

No. 697,933.

Patented Apr. 15, 1902.

M. E. BLATCHLEY.
LOCK.

(Application filed Jan. 26, 1901.)

(No Model.)

2 Sheets—Sheet I.

Fig. 4.

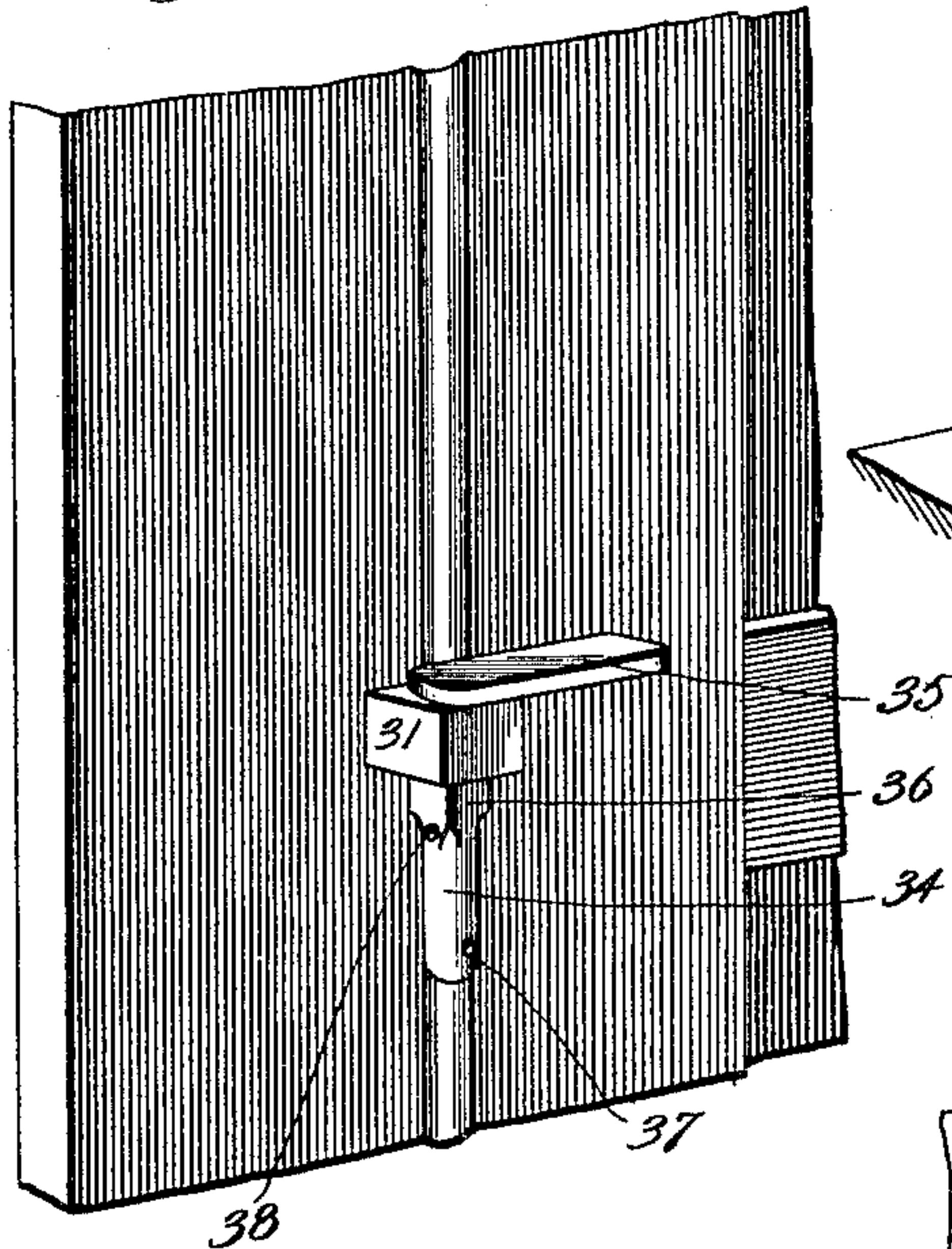


Fig. 1.

