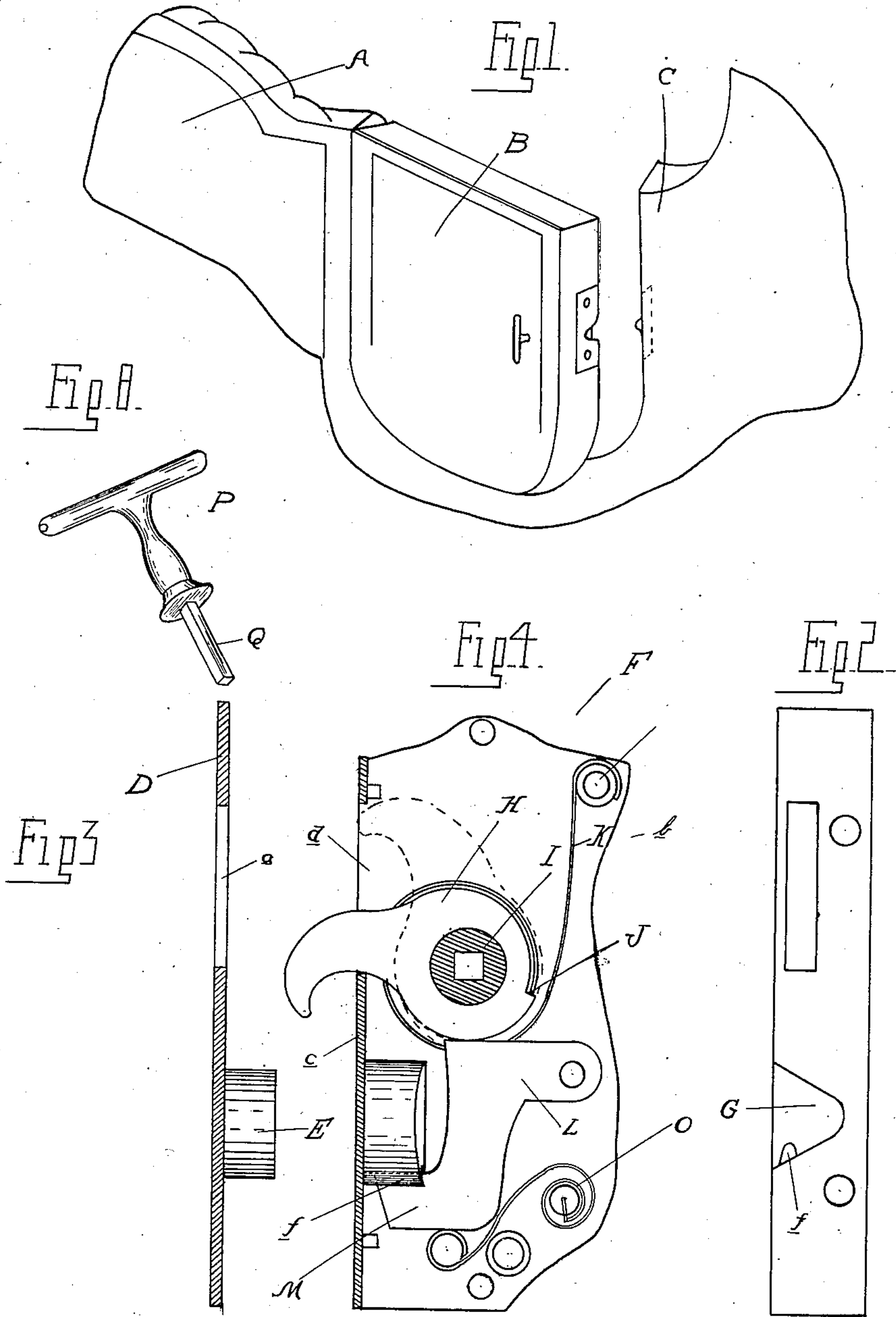


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LATCH MECHANISM.  
APPLICATION FILED FEB. 27, 1908.

929,988.

