

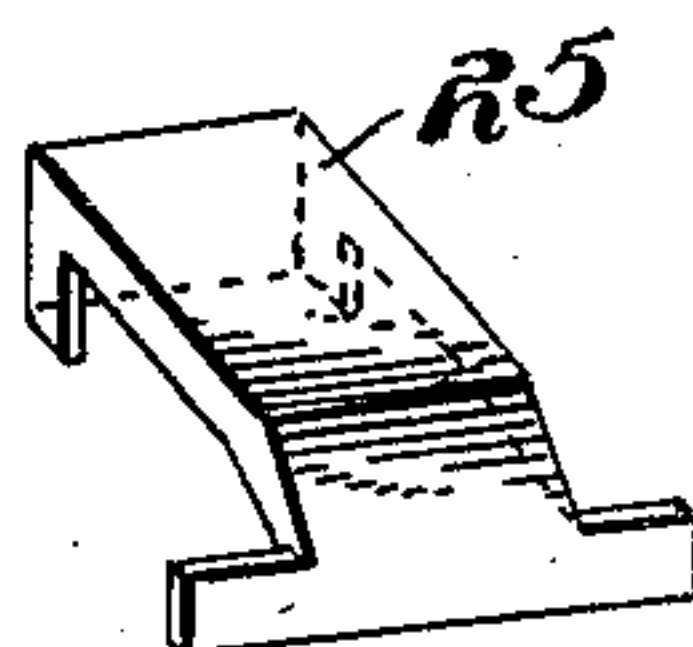
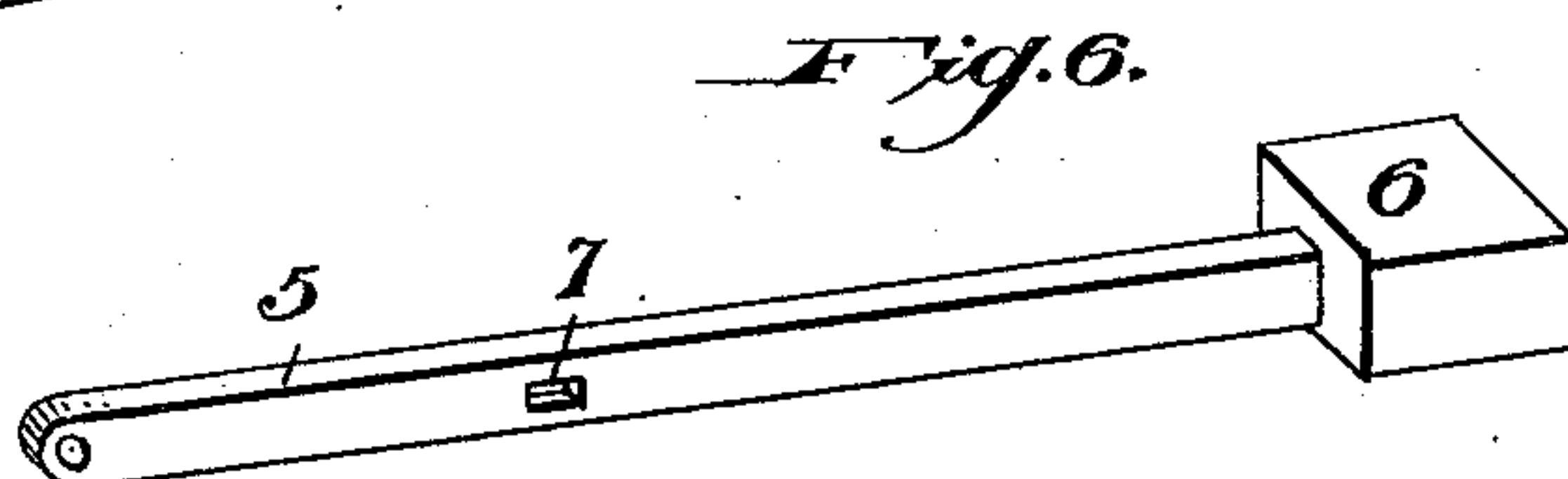