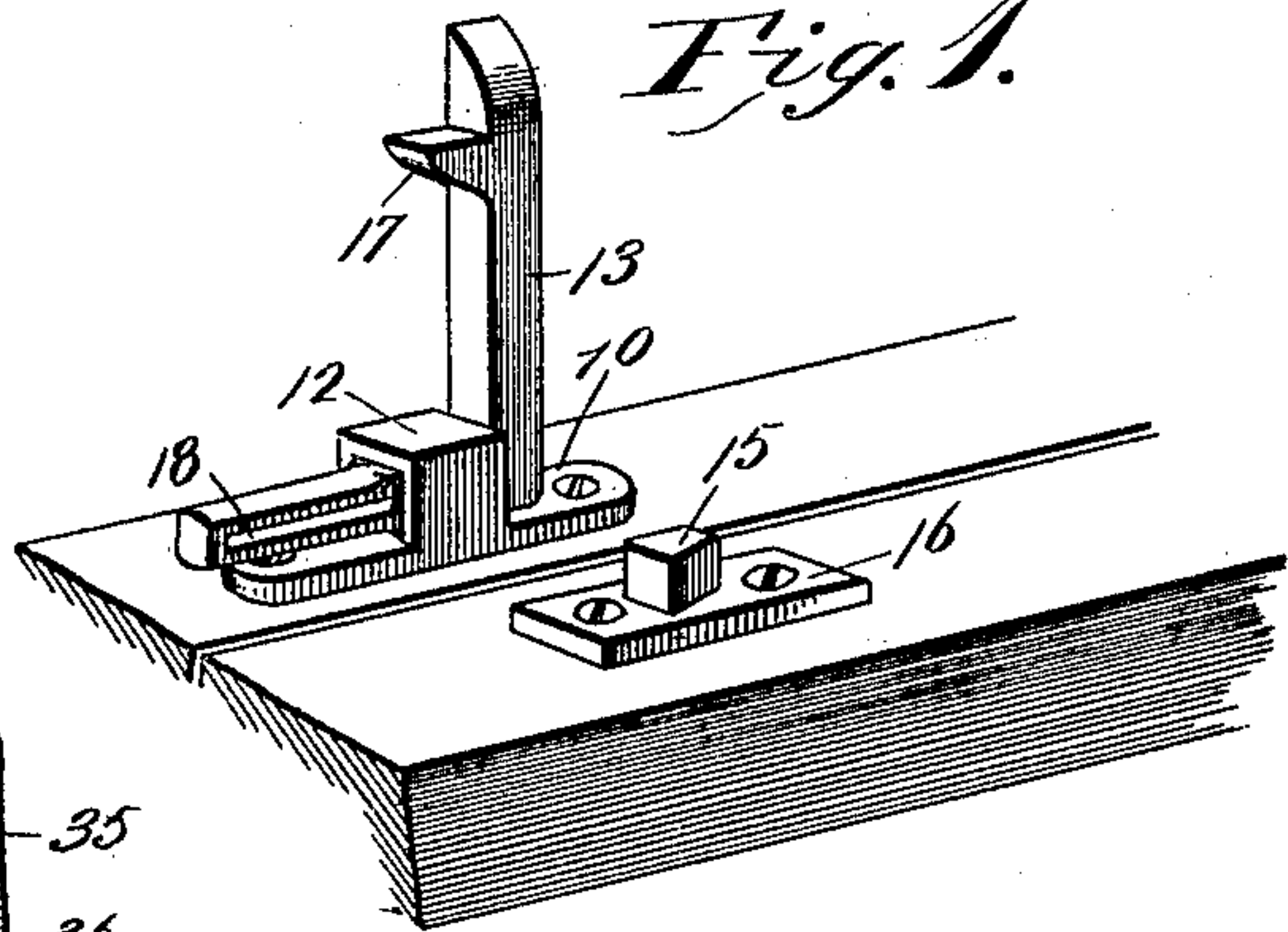


Fig. 2.

