

My present invention relates to closures for trunks and other rigid-frame containers, especially portmanteaus, valises, briefcases, suitcases, traveling bags, and like receptacles having a cover member mounted upon a support member and adapted to be latched thereto via the closure device.

More particularly, the present invention relates to receptacles of the character described in which the so-called "upper" and "lower" parts of the receptacle are formed with frame members providing structural support and carrying the separable portions of the closure device.

Closure devices for trunks, suitcases and other receptacles have been provided heretofore with separable parts, one carried by the upper or cover member and the other by the lower support member. In general, the latching portion of the closure device is provided with a key-operated and manually controllable mechanism engageable with a tongue or the like constituting the other part of the device. Since such closure devices have, for the most part, been mounted in or on the stiffening frames of the receptacles, it has been the practice to provide various sizes and configurations of the closure devices to accommodate the widely varying dimensions and configurations of the various frames. In some cases, however, it was possible to recess the frames at the receptacle edges, which are brought together upon closure of the unit, to receive the separable portions of the closure device. Again, this modification of the receptacle structure must take into consideration the various dimensions and configurations of the frames as well as the different dimensions of the closure devices compensating for the frame configurations. Care must be taken to adjust the positions of the closure devices, within the recesses, to that required for proper latching of the device.

A further disadvantage of conventional closure devices resides in the fact that at least two such devices are commonly employed at spaced-apart locations along the parting edges at which the cover separates from the remainder of the receptacle, one of these devices being openable in a right-hand direction while the other is opened in a left-hand direction. In general, the parts for the left and right closure devices are separately produced and assembled without the possibility of interchange. This, of course, increases the cost of the closures to a considerable extent, while also necessitating a substantially larger inventory of parts for assembly of the closure devices than would

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be required if the parts for the left and right closure devices were interchangeable.

It is, therefore, an important object of the present invention to provide a closure for receptacles of the character described, and especially receptacles provided with reinforcing frames along the cover and/or the lower receptacle member at their separable parting edges, which is suitable for use with receptacle structures and configurations of different types and with different dimensions without complicated mounting procedures.

A further object of this invention is to provide a closure which can be used for right- or left-hand operation without difficulty and wherein the closure components can be employed interchangeably for left and right closure devices.

A more specific object of this invention is to provide a closure for a receptacle of the character described which can be mounted upon the receptacle parts without recessing of any stiffening frames to accommodate separable parts of the closure device.

Still another object of this invention is to provide an improved closure for trunks, portmanteaus, valises, suitcases, and the like which is of relatively simple manufacture, has relatively few parts, and is suitable for substantially universal use in containers of this type.

These objects and others which will become apparent hereinafter are attained, in accordance with the present invention, by providing a closure device for a trunk, suitcase, valise or like receptacle provided with support frames in the region of the parting edges of the upper and lower receptacle members, which comprises essentially a latching mechanism consisting essentially of three components: a first component of the separable closure is constituted by a tongue member mounted upon the upper receptacle part and projecting in the direction of the second component which forms a housing having an opening adapted to receive the tongue. Within this housing, I provide a shiftable latching bolt having a hook-shaped extremity engageable with the tongue in one operative position and withdrawn from the path thereof in a second operative position in which the tongue is released for opening of the receptacle; it is an important feature of the present invention that this latching member or bolt co-operates with spring means, remote from its hook-shaped extremity, forming a detent for releasably retaining the latching bolt in at least one of the aforementioned operative positions. These components of the latching assembly are, in accordance with this invention, disposed along the interior of the receptacle behind the frames, whereas the third component of the mechanism is an actuating member disposed externally of the receptacle and having a pin extending through a receptacle wall into the interior and into engagement with the latching bolt for shifting same between the operative positions of this bolt. The actuating member of the latch assembly is, advantageously, a slide provided with lock means with which a key co-operates to release the slide for actuating the latching bolt. The slide is provided with a pin traversing a wall of the receptacle and extending into engagement with the latching bolt for actuating same upon a longitudinal displacement of the actuating slide.

