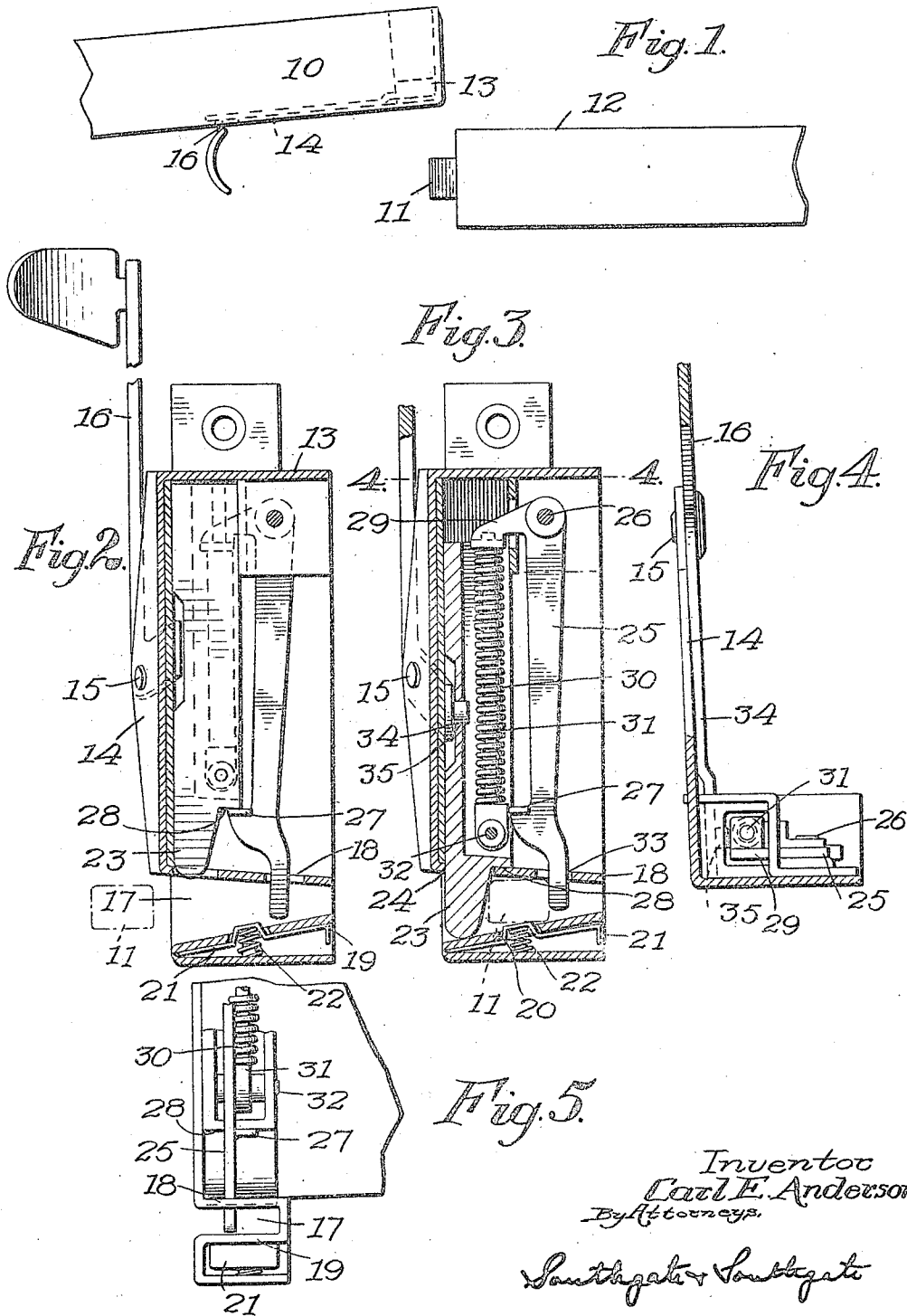


C. E. ANDERSON.  
DOOR LATCH.  
APPLICATION FILED AUG. 13, 1919.

1,372,923.

Patented Mar. 29, 1921.



Inventor  
Carl E. Anderson  
By Attorneys

Southgate & Southgate

# UNITED STATES PATENT OFFICE.

CARL E. ANDERSON, OF WORCESTER, MASSACHUSETTS.

## DOOR-LATCH.

1,372,923.

Specification of Letters Patent. Patented Mar. 29, 1921.

Application filed August 13, 1919. Serial No. 317,234.

*To all whom it may concern:*

Be it known that I, CARL E. ANDERSON, a subject of the King of Sweden, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Door-Latch, of which the following is a specification.

This invention relates to a door latch particularly designed for use on the doors of automobiles or for other similar purposes.

It is the general object of my invention to provide a door latch for such purposes which is of simple and durable construction and which is economical to manufacture and very reliable in operation.

With this general object in view, my invention relates to certain arrangements and combinations of parts hereinafter described and more particularly pointed out in the appended claims.

