March 11, 1924. 1,486,595

C. A. MARCUM

DOOR FASTENER

Filed Sept. 28, 1921

Fig. 1.

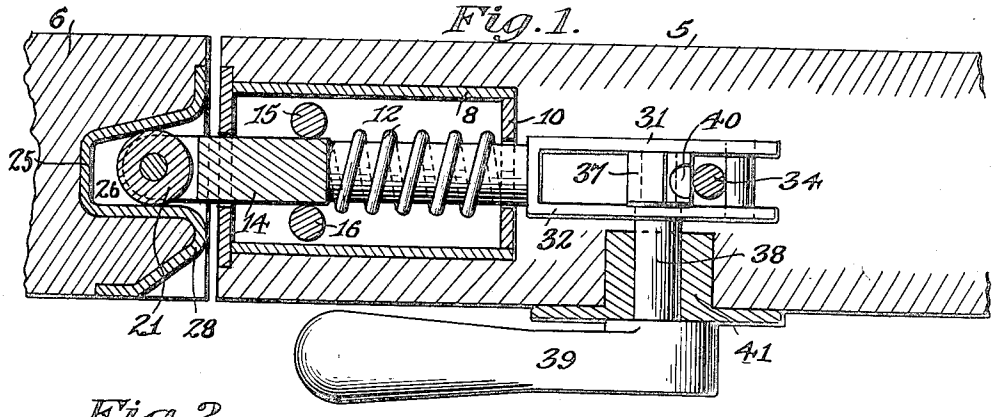


Fig. 2.

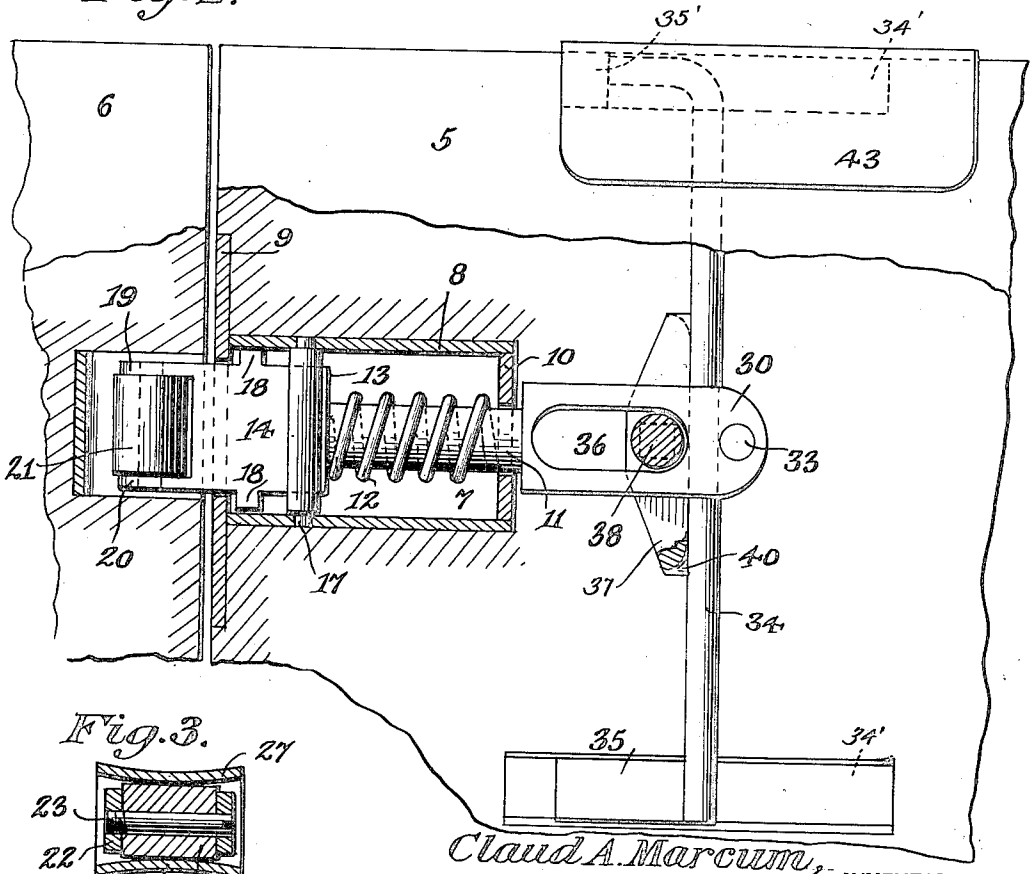


Fig. 3.

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Patented Mar. 11, 1924. 1,486,595

UNITED STATES PATENT OFFICE.

CLAUD A. MARCUM, OF JOPLIN, MISSOURI.

DOOR FASTENER.

Application filed September 28, 1921. Serial No. 503,752.

To all whom it may concern:

Be it known that I, CLAUD A. MARCUM, citizen of the United States, residing at Joplin, in the county of Jasper and State of Missouri, have invented certain new and useful Improvements in Door Fasteners, of which the following is a specification.

This invention relates to door fasteners and more particularly to a novel and improved lock or latch for vehicle doors, particularly applicable for automobiles.

The primary object of the invention is to provide a simple, yet economical and effective door latch for motor vehicles and the like, in which the lock bolt is retracted against the resistance of a spring by a hand lever and carries a latching roller, cooperating with a keeper, whereby the door may be maintained closed and easily removed from its latched position.

Another and very important object of the invention is the construction of a lock for vehicle doors and the like, wherein the spring controlled latch bolt and its roller cooperating with a keeper will not jam when closed and may be easily retracted by the operating lever without material pressure.