According to one aspect of the present invention, the latching bolt is swingably mounted within the housing of the second component and is provided with a formation (e.g., a slot) receiving the pin of the slide. In this arrangement of the device, the spring detent means can include a leaf spring provided with a hook-shaped portion engaging the swingable bolt for releasably retaining that end in one of the aforementioned operative positions, e.g., the "open" position of the bolt. The leaf spring can, moreover, bear upon the bolt, when the latter is disengaged from the hook-shaped portion of the spring means,

for urging the bolt into the "closed" position of the latching device.

According to still another feature of this invention, the latching bolt is provided with a camming shoulder engageable with the tongue of the cover member and displaceable upon shifting of the slide to cam the latter upwardly upon displacement of the slide and the latching bolt from its closed position to its open position. This is especially advantageous in arrangements wherein the cover is flush with the remainder of the receptacle or tightly fitted to the latter, since the shoulder can thus elevate the cover slightly to permit easy lifting thereof. Moreover, the spring detent means of the present invention is so arranged that the opening movement of the slider and the latching bolt is facilitated whereas the closing movement thereof is resisted. Opening of the closure requires, therefore, relatively little pressure upon the slider whereas the closing movement of the latch bolt must overcome a substantial resistance. This arrangement facilitates operation of the latch for opening the receptacle by the user, while preventing inadvertent relocking of the device when, for example, the cover is lowered without the intent of latching the closure system. The tongue of the cover member is thus prevented from entering the housing of the lower member so that the latching bolt serves to retain the cover member in a slightly elevated position enabling lifting of the receptacle cover without operation of the latch. When, however, the tongue is forced into the housing, the resistance of the spring detent means is overcome and the latching bolt re-engages this tongue. To this end, the detent spring can be provided with an inclined portion terminating in an indexing notch or other formation co-operating with the housing or the latching bolt as will be described in greater detail hereinafter.

To enable the closure device to be employed for both right and left-hand closures, the housing is advantageously provided with a pair of symmetrically disposed guide formations (e.g., pivot pins) co-operating with the latching bolt, respectively, when the latter is disposed in one of its reversible orientations within the housing for left- or right-hand operation. Thus, when the latching bolt is swingably mounted within the housing, it can be disposed upon one of the pivots for swinging movement in one sense during operation of the slider to "open" the latch, while it is positioned upon the other pivot for swinging movement in the opposite sense for latch-opening operation when the closure is of the other type. Advantageously, the latching bolt as well as the indexing spring are reversible and the housing is provided with symmetrical mounting means for the indexing spring to enable the latter to be disposed in either a right- or a left-hand operative position. The slider pin is preferably received in a boss integrally formed in one of the wall portions of the slider to enable the pin to be shifted transversely to the slider movement and perpendicularly to the wall of the receptacle through which it passes to accommodate various thicknesses of stiffening frames and wall constructions. This arrangement permits the effective lengthening or shortening of the pin which advantageously passes through the latching bolt. Moreover, the tongue of the cover member of the receptacle, the parts of the housing, the latching bolt and the parts of the slider are all preferably constituted of metal stampings and of sheet metal so formed that, by their simple reversal, a closure for the left-hand side of a receptacle can be employed for the right-hand side thereof as well. This arrangement permits the closures to be shifted in opposite directions during the corresponding operations of the latch bolt as is the usual case. The reversible arrangement of similar parts permits a substantial simplification of the manufacture, mounting and positioning of the closure devices.

It is, moreover, a further feature of the present invention that the outer wall of the receptacle is provided with a base plate upon which the slider is shiftably mounted.

The slider is, advantageously, coextensive with this base plate, at least in the normal or unactuated position of the slider, or is larger than the base plate so as to completely cover it in this normal position. Thus only the outer slider parts, e.g., the outer cap of the slider, need be composed of polished and relatively high-value electroplated metal. All other parts of the slider and of the closure device are not visible and can be treated by mass galvanization in an economical manner and without polishing. When the housing and the slider are mounted upon wall portions of the receptacle below the frame along the parting edges, the housing portion adjacent the wall is laterally offset therefrom to clear the frame member, the tongue or upper closure member being similarly offset to clear the upper frame.

