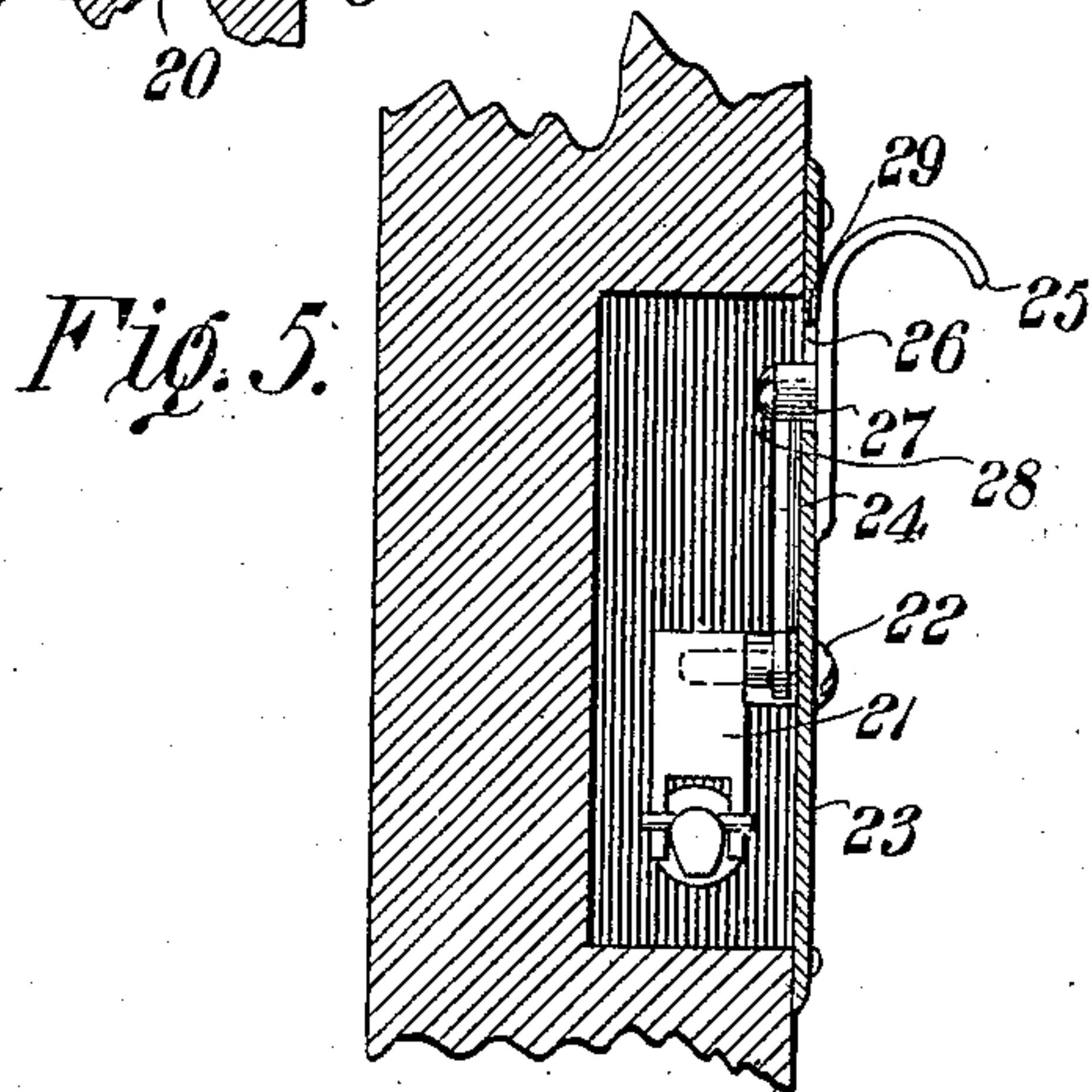