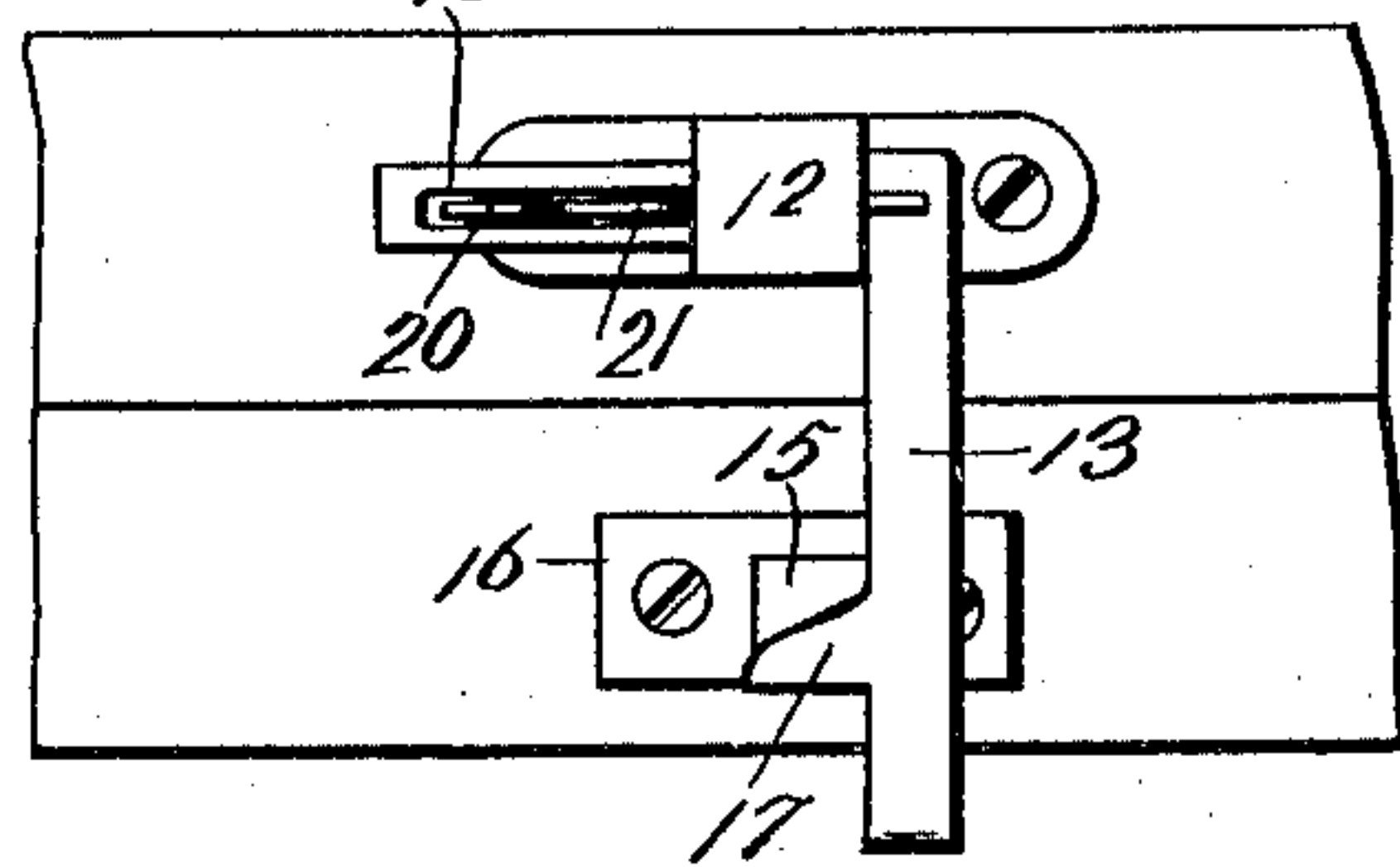
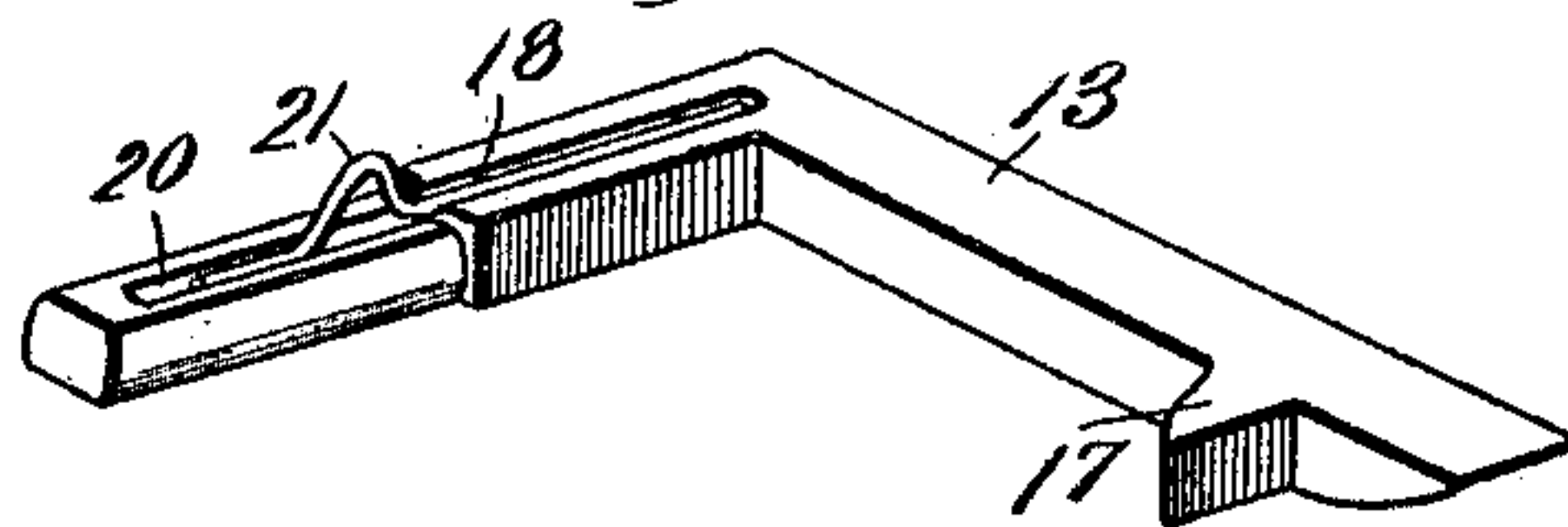


Fig. 3.



Witnesses

L. H. Walker.
Geo. H. Chandler.

M. E. Blatchley, Inventor.

by *C. A. Snow & Co.*
Attorneys

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2 Sheets—Sheet 2.

Fig. 5.