Patented Aug. 3, 1909.  
2 SHEETS—SHEET 1.



Witnesses  
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Fig. 5.

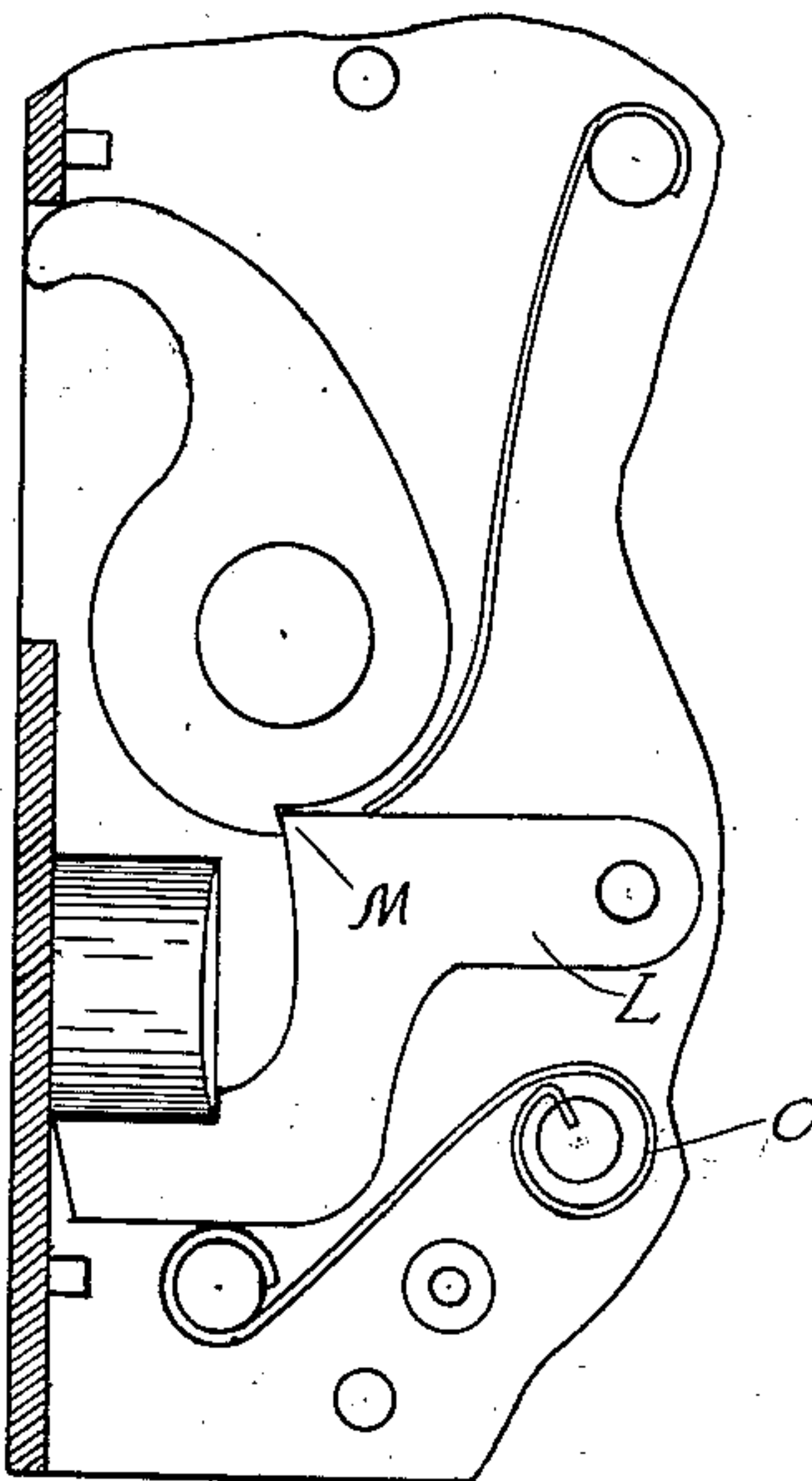


Fig. 6.

