

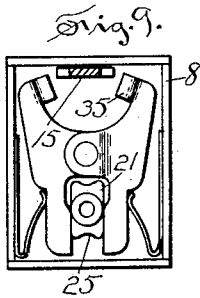
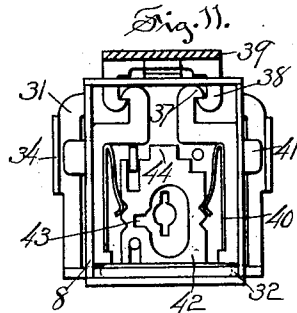
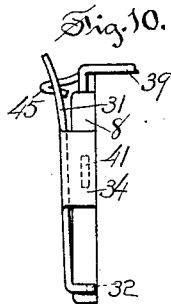
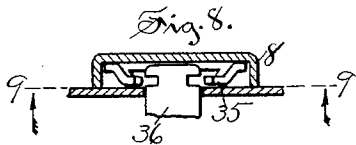
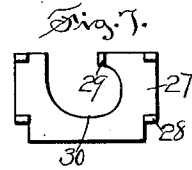
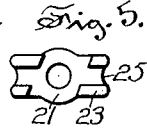
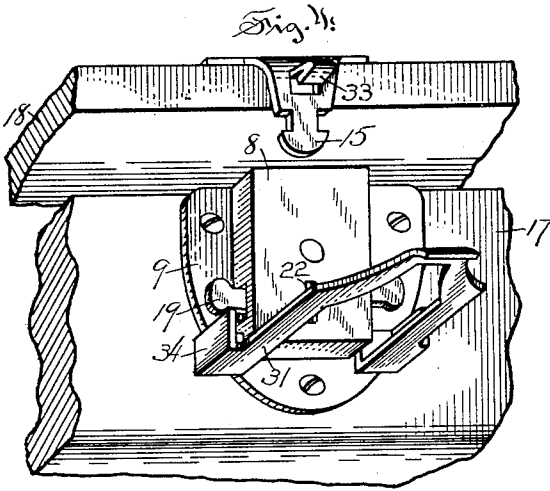
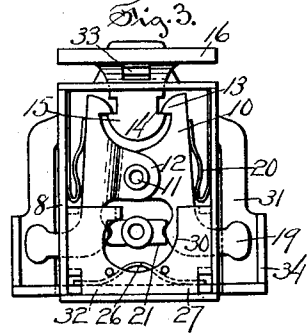
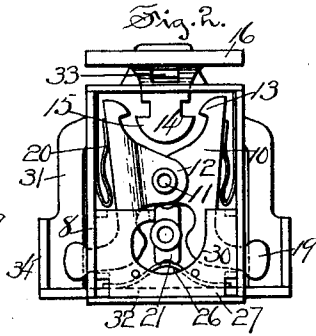
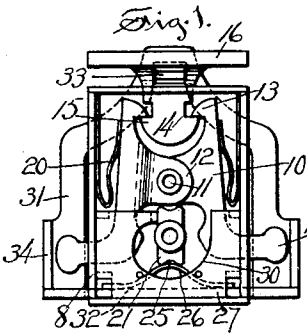
Oct. 18, 1932.

E. B. STONE

1,883,072

LOCK

Filed April 18, 1930



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UNITED STATES PATENT OFFICE

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LOCK

Application filed April 18, 1930. Serial No. 445,287.

My invention relates to the class of locks more particularly intended for use with cases of various sorts, as typewriter cases, suit cases and the like, and an object of my invention, among others, is the production of a lock of this class that shall be simple in construction and particularly durable and efficient in operation.

One form of a lock embodying my invention and in the construction and use of which the objects herein set forth, as well as others, may be attained is illustrated in the accompanying drawing, in which—

Figure 1 is a back view of a lock embodying my invention and with the back plate removed, the parts being shown in their holding but unlocked positions.

Figure 2 is a similar view but showing the parts in their releasing positions.