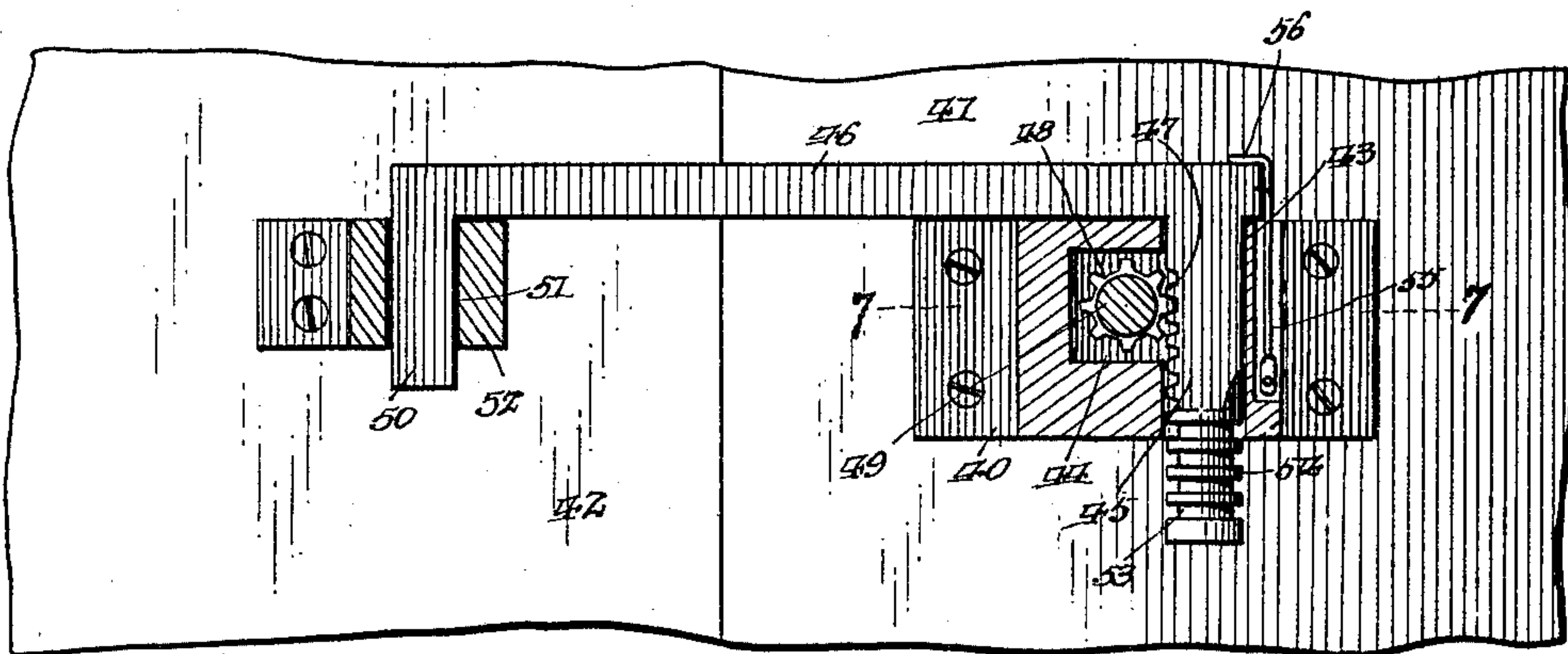


Fig. 6.

