(No Model.)

J. A. GIESE.

LATCH.

No. 450,669. Patented Apr. 21, 1891.

Fig. 1.

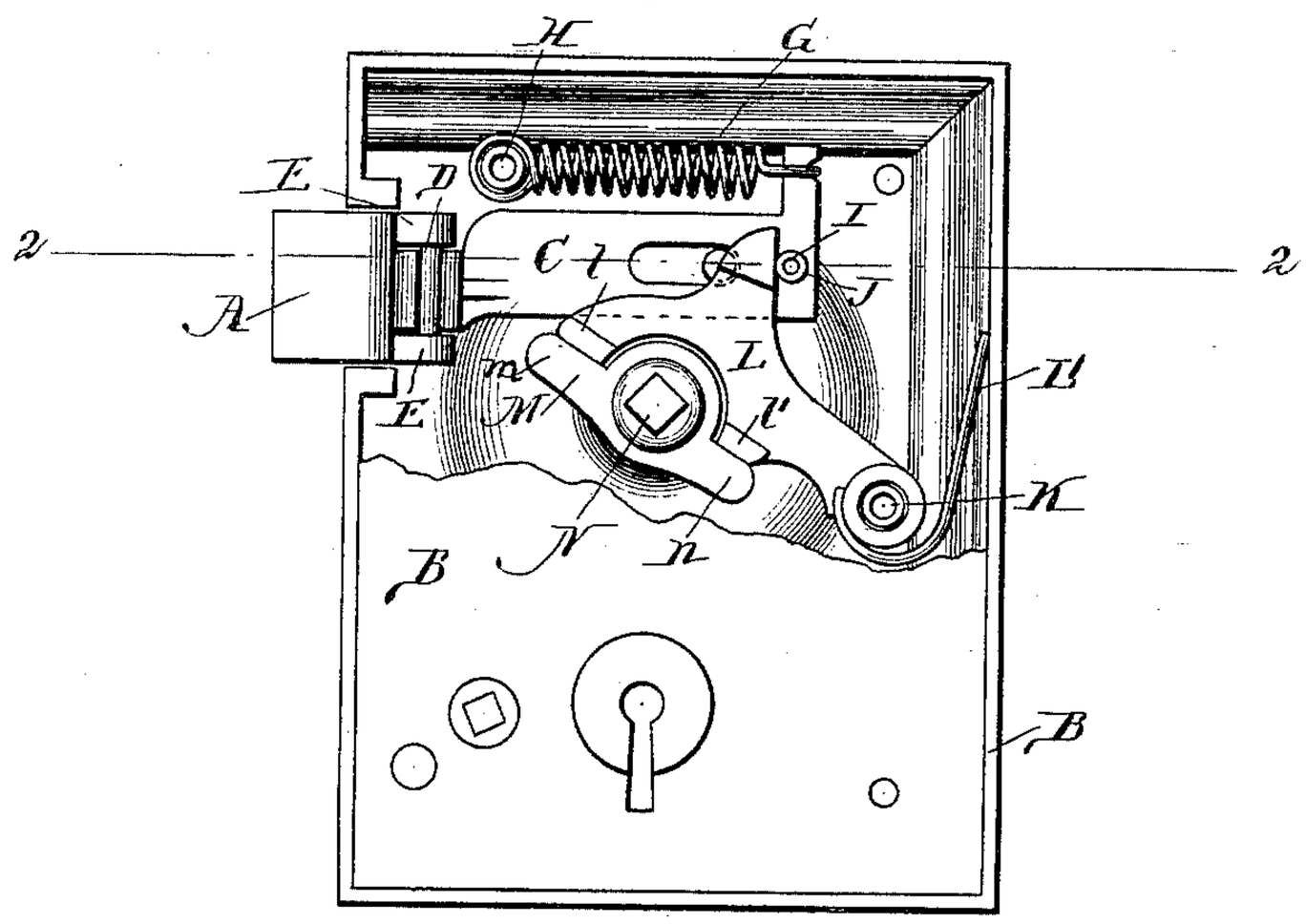
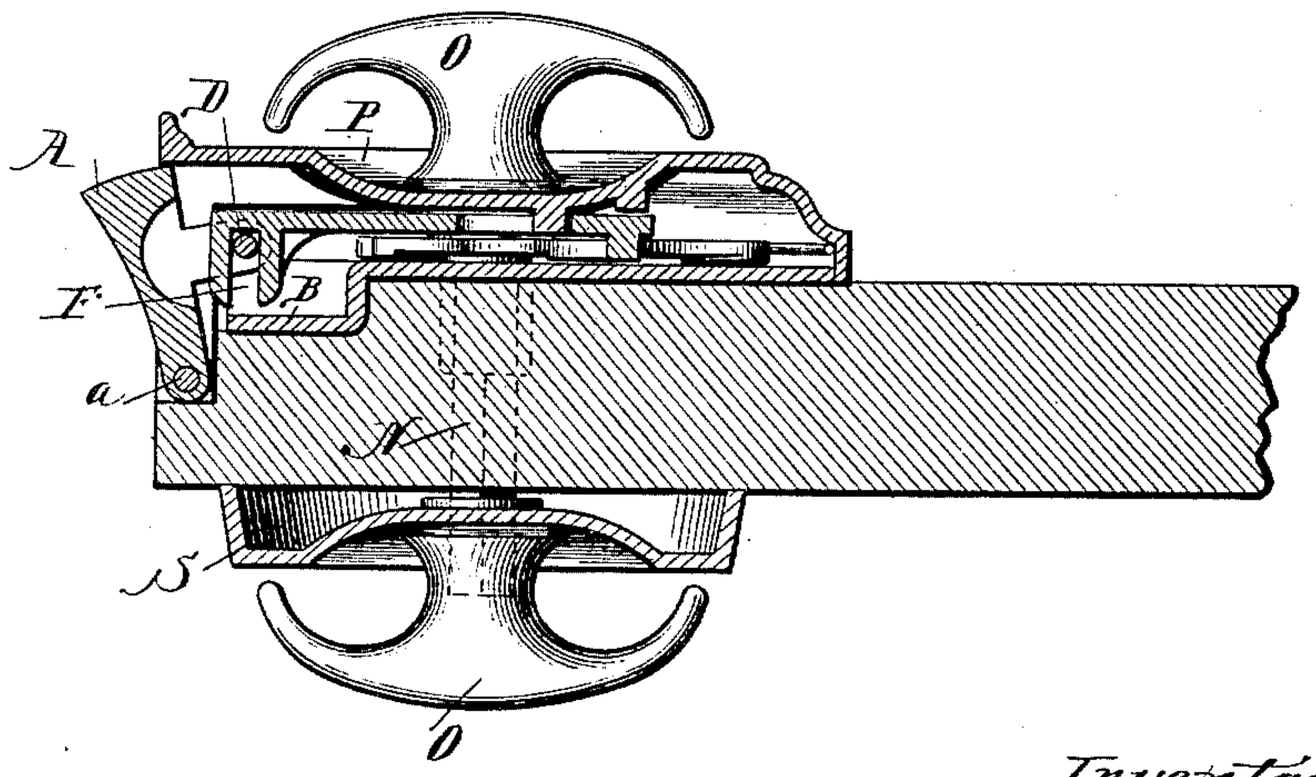


