Nov. 6, 1934. A. LEVINE 1,979,560

BAG LOCK

Filed March 9, 1933

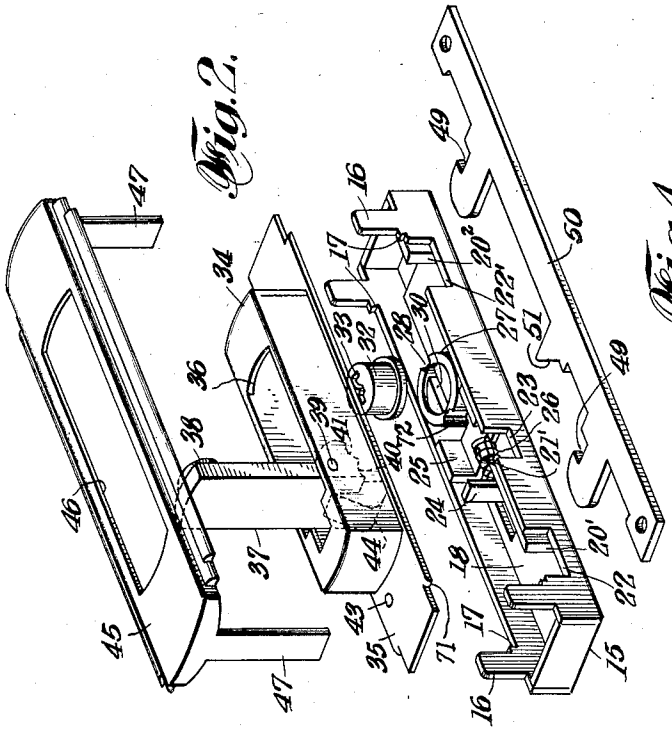


Fig. 2.

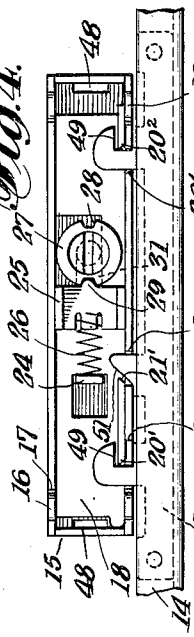


Fig. 4.

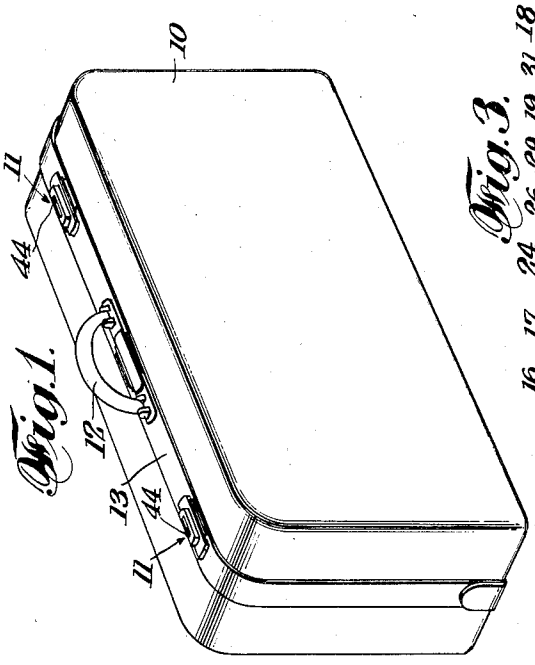


Fig. 1.

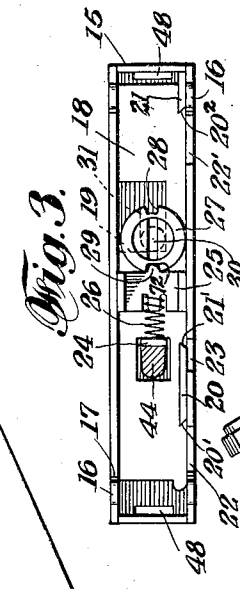


Fig. 3.