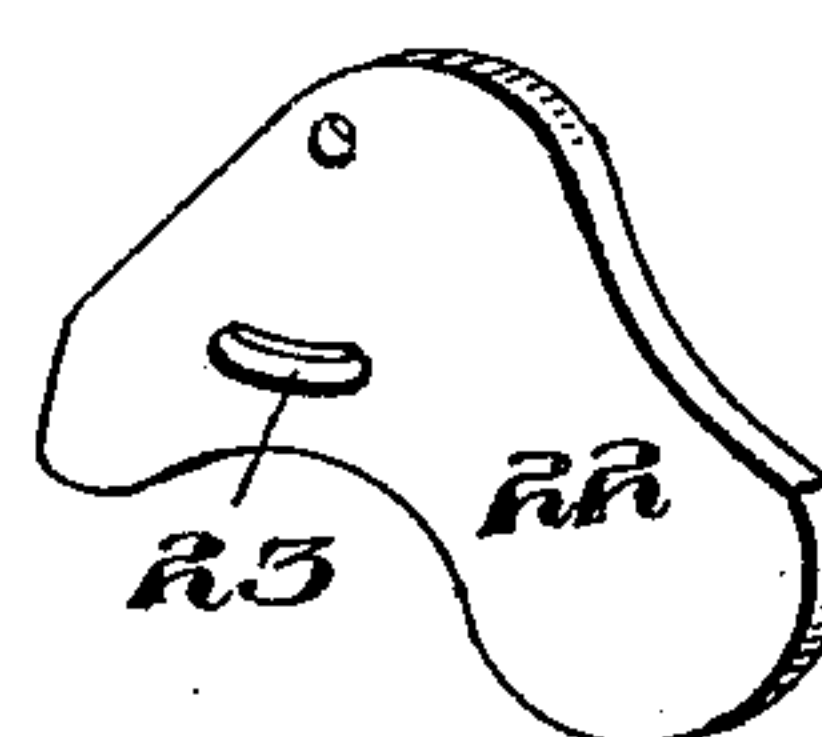
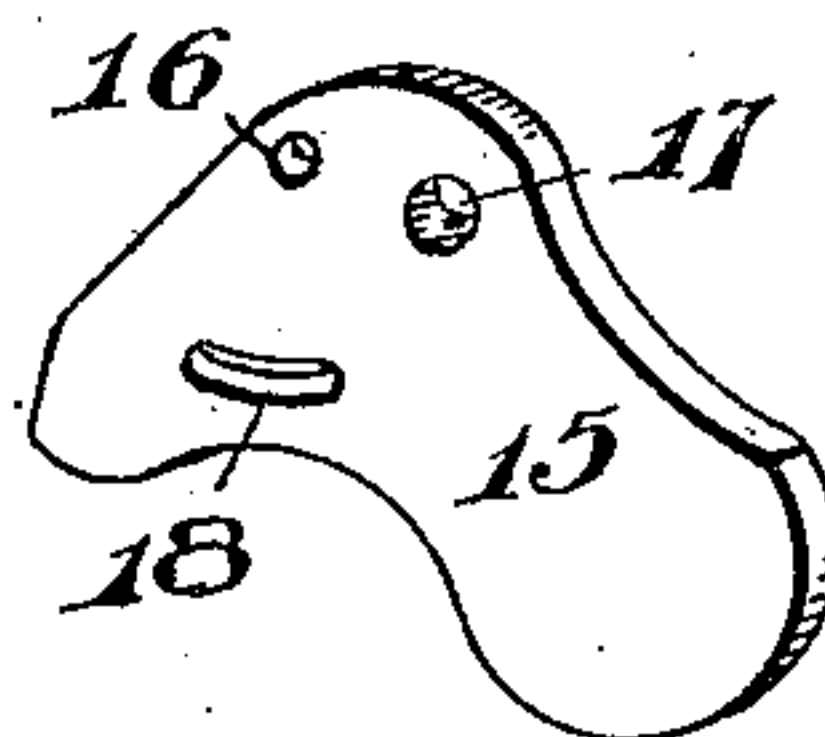