Figure 3 is another similar view but illustrating the parts in their locked positions.

Figure 4 is an isometric view of a portion of a case, illustrating the manner of applying my improved lock thereto.

Figure 5 is a detail view illustrating the construction of the locking dog.

Figure 6 is a perspective view of the same.

Figure 7 is a face view of the retaining plate.

Figure 8 is a detail view in section through the lock case showing a little different form of mechanism.

Figure 9 is a face view of said case with the back plate removed.

Figure 10 is a side view of a lock mechanism embodying still another form of construction.

Figure 11 is a face view of said lock with the back plate removed, the line of separation being denoted by the dotted line 9—9 of Figure 8.

In the accompanying drawing the numeral 8 denotes the case of my improved lock that may be made from any suitable metal, preferably rectangular in shape when viewed from the face and which is secured to a back or base plate 9 as by means of lugs on the edges of the plate projecting through holes in the back plate and secured in a common and well-known manner, and as will be

readily understood. Latches 10 are pivotally secured within the case as upon a pin 11 secured to the front and back plates and extending across the space therebetween, the latches having ears 12 through which said pin extends. Hooks 13 are formed at one end of each latch 10 for locking engagement with notches 14 in opposite edges of a catch 15 projecting from a catch plate 16, and as shown in Figs. 1 to 3 of the drawing.

The structure shown herein is formed for special application to a typewriter case 17 in which the catch plate 16 is attached to the face of the cover 18 of the case 17 and is bent over the edge of the cover to engage within an opening in the end of the case 8 and as shown in Fig. 4 of the drawing.

The ends of the latches 10, opposite the hooks 13, are extended at an angle outwardly through openings in the side edges of the case 8 and are formed preferably on their outer ends with thumb and finger pieces 19 for application of the thumb and finger to move said pieces toward each other and thereby release the hooks 13 from the notches in the catch 15. Bowed springs 20 each pressing with one end against a side of the case 8 and its opposite end against one of the latches 10 exert their force to engage the hooks 13 with the notches 14 in a manner that will be readily understood.

A locking dog 21 is pivotally mounted within the case as by means of a hub projecting from one side of the dog into an opening in the back plate of said case. An opening 22 in the front wall of the case is formed as a key hole to receive a key, this hole being provided with notches in a manner well-known to receive the bits of a key. The dog 21 is provided with wards 23 arranged at opposite corners of the dog for engagement of the bits of the key, and by means of which engagement said dog is rotated into the position shown in Figure 3 to secure the latches in their locked positions, or to the position shown in Figures 1 and 2 to permit the latches to be released from the catch 15. The dog 21 is provided, preferably at its opposite ends, with notches 25 to receive the bow of a re-

taining spring 26 for yieldingly holding the dog in different positions.

A retaining plate 27 is placed within the case 8, said plate having legs 28 to support it and to space it from the front plate of the case 8 so that the retaining plate, while acting to maintain the parts within it in place, will not impede the action of such parts. A finger 29 projects from one edge of an opening 30 in the plate 27 and forms a stop to determine the position of the dog 21 in both its releasing and locking positions, the dog engaging the edge of the stop in its locking position and the front face of the stop in its releasing position.

A bail and housing 31 is pivotally mounted in the case 8, the pivot being preferably a bar 32 of angular shape in cross section extending into or through the case at one end thereof and engaged by the spring 26 that acts to hold the bail in different positions, as in its open or in its closed positions. The bail at that end opposite the pivot is formed to engage a tongue 33 projecting from the catch plate 16, and as shown in Figure 4 of the drawing, the bail thus aiding and supporting the hooks 13 in retaining the catch in place.

Wings 34 project laterally from the side parts of the bail, these wings being curved downwardly to form a housing to cover and protect the finger pieces 19 when the bail is in its closed and holding position.

