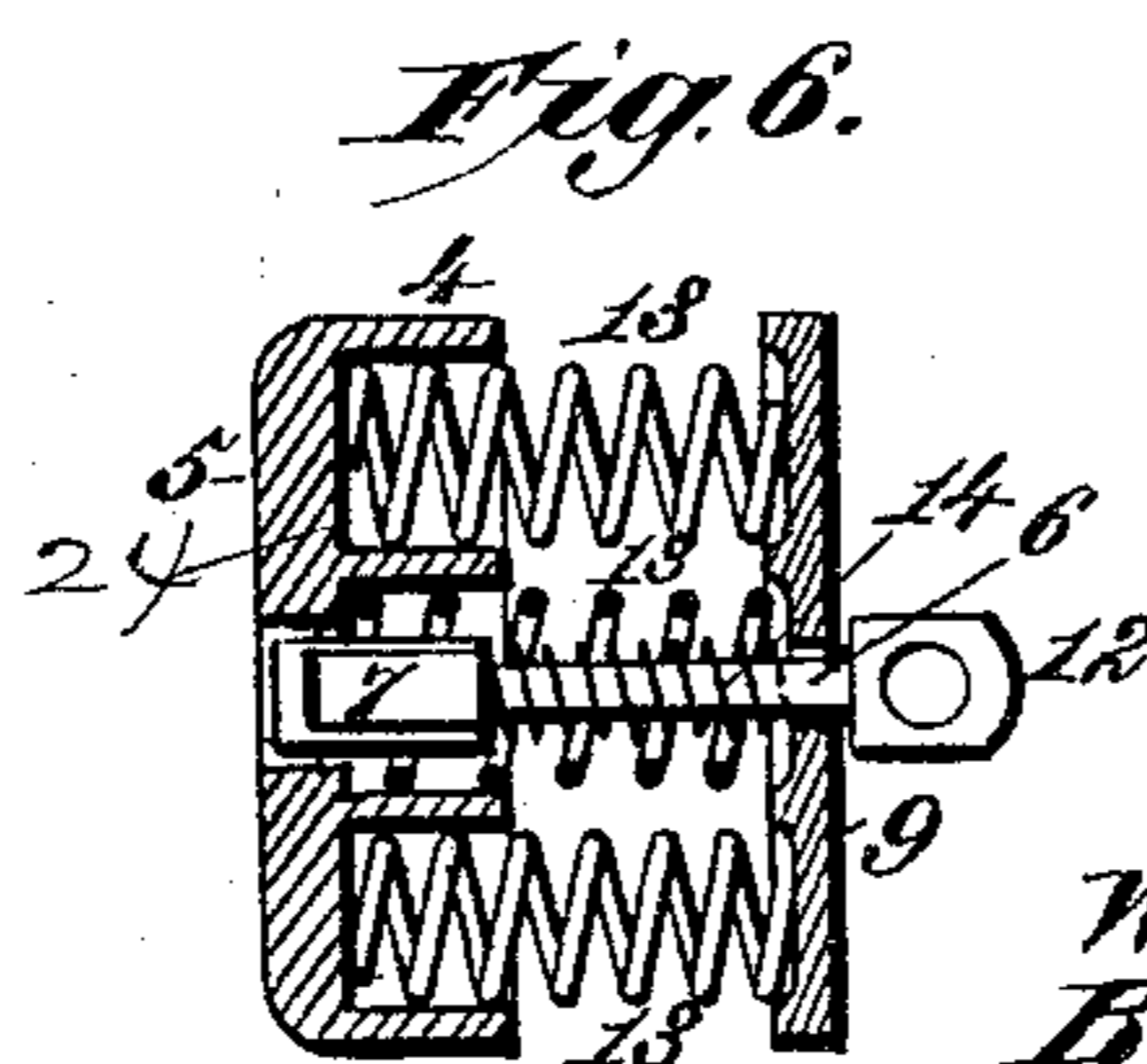