According to another aspect of the present invention, a closure device with relatively small thickness can be provided when the latching bolt is linearly shiftable within the housing and is provided with a bore into which the pin extending through the wall of the receptacle from the slider is received. Because of the shiftability of the latching bolt, by contrast with a swingable bolt, relatively flat slider means can be provided on the walls of the housing, whereas pivots and the like are avoided so that the entire housing can be of relatively low height. In both cases, however, the indexing spring advantageously lies in the plane of the bolt and, in the case of a slidable bolt, it is disposed along the bottom edge of the housing and of the bolt; in this construction, the leaf spring can be provided with a projection adapted to engage releasably in an aperture formed in the bottom wall of this housing. Again, the indexing spring is of such configuration that the shifting movement of the latching bolt from its closed position to its open position is relatively simple and requires little force, whereas the shifting movement of this bolt from the "open" position to the "closed" position requires considerable force.

The above and other objects, features and advantages of the present invention will become more readily apparent from the following description, reference being made to the accompanying drawing in which:

FIG. 1 is a vertical cross-sectional view through a three-component latching mechanism of a closure according to the present invention, the cross-sectional view being taken generally along the lines I—I of FIGS. 3 and 5;

FIG. 2 is an elevational view of the latch assembly, partly broken away to show the swingable latching bolt and the indexing spring co-operating therewith;

FIG. 3 is a view similar to FIG. 2, showing the mechanism in a "closed" position;

FIG. 4 is a cross-sectional view taken generally along a horizontal plane through the device of FIGS. 1-3 as represented by the lines IV—IV of FIGS. 3 and 5;

FIG. 5 is an elevational view of the slider member of the closure device of FIGS. 1-4, parts being broken away to show the lock device and the retaining means for holding the slider onto its base plate;

FIG. 6 is a longitudinal cross-sectional view through the housing of another embodiment of the closure device of the present invention;

FIG. 7 is a cross-sectional view taken generally along the line VII—VII of FIG. 6 and

FIG. 8 is a view similar to that of FIG. 2 of the embodiment of FIGS. 6 and 7.

The closure assembly of FIGS. 1-5 generally comprises three components I, II and III (FIG. 1) whose structural details will be described in greater detail hereinafter. The first component I of the latching assembly consists of an integral (i.e., one-piece) upper latch member or tongue 1 which is riveted to the cover 2 of the trunk or some other similar receptacle. The rivet flange 3 of the tongue 1 simultaneously serves as a riveting plate for the lining, strengthening ribs, straps 4 or the like which is sandwiched between the tongue 1 and the cover 2. The riveting flange 3 of tongue 1 is provided with a plurality of longitudinally

spaced bores 5 which enable various widths of strap 4 to be fixed to the cover 2.

The upper element or tongue 1 of the closure is aligned with and can extend into an opening 7 formed in the housing portion 8, 9 of the closure device. The housing portion 8, 9 constitutes the second component II of the mechanism and encloses a swingable latching bolt 10 mounted upon a pin-like formation 14 integral with the innermost housing member 9 and stamped therefrom during the stamping of this member. The housing is defined by the two sheet-metal stampings 8 and 9 which interfit to define between them a compartment receiving the latching bolt 10. The latter can be mounted either upon the pin 14 or upon a similar and symmetrically positioned (with respect to opening 7) pin-like formation 14'; formation 14' is used when the latch bolt 10 is reversed and is to swing in a counterclockwise sense for latching engagement with the hook-shaped extremity 6 of tongue 1. In the arrangement of the device illustrated in FIGS. 2 and 3, however, the latching bolt 10 swings in the clockwise sense to engage the tongue 1 and in the counterclockwise sense to release the latter.