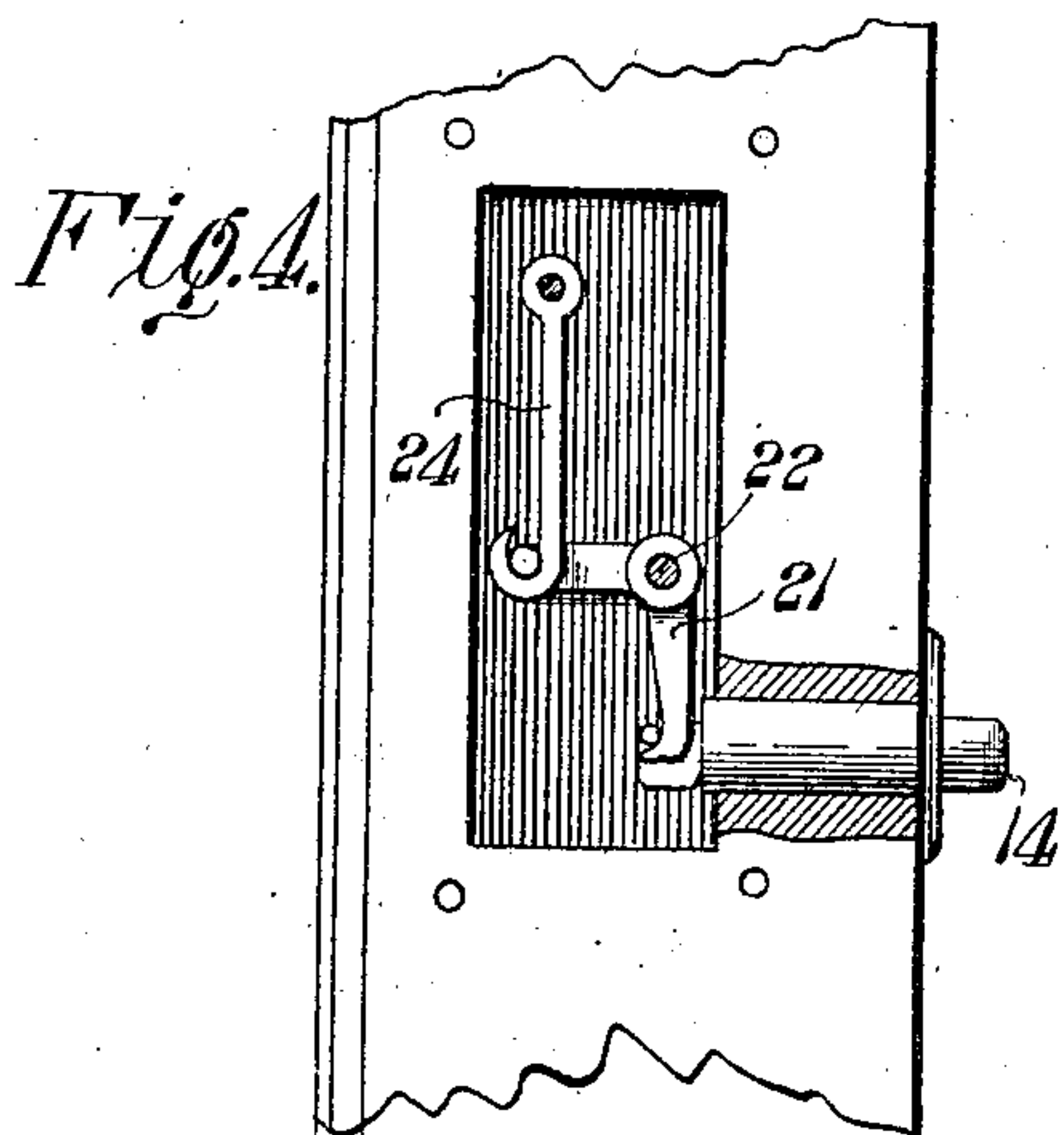
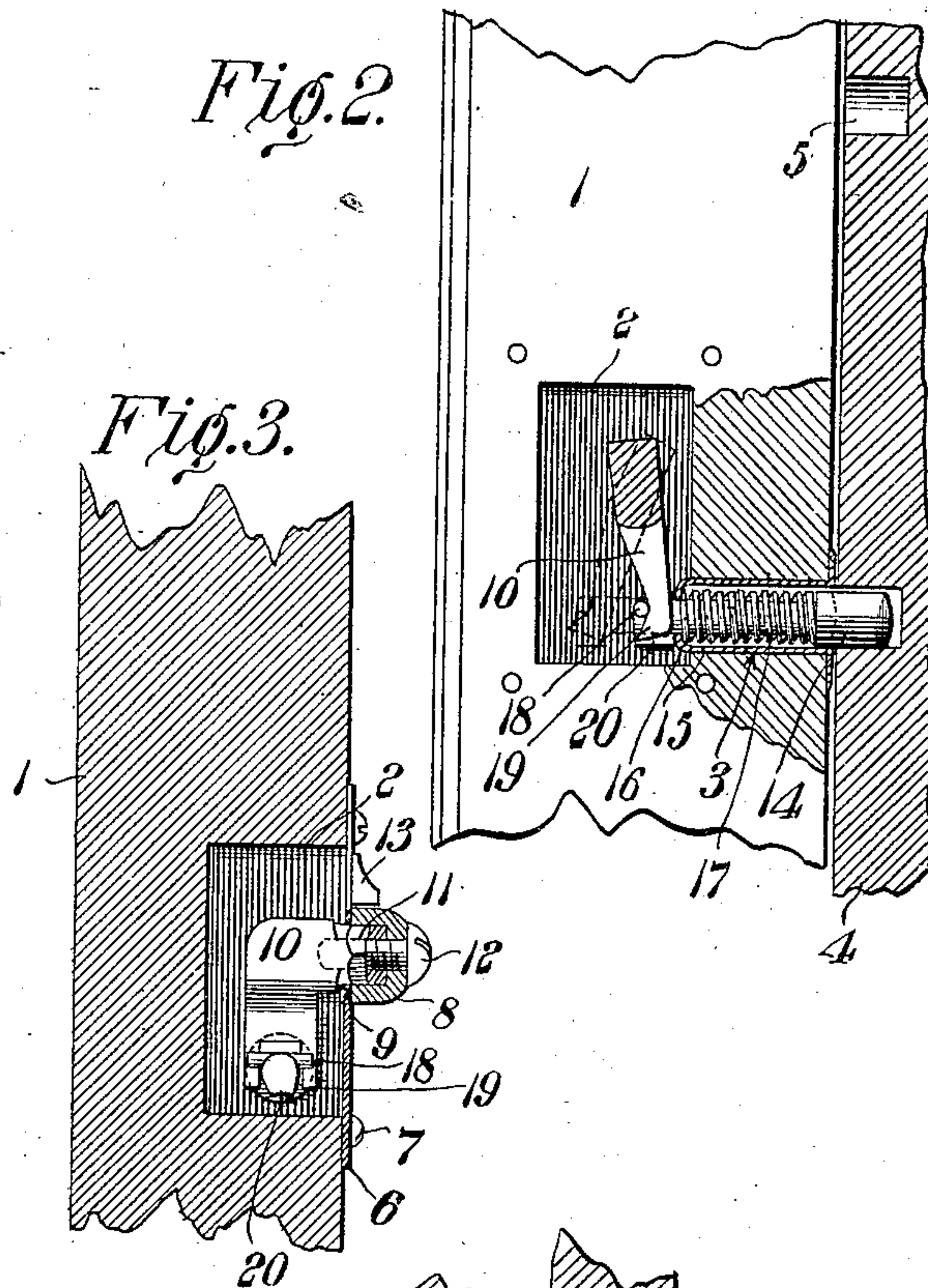