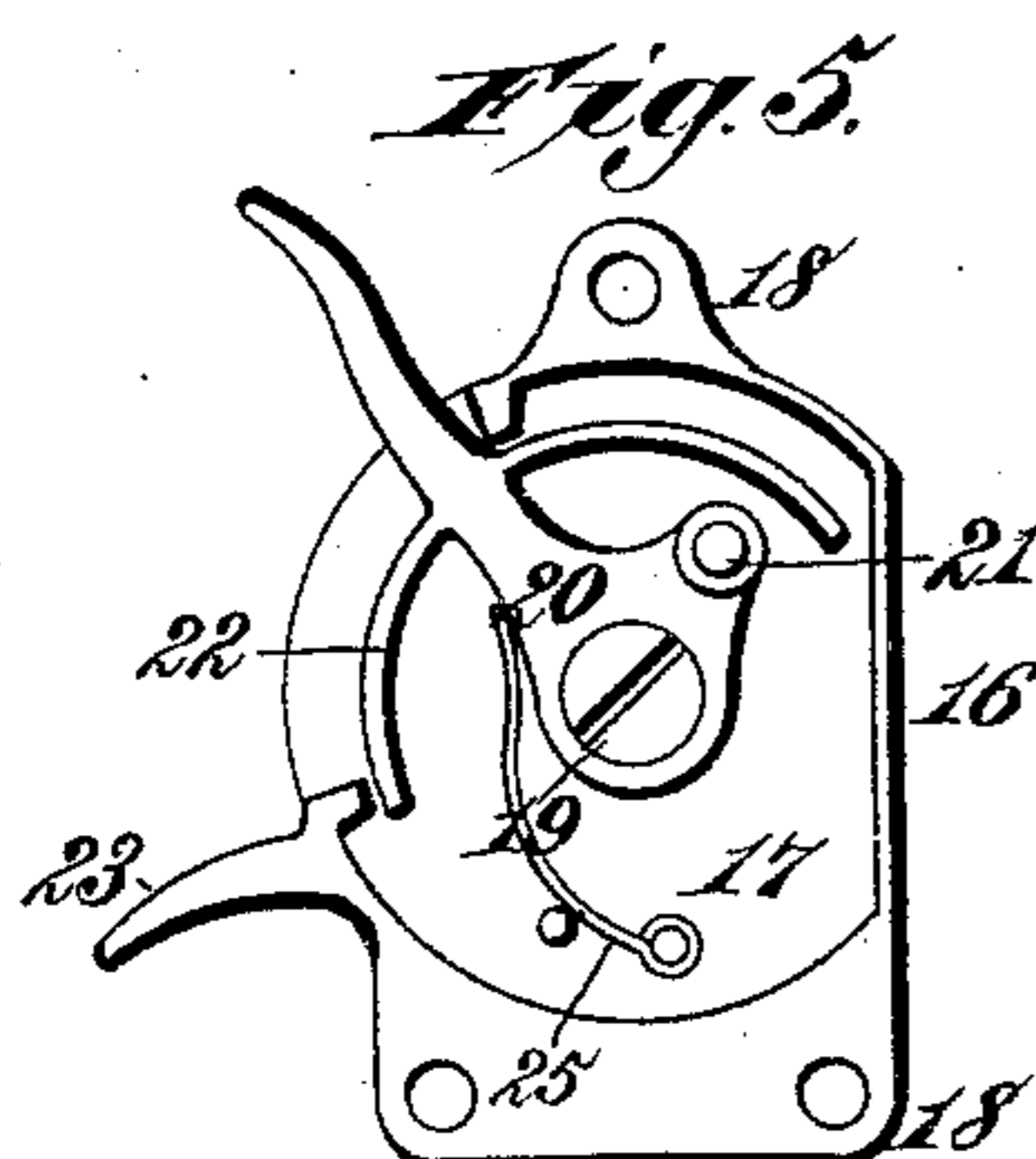