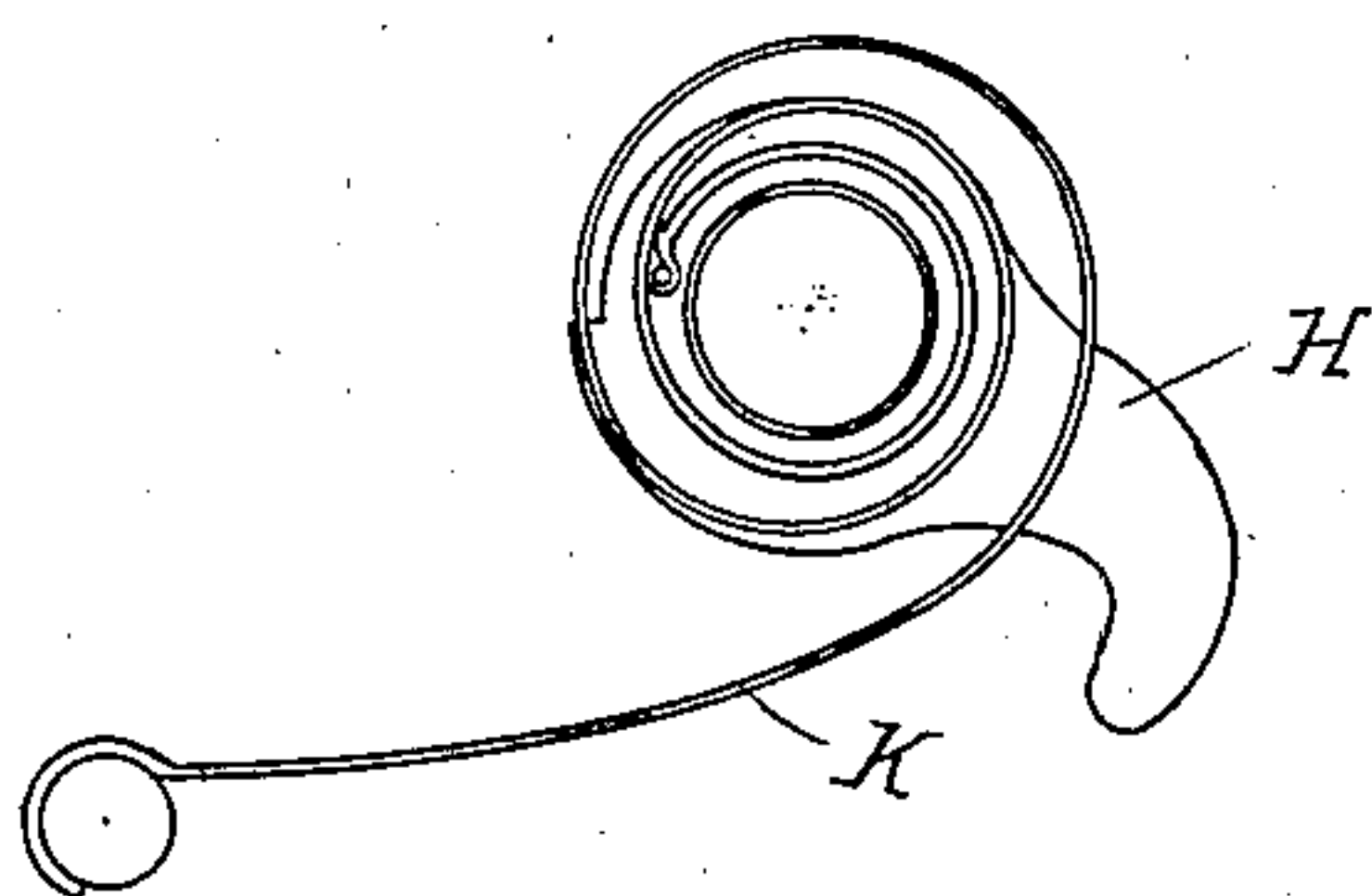
