Aug. 15, 1939 J. J. FANNING 2,169,875

LUGGAGE LATCH DEVICE

Filed Nov. 13, 1937

FIG. 1.

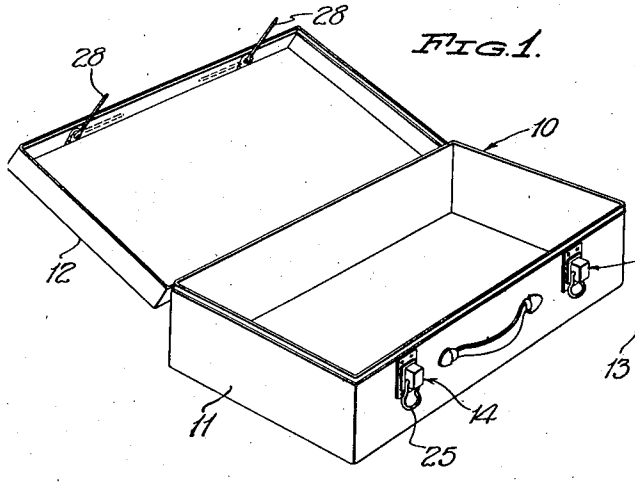


FIG. 2.

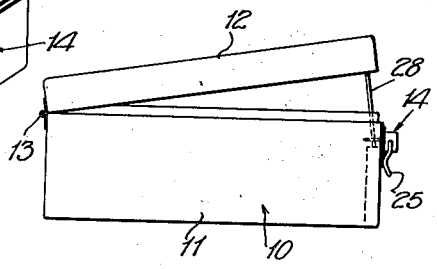


FIG. 4.

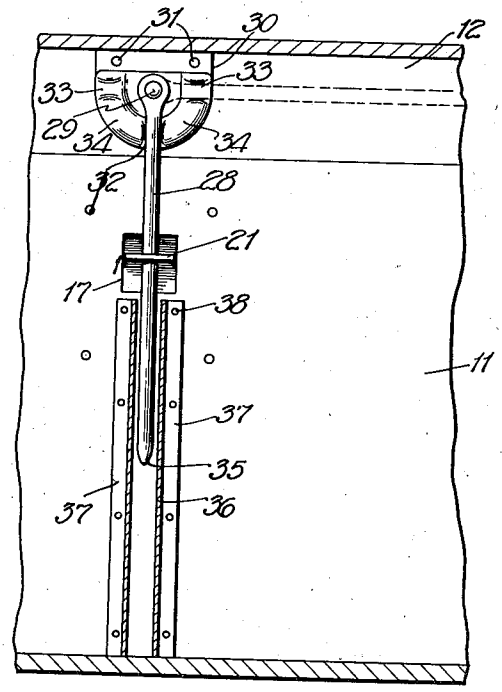


FIG. 3.

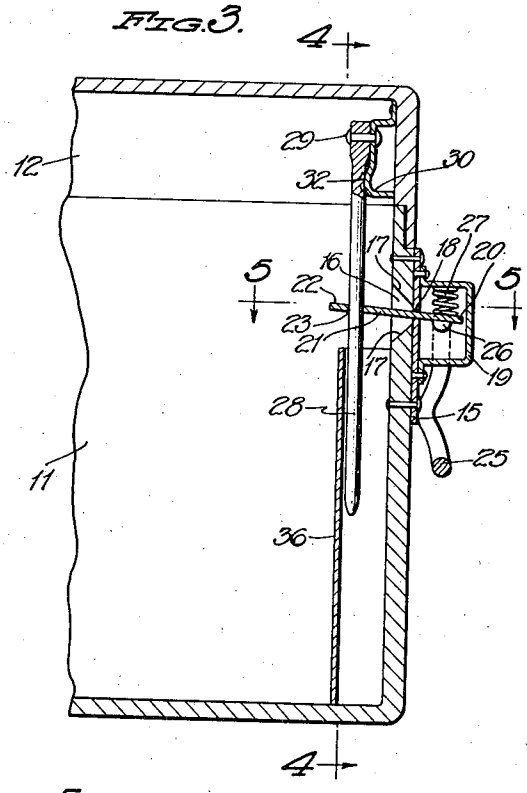
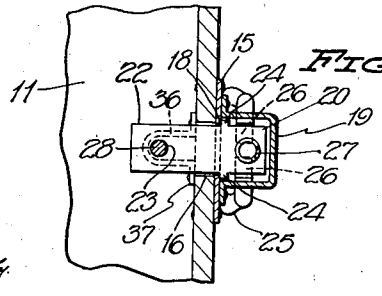


FIG. 5.



WITNESS:

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Patented Aug. 15, 1939 2,169,875

UNITED STATES PATENT OFFICE

2,169,875

LUGGAGE LATCH DEVICE

John J. Fanning, Brooklyn, N. Y.