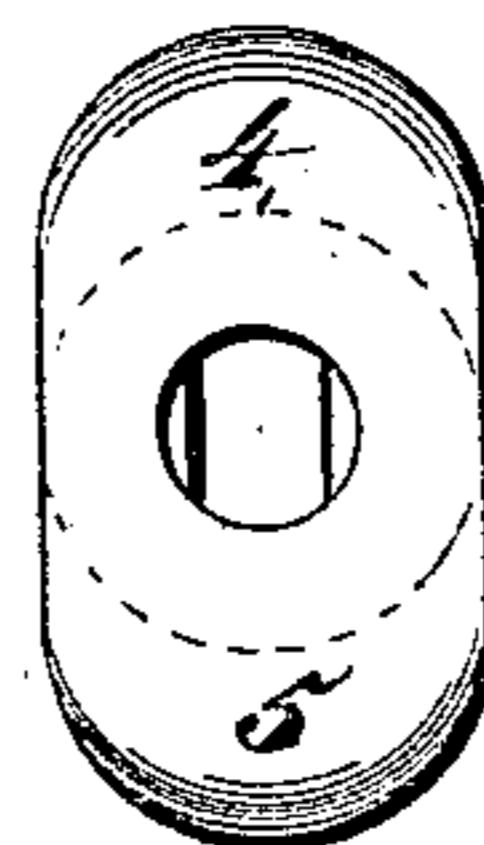
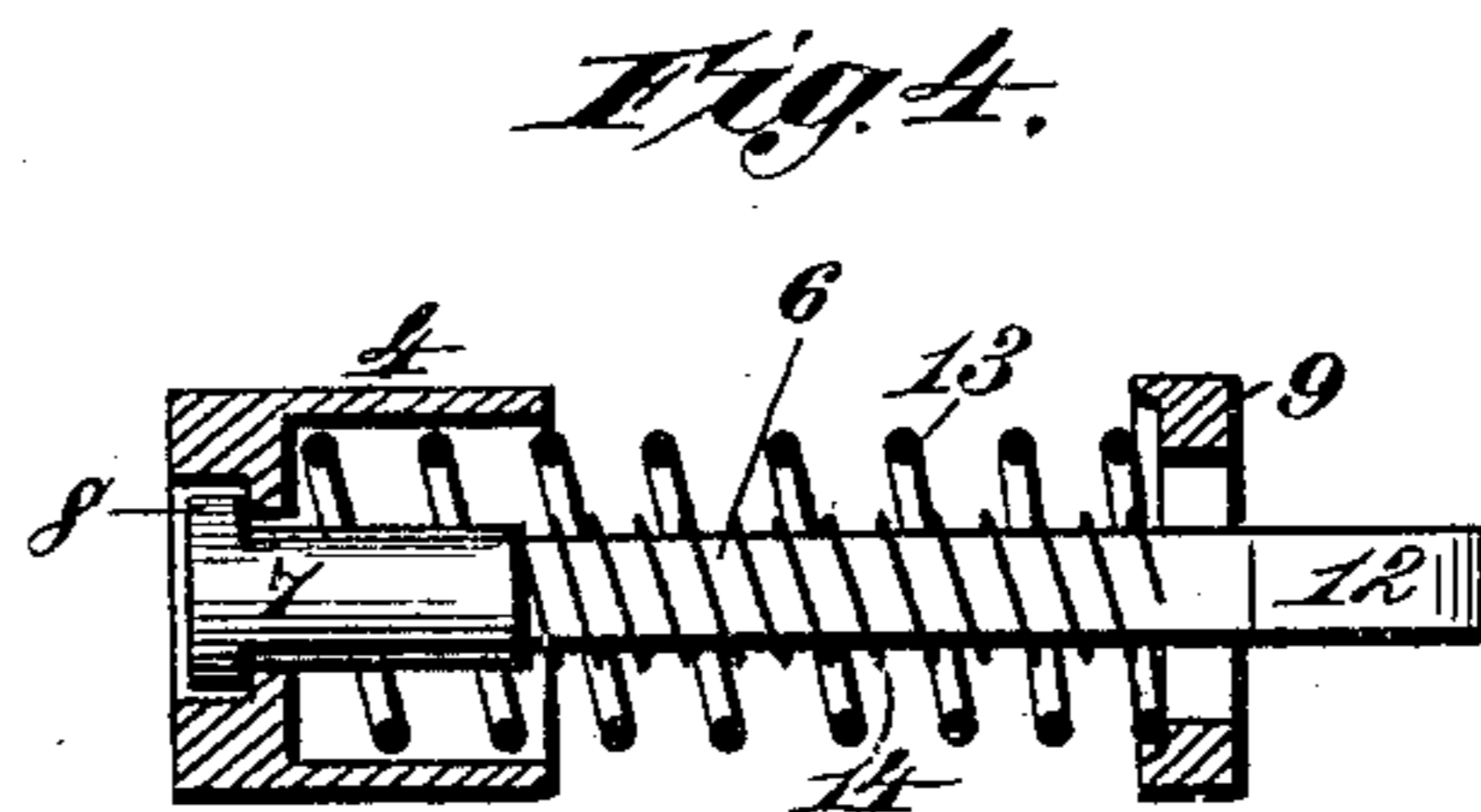