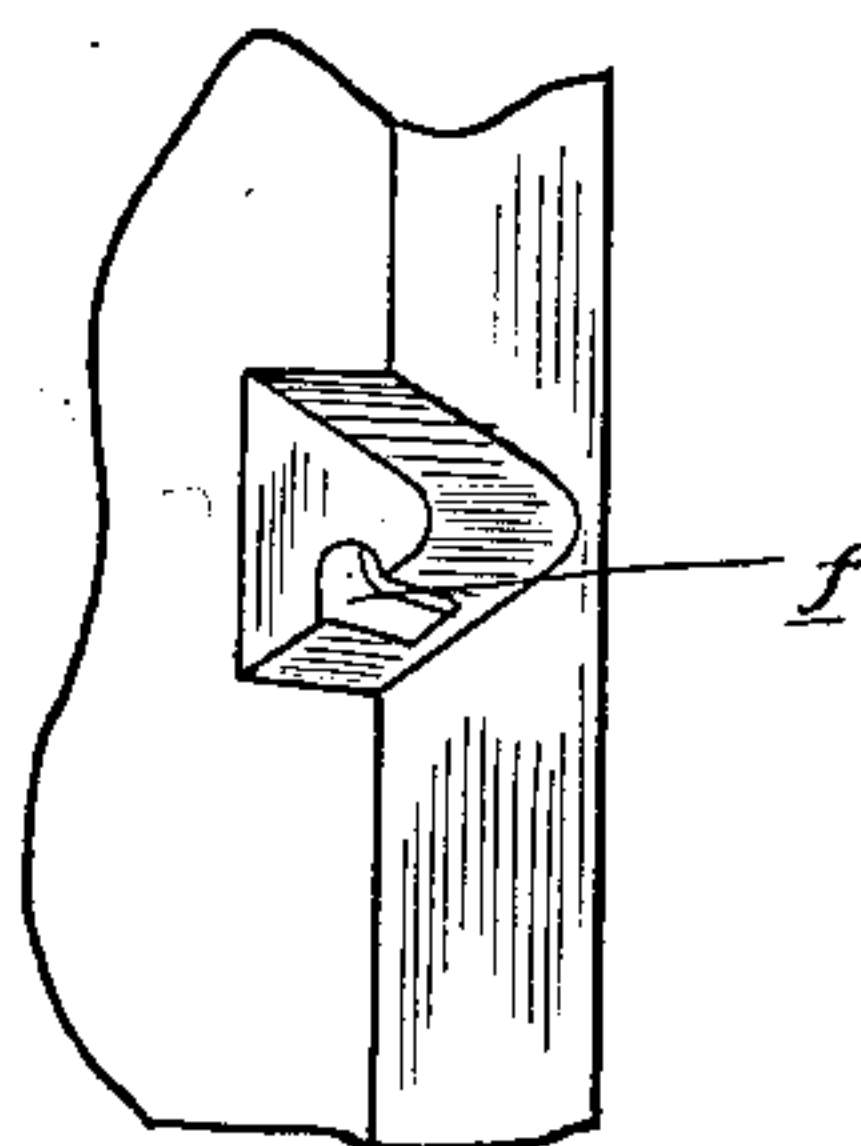


