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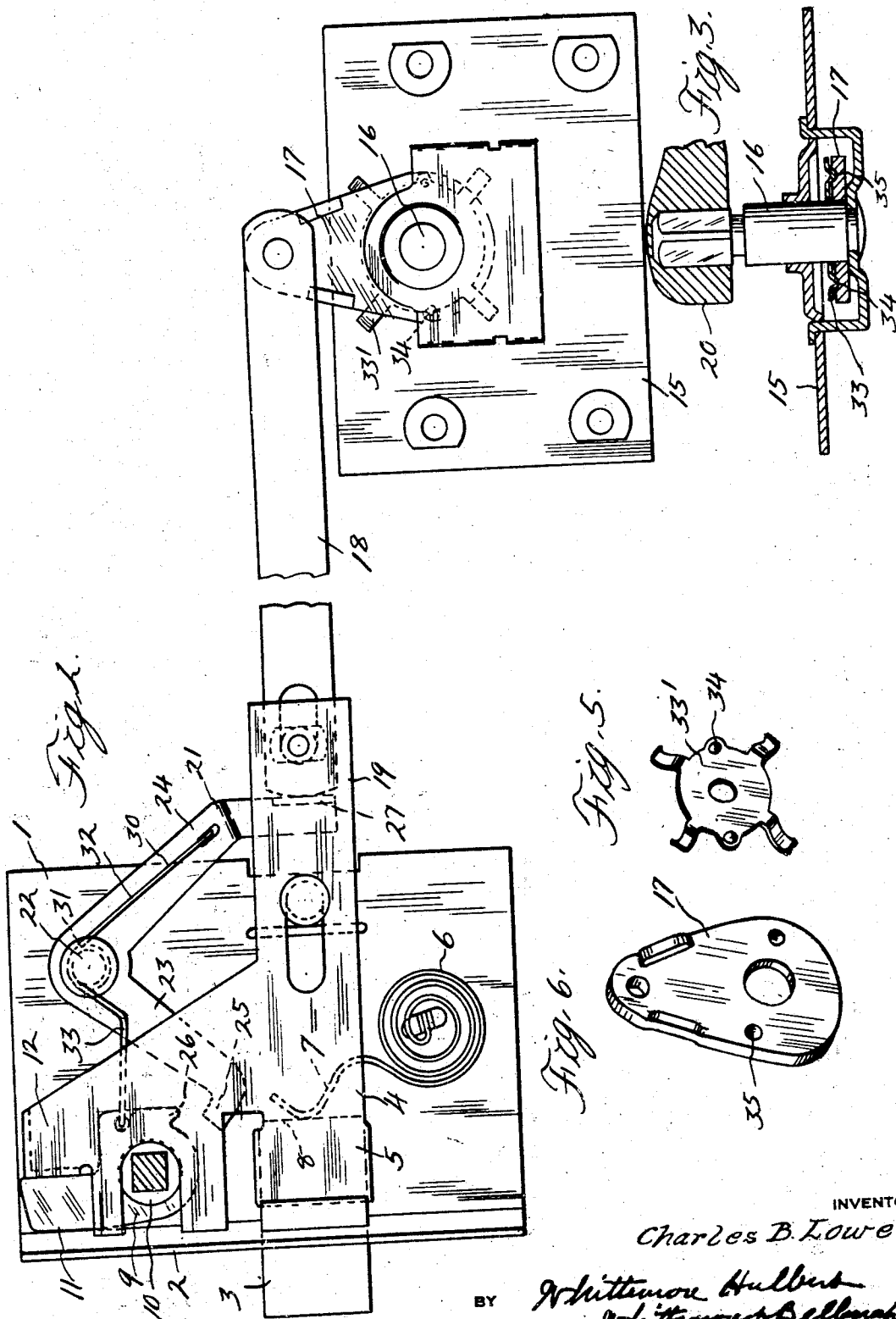
C. B. LOWE