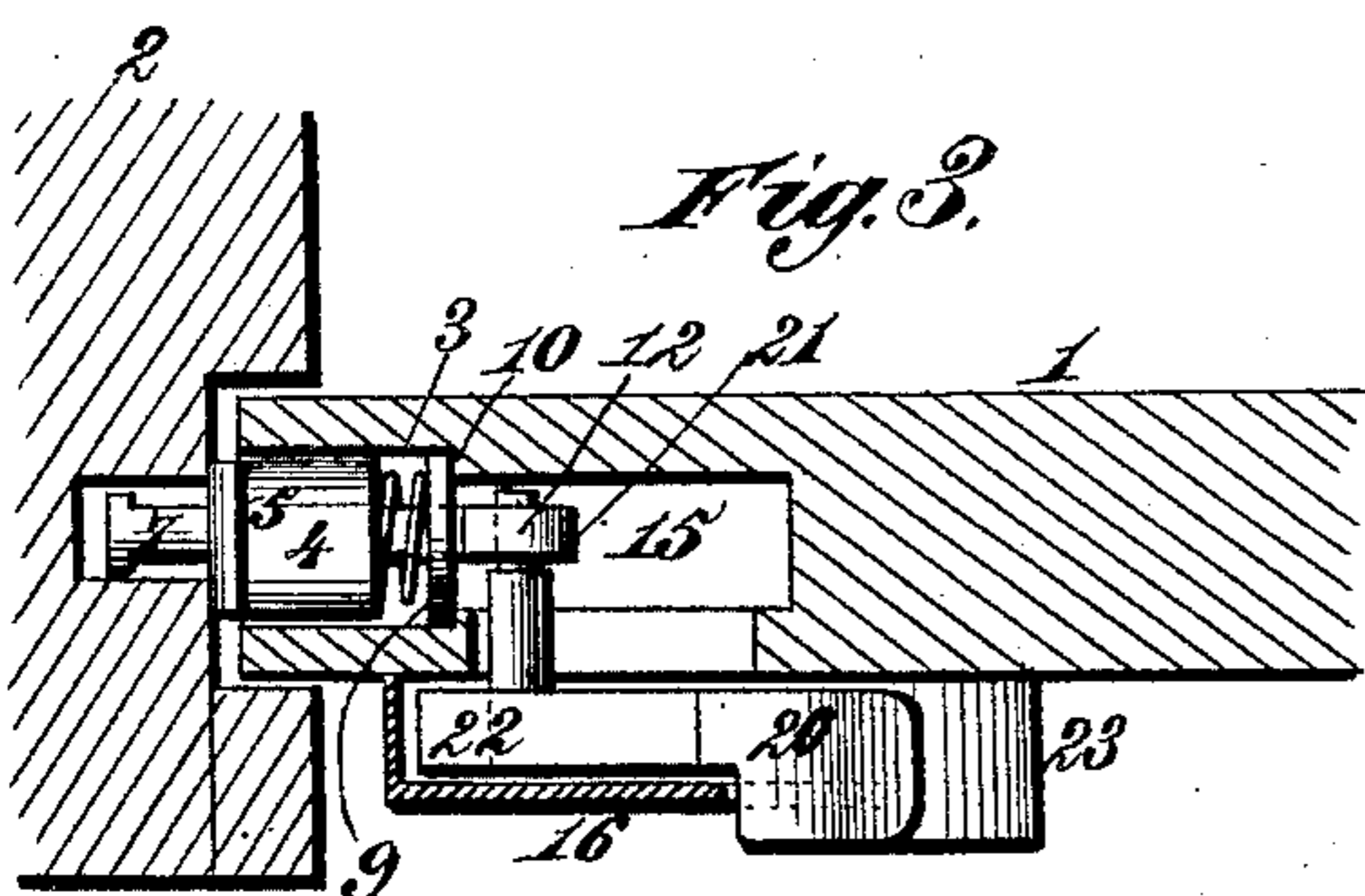