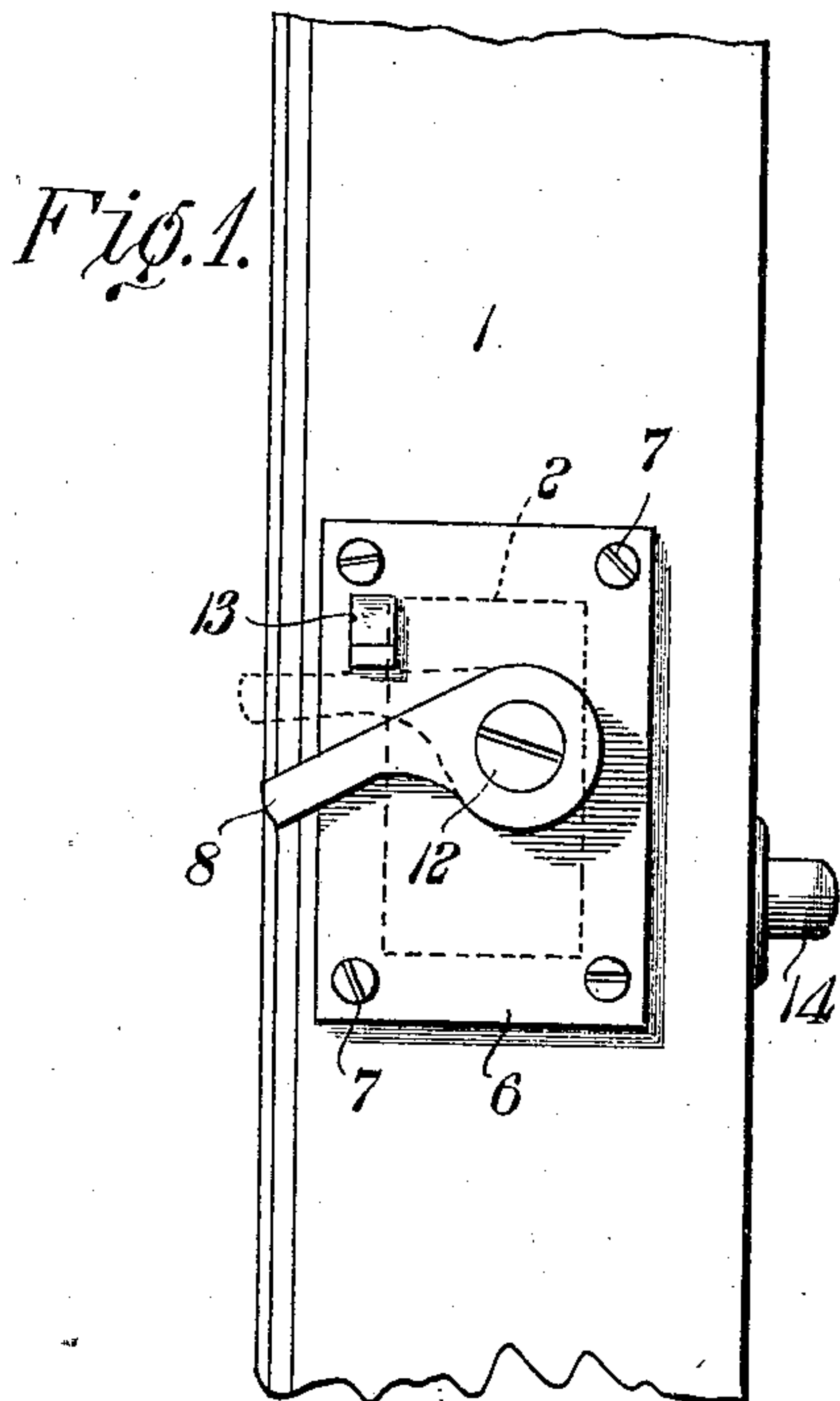