The latching bolt 10 has a hook-shaped portion 32 adapted to engage the hook-shaped portion 6 of tongue 1 when the bolt is in its upright position (FIG. 3) and cooperates with a detent leaf spring 11 as will be described in greater detail below. The leaf spring 11 has a straight portion 11a lying along the bottom edge formed by the flanges 8' and 9' of the sheet-metal housing members 8 and 9 and is held in place between the right-hand wall of this housing (FIG. 3) and a projection 11b thereof. A similar projection 11c is disposed symmetrically with respect to the positioning formation 11b and the opening 7 to permit reversal of the spring 11 in such manner that it is held between the left-hand wall of the housing and the abutment 11c. The indexing spring 11 comprises an inclined ramp portion 11d terminating at a bight 12 into which a projection 13 of bolt 10 can pass and by means of which the bolt can be retained in the "open" position of the device as illustrated in FIG. 2. The bolt 10 is rounded at the projection 13 which glides along the ramp portion 11d of the leaf spring to cam the latter downwardly as the bolt 10 is swung in the counterclockwise sense about its pivot 14. The spring 11 thus resists such swinging movement of the bolt 10 although with relatively little force because of the camming relationship of the inclined portion of the spring near the face end thereof and the rounded portion of the projection 13. When, however, the projection 13 is received within the bight 12 of the spring 11, it is retained and the spring 11 ceases to apply force to the bolt 10 tending to displace it in the clockwise sense. It will be seen from FIGS. 2 and 3 that the leaf spring 11 bears against the projection 13 with a force definable by a vector whose extension lies below the pivot 14. The projection 13 and the spring are, however, so dimensioned that, when the projection 13 engages the detent portion 12 of the spring, the spring force is applied along a normal to the surface which is aligned with the pivot axis and thus is in a dead-center position. The shapes of the detent portion 12 of the spring 11 and of projection 13 are so related that the clockwise movement (closing) of the bolt 10 from its position illustrated in FIG. 2 is strongly resisted. Thus, when the cover 2 of the trunk is lowered, the lower edge 34 of tongue 1 bears against the shoulder 33 without swinging the bolt 10 from its position illustrated in FIG. 2 unless considerable force in the downward direction is applied to the cover. This prevents undesired latching of the closure.

The reversibility of the sheet-metal housing parts, the indexing spring and the latching bolt, as described above, permits the closure device to be assembled for either left- or right-hand operation. Similarly, the actuating component III of the device is constructed in a manner enabling it to be assembled for right- or left-hand operation. The actuating component III comprises a slider 15 com-

posed of an inner sheet-metal shell 16 and an outer polished sheet-metal cap 17 interfitting therewith. The slider 15, connected with bolt 10 by a rigid link in the form of a pin 30, thus constitutes a housing shiftable along a base plate 19, normally concealed completely by the housing 16, 17 and affixed to the wall 25 of the lower receptacle member beneath the stiffening frames 35 at the parting edge of the receptacle. The base plate 19 is formed integrally with a plurality of lugs 18 punched out of the sheet metal of the base plate and overlying the inner shell member 16 while permitting sliding displacement of the latter whose recesses 16a clear the lugs 18 (FIG. 5). The lugs 18 constitute a fastening means engageable with the slider 15 from below but holding it against the base plate 19, while bent portions 20 pass through the apertures 16a to form stops for the slider movement. The slider 15 is provided with key-operated locking means for selectively permitting or preventing slider displacement, such locking means including a key-shiftable bolt 21 displaceable in the direction of arrow 21a (FIG. 5) and having formations 21b engageable with the projection 24a of the key 24. The bolt 21 is thus shiftable in a plane perpendicular to the pin 30 and to the direction of slider displacement. The slider is also formed with a guide 23 for the key 24 in the usual manner. A spring 22 forms a detent means for the bolt 21 to hold it either in one of its extreme positions or in an intermediate position depending upon the operation of key 24. This locking structure is conventional in the art and need not be described in greater detail here.

As will be evident from FIGS. 1 and 4, the latch component II is disposed along the inner wall of the trunk while the actuating component III is disposed externally thereof. Thus, the base plate 19 can be provided with pin-like formations 27, stamped, drawn or bent from the sheet metal of the base plate, which extend through the wall 25 of the trunk and through slits 28 of the housing 8, 9, these projections being bent within the housing to fix the base plate 19 and the housing 8, 9 in their desired relationship. Further pin-like formations 26, drawn from the sheet-metal housing member 8, pass through the wall of the trunk to prevent rotation of the closure structure relative thereto. The pin 30, which is received within a boss 30a of the slider 15 to permit adjustment of the effective length of this pin, extends through a slot 30b in the wall 25 and into a further slot 31 of the latching bolt 10 so that, upon linear shifting movement of the slider 15, the bolt 10 will be entrained to release the tongue 1.