Another and equally important object of the invention is the provision of a door lock or latch adapted for use on various types of motor vehicle doors and the like, and one in which the parts are extremely simple in construction, easily assembled, rigid and durable, highly efficient in operation, practical and capable of being manufactured at a very low cost, whereby its commercial possibilites are greatly enhanced.

I attain these objects and others, in the accompanying drawings, wherein:

Figure 1 is a plan view, showing parts in section.

Figure 2 is a side view of the locking mechanism as applied to the door and car; and

Figure 3 is a detail view of the roller in cooperation with the keeper.

Referring now to the drawings, wherein like reference characters designate corresponding parts throughout the several views, 5 designates a portion of the car door and 6 the car frame, to which the latch bolt and keeper respectively are secured in a manner now to be set forth in detail. The door 5 is provided with an enlarged recess 7 therein, in which a substantially rectangular housing 8, is secured and countersunk in the said front wall of the door is a plate 9, bearing against the front of the housing 8 and has an aperture therethrough, to permit of the movement of the latch bolt, subsequently to be referred to. The rear wall 10 of the housing is also provided with a slot or recess to permit of the sliding movement of the latch bolt 11, which as shown is provided with a coiled spring 12 thereon, bearing against the inner side of the rear wall 10 and against the end 13 of a substantially rectangular, squared extension 14, formed integral therewith. The said extension 14 operates between a pair of rollers, constituting guides 15, 16, the reduced ends or spindles 17 of which are mounted in the side walls of the housing 8, above referred to. The said extension 14 also has formed integral therewith lugs 18 at its top and bottom, which constitute stop members for the latch bar, said lugs adapted to engage the front plate 9 in its extreme inward movement. The front portion of the squared extension 14 is adapted to pass through the plate 9 and operates in a keeper, the said front extension being formed with a yoke, the arms 19, 20 of which carry the roller 21 therein, the shaft of said roller having a nut 22 on the threaded end 23 thereof, as clearly shown by Figure 3 of the drawings.

The cooperating keeper 25, which is seated within a recess 26, formed in the car body adjacent the door 5, has its flanged or bent portions 27, 28 curved upwardly and downwardly respectively and secured in the body portion of the car, said curved portions effectively cooperating with the roller in the opening and closing movement of the lock or latch. The opposite end of the latch bolt 11 also extends through the opening in the rear wall 10 of the housing and has formed integral therewith an attaching member 30. The arms 31, 32 of the attaching member are connected by a pin 33, whereby the said member may be held securely on the vertically extending bolt 34, secured in the bottom slide block 35. The respective arms 31, 32, above referred to, are preferably provided with elliptical slots 36 therein, to permit of rocking movement of the nut 37 held on the end of the spindle 38 of the operating lever 39, said nut movable between the said arms and provided with a semi-circular slot or recess 40, adjacent the rod 34, to permit of rotation of

the spindle 38 in its flanged bushing 41, whereby the latch bolt may be retracted against the resistance of the spring 12, as clearly shown by the figures of the drawing. The upper end of the rod 34 is secured to an upper slide block 35′ and the rod and the blocks 35 and 35′ are adapted to be bodily moved rearward to operate the latch bolt upon actuation of the handle 39. The blocks 35 and 35′ are mounted in suitable guide ways 34′ carried by the door. The usual hand piece, preferably made of leather, shown by 43, is secured on the top of the car door, concealing the top of the rod 34 and its guide 34′, as clearly illustrated.

From the above construction, it will be readily seen that by simply turning the lever 39, the spindle 38 and nut carried thereby will move the rod 34 attaching member 30 and the latch bolt 11 against the resistance of the spring, bearing against the rear wall 10 and the end 13 of the front extension 14. The said extension, of course, operates between the guide rollers 15, 16, and consequently permits of the retraction of the roller 21 from the curved keeper 25 of the car body proper. Furthermore the lugs 18 on the said extension 14 limit the inward movement of the roller and thus prevent the same from being jammed or stuck in its keeper and assures proper operation of the device.

In the accompanying drawings, I have illustrated my invention embodied in one form by way of example, and which in practice has been found to be highly satisfactory in obtaining the desired results. It will be obvious however that other embodiments may be adopted, and that various changes in the details of construction may be resorted to by those skilled in the art without departing from the spirit and scope of the invention. It is furthermore understood that the invention is not necessarily limited or restricted to the precise elements shown except in so far as such limitations are specified in the subject matter being claimed.

What I claim as new is:

1. In a door lock, a housing, a sliding bolt carried by the housing including a cylindrical body portion, an enlarged extension at one end having plain side faces and a slotted extension at its opposite end, a spring coiled about said cylindrical portion engaging the enlarged portion and one end of the housing for normally urging the bolt outward of the housing, guide rollers carried by the housing engaging the plain side faces of the enlargement, a rotatable spindle extended through the slotted portion of the bolt, and means carried by the spindle for actuating the bolt against the tension of said spring means.

2. In a door lock, a housing, a sliding bolt carried by the housing including a cylindrical body portion, an enlarged flat extension at one end and a bifurcated portion at the opposite end, the bifurcated portion being slotted, an expansion spring coiled about the cylindrical portion engaging the housing and the enlarged flat end of the bolt normally urging the bolt outward of the casing, a rod disposed in the bifurcated portion of the bolt, means carried by the bifurcated portion for engaging the rod, a rotatable spindle extending through the slots of the bifurcated portion and a cam carried by the spindle for engaging said rod.

In testimony whereof I affix my signature in presence of two witnesses.

CLAUD A. MARCUM.

Witnesses:
H. M. WARREN, Jr.,
JAMES E. RAMSEY.