

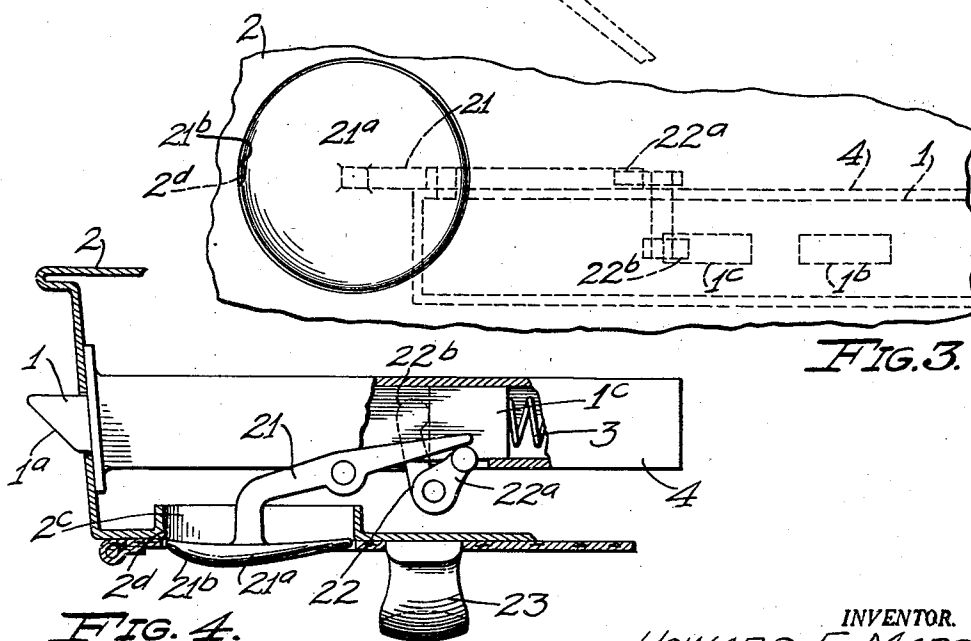
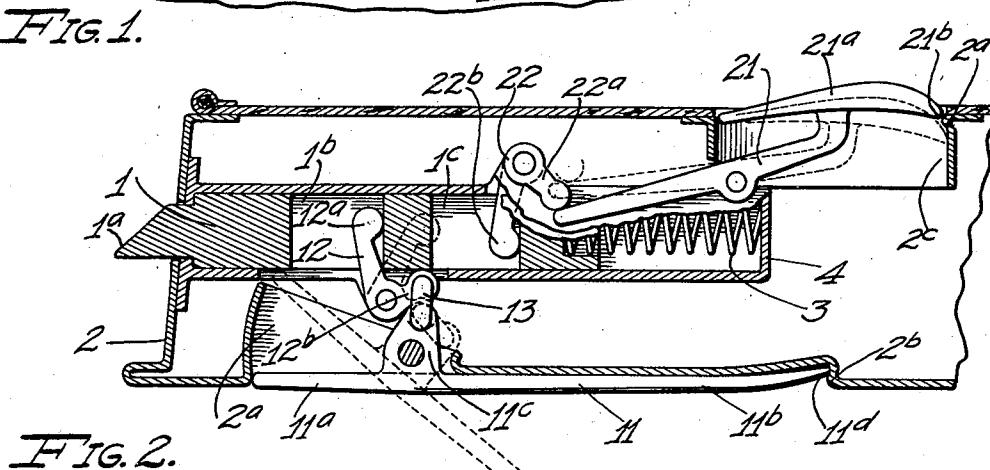
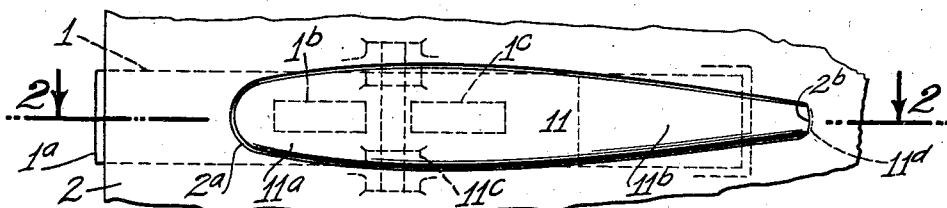
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AUTOMOBILE DOOR LATCH OPERATING MEANS

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AUTOMOBILE DOOR LATCH OPERATING MEANS

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2 Claims. (Cl. 292—165)

My present invention relates to automobile door latch operating means.

One of the principal objects of this invention is to provide latch operating means for automobile doors in which the operating means, at either the inside or outside or both sides of the door, is normally flush with the door, so that objects are not readily caught, hooked, or engaged thereby, or whereby the door is not accidentally operated or opened, and whereby the door may be readily cleaned, washed, or polished without obstruction or injury.

An important object also is the provision of means of this class whereby the door latch is operated and the door opened easily.

Another important object of this invention is to provide latch operating means of this class which is particularly simple and economical of construction with a minimum number of parts, which is durable, and which will not readily deteriorate or get out of order.

A further object of this invention is the provision of a latch in which the latch member and all operating handles or devices are held in their normal positions by a single spring.