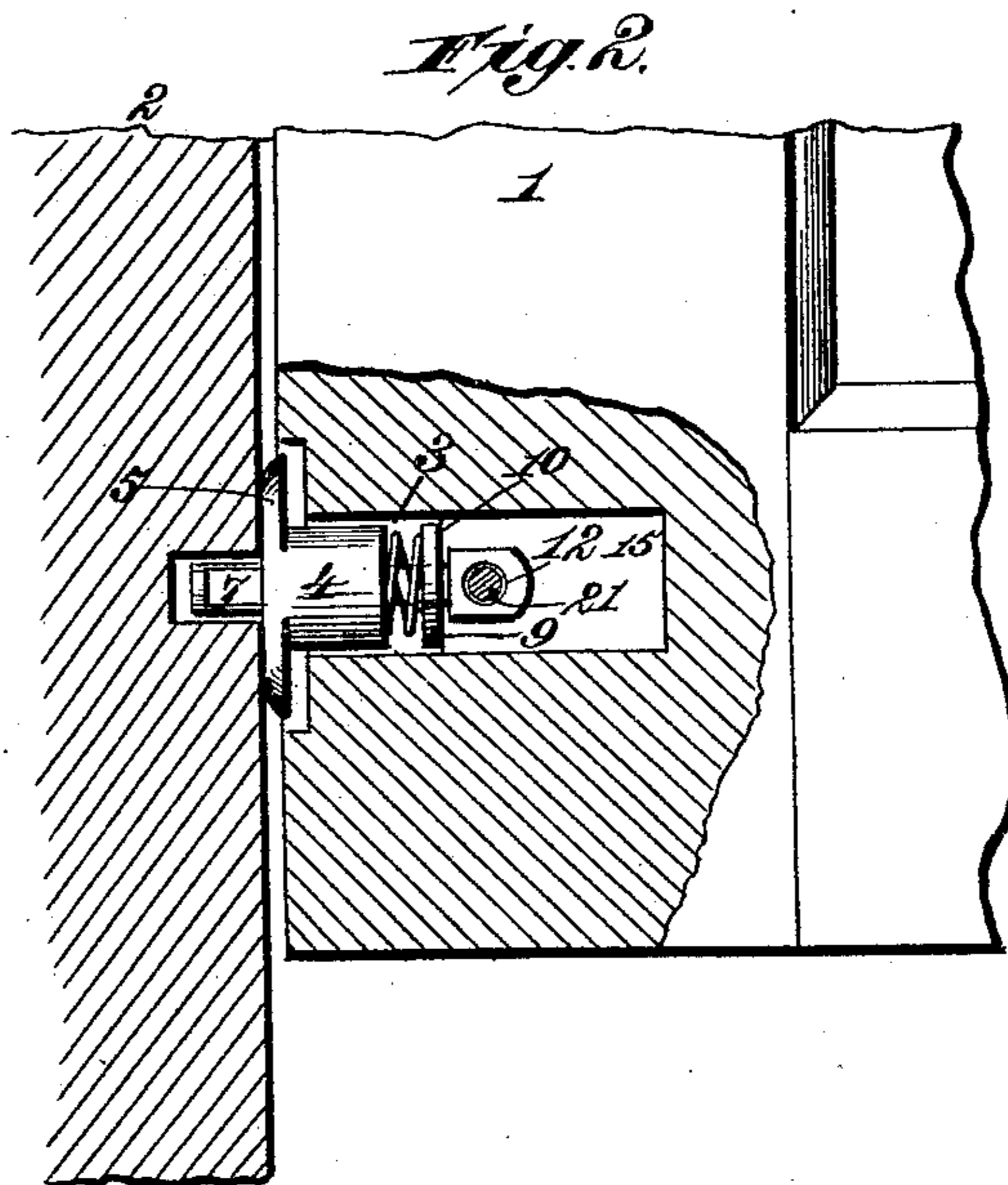