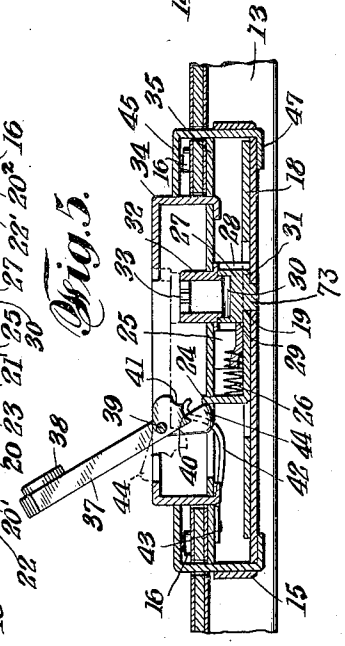


Fig. 5.

INVENTOR

ABRAHAM LEVINE

BY C. James Cottrell

ATTORNEY

Patented Nov. 6, 1934 1,979,560

UNITED STATES PATENT OFFICE

1,979,560

BAG LOCK

Abraham Levine, Elizabeth, N. J.

Application March 9, 1933, Serial No. 660,176

11 Claims. (Cl. 70—2)

This invention relates to latching and locking devices especially adapted for use on traveling bags, and the like.

Heretofore, the latching of suitcases and bags of the Gladstone type, and the like, has been somewhat inconvenient in that it has been necessary to hold the bag closed with one hand and manipulate the latch with the other hand. Also, it has been customary to provide means for locking the bag from surreptitious opening independently of the latching devices, thus increasing the cost of latching and locking hardware for bags.

It is, therefore, an object of this invention to provide a latching device for bags which is automatic in operation and requires no other manipulation than the bringing of the frame members of the two parts of a bag together.

A further object is the provision of a latching device for bags having associated therewith key operable means for locking the latched parts against surreptitious releasing.

A further object is the provision of a locking and latching device for bags concealed in a casing which protects the device from dust and injury while the bag is being handled.

A further object is the provision of an automatic bag latching device having associated therewith key operable locking means, said device being simple in structure and having relatively few parts, which enable it to be manufactured at a comparatively low cost.

These and other objects are attained by the novel construction, combination and arrangement of parts hereinafter described and shown in the accompanying drawing, constituting a material part of this disclosure, and in which:

Fig. 1 is a perspective view of a bag embodying my invention.

Fig. 2 is an exploded perspective view of my latching and locking device.

Fig. 3 is a plan view of the device with the cover removed showing the parts in an unlatched condition.

Fig. 4 is a similar plan view showing the parts when in a latching condition.

Fig. 5 is a sectional view of the latching and locking device attached to a bag frame member.

Referring to the drawing, in Fig. 1 is shown a bag 10, of the suitcase or Gladstone type, having a pair of hingedly connected frame members as is common in such bags, one of the frame members 13 having mounted thereon my latching device generally denoted by the numeral 11, the frame member also having attached thereto a handle 12. The other frame member 14, see Fig. 4 has attached thereto a catch carrying member 50.

Referring to Fig. 2, the latching device is shown to comprise a rectangular casing 15, having at each end a pair of upwardly projecting tangs 16 which are adapted to pass through apertures in the frame member 13, the tangs being bent over to securely hold the casing to the frame member. Adjacent the tangs 16 and substantially integral therewith are nibs 17, which are slightly inclined to engage a cooperating edge 71 of a cover plate 35 for the casing.

Slidably mounted on the bottom of the casing 15 is a plate 18 having a rectangular slot 19 and two spaced upstanding flanges 20 and 21, the flange 20 having beveled edges 20′ and 21′, while the flange 21 has a beveled edge 20^2. The beveled edges 20′ and 21′ respectively project into cut-out sections 22 and 23 in the adjacent side wall of the casing 15, while the bevel edge 20^2 projects into a similar cut-out section 22′ in the same side wall.

Struck up from the plate 18 is a lug 24 which bears against a coiled compression spring 26 attached to a saddle 25 slidably positioned on the plate 18, the saddle having a projection 29 normally resting in a notch 72 in a tumbler 27, which is cylindrical in shape and has also a diagonally disposed similar notch 28.