The structure illustrated and described herein contemplates latches that are movably mounted to engage the catch, the device just described comprising catches having their movement a pivotal one. In that form of the structure shown in Figures 8 and 9 the latches have a pivotal movement, while in that form shown in Figures 10 and 11, such movement of the latches is a sliding movement. The latches of Figures 8 and 9 have lips 35 formed to engage notches in the edges of a catch 36 that projects into the case at right angles to the line of projection of the catch into the case in the devices of Figures 1 to 4, inclusive. In the structure of Figures 8 and 9 the latches and springs are formed so that the latter will hold the latches in their disengaging positions instead of in their engaging positions, as in the form of the device first herein described.

In the structure shown in Figures 10 and 11 the movement of the latches is a sliding movement, such latches being disposed in the case preferably at opposite sides thereof when in their locking positions. Each of these latches has a hook 37 adapted to engage a catch 38 projecting from the side of a catch plate 39. Springs 40 exert their trust against the edges of the catches to force them apart and into locking positions. Each catch is provided with a finger piece 41 by means of which the catches may be moved toward each other to release them from

the catch plate. The springs thrust with one arm against the catches and with another arm against the opposite edges of a locking plate 42 mounted for sliding movement in the case, each spring having a tooth to engage a notch in the locking plate and thereby retain the latter yieldingly in different positions to which it may be moved by means of a key inserted through the key hole and with the bit engaging a notch 43 in the edge of an opening in the plate, as shown in Figure 11. A locking dog 44 projects from one edge of the locking plate into the space between the latches when the locking plate is in its locking position, said dog, in the unlocking position of the locking plate, being removed from said space to permit movement of the latches toward each other.

In this form of the device the bail 31 is provided with the wings 34 to cover and protect the finger pieces 41, and the end of the bail is shaped to engage a tongue 45 projecting from the front of the catch plate 39, and as shown in Figure 10 of the drawing.

As hereinbefore mentioned while the latches shown in Figures 10 and 11 have a sliding movement, the latches of the other figures have a pivotal movement. It is, however, observed that the latches of either of the structures herein may have a sliding or a pivotal movement, that is, the latches of Figures 10 and 11 may be arranged to have pivotal movement the same as in the remaining figures, while those in the remaining figures, or either of them, may be arranged to have sliding movement instead of pivotal movement.

In accordance with the provisions of the patent statutes I have described the principles of operation of my invention, together with the device which I now consider to represent the best embodiment thereof; but I desire to have it understood that the device shown is only illustrative, and that the invention may be carried out by other means and applied to uses other than those above set out.

I claim:—

1. A lock including a case, a pair of latches mounted in the case and formed to releasably engage a catch, a locking dog pivotally mounted in a fixed position between said latches and having notches in its opposite ends to releasably engage the latches with the dog in one position, the width of the dog permitting movement of the ends of the latches toward each other when the dog is in another position.

2. In combination in a lock including a pair of movably mounted latches to releasably engage a catch, a locking dog pivotally mounted for engagement between said latches to prevent releasing movement thereof, key engaging means on said dog for engagement by the bit of a key, and means for yieldably

resisting turning movement of said dog from its unlocking position.

3. A lock including a case, a pair of latches movably mounted in the case and formed to releasably engage a catch, finger pieces projecting from the latches through opposite edges of the case for manual operation of said latches, and a bail pivotally mounted within the case to engage a tongue projecting from the catch, said bail having wings to overlie and house said finger pieces in the closed position of the bail.

4. A lock including a case, a pair of latches movably mounted in the case and formed to releasably engage a catch, finger pieces projecting from the latches through opposite edges of the case for manual operation of said latches, and a member pivotally mounted upon the case and having wings to overlie and house said finger pieces in one position of said member.

5. A lock including a case, a pair of latches movably mounted in the case and formed to releasably engage a catch, a dog movably mounted within the case to hold said latches in locked engagement with said catch, a bail pivotally mounted within the case to engage a tongue projecting from said catch, and a spring within the case engaged with said bail and with said dog to yieldingly resist movement of both.

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