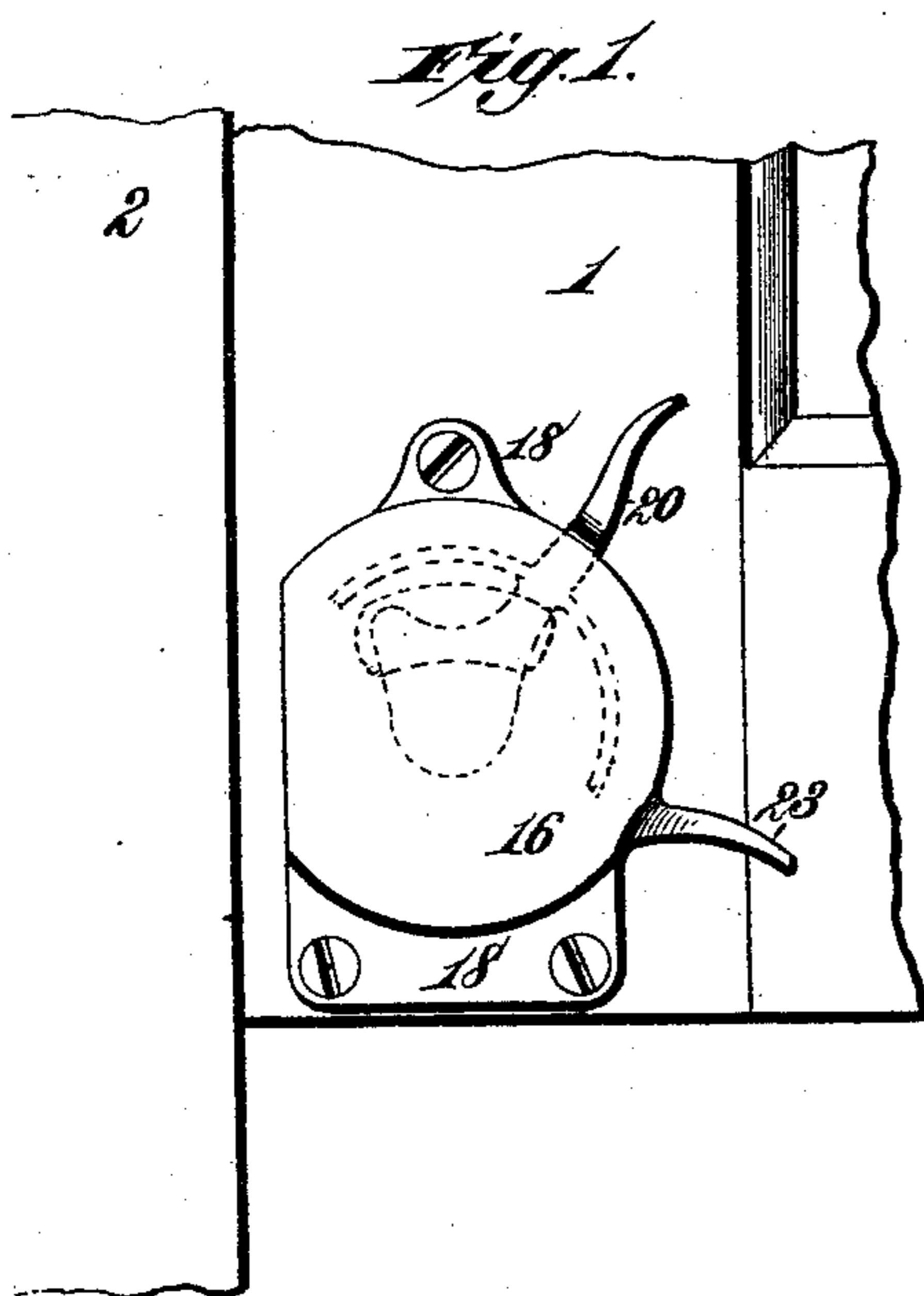