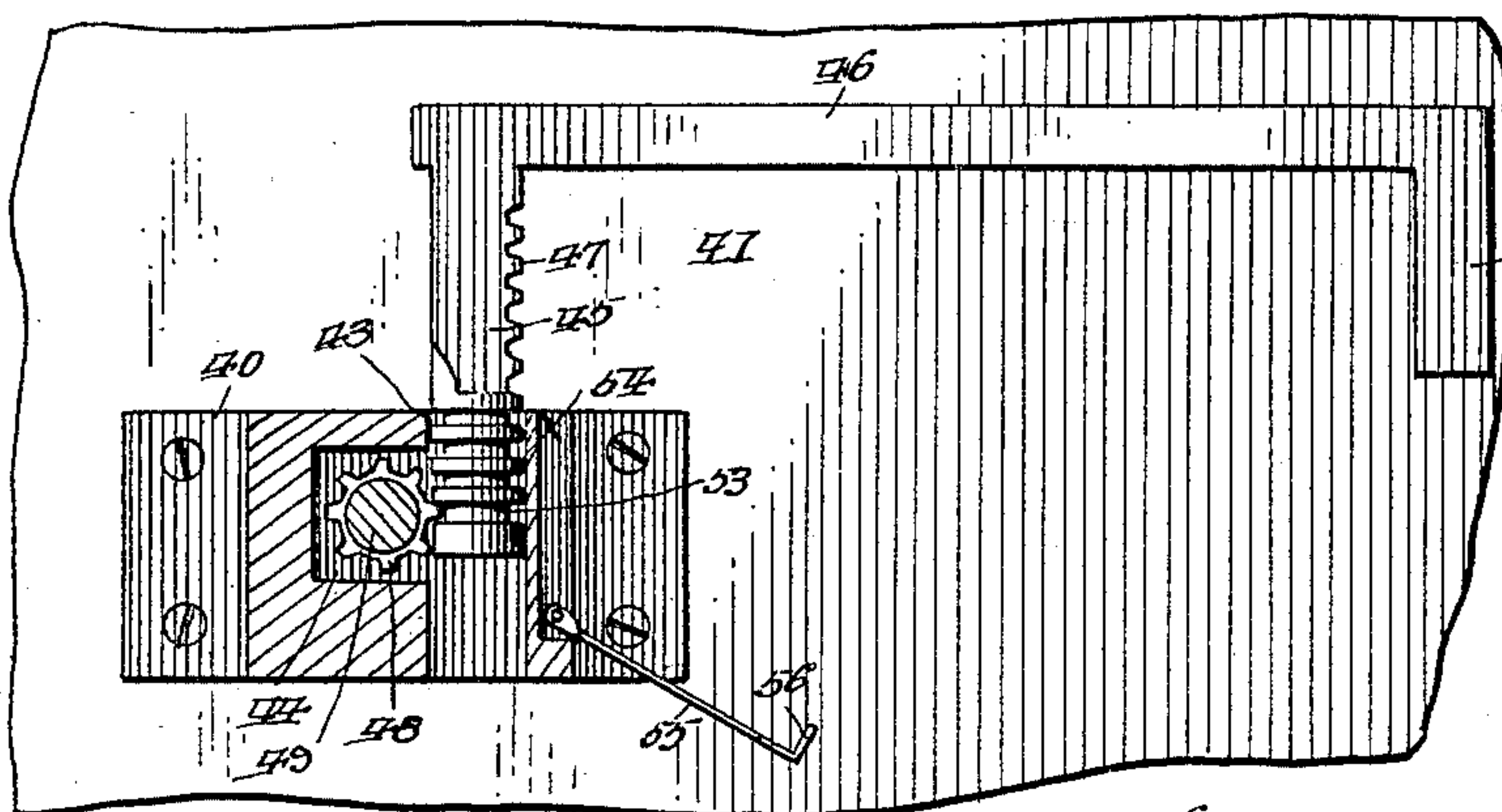


Fig. 7.

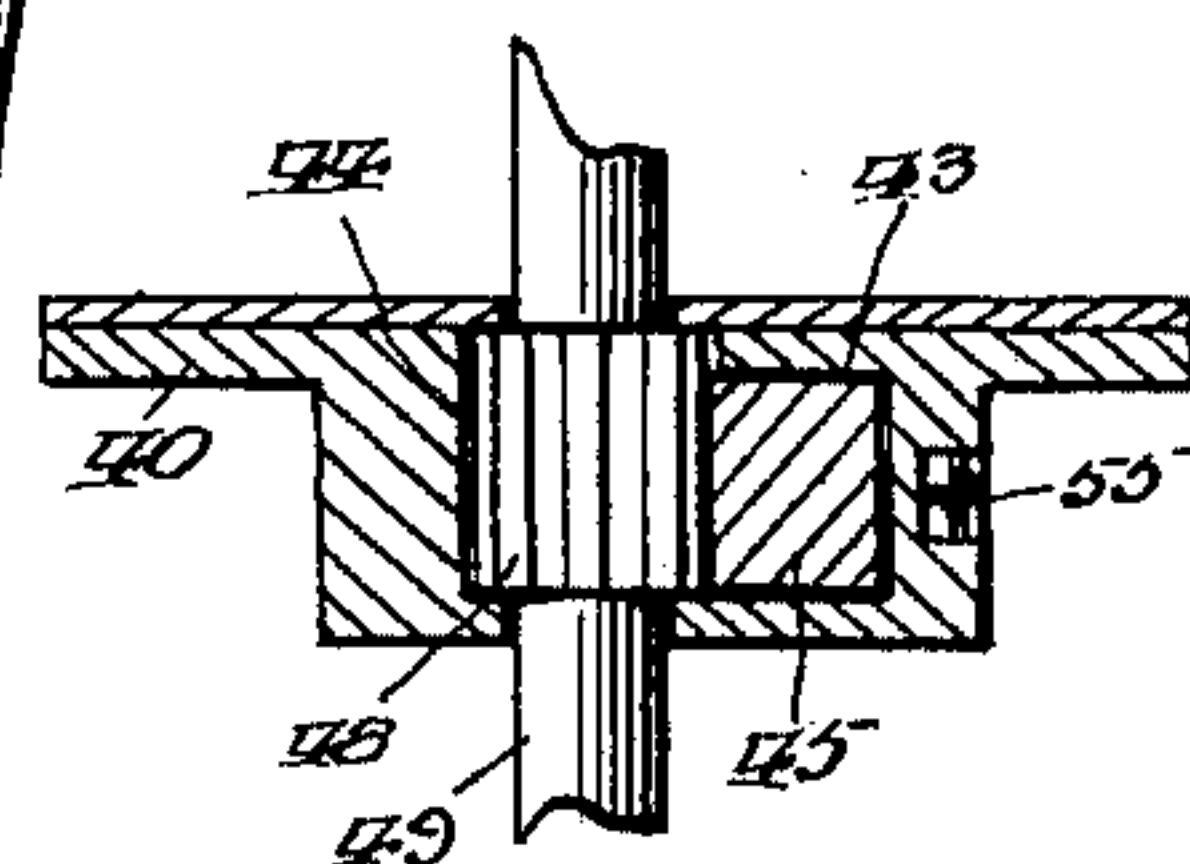


Fig. 8.