The operation of the closure device of FIGS. 1-5 will now be described in detail. To open the latch, the key 24 is inserted into its guide 23 and rotated to release the bolt 21. Thereafter, the user shifts the slider 15 with his thumb in the direction of arrow 29 (FIG. 5) so that this slider is shifted along the base plate 19 and carries the pin 30, fixedly riveting thereto, along in this direction. The pin 30 entrains the lower portion of bolt 10 and swings the latter to the right so that this bolt rotates in the counterclockwise direction from its position illustrated in FIG. 3 whereby the hook portion 32 is displaced to the left (FIGS. 2 and 3). The shoulder 33 below the hook 32 cams the tongue 1 upwardly to elevate the cover slightly and permit the user to open it with ease. In the open position of the device (FIG. 2), the indexing spring 11 retains the bolt 10 in its off-normal position in which the holder 23 is disposed in the path of edge 34 of the tongue 1. When the cover 2 is slammed, the tongue 1 engages the holder 33 to swing the bolt 10 in the clockwise direction and relatch it. The holder 23 is thus displaced to the left (FIG. 5) and the original latching condition is established. The bolt 21 can then be shifted by the key to relock the unit. The hooked portion 6 of tongue 1 is formed with a camming surface 34a engageable with a complementary surface 32a in the path of the tongue when the bolt 10 is in its upright position. Thus, even

if the slider 15 is forced to the left (FIG. 5) while the cover is elevated, the tongue 1 can cam the hook 32 slightly aside during insertion of the tongue through an opening 7. As can be seen from FIG. 1, both the tongue 1 and the housing 8, 9 are offset from the wall of the receptacle to clear the reinforcing frames 35 provided along the edges of the trunk in normal commercial practice.

In the embodiment of FIGS. 6-8, the slider 15 of the actuating component III is identical with the slider described in connection with the closure device of FIGS. 1-5. The housing 103 is again constituted of a pair of sheet-metal stampings 108 and 109 which interfit to form a compartment for the linearly shiftable bolt 110 which, in FIG. 6, is shown in its latching position. The bolt 110 entrains a leaf spring 111 whose downwardly bent portion 112 rides along the bottom wall of the housing 108, 109 and can engage in an aperture 113 of the housing member to index the bolt 110 in its "open" position (FIG. 8). The configurations of the indexing formation 112 of the spring 111 and the aperture 113 are so arranged that the "opening" movement of the bolt 110 (to the left in FIG. 6) is relatively easy and involves little resistance while the closing movement of the bolt involves a substantially increased resistance. A restoring spring 131 bears upon one end of the bolt 110 and is held in place by a pair of formations 133, 134 engaged by the spring 131. A symmetrical pair of similar formations 133', 134' are disposed on the opposite side of the housing 103 with respect to the opening 107 thereof. This additional pair of formations permits the spring 131 to be reversed and disposed upon the opposite side of the assembly with concurrent reversal of the bolt 110 to permit the closure device of FIGS. 6 and 8 to be employed for both right-hand and left-hand operation. The bolt 110 is provided with a bore 135 into which the pin 30 of slider 15 extends through a slot 130b in the container wall 125, to permit an accurate guiding of the pin 30, the housing wall 109 is formed with a channel 140.

The device of FIGS. 6-8 operates in the following manner. Upon release of the lock of slider 15, the latter can be shifted to the left (FIGS. 6 and 8) along its guide plate 19 which is fastened to the housing 103 in a manner similar to that employed to secure the component II and III in fixed relationship for the device of FIGS. 1-5. The pin 30 entrains the bolt 110 to the left against the force of spring 131 until the hooked portion 132 of this bolt releases the hooked end 106 of the tongue 101 mounted upon the cover 102 of the trunk. The detent spring 111, 112 engages the aperture 113 to retain the bolt 110 in its left-hand position (FIG. 8) until the cover is slammed to bring the camming surfaces 141 and 142 of the tongue 101 and the bolt 110 into engagement. The bolt 110 is thereby shifted to the right (FIGS. 6 and 8) until the hooked portions reengage, the slider 15 being entrained accordingly. It will be understood that the movement of the bolt 110 to the left when the latch is closed (FIG. 6) will cause the ramp 142 to engage surface 141 and cam the cover upwardly. After movement of bolt 110 to the right into its closed position, it is held there by the spring 131. Here as well the housing and tongue are offset to clear the reinforced portions of the trunk along its parting edge.

While the present invention has been described primarily with reference to frame-reinforced trunks and the like, it will be understood that it is equally applicable to receptacles of this nature omitting such reinforcing means; these modifications and other variations within the ability of one skilled in the art are considered to be within the spirit and scope of the present invention as defined by the appended claims.