No. 880,600.

PATENTED MAR. 3, 1908.

B. F. THOMPSON.
COMBINED SASH FASTENER AND LIFT.

APPLICATION FILED JAN. 31, 1907.



WITNESSES:

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UNITED STATES PATENT OFFICE.

BENJAMIN F. THOMPSON, OF MALONE, NEW YORK.

COMBINED SASH FASTENER AND LIFT.

No. 880,600.

Specification of Letters Patent.

Patented March 3, 1908.

Application filed January 31, 1907. Serial No. 355,106.

To all whom it may concern:

Be it known that I, BENJAMIN F. THOMPSON, a citizen of the United States, residing at Malone, in the county of Franklin and State of New York, have invented a new and useful Combined Sash Fastener and Lift, of which the following is a specification.

This invention relates to a sash fastener of that type in which the locking bolt is automatically withdrawn in the effort to raise the sash by pulling on the lift of the device, so that no extra labor is required to unlock the fastener than that necessary to raise the window.

The invention has for one of its objects to improve and simplify the construction and operation of devices of this character so as to be comparative easy and inexpensive to manufacture, readily applicable to ordinary windows, and thoroughly effective in operation.

A further object of the invention is the provision of a combined sash fastener and lift, which is arranged in a socket in one of the side rails of the sash, and a cover plate is employed for the socket or chamber in the side rail, which plate forms a support for the lift or actuating member for withdrawing the bolt and lifting the sash.

With these objects in view, and others, as will appear as the nature of the invention is better understood, the invention comprises the various novel features of construction and arrangement of parts, which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawing, which illustrates certain of the embodiments of the invention, Figure 1 is a front elevation of the sash fastener showing a portion of the side rail of a window sash. Fig. 2 is a vertical sectional view of a fastener with the cover plate removed from the sash. Fig. 3 is a detail sectional view. Fig. 4 is a side elevation, partly in section, of a modified form of sash fastener, the cover plate being removed. Fig. 5 is a vertical longitudinal section of a modified form of fastener.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

Referring to the drawing, 1 designates a side rail of a window sash which is provided with a chamber or socket 2 open at the front side of the rail for receiving parts of the

sash fastener. Extending laterally from the chamber 2 is an opening 3 bored therein from the edge of the sash that runs in the usual guide-way of the window frame, said passage being for the bolt of the sash device. The window frame, a portion of which is designated by 4, is provided with one or more bolt receiving openings 5 which are adapted to register with the opening 3 of the sash, so that the bolt of the fastening device can be entered in any one of the openings 5, Fig. 2.