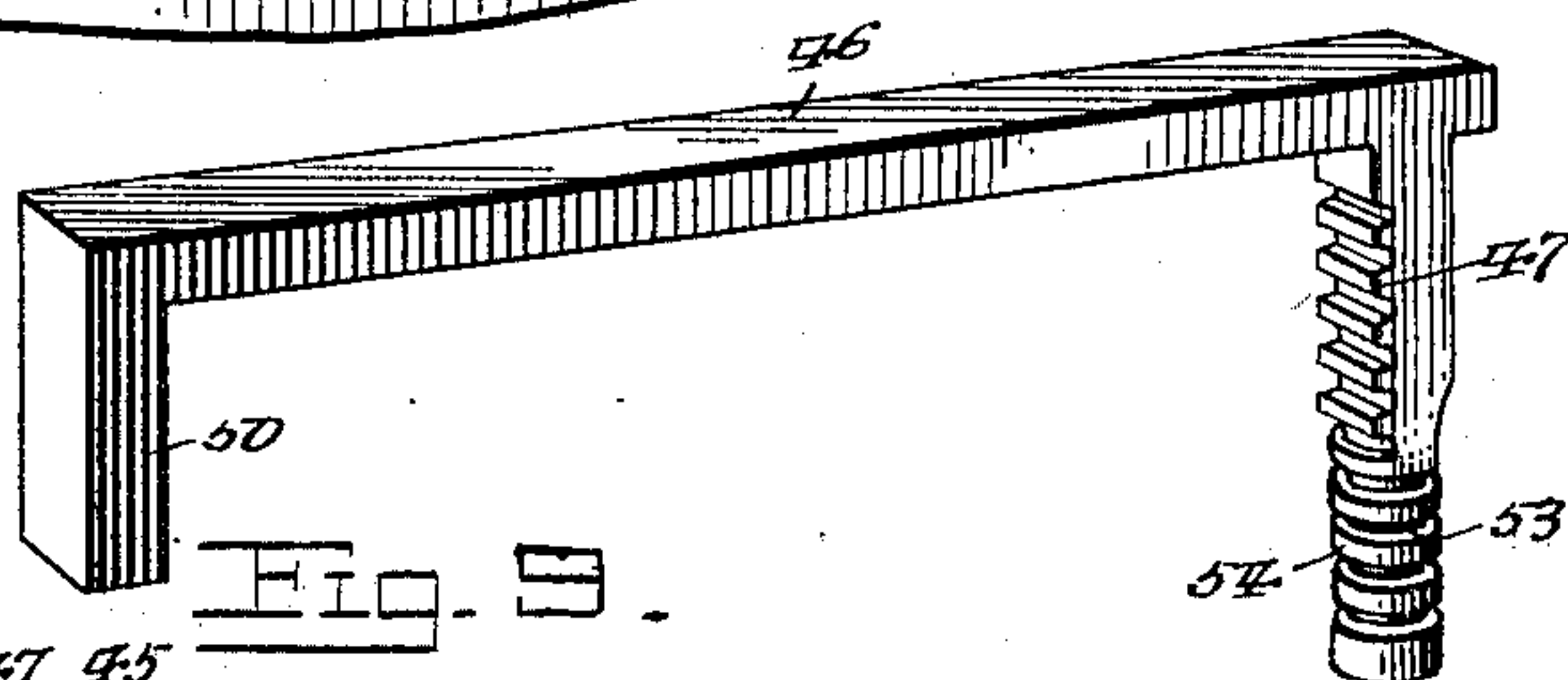
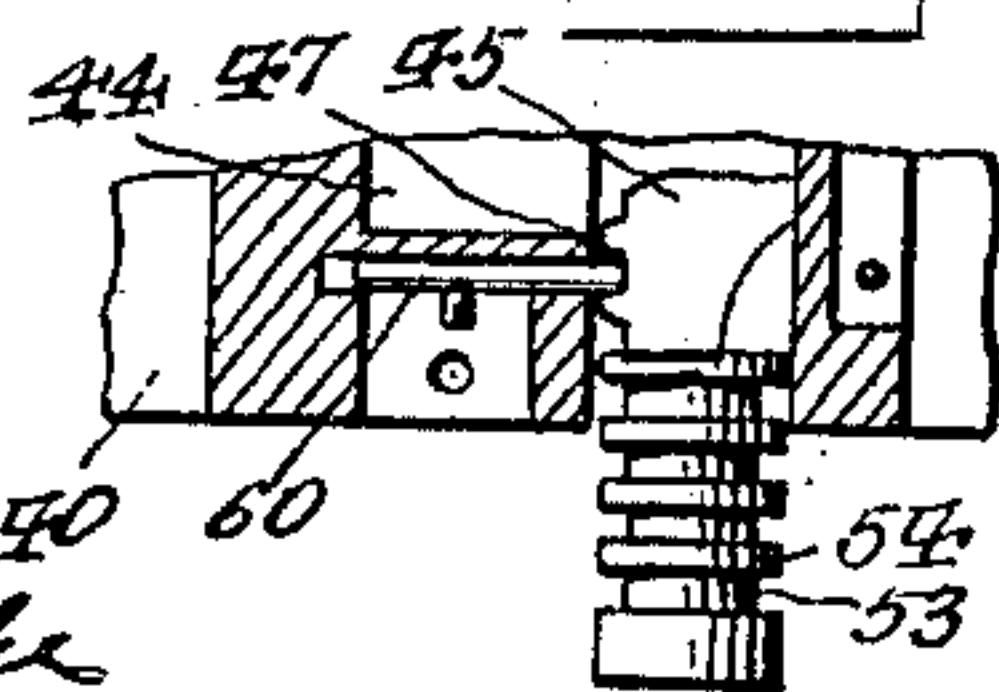


