

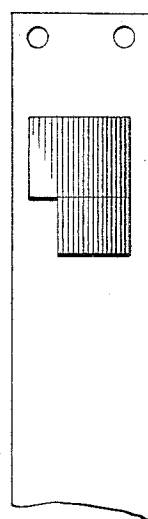
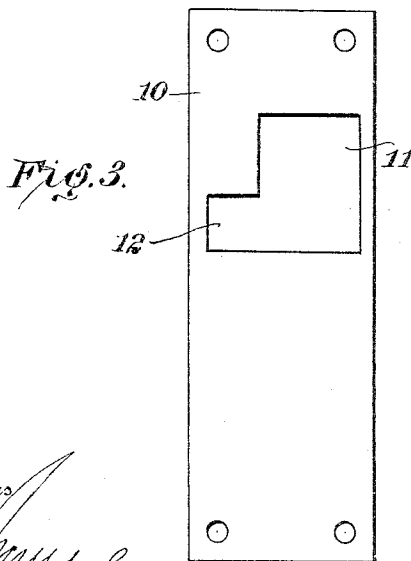
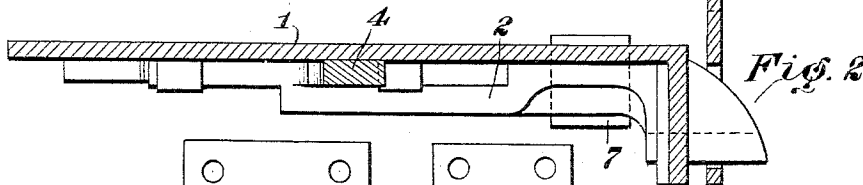
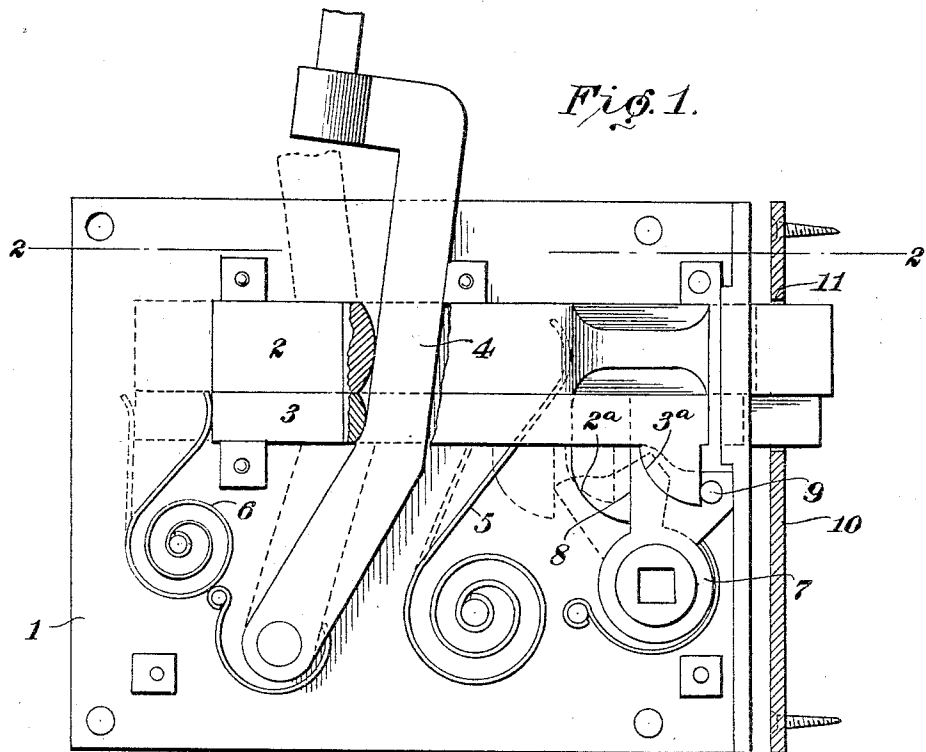
H. F. SMITH.

LATCH.

APPLICATION FILED NOV. 16, 1908.

932,507.

Patented Aug. 31, 1909.



Witnesses

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UNITED STATES PATENT OFFICE.

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LATCH.

932,507.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed November 16, 1908. Serial No. 462,898.

To all whom it may concern:

Be it known that I, HARRY F. SMITH, citizen of the United States, residing at the city of Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Latches, of which the following is a specification.

This invention comprehends certain new and useful improvements in latches for swinging closures, the invention being particularly designed for use in connection with the doors of carriages or automobiles, cars or other vehicles. In swinging closures of this character, it is well known, that with the ordinary construction of latch, it often happens that when the door is swung toward the closed position, the latch fails to move into the keeper, and, as a consequence, the door will subsequently swing open, thereby rendering the door liable to injury, in the straining of the hinges, or by the engagement of the door with the vehicle, or in the shattering of the glass panel or window of the door.

