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SNAP LOCK

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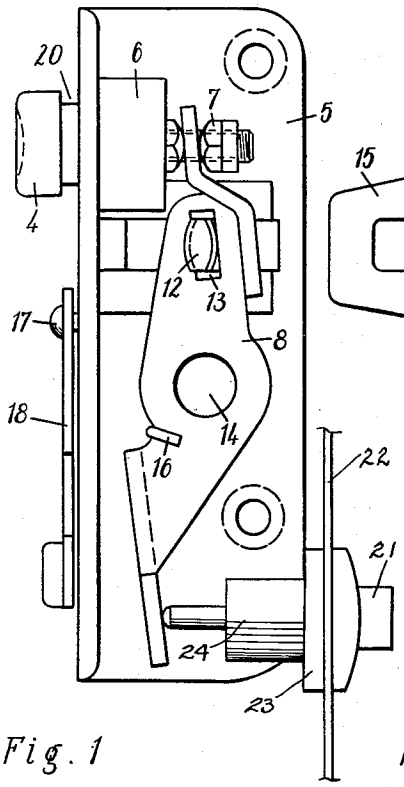


Fig. 1

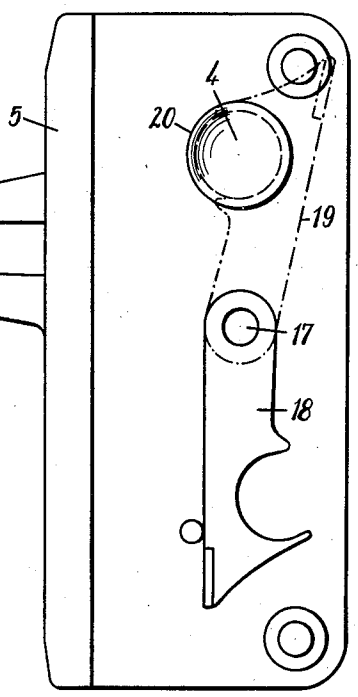


Fig. 2

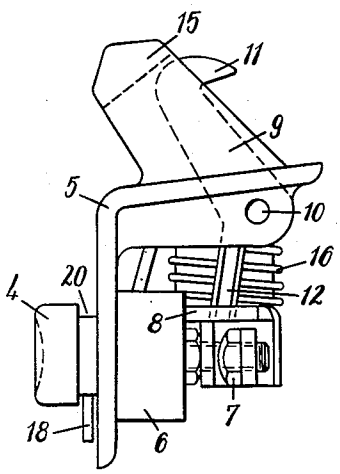


Fig. 3

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SNAP LOCK

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5 Claims. (Cl. 292—127)

The present invention relates to a snap lock, particularly for the doors of automobiles and similar vehicles.

In race cars and fast sport cars, the weight of each indivdual part of the car must be carefully calculated so as to reduce the weight of the entire car as much as possible. The customary door locks of ordinary automobiles, however, are too heavy and bulky and thus unsuitable for this purpose. Furthermore, the customary outer door handles of such locks have a detrimental influence upon the streamlining of the car body, while the inner door handles take away from the limited space usually provided in such cars and also often constitute a hazard during driving and especially in an accident.

It is an object of the present invention to overcome these disadvantages and to provide a lock of lighter and more simple construction which, however, affords absolute safety in operation.

It is another object of the present invention to provide a snap lock which may be opened both from the inside and outside merely by depressing a push button.

A further object of the present invention is to provide a lock as described, the inside push button of which is connected positively, that is, for direct action, with the lock bolt so as to be absolutely reliable at all times.

Another object of the present invention is to provide a lock of this type with a safety hook which, in engaged position, locks the inner push button directly and positively so as to prevent an accidental operation thereof.

Further objects, features, and advantages of the present invention will be apparent from the following detailed description thereof as well as from the accompanying drawings, in which

Fig. 1 shows a side view of the new snap lock according to the invention;

Fig. 2 shows a front view thereof; while

Fig. 3 shows a top view of the lock as shown in Fig. 1.