Projecting from the under side of the tumbler 27 is a cylindrical pin 73 which is rotatably positioned in an aperture in the bottom plate of the casing 15. The tumbler 27 is provided with a slot 30 to receive a key which passes through a cap 32 mounted on the tumbler, the cap having an irregular slot 33 therein so that only a key of a predetermined shape may be used. The under side of the tumbler has integral therewith a lug 31 for a purpose hereinafter explained.

Attached to the cover plate 35 is a casing 34 having a slot 36 in its upper wall. A lever 37 is pivotally mounted on the side walls of the casing 34 at 39, the portion of the lever below the pivot 39 having a pair of cusped recesses 40 and 41 adapted to engage the curved portion of a leaf spring 42 attached to the plate 35 at 43. The lever 37 also has a downwardly projecting portion 44 adapted to engage the lug 24 to move the plate 18 against the action of the spring 26. A cylindrical boss 38 at the end of the lever, see Fig. 2 is adapted to rest on the cap 32 to hold the lever in a horizontal position when the casing 34 is closed.

Positioned above the casing 34 is an escutcheon plate 45 having a slot 46 to accommodate the

casing 34, and a tongue 47 at each end thereof, the tongues 47 passing through slots 48 in the bottom plate of the casing 15 and bent over the underside of the bottom plate, as shown in Fig. 5, to securely hold the plate 45 in position, the plate in turn preventing unauthorized access to the tangs 16 so that the latching and locking device can not be removed without first unlocking it with the proper key.

The catch carrying member 50 consists of a flat plate which is attached to the bag frame member 14, see Figs. 4, 2, and has projecting therefrom a pair of spaced catches 49 and an inclined cam member 51.

In operation, when the lever 37 is in the position shown in Fig. 5, the leaf spring 42 engages the cusped recess 40 and the portion 44 of the lever bears against lug 24 to force plate 18 to the right, Fig. 5, which movement positions the beveled edges 20′ and 20^2 out of the cut-out portions 22, 22′ so that the catches 49 can pass freely into the casing 15. However, as the catches 49 enter the casing 15, the cam member 51 engages the beveled surface 21′ and pressure on the cam member 51 forces plate 18 to the left, see Fig. 5, against the force of the leaf spring 42 on the lever 37, and moves the flanges 20 and 21 in the same direction so that the beveled edges 20′ and 20^2 engage the catches 49 and hold the bag frame members 13 and 14 in a latched condition. At the same time the lever 37 is rotated so that the leaf spring 42 engages the recess 41 and the lever 37 is held in a substantially vertical position.

Obviously, to unlatch the frame members, it is only necessary to force the lever 37 to the position where the spring 42 engages recess 40, as shown in Fig. 5, which moves the plate 18 so that the catches 49 are free of the beveled surfaces 20′ and 20^2 and may be withdrawn.

When the frame members are latched and the lever 37 is in a vertical position with the spring 42 engaging recess 41, a key can be inserted through the slot 33 in the cap 32 to fit in the slot 30 in the tumbler 27 to rotate the latter to cause notch 28 to engage the lug 29 on the saddle 25. Rotation of the tumbler causes the lug 31 thereon to engage an edge of the slot 19 thus preventing movement of the plate 18, and consequently, preventing withdrawal of the catches 49 from engagement with the beveled edges 20′ and 20^2.

From the above description, it will be seen that I have provided a simple latching device of few parts, which is automatic in operation, it being only necessary to bring the frame members together to latch them, regardless of the position of the lever 37. After the members 13 and 14 have been latched, they can be locked in such a condition by simply rotating the tumbler 27, which is associated with the latching device.

The device may be readily attached to bag frames by unskilled persons, it being only necessary to bend the tangs 16 over the frame member 13, and then bend the tongues 47 over the underside of the bottom plate of the casing 15; and the lever 37, when in a horizontal position as shown in Fig. 1, serves to conceal the locking means and also to protect the parts from dust and injury.