Application November 13, 1937, Serial No. 174,279

4 Claims. (Cl. 292—306)

This invention relates to improvements in latch devices and more specifically to a friction latch device for use upon suit cases, trunks, and other like articles of luggage.

One of the features of the invention resides in a latch device for securely holding the two sections of a suit case or other like article of luggage in closed position regardless of the outward pressure exerted upon the sections caused by overpacking of the suitcase.

Another feature of the invention is to provide a latch device which will enable the two hinged sections of a suitcase to be brought into locked relation prior to the full closing of the sections and which sections may be gradually forced to fully closed latch position against any outward restraining pressure which may be caused by the overpacking of the suitcase.

A further feature is the provision of a latch device for suitcases which functions to initially latch the two hinged sections of a suitcase preparatory to the full closing of the same, and subsequently functions to guide the hinged sections to fully alined closed position to prevent relative shifting of the sections which relieves the hinge connection of undue strain.

A still further feature of the invention is to provide a friction latch device which is simple and inexpensive of construction, positive in its latching function, easy to manipulate to unlatching position, and which does not detract from the appearance of an article of luggage when in use thereon.

With these and other objects in view, the invention relates in the novel features of construction, combination and arrangement of parts, the essential features of which are hereinafter fully described in the specification, are particularly pointed out in the appended claims, and are illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of a suitcase or traveling bag in open position with my improved latch device in use thereon, the latch bolt being shown in inoperative position in dotted lines, and in operative position in full lines.

Figure 2 is an end elevational view of a suitcase with the cover partially closed and the latch device in its initial latching position.

Figure 3 is an enlarged fragmentary vertical sectional view illustrating the sections of the suitcase in fully closed position.

Figure 4 is a fragmentary vertical sectional view on the line 4—4 of Figure 3.

Figure 5 is a detail horizontal sectional view on the line 5—5 of Figure 3.

Referring to the drawing by reference characters, the numeral 10 designates a suitcase or other like article of luggage which includes a body section 11 and a cover section 12, the said sections being hingedly connected along one of their edges as at 13. Whereas two of my latch devices have been illustrated in Figure 1 upon the suitcase 10, a description of one will suffice for the other.

My improved latch device includes a keeper member designated in its entirety as at 14, and which is fixedly mounted upon the top wall of the body section 11 in a manner now to be explained. The keeper device 14 includes an outer face plate 15, riveted or otherwise secured to the top wall of the body section 11 and which plate overlies a slot 16 provided in the said wall and which slot has opposed outwardly converging walls 17 for a purpose to be presently appreciated. The plate 15 is also provided with a slot 18, the opposed longitudinal walls of which act as fulcrums for the latch plate to be presently described. Riveted or otherwise secured to the face plate 15 and extending outwardly therefrom is a box-like housing 19 which receives the tail end 20 of a friction latch plate 21, the head end of the said plate being designated 22 and extending within the body section 11. The head end 22 of the latch plate is provided with a bolt receiving opening 23. The latch plate 21 extends through the slots 16 and 18 and is prevented from becoming separated from the housing 19 by reason of the outwardly extending lugs 24—24 disposed at opposite sides of the latch plate and engaging the outer side of the face plate 15.

Pivotally supported by the housing 19 is an actuating lever 25, the same being of substantially U-shape with the terminal ends bent inwardly and journaled in opposite sides of the housing 19, the said terminal ends being semi-circular or cam shaped in cross section as at 26. The flat surfaces of the cam portions 26 act as stops or rests for the tail end 20 of the latch plate 21 and interposed between the tail end of the latch plate and the adjacent wall of the housing 19 is an expansion spring 27, which spring acts to impart a tilting or canting action to the latch plate 21, the canting movement being limited by the cam portions 26 of he lever 25. The lever 25 remains in the position shown in Figure 3 of the drawing at all times except when it is desired to impart a releasing movement to the latch plate 21, at which time the lever 25 is swung outwardly causing the cam portions 26 to act upon the tail end of the latch plate and correspondingly move the head end of the latch plate to releasing position.

Coacting with each of the keeper elements 14 is a latch bolt 28 which has its inner end pivoted at 29 to a bracket 30, the said bracket being fixedly attached to the top wall of the cover section 12, by rivets or other like fastening means 31. The bracket 30 is provided with bolt receiving seats 32 and 33—33, there being resilient segmental shaped surfaces 34 intermediate the seats

33 and 32 and over which the bolt 28 may be swung when it is desired to move the same to either an operative or inoperative position. When the bolt 28 is swung so as to seat upon the seat 32 as shown in full lines in Figure 4, the said bolt is in operative position to be received in the opening 23 of the latch plate 21, but when the bolt 28 is swung into either of the seats 33, the same is held parallel to the top wall of the cover section so as to be disposed in an out-of-the-way position. The free end of the bolt 28 is pointed or rounded as at 35 so as to more readily enter the opening 23 in the latch plate when these two parts are brought into operative engagement with each other.