(No Model.)

W. H. KING.
SASH FASTENER.

No. 452,545.

Patented May 19, 1891.



Witnesses:

Robert G. Smith,

J. A. Rutherford.

Inventor:

William Haskell King.

By

James L. Norris.

Atty.

UNITED STATES PATENT OFFICE.

WILLIAM HASKELL KING, OF NEW HAVEN, CONNECTICUT.

SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 452,545, dated May 19, 1891.

Application filed February 14, 1891. Serial No. 381,455. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HASKELL KING, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Sash-Locks, of which the following is a specification.

My invention relates to that class of sash-locks in which a positive lock is combined with means for holding the sash from falling at any point.

It is the purpose of my invention to provide simple and convenient means for operating the locking-bolt and holding device by means of the same lever and to combine said parts in such manner that the whole may be actuated with the exertion of but little force on the part of the operator.

It is my purpose, also, to provide a simple and inexpensive construction and combination of parts expressly adapted for use upon railway-car windows, whereby both the holding and the locking device shall be normally at all times in action, the lock being automatically fastened whenever the locking-openings in the jamb are presented to the bolt.

The invention consists in the several novel features of construction and new combinations of parts hereinafter fully set forth, and then definitely pointed out in the claims which follow this specification.

Referring to the accompanying drawings, Figure 1 is a front elevation, partly in section, showing part of a window sash and jamb with my invention applied thereto. Fig. 2 is a vertical section of the sash in a plane parallel with the sash-frame. Fig. 3 is a horizontal section on the axial line of the locking-bolt. Fig. 4 is a detail section of the locking and holding devices. Fig. 5 is an interior view of the housing. Fig. 6 is a view showing a modification.