When in a horizontal position, the upper surface of the lever 37 is substantially flush with the upper surface of the upper wall of casing 34. When the lever 37 is in a horizontal position, as shown in dotted lines in Fig. 5, the arm 44 projects above the surface of the lever and the upper wall of the casing 34 to provide a finger piece to facilitate rotation of the lever to a vertical position to expose the locking means.

The catch can be inserted in the casing 15 regardless of the position of the lever 37. Should the lever 37 be in the horizontal position or in a vertical position, the flanges 20 and 21 partially cover the slots 22 and 22′ and obstruct the passage of the catches 49 into the casing. In order to facilitate the passage of the catches through the slots, the catches have rounded ends which have a camming action on the beveled edges 20′ and 20^2 to cam the flanges 20 and 21 out of the way, against the action of the spring 26.

The spring 42 is stronger than spring 26, and consequently, the lever will be effectively held in either of its three positions, the spring 42 and the recesses 40, 41 serving as a resilient detent.

When the lever 37 is moved to the position shown in full lines in Fig. 5, the flanges 20 and 21 are moved to uncover the slots 22, 22′ to release the catches 49. At the same time, the beveled edge 21′ acts upon the cam 51 to force the cam and catches out of the casing to automatically open the bag by simply moving the lever to the position shown in Fig. 5.

The foregoing disclosure is to be regarded as descriptive and illustrative only, and not as restrictive or limitative of the invention, of which obviously an embodiment may be constructed including modifications without departing from the general scope herein indicated and denoted in the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letter Patent, is

1. A latching device for traveling bags, comprising a catch carrying member having a pair of spaced apart catches projecting therefrom, a casing having a wall provided with spaced apart slots arranged to enable the catches to enter the casing, a cam projecting from the catch carrying member intermediate of the catches, said casing wall having also a slot to receive said cam, a plate slidably mounted in the casing, said plate having a pair of upwardly projecting beveled edged flanges, one of said flanges being of such a length as to have at all times one of its beveled edges in the path of one of the catches or of the cam member as they pass through corresponding slots in the wall of the casing, resilient means normally maintaining the plate in a position so that said flanges partially cover the catch receiving slots, a lever pivotally mounted on the casing and arranged to engage the plate to move the plate to a position so that the flanges uncover the catch receiving slots, and resilient detent means to hold the lever in various positions.

2. A latching device for traveling bags, comprising a bar having a catch and a cam projecting therefrom, a casing having a wall provided with slots to receive the catch and cam, a plate sildably mounted in the casing, said plate having an upwardly projecting beveled edges flange arranged adjacent said slots, said flange being of such a length as to have at all times one of its beveled edges projecting into either the catch receiving slot or the cam receiving slot, resilient means acting on the plate to normally hold a beveled edge of the flange in the catch receiving slot, and means supported by the casing to move the plate to position said beveled edge out of the

catch receiving slot and to position the other beveled edge in the cam receiving slot.

3. A latching device for traveling bags, comprising a bar having a catch and a cam projecting therefrom, a casing having a wall provided with slots to receive the catch and cam, a plate slidably mounted in the casing, said plate having a pair of upwardly projecting members arranged so that at all times there is one of the members obstructing the passage of either the catch or the cam through their respective slots, resilient means acting on the plate to normally maintain one of the members to obstruct the passage of the catch through the catch receiving slot, and means supported by the casing to move the plate to position the member to enable free passage of the catch through its slot.

4. A latching device for traveling bags, comprising a bar having a catch and a cam projecting therefrom, a casing having a wall provided with slots to receive the catch and cam, a plate slidably mounted in the casing, said plate having a pair of upwardly projecting members arranged so that at all times there is one of the members obstructing the passage of either the catch or the cam through their respective slots, resilient means acting on the plate to normally maintain one of the members in a position to obstruct the passage of the catch through the catch receiving slot, means supported by the casing to move the plate to a position so that the passage of the catch through its slot is unobstructed, and key controlled means mounted in the casing to prevent movement of the plate.