Secured to the front wall of the body section 11 is a substantially U-shaped shield member 36, the same having flanges 37 which fit against the said wall and through which rivets or other like fastening elements 38 pass. The shield member 36 acts to prevent any obstruction such as articles packed in the body section 11 from coming into the path of the bolt 38 during a latching operation.

Assume that the suitcase 10 is in an open position as shown in Figure 1 of the drawing, and the cover 12 is swung to a position over the body section 11. Prior to the full closing of the cover section 12, the bolt 28 enters the opening 23 in the latch plate 21 as illustrated in Figure 2 of the drawing, and as the bolt enters the opening, the walls of the same become jammed and prevent any withdrawal of the bolt from the opening due to the angularity of the latch plate with respect to the axis of the bolt. The bolt 28 however may be freely pushed inward and during its gradual inward movement, the latch plate still acts to prevent withdrawal of the bolt. Thus it will be seen that if the body section 11 of the bag 10 is overpacked, the cover section 12 may be initially latched as shown in Figure 2, and subsequently forced to fully closed position as shown in Figure 3, and at which time the free end of the bolt enters the shielded space provided by the shield member 36. Assume that it is desired to open the cover section 12, whereupon an operator grasps the actuating lever 25 and pulls outwardly thereon to cause the cam portions 26 to move the latch plate 21 to a position substantially at a right angle to the axis of the bolt 28. When the latch plate 21 has been so moved, the cover section 12 may be opened, for the bolt 28 is free to slide through the opening 23. After actuating the lever 25 to released position and the swinging of the cover section 12 to open position the lever 25 may be returned to its original position to again permit the spring 27 to move the latch plate 21 to its latching position.

While I have shown and described what I consider to be the most practical embodiment of my invention, I wish it to be understood that such changes and alterations as come within the scope of the appended claims may be resorted to if desired.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. In combination, a suitcase or like article of luggage having a body section, and a cover section fixedly hinged to said body section, a latch device including a keeper member mounted on the body section comprising a fulcrumed latch plate extending inside of said body section and having a bolt receiving opening therein, a smooth latch bolt pivoted to the inside of said cover section, means for holding said bolt in either a folded non-operative out of the way position or in an operative alined position relative to said opening to cause said bolt to enter said opening on an arc as the cover section approaches its fully closed position relative to said body section, spring means acting upon said latch plate to cant the same to cause the walls of said opening to frictionally bind against said bolt to prevent outward movement thereof, and actuating means associated with said keeper member for tilting said latch plate to releasing position against the action of said spring means.

2. In combination, a suitcase or like article of luggage having a body section, and a cover section fixedly hinged to said body section, a latch device comprising a latch smooth bolt carried by said cover section, a housing mounted on the outside of said body section, a fulcrumed latch plate extending through a wall of said body section and having its head end disposed within said body section and its tail end disposed within said housing, the head end of said latch plate having a bolt receiving opening therein for receiving the free end of said bolt as the cover section nears the limit of its closing movement, a latch plate actuting release lever pivoted in said housing, and spring means acting upon said latch plate to cant the same to cause the tail end of the same to engage said release lever and the walls of the opening to bind against said bolt to effect a latching between said plate and bolt.

3. A latch device for luggage comprising in combination, a housing, a latch plate fulcrumed in one of the walls of said housing nd having a head end extending exteriorly thereof and a tail end extending interiorly thereof, an actuating lever pivoted upon said housing and having a cam portion disposed therein and disposed to one side of the tail end of said latch plate, a spring acting upon the tail end of said latch plate to normally urge the same against the cam portion of said actuating lever to effect a canting of said latch plate, the head end of said latch plate having an opening therein, and a latch bolt freely movable through said opening in one direction and held against movement in an opposite direction by a binding action between the walls of said opening and said latch bolt, said latch plate adapted to be tilted to bolt releasing position by the manual actuation of said actuating lever.

4. A latch device for luggage comprising in combination, a housing, a latch plate fulcrumed in one of the walls of said housing and having an outer head and extending exteriorly thereof and a tail end disposed interiorly thereof, a cam turnably mounted within said housing and disposed in the path of the tail end of said latch plate, a spring acting upon the tail end of said latch plate to normally urge the same against said cam to effect a canting of said latch plate, the head end of said latch plate having an opening therein, a latch bolt freely slidable through said opening in one direction and held against sliding movement in an opposite direction by a binding action between the walls of said opening and said latch bolt, and manipulating means connected to said cam and extending exteriorly of said housing for effecting the manual actuation of said cam to cause the tail end of said latch plate to move against the action of said spring to cause tilting of the latch plate in a direction to relieve the binding action between said latch bolt and the wells of said opening.

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