With these and other objects in view, as will appear hereinafter, I have devised an automobile door latch operating means having certain novel features of construction, combination and arrangement of parts and portions as will hereinafter be described in detail and particularly set forth in the appended claims, reference being had to the accompanying drawing and to the characters of reference thereon, which form a part of this application, in which:

Fig. 1 is a fragmentary side elevation of the outside of an automobile door, showing my operating means in one form for operating the door latch from the outside of the automobile;

Fig. 2 is a fragmentary section in plan of my invention, in one form, showing the operating means at the outside and inside of the door, the section being taken through 2—2 of Fig. 1;

Fig. 3 is a fragmentary elevation showing the latch operating means at the inside of the door; and,

Fig. 4 is a fragmentary sectional view of my invention, showing a slightly modified form of the operating means and arrangement at the inside of the door.

The latch member to be operated or controlled by my operating means is shown in the drawing, as a bolt 1, which is constructed similar to the conventional door bolt and is supported and reciprocally mounted in the frame 4, built in the

door, with the latch 1^a normally projecting from the edge of the door 2. The bolt is resiliently held in such projected or extended position by a spring 3.

This bolt may be withdrawn, that is, drawn inwardly, by handles or operating devices at the outer and inner sides of the door. These handles or operating devices are arranged normally to be flush with the respective walls or faces at the outer and inner sides of the door, but removed from such flush positions, either inwardly or outwardly, when the bolt or other latch member is withdrawn, that is, drawn inwardly.

The means for operating the latch from the outside of the door, as shown in the drawing, consists of a handle 11, a bellcrank lever 12, and a link 13. The bellcrank lever is pivoted in the bolt support and guide 4 at the outer side of the bolt, and has one arm 12^a extending into a longitudinal slot 1^b in the bolt and normally engages the portion at the inner end of the slot. The other arm 12^b extends toward the rear end of the bolt and is pivotally connected at its end to one end of the link 13. The handle 11 may be a long plate, shaped substantially to conform to the contour of the automobile body. This handle normally covers a recess 2^a at the outer wall of the door, which recess is provided to permit the handle to be shifted to an angular position for opening the door, as shown by dotted lines in Fig. 2. This handle is pivoted intermediate its ends and preferably near its outer face on the door. The pivotal axis is also preferably nearer the front end of the handle, as shown, forming a forward short arm 11^a and a rear long arm 11^b. The handle has an inwardly extending lug 11^c at its pivotal portion, to the inner end of which the other end of the link 13 is pivotally connected.

The pivotal connection of the link 13 to the lug 11^c is preferably slightly backwardly from the line passing through the pivotal axis of the handle and perpendicular to the face thereof. Such pivotal connection between the link and the handle normally provides a slight spring action, exerted by the spring 3, for closing the handle over the recess 2^a of the door. Such connection further permits the short arm 11^a to be easily depressed for the initial movement of the handle before the bolt is appreciably withdrawn.

If desired, provision may be made for snapping the handle 11 into its closed position, such as by means of interengaging projections 11^d and 2^b on the handle and door, shown in Fig. 2.

The means for unlatching the door from the

inside, as shown in the drawing, consists of an operating lever 21 and a bellcrank 22. The lever 21 is pivoted intermediate its ends and is provided at one end with a large button 21^a which extends through a conforming hole 2^c in the inner wall in the door, and is normally flush with the inner face of the door. The opposite or forward end 21^b of the lever is positioned behind the arm 22^a of the bellcrank lever. The other arm 22^b extends into a longitudinal slot 1^c in the bolt and normally engages the portion at the rear end of said slot. Thus, when the button 21^a is depressed, the bellcrank 22 is rocked, withdrawing the bolt. To effect such operation it is necessary only to depress the button 21^a a slight distance inwardly. The button 21^a may be held in its outward position by its spring 3. In order easily to depress the button 21^a, it is preferably made large enough so as to be depressed by the flat portion of the hand.

In order to facilitate the retention of the button in the flush position, the button and the door are provided with interengaging portions 21^b and 2^d, from which the button may be readily dislodged with a slight pressure.

In Fig. 4 of the drawing the operating lever 21 is reversed, with the button 21^a near the free edge of the door. Immediately to one side of the button, and preferably on the side opposite the free edge of the door, is a handle 23 whereby the door may be easily gripped and controlled from within, and whereby the latch may be simultaneously controlled by the thumb of the hand gripping the grip.

Though I have shown and described a particular construction, combination and arrangement

of parts and portions, and a certain modification thereof, and though I have referred to particular forward or rear ends of various portions, I do not wish to be limited to the same, but desire to include in the scope of my invention the construction, combination and arrangement substantially set forth in the appended claims.

I claim:

1. In a means of the class described, the combination with a door, of a latch member movably mounted in the door, a spring normally forcing the outer portion of the member beyond the edge of the door, a latch operating member movably mounted in a recess in the side of the door and normally flush with the door, means connecting the operating member to the latch member for drawing the latter inwardly when the operating member is shifted from its flush position, and a spring latch for holding the latch operating member normally flush with the door, said latch forming a resilient part of the door adjacent the recess.

2. In a means of the class described, the combination with a door, of a latch member movably mounted in the door, a spring normally forcing the outer portion of the member beyond the edge of the door, an operating button at the inner side of the door and normally flush with said inner side, means connecting the button to the latch member for drawing the same inwardly when the button is depressed, and a spring latch for holding the button normally flush with the door, said latch forming a resilient part of the inner side of the door.

HOWARD E. MARSH.