I claim:

1. A closure device for a storage receptacle having a pair of confronting members, said device comprising a housing mounted upon an inner surface of a wall of one

of said members and open in the direction of the other member; a tongue on said other member extending in the direction of said one of said members for insertion into said housing upon closing of the receptacle; a latching bolt movable in said housing into engagement with said tongue upon its insertion into said housing for releasably engaging said tongue; a slider mounted upon the outer surface of said wall of said one of said members; a pin extending from said slider through said wall into engagement with said bolt for shifting the latter to release said tongue, said wall having an aperture laterally shiftablely accommodating said pin, said bolt being provided with a cutout receiving said pin; and mounting means for said slider separated by said wall from said housing.

2. A closure device as defined in claim 1 wherein said bolt is provided with a hooked extremity in the region of the opening of said housing for engagement with said tongue, said device further comprising resilient detent means for releasably retaining said bolt in an open position thereof wherein said tongue is released.

3. A closure device as defined in claim 2 wherein said bolt is swingably mounted in said housing for rotation about a fulcrum spaced from said hooked extremity.

4. A closure device as defined in claim 3 wherein said housing is formed with a pair of pivotal mountings for said bolt symmetrically disposed with respect to the housing opening, said bolt being selectively engageable with either of said mountings for operation of the closure device in either of two directions.

5. A closure device as defined in claim 3 wherein said cutout is a slot remote from said hooked extremity and offset from said fulcrum, said pin passing through said slot transversely to said bolt.

6. A closure device as defined in claim 2 wherein said bolt is provided with a camming surface adjacent said hooked extremity adapted to displace said tongue in a direction away from said housing upon the shifting of said bolt from its closed position to its open position, thereby partially opening the receptacle.

7. A closure device as defined in claim 1 wherein said mounting means includes; a base plate underlying said slider and affixed to said wall on said outer surface thereof, said slider completely concealing said base plate at least in a normal position of said slider corresponding to the closed position of said bolt.

8. A closure device as defined in claim 7 wherein said base plate is provided with lugs engaging said slider with freedom of relative displacement and holding said slider against said base plate.

9. A closure device as defined in claim 8 wherein said slider is provided with a key-operated lock mechanism for preventing displacement of said slider along said base plate.

10. In a storage receptacle having a pair of confronting members, the combination therewith of a closure device for locking said members to each other, said device comprising a female part supported on one of said members and a male part supported on the other of said members, said one of said members having a wall provided with an aperture; said female part including first mounting means on the inner surface of said wall, second mounting means on the outer surface of said wall, a manually displaceable slider on said second mounting means, movable latch means on said first mounting means engageable with said male part, and a rigid link laterally shiftablely extending from said slider through said aperture into contact with said latch means for entraining the latter upon displacement of said slider.

11. The combination defined in claim 10 wherein said link is a pin fixed to said slider and retractably engaging said latch means.

12. The combination defined in claim 11 wherein said aperture is a guide slot for said pin extending parallel to the direction of movement of said slider.

13. The combination defined in claim 11 wherein said

latch means comprises a bolt swingably mounted on said first mounting means for rotation about a pivot, said bolt being provided on one side of said pivot with a hook adapted to engage said male part and on the other side of said pivot with a slot engaged by said pin.

14. The combination defined in claim 13 wherein said bolt has a projection bounding said slot, the latter being outwardly open, further comprising a leaf spring on said first mounting means provided with a formation arranged to enter said slot in a disengaged position of said bolt to index same in said position, said spring bearing upon an outer edge of said projection in an alternate position of said bolt for releasably holding same engaged with said male part.

15. A closure device having a male part and a female part for mounting upon confronting members of a receptacle to be closed thereby, said female part comprising a support, a swingable latch bolt pivotally secured to said housing, said bolt having an open-ended slot bounded by a projection and a hook engageable with said male part, operating means for swinging said bolt about its pivotal axis between an engaged and a disengaged position, said operating means including a movable pin engaging in said slot, and detent means for releasably retaining said bolt in either of said positions, said detent means including a

leaf spring on said support provided with a formation arranged to enter said slot in one of said positions, said spring having a free end bearing upon an outer edge of said projection in the other of said positions.

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