The primary object of my invention, is a latch of this general type, which will effectually prevent the accidental opening of the door as above set forth, and to this end, the invention consists in a novel construction and arrangement of supplemental bolt that is designed to take hold of the keeper before the door has been closed, thereby preventing the door from swinging outwardly again until the supplemental bolt has been manually retracted.

The invention further consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

Figure 1 is a side elevation of a lock constructed in accordance with my invention; Fig. 2 is a horizontal sectional view through the lock casing, the section being taken on the line 2—2 of Fig. 1; Fig. 3 is a face view of the keeper employed; and, Fig. 4 is a front top view of a portion of the lock.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates a latch casing which is formed

with a longitudinal guide way for a main bolt 2 and a supplemental bolt 3, said bolts being mounted in spaced relation in the present instance, as clearly illustrated in the drawings. The bolts 2 and 3 may be formed with registering vertically opening slots extending longitudinally therein and designed for the accommodation of the ordinary spring-pressed, inside handle lever 4 fulcrumed within the casing and extending upwardly through said slots so that by pulling upwardly upon said handle lever both bolts may be simultaneously withdrawn or retracted into the casing.

5 designates the spring for the main bolt 2, the free end of said spring, in the present instance passing up into the slot of said main bolt and engaging the front wall thereof with a tendency to project the bolt, and 6 designates the corresponding spring for the supplemental bolt 3, said spring 6 bearing against the rear end of said supplemental bolt as shown.

As another means for retracting the bolts, I have provided a retracting device 7 which is designed to be turned by a knob or the like in the usual manner, and which is of the usual construction except that in addition to its cam 8 for engagement with the tongue 2^a of the main bolt 2 it is formed with a laterally projecting pin 9 for engagement with the tongue 3^a of the supplemental bolt 3, whereby upon turning the reciprocating device 7, both bolts may be simultaneously withdrawn into the casing.

It is to be particularly noted that the keeper plate 10 which is secured to the door jamb is formed, not only with the usual socket 11 for the projecting beveled end of the main bolt 2, but is also formed with another socket 12 for the projecting end of the supplemental bolt 3, the two sockets communicating in the present instance, and the socket 12 being located in advance of the socket 11, that is to say the socket 12 meets or confronts the beveled end of the supplemental bolt 3^a in the swinging movement of the door toward the closed position, in advance of the beveled projecting end of the main bolt 2 with its socket 11. Manifestly the socket 12 is out of alinement with the socket 11. It is also to be noted that while the advancing side edges of both bolts are in the same vertical plane, the rear edge of the supplemental bolt terminates short of the corresponding edge of the main bolt

above it. By the rear edge is meant that edge of the bolt which is the rearmost as the door closes.

From the foregoing description, in connection with the accompanying drawings, it is evident that as the door, equipped with the improved latch of my invention, swings toward the closed position, the supplemental bolt 3, which may work independently of the main bolt, comes into engagement with the socket 12 of the keeper 10 before the door has been brought to the fully closed position where the bolt 2 would engage with its corresponding socket 11. Hence before the door has been fully closed and latched, the supplemental bolt will catch and thereby effectually prevent the door from accidentally swinging open again, and the liability of injury to the door as before mentioned, is effectually avoided.

Having thus described the invention, what is claimed as new is:

1. In a latch, the combination of a main bolt, a supplemental bolt movable independently of the main bolt, and a keeper formed with sockets for the supplemental and main bolts respectively, the socket for the supplemental bolt being located in advance of the socket for the main bolt, as herein shown and described.

2. A latch comprising a casing, a main and a supplemental bolt mounted for movement therein in spaced relation to each other, means for simultaneously retracting both of said bolts, means for permitting the retraction of the supplemental bolt independently of the main bolt, and a keeper pro-

vided for sockets for the respective bolts, the socket for the supplemental bolt being located in advance of the socket for the main bolt.

3. A latch, comprising a casing, main and supplemental bolts mounted in said casing and movable independently one from the other, a retracting device mounted in said casing, said bolts being respectively provided with tongues, and the retracting device being formed with a cam engaging the tongue of one bolt, and with a laterally projecting pin engaging the tongue of the other bolt, and a keeper formed with sockets for the respective bolts, the socket for the supplemental bolt being located in advance of the socket for the main bolt.

4. A latch, comprising a casing, main and supplemental bolts mounted in said casing, the supplemental bolts being mounted for a retracting movement independent of the main bolt, said bolts being arranged in spaced relation with their advancing side edges in the same vertical plane, the opposite edge of the supplemental bolt terminating short of the corresponding edge of the main bolt, and a keeper formed with sockets for the respective bolts, the socket for the supplemental bolt being located in advance of the socket for the main bolt.

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

HARRY F. SMITH. [L. S.]

Witnesses:

G. W. DAVIS,
E. K. BOWLES.