Referring to the drawings, the push button 4 is located on the inside of the door and slidably mounted in the socket 6 which is rigidly secured on the lock plate 5. An adjustable screw connection 7 pivotally connects the push button 4 with a two-armed lever 8 which is pivotally supported about pivot 14. The lock bolt 9 (Figure 3) is likewise made in the form of a two-armed lever which is pivotally mounted on a pivot pin 10. One end of bolt 9 is designed to act as a lock hook 11 (Figure 3), while the other end 12 is pivotally mounted in an aperture 13 which is provided in the lever 8 (Figure 1). When the push button 4 is being depressed, the bolt 9 will swing about its axis 10 so that the lock hook 11 will move back into its housing 15, thereby permitting the door to open. The spring 16 which is coiled around the pivot 14 tends to maintain the hook 11 in its locking position.

On the inside of the door the lock may be secured in the locking position by means of a throw hook 18 which is pivotable about a pin 17. The dot-and-dash line 19 in Fig. 2 illustrates the safety position in which the hook

18 engages into the annular groove 20 of the push button 4, thus preventing the same from being accidentally depressed. Since the movable parts 4, 8, and 9 are positively connected with each other, the lock hook 11 will thus be secured in a fixed position. Such simple and reliable locking feature also has the advantage that one glance will be sufficient to show whether or not the inside button is locked in the safety position. It also prevents unintentional or accidental locking or arresting of the lock when the door is open and then slammed shut. On the other hand, the throw hook 18 may engage in the annular groove 20 of push button 4 only if the lock hook 11 has properly engaged in its corresponding catch.

For opening the lock from the outside of the door, a second push button 21 may be secured on the outer covering 22 of the door. It is likewise slidable in a socket 23 and when depressed, acts upon the two-armed lever 8 in the direction for opening the door. If desired, the outer push button 21 may also be provided with a cylinder lock 24 or the like to be locked by a key.

Although my invention has been illustrated and described with reference to the preferred embodiments thereof I wish to have it understood that it is in no way limited to the details of such embodiments or to the specific examples described, but is capable of numerous modifications within the scope of the appended claims.

Having thus fully disclosed my invention, what I claim is:

1. A snap lock for doors and the like comprising a pair of push buttons, said buttons being mounted on the inside and the outside of the door, a first lever pivotally mounted in said lock and having two lever arms, means for positively connecting one of said push buttons with one of said lever arms, a second lever pivotally mounted in said lock and having two lever arms, one of the lever arms of said second lever forming the lock bolt and the other lever arm of said second lever being positively connected with a lever arm of said first lever, and spring means normally urging said lock bolt into closing position.

2. A snap lock particularly for vehicle doors comprising a pair of push buttons for operating said lock, one of said buttons being mounted on the inside of said vehicle while the other one of said buttons is mounted on the outside thereof, a first lever pivotally mounted in said lock and having two lever arms, means for positively connecting said inside button with one of said lever arms, a second lever pivotally mounted in said lock and having two lever arms, one of the lever arms of said second lever forming the lock bolt and the other lever arm of said second lever being positively connected with a lever arm of said first lever, and spring means normally urging said lock bolt into closing position.

3. A snap lock according to claim 2, wherein said inside push button includes an annular groove, a throw hook pivotally mounted at the inside of said door including a recess thereon for engagement with said annular groove whereby said lock is locked in an inoperative position.

4. A snap lock according to claim 2, wherein said outside button is arranged in such a way that movement thereof effects a movement of said first lever.

5. A snap lock particularly for vehicle doors comprising a pair of push buttons for operating said lock, one of said buttons being mounted on the inside of said vehicle while the other one of said buttons is mounted on the outside thereof, a first lever pivotally mounted in said lock and having a first and a second lever arm, means for positively connecting said inside button with said first lever arm, a second lever pivotally mounted in said lock and having two lever arms, one of the lever arms of said second lever forming the lock bolt and the other lever

arm of said second lever being positively connected with the first lever arm of said first lever, said outside button engaging said second lever arm of said first lever for movement thereof, and spring means normally urging said locking bolt into closing position.

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