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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LATCH.

SPECIFICATION forming part of Letters Patent No. 450,669, dated April 21, 1891.

Application filed July 3, 1890. Serial No. 357,645. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. GIESE, of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Door-Latches, of which the following is a specification.

My improvement relates to locks for doors which are secured to the side of the door in distinction from those which are set in a mortise in the edge thereof, and the lock is designed more especially for use upon cars. There are many situations in which it is desirable that the knob of the lock should be as little prominent as possible, and especially in palace cars where there are numerous doors opening upon narrow aisles and into small compartments, so that in passing one must brush very close to the door, and is therefore very likely to catch some part of the garment against the knob. I have therefore designed my improved lock so that a countersunk or partially countersunk handle could be employed therewith. At the same time I have so contrived it that the fewest and simplest operating parts should be employed.

In the accompanying drawings, Figure 1 is a side view of the lock, the upper portion of the casing being broken away to show the parts within the interior. Fig. 2 is a horizontal section on line 2 2, Fig. 1.

A is the catch, which, as shown in Fig. 2, is pivoted at *a* to the inner edge of the lock-casing B. It is connected to the slide C by a pin D, passing through jaws E of the latch, said pin fitting in a slot F of the slide C. The slide C is provided with a spring G, secured at one end to the pin or lug H of the casing. Said spring G serves to throw the slide C and the catch A outward, so as to be ready to engage with the keeper on the door-jamb. Projecting from the slide C is a pin I, which is preferably, although not necessarily, provided with an anti-friction roller J. Pivoted within the casing, at a point K at one side of and below the slide C, is a lever L. The lever L extends obliquely upward and inward toward the center of the casing. Its top edge curves upward at its inner end to form a vertical face, against which the roller or other projection J of the slide C bears. The lower edge of the lever L is arched to accommodate the hub of the cam M upon the spindle N, the toes *m n* of said cam making contact with the faces *l l'* of said lever. The toe *n* is made shorter than the toe *m* to compensate for the relatively smaller movement of the face *l'* as compared with the face *l*. A spring L' is attached to the lever L, so that contact is maintained between the lever L and the cam M at all times, whether the slide C be forced back or not, the rattling of the parts of the latch being thereby prevented. At each end of the spindle N, which passes through the cam M, are fixed knobs or handles O O. The shanks of said handles are countersunk in depressions P P in the casing B and the escutcheon S, respectively, and the outer ends of said handles are curved down, so as to lie close to the case.

The use of the lever L, constructed as before described, allows the cam and spindle operating the slide of the latch to be placed at one side of the slide and out of its way. The depression P can, therefore, be made deeper and be located near the middle of the casing, the handle being thereby better protected and presenting a neat appearance.

I claim—

The combination, in a door-latch, of a casing having a central circular concavity beneath the handle, a spindle passing through the center of said concavity, a cam on said spindle, a spring-actuated slide operating to project the latch and located away from the center of said concavity, a pivoted lever extending obliquely upward toward the central part of the casing, its upper edge being curved upward to form a vertical working-face operating said slide to retract the latch and its lower oblique edge forming a face against which said spindle-cam operates, and a second spring connected to said lever and maintaining the contact between the said cam and lever independently of the movement of the latch-slide, substantially as described.

JAMES A. GIESE.

Witnesses:
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