5. A latching device for traveling bags, comprising a bar having a catch and a cam projecting therefrom, a casing having a wall provided with slots to receive the catch and cam, a pair of members mounted in the casing to slide in unison and arranged so that at all times one of the members is positioned to prevent passage of either the catch or the cam through their respective slots, resilient means to normally maintain one of the members in the path of the catch, and means supported by the casing to move said members so that the passage of the catch is unobstructed.

6. In a latching and locking device for traveling bags, a bar having a catch and a cam projecting therefrom, a casing having a wall provided with slots to receive the catch and cam, a plate slidably mounted in the casing, said plate having a pair of upwardly projecting members arranged so that at all times there is one of the members obstructing the passage of either the catch or the cam through their respective slots, a lug projecting from the plate, a saddle slidably mounted on the plate, a compression spring abutting the saddle and the lug, said plate having a slot therein, a tumbler rotatably mounted in the bottom of the casing and passing upward through the slot in the plate and abutting the saddle to prevent movement of the saddle in one direction so that the pressure of the spring on the lug will normally maintain the plate in a position to place one of the members in the path of the catch through its slot, means supported by the casing to move the plate to a position so that the passage of the catch through its slot is unobstructed, said tumbler in one position allowing free movement of the plate, a lug on the tumbler to engage the plate to prevent movement of the plate when the tumbler is rotated to another position, and means associated with the tumbler and saddle to frictionally hold the tumbler in either of said positions.

7. In a locking device for traveling bags, a casing, a plate slidably mounted in the casing and having a slot, a lug projecting from the plate, a saddle slidably mounted on the plate, a compression spring abutting the lug and the saddle, a tumbler rotatably mounted in the casing and passing upward through said slot and abutting the saddle to prevent movement of the saddle in one direction, so that the pressure of the spring on the lug will normally maintain the plate in a predetermined position, said tumbler in one position allowing free movement of the plate, a lug on the tumbler to engage the plate to prevent movement of the plate when the tumbler is rotated to another position, and means associated with the tumbler and saddle to frictionally hold the tumbler in either of said positions.

8. In a latching and locking device for traveling bags, a bar having a catch and a cam projecting therefrom, a casing having a wall provided with slots to receive the catch and cam, a pair of members mounted in the casing to slide in unison and arranged so that at all times one of the members is positioned to prevent passage of either the catch or the cam through their respective slots, resilient means to normally maintain one of the members in the path of the catch, means supported by the casing to move said members so that the passage of the catch is unobstructed, a key controlled tumbler rotatably mounted in the casing, said tumbler in one position allowing free movement of said members, means on the tumbler to prevent movement of the members when the tumbler is rotated to another position, and detent means to frictionally hold the tumbler in either of said positions.

9. In a latching and locking device for traveling bags, a lower casing, latching means mounted in the casing, an upper casing mounted on the lower casing, key operable locking means mounted in the lower casing and associated with the latching means, said locking means projecting upwardly into the upper casing, said upper casing having a slot in its upper wall to enable access to the locking means, and a lever pivotally mounted on the upper casing and associated with the latching means, said lever in one position closing the slot in the upper casing to conceal the locking means and protect the same from dust and the like.

10. In a bag, a frame member, a casing attached to the frame member and having a slot in its upper wall, a lever pivotally mounted on the casing and arranged to assume a plurality of positions, a latching device associated with the lever, a locking device associated with the latching device, and having a key receiving element positioned in the casing, said lever in one position completely closing said slot to conceal the key receiving element and to protect the same from dust and the like.

11. In a bag, a frame member, a casing attached to the frame member and having a slot in its upper wall, a lever pivotally mounted on the casing and arranged to assume a plurality of positions, a key receiving element of a locking device positioned in the casing, said lever when in a horizontal position having its upper surface substantially flush with the upper surface of the upper wall of the casing and completely closing the slot to conceal the key receiving element, and a lug on the lever to facilitate moving the lever to another position.

ABRAHAM LEVINE.