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DOOR LATCH MECHANISM

Filed Oct..8, 1928

2 Sheets-Sheet 1



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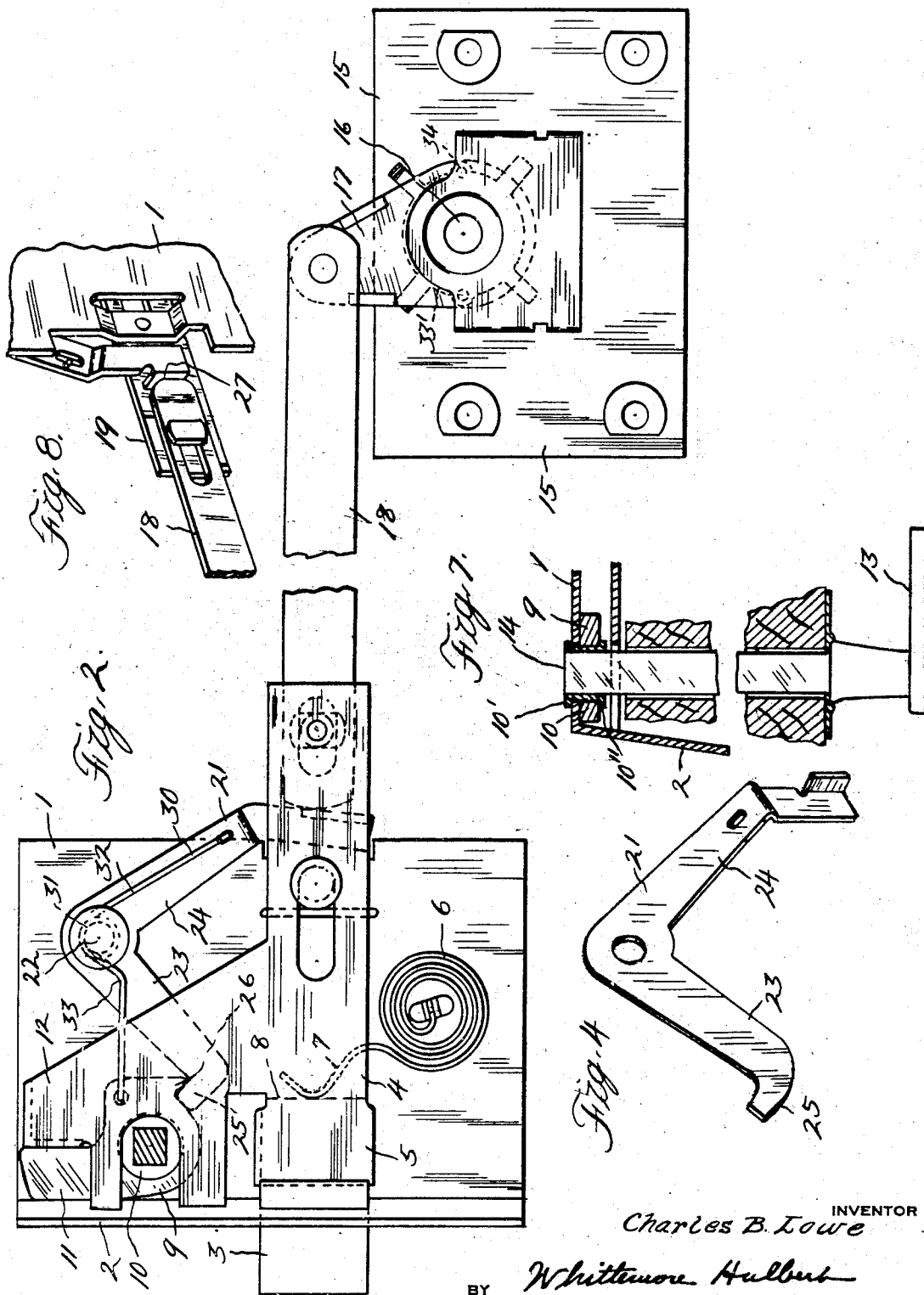
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DOOR LATCH MECHANISM

Application filed October 8, 1928. Serial No. 311,149.

This invention relates generally to remote control mechanism for vehicle doors and the like, and consists of certain novel features of construction, combinations and arrangements of parts that will be hereinafter more fully described and particularly pointed out in the appended claims.

In the accompanying drawings—

Figure 1 is a side elevation of a latch mechanism embodying my invention and showing the parts thereof in normal position;

Figure 2 is a view similar to Figure 1 but with the roll-back rendered inoperative by the dog;

Figure 3 is a vertical sectional view through the auxiliary case plate and associated parts;

Figure 4 is a detail perspective view of the dog;

Figure 5 is a detail perspective view of the detent spring;

Figure 6 is a detail perspective view of the upstanding lever of the remote control mechanism and showing the recess therein for receiving a portion of the detent spring;

Figure 7 is a fragmentary sectional view of the latch case plate and roll-back rivet.

Figure 8 is a detail perspective view of a portion of the dog and link mechanism.

Referring now to the drawings, 1 is a latch case plate adapted to be secured to the inner side of a vehicle door adjacent to the free edge thereof and having a lateral flange 2 at its forward edge attachable to the free edge of the door. 3 is a reciprocating latch bolt that is movable through an opening in the flange 2 for engagement with a suitable keeper (not shown) and having a portion slidably mounted on the case plate. 4 is a yoke slidably mounted on the case plate and having one arm 5 thereof rigidly secured to the bolt 3. 6 is a helical spring anchored on the case plate and having one arm 7 thereof abutting the rear end of the bolt 3 and normally maintaining the yoke and latch bolt in advanced position. 9 is a roll-back having a hub 10, provided with lateral flanges 10' and 10'', and having an arm 11 engageable with an arm 12 of the yoke. 13 is a handle having a shank 14 non-rotatably received in the rivet

10' and operable from the outer side of a door to effect the retraction of the yoke 4 and latch bolt. 15 is an auxiliary case plate adapted to be secured to the inner side of the door at a point remote from the case plate 1. 16 is a stub shaft journaled in the auxiliary case plate, 17 is a lever rigidly mounted on the stub shaft, 18 is a link pivotally connected at one end to the lever 17 and having a slotted connection at its other end with the arm 19 of the yoke, and 20 is a handle carried by the stub shaft 16 and operable from the inner side of the door to actuate the lever 17 and link 18 to effect the retraction of the yoke and latch bolt independently of the roll-back 9. 21 is a dog swingingly mounted on the case plate 1 between the link 18 and roll-back 9 and adapted to be actuated by the link to render the roll-back inoperative for retracting the bolt.