In the said drawings, the reference-numeral 1 denotes the window-sash, and the numeral 2 designates the jamb of the window, both being of the usual or any desired form or pattern used upon railway cars, coaches, or carriages. In the sash-frame is formed a circular recess 3, within which lies the locking and holding devices. These consist of a tubular plunger 4, having on its outer end a friction-plate 5, having usually a width equal to that of the plunger, but which may be of any width preferred and of any suitable length, its outer edges being rounded or beveled off or of any desired form to enable it to pass smoothly over any flat surface. Within the tubular plunger 4 is arranged a spindle 6, carrying a locking-bolt 7, which projects through the central part of the plate, the sides of the bolt being flattened nearly to its end, leaving partial flanges 8, which engage with the plunger as the bolt is drawn completely within the outer face of the plate 5. Upon the rearward end of the spindle is loosely mounted a washer or plate 9, which rests against shoulders 10 in the circular recess 3, and in rear of said plate the end of the spindle is provided with an eye 12, or its equivalent. Within the tubular plunger is coiled a strong spring 13, one end resting against the friction-plate 5 and the other against the washer or plate 9, which may be provided with a circular seat for the end of the spring. An independent spring 14 is coiled on the spindle 6, bearing at one end against the washer-plate 9 and at the other against the locking-bolt 7. The eye 12 on the spindle 6 projects into a chamber 15, cut in the inner face of the sash in rear of the circular recess 3. Upon the flat face of the sash is mounted a housing 16, composed of a metallic plate cast or struck to form a chamber 17, from the ends of which project tongues or lugs 18, which receive screws fastening the housing upon the sash. Within the substantially circular chamber 17 is a central pivot-pin 19, on which is mounted a lever 20, carrying an eccentric stud 21, which engages the eye 12 on the spindle 6. On the said lever is mounted a curved plate 22, which serves as a guard-plate to close and cover the opening in which the lever swings. Projecting from the lower lateral portion of the bearing is a thumb-piece 23, which serves as a hold for the operator in throwing the lever down to the full extent of its movement, thereby retracting the bolt and drawing the friction-plate 5 into a recess 3, cut in the outer edge of the sash to receive

it. The sash is then moved up or down freely to any point, and upon release of the lever the friction-plate is thrown against the jamb with such force as to hold the window securely. By the exertion of greater force, however, the window may be moved without operating the lever, since the plate 5 will slide upon the jamb if a proper force is exerted. Upon reaching any one of the locking-openings the bolt, under the force of its independent spring, will be thrown into the opening automatically and lock the sash.

In view of the fact that the spring projecting the tubular plunger 4 must be stored in a comparatively limited space, it is necessary in order to provide the required force that it be made of an expensive quality of steel wire. To avoid this expense, I may employ the slightly-modified form shown in Fig. 6, wherein the friction-plate 5 is extended above and below its central portion far enough to provide seats 24 for additional springs on each side of and above and below the central spring. To provide a rearward support for the other ends of said springs, the washer-plate 9 is similarly extended, as shown. This construction provides three actuating-springs for the sash-holder, the united force of which is sufficient to enable me to employ ordinary spring-wire for the purpose and effect a material saving in the cost of manufacture.

The tubular plunger, in conjunction with the spindle and locking-bolt and the independent springs projecting both plunger and bolt toward the jamb, are not essentially different from the invention patented to me the 4th day of February, 1879, No. 212,015, and

I make no claim, broadly, to said devices, my present invention being an improvement upon said patent.

The guard or shield 22 may or may not be used, as preferred. I may, if I desire, use a spring 25 to throw the lever 20, to throw it and its bolt into locking engagement; but I do not limit my invention thereto.

Having thus described my invention, what I claim is—

1. In a sash lock and holder, the combination, with a tubular plunger carrying a friction-plate and a spindle carrying a locking-bolt projecting through the friction-plate, the plunger and spindle each actuated by an independent spring, of a lever pivoted at one end in a housing mounted on the sash and having an eccentric stud engaging an eye on the rear end of the spindle, substantially as described.

2. The combination of the housing secured to the sash and having an internal pivot-pin and the swinging lever mounted on the pivot-pin projecting through the housing to the exterior thereof and having a lateral eccentric stud, with a spindle having an eye engaging the eccentric stud, a plunger surrounding the spindle and retracted by a locking-bolt carried by the spindle, and springs respectively acting upon the plunger and spindle, substantially as described.

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

WILLIAM HASKELL KING.

Witnesses:

JNO. R. SNOW,
C. F. BRYANT.