Specific features of my invention relate to the provision of a casing having a re-entrant portion forming a recess, preferably with converging sides; a sliding bolt to retain a striker in said recess; a locking member for said bolt engaged by the striker to release said bolt; and a resilient member projecting through one side of said recess and engaging the striker to prevent lost motion.

A preferred form of my invention is shown in the drawings in which—

Figure 1 is a plan view showing the relative position of the parts when mounted on an automobile door;

Fig. 2 is a sectional side elevation of my improved door latch;

Fig. 3 is a view similar to Fig. 2, showing the parts in a different position;

Fig. 4 is a sectional plan view taken along the line 4—4 in Fig. 3; and

Fig. 5 is a partial rear elevation.

Referring to the drawings, I have shown the door latch as mounted upon a swinging member or door 10, and the striker 11 as secured to a fixed frame 12.

The different parts of the door latch are assembled in a casing 13, a portion 14 of which extends along the inside of the door and provides a pivot 15 for the bell crank or handle lever 16. The casing 13 is provided with a re-entrant portion 17 (Fig. 5) having converging upper and lower walls 18 and 19 (Figs. 2 and 3). The striker 11 is received in the re-entrant portion or re-

cess 17 as the door is closed, and is vertically positioned thereby.

An opening 20 may be formed in the lower wall 19 of the recess 17, a spring plate or other resilient member 21 projecting through the opening 20 and being held yieldingly in raised position by a spring 22. This plate 21 engages the striker 11 when the door is shut and tends to prevent rattling and lost motion between the parts.

A bolt 23 is mounted to slide vertically in the casing 13, the lower end of the bolt being wedge-shaped and being adapted to project through an opening 24 in the upper wall of the recess 17. The bolt when in position substantially closes the outer end of the recess and holds the striker 11 firmly between the converging walls of the recess. The wedge-shaped end of the bolt is adapted to progressively advance the striker to locking position and to hold the bolt in every such position thereof.

A locking lever 25 is pivoted at 26 in the casing 17 and is provided with a projection 27 adapted to be positioned below a shoulder 28 on the bolt 23, thus holding the bolt in raised position as shown in Fig. 2. An arm 29 projects laterally from the upper end of the lever 25, and a compression spring 30 is mounted on a shouldered rod 31 pivoted at 32 to the bolt 23, and having its upper end extended through an opening in the arm 29.

The lower end of the lever 25 extends through a slot 33 in the upper wall 18 of the recess 17 and is engaged by the striker 11 as the door is closed. Such engagement releases the bolt 23 from the locking lever 25, permitting the bolt to be forced downward by the spring 30 to engage the rear side of the striker 11.

A laterally extending arm 34 of the handle lever 16 is provided with a stud 35 extending into an opening in the bolt 23. By pushing the handle to the left in Fig. 1, the bolt 23 may be raised against the pressure of the spring 30 and will be held in raised position by engagement of the projection 27 with the shoulder 28, the lever 25 being moved to engaging position by the spring 30.

It will be seen that my improved door latch is of exceedingly simple construction, comprising only three moving parts, the bolt 23, the locking lever 25 and the hand lever 16; also that it is self-operative on closing,

and that escape of the striker after release of the bolt is substantially impossible. Furthermore the engagement of the striker between the converging walls of the recess 17, the wedge-shaped end of the bolt 23, and the upwardly projecting spring plate 21 effectively prevent any noise, or lost motion between the parts. As previously noted, the converging shape of the recess guides the striker to correct locking position, even when the striker is materially displaced vertically.

Having thus described my invention it will be evident that changes and modifications may be made therein by those skilled in the art within the scope of my invention as expressed in the claims, and I do not wish to be otherwise limited to the details herein disclosed, but what I claim is:

1. A door latch having, in combination, a casing having a recess with converging upper and lower walls, a striker adapted to be centered by said walls, a wedge-shaped bolt effective to hold said striker in said recess and a locking lever extended into said recess and normally holding said bolt in inoperative position, said lever being movable by said striker to release said bolt.

2. A door latch having in combination, a casing having a recessed portion with con-

verging side walls, a striker adapted to enter said recess, and a wedge-shaped bolt effective to engage one side of said striker and force said striker against said converging walls.

3. A door latch having, in combination, a casing having a reëtrant portion forming a recess with converging side walls, a bolt effective to close the larger end of said recess, a locking device for said bolt extending into said recess near its smaller end normally holding said bolt in inoperative position, and a striker adapted to enter said recess and engage said locking device, thereby releasing said bolt.

4. A door latch having, in combination, a casing having a recessed portion with converging side walls, a striker adapted to enter said recess, a wedge-shaped bolt effective to engage one side of said striker and force said striker against said converging walls, and a yielding striker-engaging device mounted in said casing, one of said walls having an opening through which said device is yieldingly projected.

In testimony whereof I have hereunto affixed my signature.

CARL E. ANDERSON.