As shown the hub 10 of the roll-back 9 is in the form of a hollow rivet and is provided at its opposite ends with lateral flanges 10' and 10'' that overlap the roll-back 9 and case plate 1. The dog 21 is substantially V-shaped in form with the pivot 22 therefor at the apex thereof and with the arms 23 and 24 thereof adjacent to the roll-back 9 and link 18. Preferably, the forward arm 23 has a forwardly and upwardly projecting shoulder or extension 25 engageable with a similar shoulder or projection 26 of the roll-back 9, while the rear arm 24 has a lateral projection or flange 27 engageable with the forward end of the link 18. Normally the shoulder 25 is held disengaged from the roll back shoulder 26 and the lateral flange 27 is held against the link 18. This is accomplished by the provision of a wire spring 30 which preferably has an intermediate portion 31 wound about the dog pivot 22 and has diverging arm portions 32 and 33 respectively terminally connected to the dog arm 24 and to the roll-back 9. If desired the arm 33 of the spring may be anchored to the case plate 1 at a point between the arms 23 and 24, however, when it is connected to the roll-back 9 as shown it normally maintains the roll-back against the lateral flange 2 of the case plate 1 when the yoke is retracted

by the remote control mechanism and will maintain the outer handle 13 and shank 14 in proper horizontal position and will also prevent the roll-back 9 from rattling.

In use the latch bolt 3 may be retracted by either the remote control mechanism upon the inner side of the door or by the roll-back 9 from the outside of the door without disturbing the dog 21. When the remote control mechanism is utilized the lever 17 is swung rearwardly by manipulation of the inner handle 20 so as to move the link 18 and yoke 4 rearwardly and upon release of the inside handle 20 the helical spring 6 will cause the parts to resume normal position; however when it is desired to render the roll-back 9 inoperative, the lever 17 is swung forwardly by the inside handle 20 so as to cause the link 18 to push the rear arm 24 of the dog forwardly and thereby cause the shoulder 25 of the forward arm 23 to become operatively engaged with the roll-back shoulder 26. Due to the slotted connection between the link 18 and the yoke 4 this forward dogging movement of the link may be accomplished without moving the yoke 4 and latch bolt 3. Preferably, a spring 30 interposed between the lever 17 and auxiliary case plate and having a detent 34 engageable with a recess 35 in the lever 17 is utilized to detachably hold the lever 17, link 18, and dog in forward dogging position against the tension of the spring 30. When the lever 17 is returned to neutral or upright position by manipulation of the inside handle, the link 18 will be moved rearwardly so as to permit the spring 30 to automatically return the dog to normal position.

Thus from the foregoing description it will be apparent that the dog is positively moved by the remote control mechanism into dogging position with respect to the roll-back, but it is automatically released by the spring 30 when the remote control parts are returned to normal position. The rivet formation of the roll back hub 10 is also an important feature as it serves the dual function of a pivot and attaching means for the roll back 9. With such a construction the usual cover plate ordinarily cooperating with the case plate for supporting the roll-back may be dispensed with entirely. It will also be apparent that the latch assembly may be manufactured and installed at a comparatively low cost, and that it is easy to operate.

While it is believed that from the foregoing description, the nature and advantages of the invention will be readily apparent, I do not desire to limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim as my invention is:

1. In a door latch, a latch bolt, a sliding

yoke connected to the bolt and constituting a rearward extension thereof, a roll-back engageable with the yoke and operable from the outer side of a door to retract the bolt, remote control means operable from the inner side of a door to retract the bolt and including a sliding link connected to and constituting a rearward extension of said yoke, a pivotally mounted element between the link and roll-back and movable by the link into the path of the roll-back to prevent the same from moving to retract the bolt, and yieldable means terminally connected to the roll-back and element and normally maintaining both the element and roll-back in neutral positions.

2. In a door latch, a latch bolt, a roll-back operable to retract the bolt, a dog for rendering the roll-back inoperative, and a yieldable connection between said dog and roll-back and operable automatically to restore either or both of said parts to normal position after they have been moved.

3. In a door latch, a latch bolt, means operable to retract the bolt including a roll-back, means for rendering the roll-back inoperative and a yieldable connection between the two means aforesaid operable automatically to restore either of said means to normal position after they have been moved.

4. In a door latch, a latch bolt, a rollback operable to retract the bolt, a pivot element, a dog mounted on said pivot element and having diverging arm portions, one of said arm portions being engageable with the rollback to render the same inoperative, and a spring element mounted on the pivot element and having diverging arm portions respectively secured to the other arm portion of the dog and to the rollback.

In testimony whereof I affix my signature.
CHARLES B. LOWE.

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