Fig. 7.



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# UNITED STATES PATENT OFFICE.

JAMES SHAND, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-THIRD TO EDWARD L. ACKERMAN AND ONE-THIRD TO CHARLES E. CHAMBERLIN, OF DETROIT, MICHIGAN.

## LATCH MECHANISM.

No. 929,988.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed February 27, 1908. Serial No. 418,112.

*To all whom it may concern:*

Be it known that I, JAMES SHAND, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Latch Mechanism, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates generally to a latch mechanism, which, for the purpose of illustration, is shown as applied to the door of an automobile body, and consists in the novel construction of the mechanism whereby the door may be readily and securely latched or locked without the necessity of slamming.

The invention further consists in the detail construction of the latch mechanism, and in the peculiar arrangement and combination of its various parts.

In the drawings,—Figure 1 is a sectional perspective view of an automobile body, showing the latch mechanism applied; Fig. 2 is a face view of the casing; Fig. 3 is a vertical central sectional view of the latch-plate; Fig. 4 is a view in side elevation of the latch mechanism, a portion of one casing side being broken away to show the interior arrangement of the parts; Fig. 5 is a view similar to Fig. 4, showing the parts in different positions; Fig. 6 is a bottom plan view of the latch and its actuating spring; Fig. 7 is a sectional perspective view of a portion of the casing; and Fig. 8 is a detached perspective view of the handle.

In the drawings thus briefly described, A' represents the automobile body, B the door, and C the casing.

D represents the usual latch-plate, slotted, as at *a*, to receive the latch, and provided in this instance with a latch-releasing member E of a tapering or wedge-like form, the plate being secured in the ordinary manner to the door casing.

F represents the usual casing containing the latch mechanism proper, comprising the usual side-plates *b* and face-plate *c*, slotted, as at *d*, to permit of the projection of the latch therethrough. The casing is also formed with a guideway G,—preferably in the form of a housing,—adapted to receive, upon the closing of the door, the latch-releasing member E upon the latch-plate. The

housing is slotted, as at *f*, for a purpose hereinafter set forth.

H indicates the latch proper in the form of a locking-hook mounted upon and rigidly secured to a spindle-sleeve I suitably journaled at its ends in the casing sides.

K is an actuating spring for the latch connected to the latter and to a pin or lug G on the casing in any suitable manner, the spring acting normally to maintain the locking-hook in its operative position in relation to the latch-plate, as indicated in Fig. 4.

Beneath the latch described is pivoted a locking-plate L fashioned to extend beneath the housing G and upwardly through the slot *f* therein, as indicated in dotted lines in Figs. 4 and 5. This plate is provided with a suitable spring O which serves to hold the locking member normally in contact with the locking hook and partially within the slot *f*. A portion of the locking-plate bearing against the latch is formed with an angular portion M that is adapted, when the latch is in its inoperative position as indicated in Fig. 5, to engage a detent or shoulder J upon the hook for retaining the latter wholly within the casing.

P represents a suitable operating member for the latch mechanism,—in this instance the usual form of handle, provided with a spindle Q which fits the spindle-sleeve I.

When the door is shut and in alignment with its casing, the parts are in the position indicated in Fig. 4, the latch protruding through the face-plate and engaging the latch-plate in the ordinary manner. Upon turning the handle to open the door, the latch is rotated until entirely within its casing, and is held in this position by the automatically-operating locking-plate. Upon closing the door, the parts remain in the position described until the member E upon the latch-plate enters the housing or guideway G, when the portion of the locking-plate L projecting within the guideway is engaged, the locking-plate depressed, and the spring-actuated latch released, locking the door to its casing.

It will be noticed from the construction of the mechanism described that the latch-releasing member E is adapted to perform not only its primary function as set forth but also serves in the nature of a centering de-



vice for the door, raising the latter slightly, or depressing the same,—as the case may be,—according to the extent that the door may be out of proper alinement with its casing.

What I claim as my invention is,—

1. In a latch mechanism, the combination with a latch casing provided with a guideway, of a spring-pressed latch within the casing, automatic means for holding the latch in an inoperative position against the tension of its spring, automatic releasing mechanism for the latch including a member projecting within the guideway, a latch retainer, and means associated with said retainer adapted to engage the guideway and the projecting member therein.

2. The combination with door and casing members, of a latch retainer upon one mem-

ber and a latch mechanism upon the other consisting of a casing, a latch therein, a coil spring for normally holding the latch in locked position, a spring-actuated lock also within the casing adapted to hold the latch in inoperative position, a guideway on the casing having a slot therein through which a portion of the lock projects, and a latch-releasing member upon the latch plate engaging the guideway upon the alining of the door and casing members, for the purpose described.

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

JAMES SHAND.

Witnesses:

NELLIE KINSELLA,  
HARRY W. GALVIN.