Over the chamber 2 is cover plate 6 that is secured to the front surface of the rail 1 by screws 7, or other suitable fastenings, and this plate serves to support the lifting crank or actuator 8 of the fastening device. The plate 6 is provided with an opening 9, Fig. 3, through which one arm of the elbow lever 10 forwardly projects. This forward end is squared, as indicated at 11, Fig. 3, and the lifting crank 8 is correspondingly socketed to fit the same, and the parts are held together by a screw 12 extending through the crank 8 and screwing into the squared arm of the elbow lever 10. On the front surface of the cover plate 6 is an integral stop 13 located in the path of the free end of the crank 8, so as to arrest the movement of the crank when the locking bolt of the fastening device is completely withdrawn. The locking bolt, designated by 14, is mounted in a metal thimble or shell 15 lining the opening 3, the inner end of the thimble being curled inwardly at 16, Fig. 2, to form an abutment for one end of the bolt actuating spring 17. The opposite end of the spring 17 abuts the shouldered head of the bolt. The inner end of the bolt 14 projects out of the casing or thimble 15 into the chamber 2 and is provided with oppositely extending lugs 18 between which and the thimble 15 the bifurcations 19 of the elbow lever 10 engage. The inner end of the bolt is formed with an enlargement 20 which serves, after the thimble 15 is bent inwardly at 16, to prevent the bolt from separating from the thimble.

When it is desired to raise the sash, the lifting crank 8 is gripped between the first finger and thumb of one hand and pressure applied to move the sash upwardly. The crank moves to the dotted line position shown in Fig. 1 and, through the agency of the elbow lever 10, the bolt 14 is indrawn against the tension of the spring 17. By the time the crank 8 strikes the stop 13, the bolt is

disengaged from the socket or opening 5 of the window frame and the sash is free to be raised. When the desired height is reached, the pressure on the crank 8 is released so that the parts are moved from the dotted line position shown in Fig. 2 to the full line position, the bolt entering the nearest opening 5 by a slight movement of the sash in one direction or the other, if the bolt does not happen to immediately register with the desired opening 5. The parts of the sash fastener are returned to their normal or locking position by the expansion of the spring 17.

In the modification shown in Figs. 4 and 5, the elbow lever is substituted by a bell crank lever 21 fulcrumed by means of a screw 22 on the cover plate 23, one arm of the lever being connected with the bolt 14 in the same manner described in connection with the first construction. The other arm of the bell crank lever 21 is connected by a link 24 disposed along the inside of the cover plate and connected with the hook-shaped lift or actuator 25 on the front side of the cover plate. The cover plate is provided with a slot 26 through which extends a stud 27 on the member 25, and the link 24 is connected with the stud by a screw 28, or equivalent fastener. The upper wall 29 of the slot 26 serves as a stop with which the stud 27 engages when the bolt 14 has been completely withdrawn, so that the pressure applied to the actuator 25 for lifting the sash immediately becomes effective for raising the sash the moment the bolt is completely withdrawn.

From the foregoing description, taken in connection with the accompanying drawing, the advantages of the construction and of the method of operation will be apparent to those skilled in the art to which the invention appertains; and while I have described the principle of operation of the invention, to-

gether with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made, when desired, as are within the scope of the claims.

What is claimed is:—

In combination, a window sash having a recess opening at its inner face and provided with an opening extending from one wall of the recess to the edge of the sash, a locking bolt slidably mounted in the opening and having its inner end projected into said recess, a spring tending to project the outer end of the bolt beyond the edge of the sash, a detachable plate secured to the inner face of the sash and forming the sole support of the bolt actuating means, said plate forming a covering for the recess and being provided with an approximately central opening, an elbow lever having one arm pivotally mounted in the opening of the plate and extending through beyond the outer face of the plate, its outer end having a rectangular portion, the other arm of said lever being arranged to engage the inner end of the bolt, an operating crank having a socket to receive the projecting rectangular portion of the elbow lever, and a lug projecting from the outer face of the plate and forming a stop with which the operating crank engages after the bolt has been retracted, said lug serving as a means for transmitting lifting movement to the sash from said operating crank.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

BENJAMIN F. THOMPSON.

Witnesses:

OLIVER S. BOYER,
S. M. COONEY.