Fig. 9.



Witnesses

F. E. Alden.

Wm. H. Chandler

M. E. Blatchley, Inventor.
by C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

MELBORNE E. BLATCHLEY, OF WHITEHALL, ILLINOIS, ASSIGNOR TO H. O. TUNISON, OF WHITEHALL, ILLINOIS.

LOCK.

SPECIFICATION forming part of Letters Patent No. 697,933, dated April 15, 1902.

Application filed January 26, 1901. Serial No. 44,896. (No model.)

To all whom it may concern:

Be it known that I, MELBORNE E. BLATCHLEY, a citizen of the United States, residing at the city of Whitehall, in the county of Greene and State of Illinois, have invented a new and useful Lock, of which the following is a specification.

This invention relates to locks in general; and it has for its object to provide a construction which may be embodied in a lock for doors or a lock for the meeting-rails of window-sashes, the object of the invention being to provide a simple, cheap, and effective device that will be held securely in its operative position and which may be readily moved into and out of operative position.

Further objects and advantages of the invention will be evident from the following description.

In the drawings forming a portion of this specification, and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a perspective view showing portions of the meeting-rails of two sashes with the parts of the lock thereon and the latch-lever raised to its inoperative position. Fig. 2 is a plan view of the meeting-rails with the latch-lever in lowered or engaging position. Fig. 3 is a detail perspective view of the latch-lever. Fig. 4 is a perspective view showing the invention embodied in a lock for doors. Fig. 5 is a vertical section showing a modification of the device in locked position. Fig. 6 is a similar view with the parts in unlocked position. Fig. 7 is a transverse section on the line 7 7 of Fig. 5. Fig. 8 is a detached perspective view of the locking-bolt. Fig. 9 is a detail view illustrating the application of a key-operated bolt to the locking mechanism.

Referring now to the drawings, and more particularly to Figs. 1, 2, and 3 thereof, this embodiment of the invention comprises a base-plate 10, having perforations for attaching-screws, and in practice is attached to the upper face of the meeting-rail of the upper sash of a window. Centrally of the plate 10 is mounted a cross-sectionally rectangular sleeve 12, the opening of which is in a direction longitudinally of the plate, this sleeve in

practice being formed integral with the plate. In the sleeve 12 is mounted a latch-lever 13, including a stem and an engaging arm, the upper portion of the stem—i. e., adjacent to the arm—being formed cross-sectionally angular to slidably fit the sleeve. The lower portion of the stem is rounded on two opposite sides, while its remaining opposite sides are flat and parallel, the curved sides being struck from the same center. The proportions of these parts of the stem and of the sleeve are such that when the angular portion of the stem is engaged with the sleeve rotation of the stem is prevented, while when the stem is moved slidably to bring the lower portion thereof into the sleeve and draw the angular portion therefrom the stem may be rotated in the sleeve so that the engaging arm may be brought to lie transversely of and against the top or meeting rail of the lower sash. The lever may be then moved with its stem longitudinally to engage the upper portion thereof with the sleeve and being prevented from pivotal movement will hold the lower sash in lowered position and will likewise prevent movement of the upper sash. To draw the meeting-rails closely together when the latch-lever is in operative position, a stud 15, formed upon a plate 16, is provided, this plate having screw-receiving perforations thereon for attaching it upon the top or meeting rail of the lower sash. The outer side of the stud is beveled, while the arm of the latch-lever has a lug 17 near its end, which is likewise beveled and which is adapted to engage its beveled side against the corresponding side of the stud and draw the rails together, when the stem of the lever is slid into the sleeve 12 to engage the angular portion of the stem with the sleeve.

In order that the stem of the lever may be held with its angular portion in engagement with the sleeve, a slot 18 is formed in the stem, and in this slot is disposed a spring-wire latch 20, having a nose 21, which projects from the slot. This nose has a side adjacent to the angular portion of the stem that is perpendicular to the stem, while its opposite side is slanted, and when the stem is pushed

into the sleeve so that its angular portion engages therewith this perpendicular side of the nose lies against the end of the sleeve and prevents withdrawal of the stem from the sleeve. In initially engaging the stem with the sleeve the sleeve engages or strikes the inclined side of the nose and presses the nose inwardly to permit the sleeve to pass thereover.

To draw the angular portion of the stem from the sleeve, it is of course necessary to first press the spring-catch inwardly, and when the rounded portion of the stem is drawn into the sleeve this catch presses against the wall of the sleeve, so that when the latch-lever is raised to vertical position the opposite flat face of the stem will be held against the opposite wall of the sleeve and the lever will be prevented from rotating to the inclined position. When desired, the stem may, of course, be pressed inwardly after being raised to hold the arm in vertical position, as shown in Fig. 1, when the engagement of the angular portions will prevent the lever from rotating to the horizontal position.

A modification of the invention is shown in Figs. 5 to 9, inclusive, and in this construction a casing 40 is secured to a door-jamb 41, against which a sliding door 42 is adapted to abut, as shown, and to lie flush with the outer face thereof. This casing has a vertical passage 43 therethrough, and communicating with which is a laterally-extending chamber 44. Disposed in the passage 43 is one leg 45 of a locking-bolt 46, the upper portion of which is cross-sectionally angular to fit the similarly-formed passage, and on one face of this angular portion are formed rack-teeth 47 for engagement by a pinion 48, formed upon a knob-shaft 49, which is passed transversely through the chamber 44. Thus by rotating the shaft and therewith the pinion thereon the bolt may be raised and lowered to engage and disengage its opposite downturned end 50 with respect to the socket 51 in a keeper 52, which is fixed upon the sliding door. When the end of the bolt is engaged with the keeper, it of course holds the door against sliding movement to an open position, and when the bolt is raised the door may be slid open. When the bolt is raised to its releasing position, it is of course desirable that it be swung laterally, so as not to project into the doorway, and to permit of this movement the lower portion of the leg 45 is provided with annular grooves 53 and resultant ribs 54, which correspond to the rack-teeth, and the said grooved and ribbed portion of the leg is formed cylindrical, so that when the bolt is raised to its releasing position the angular portion of the leg will lie above the casing 40, and the cylindrical portion may be then rotated in the passage 43. When the bolt is rotated, the pinion of course retains its engagement with the proper rib of the leg to hold the

bolt elevated, it being understood that by rotation of the pinion it is caused to pass from the rack to the ribs. This locking mechanism is placed on the inner side of a door, preferably, and when in such position a latch or tumbler 55 is pivoted to the casing and has a laterally-bent upper end 56, which when the bolt is in lowered position may be engaged over the upper face of the bolt to hold it against upward movement, as shown in Fig. 5. When the bolt is to be moved to unlocked position, the latch or tumbler is moved to the position shown in Fig. 6. When the locking mechanism is to be used on the outer side of a door, a key-operated bolt 60 may be disposed in the casing for engagement with a groove of the leg 45 to hold it in lowered position.

What is claimed is—

1. A device of the class described, comprising a sleeve and a latch-lever, the latch-lever including an arm and a stem lying at an angle to the arm, said stem having a portion adapted for engagement with the sleeve to hold the stem against rotation, and a portion adapted for rotation in the sleeve to permit of movement of the arm into and out of operative position, and a latch carried by one member for engagement with the other member to hold the angular portion in engagement with the sleeve.

2. A lock comprising an attaching-plate having a cross-sectionally angular sleeve formed thereon, and a latch-lever including an arm and a stem lying at an angle to the arm, said stem having a cross-sectionally angular portion adjacent to the arm to fit the sleeve and prevent rotation of the arm, and having the remaining portion rounded to permit of rotation of the arm into and out of operative position when the stem is moved with its rounded portion to lie in the sleeve, and a latch carried by one member for engagement with the other member to hold the angular portion in engagement with the sleeve.

3. A lock comprising an attaching-plate having a cross-sectionally angular sleeve formed thereon, and a latch-lever comprising an arm and a stem, said stem having a cross-sectionally angular portion adjacent to the arm to fit the sleeve and hold the arm against rotation and having its remaining portion formed for rotation in the sleeve, and a spring-catch carried by the arm and projecting normally from the stem to lie against the sleeve and prevent displacement of the angular portion of the stem therefrom.

4. A lock for meeting-rails of sashes, comprising an attaching-plate having an angular sleeve, a second attaching-plate having a beveled stud, and a latch-lever including an arm having a stem projecting at an angle therefrom, said stem having its portion adjacent the arm formed to fit the sleeve and prevent rotation therein, and the remaining portion

formed to permit of rotation in the sleeve, said
arm having a beveled lug for engagement with
the first-named beveled lug to draw the plates
together when the stem is moved slidably to
5 engage the angular portion thereof with the
sleeve.

In testimony that I claim the foregoing as

my own I have hereto affixed my signature in
the presence of two witnesses.

MELBORNE E. BLATCHLEY.

Witnesses:

CARL VERTREES,
GEORGIA JOHNSTON.