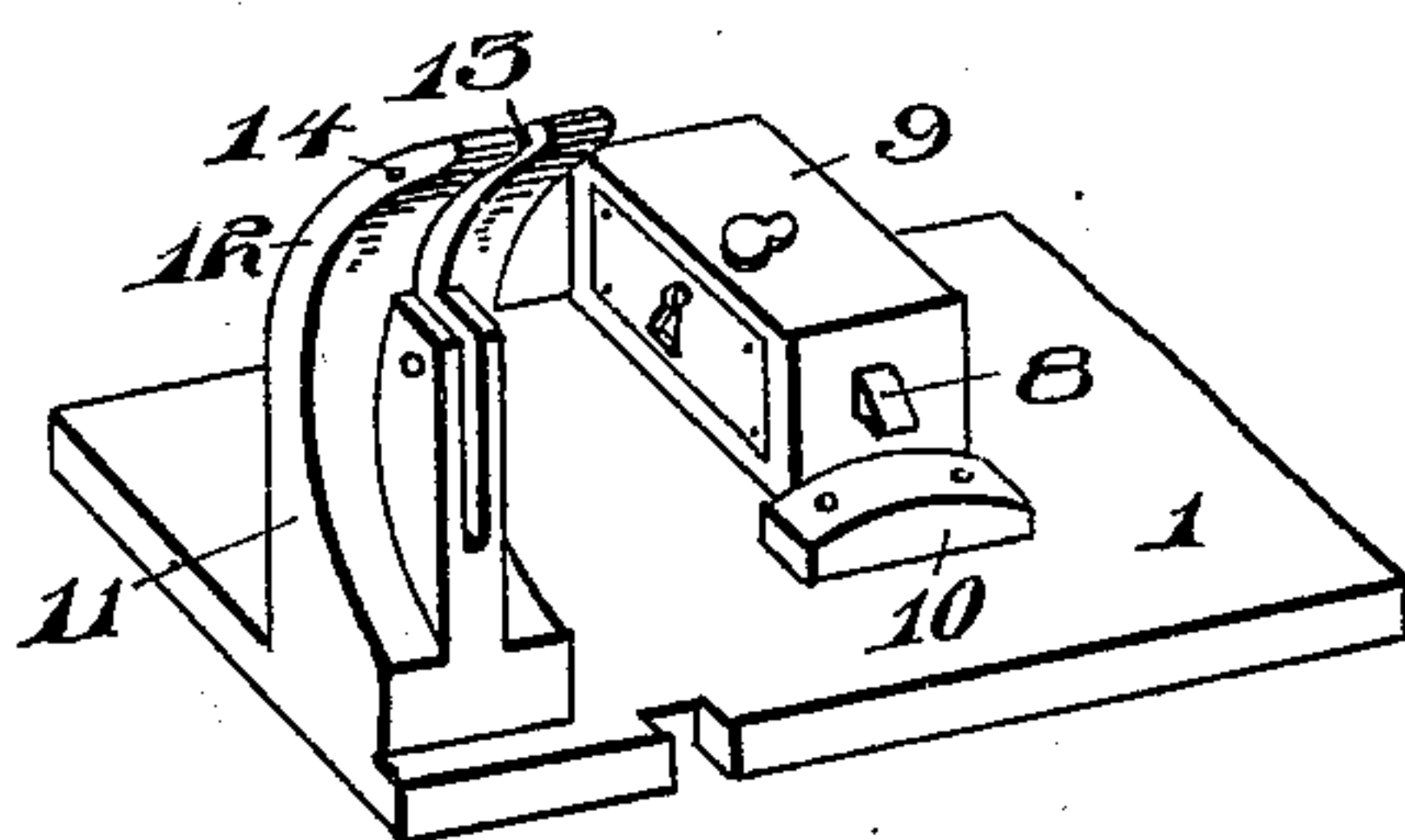
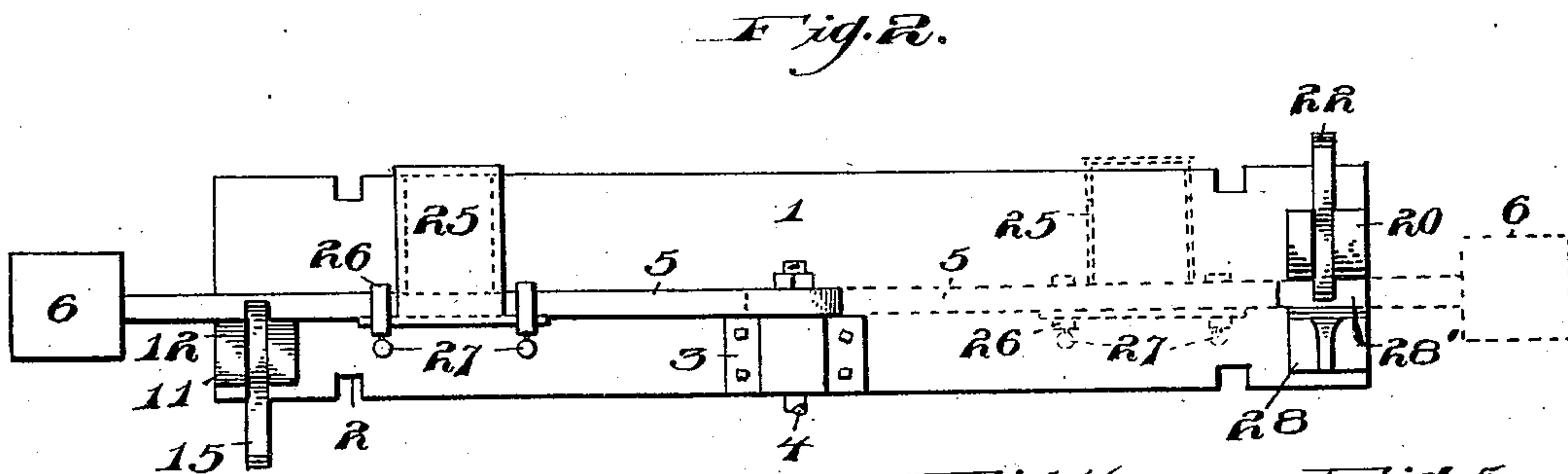
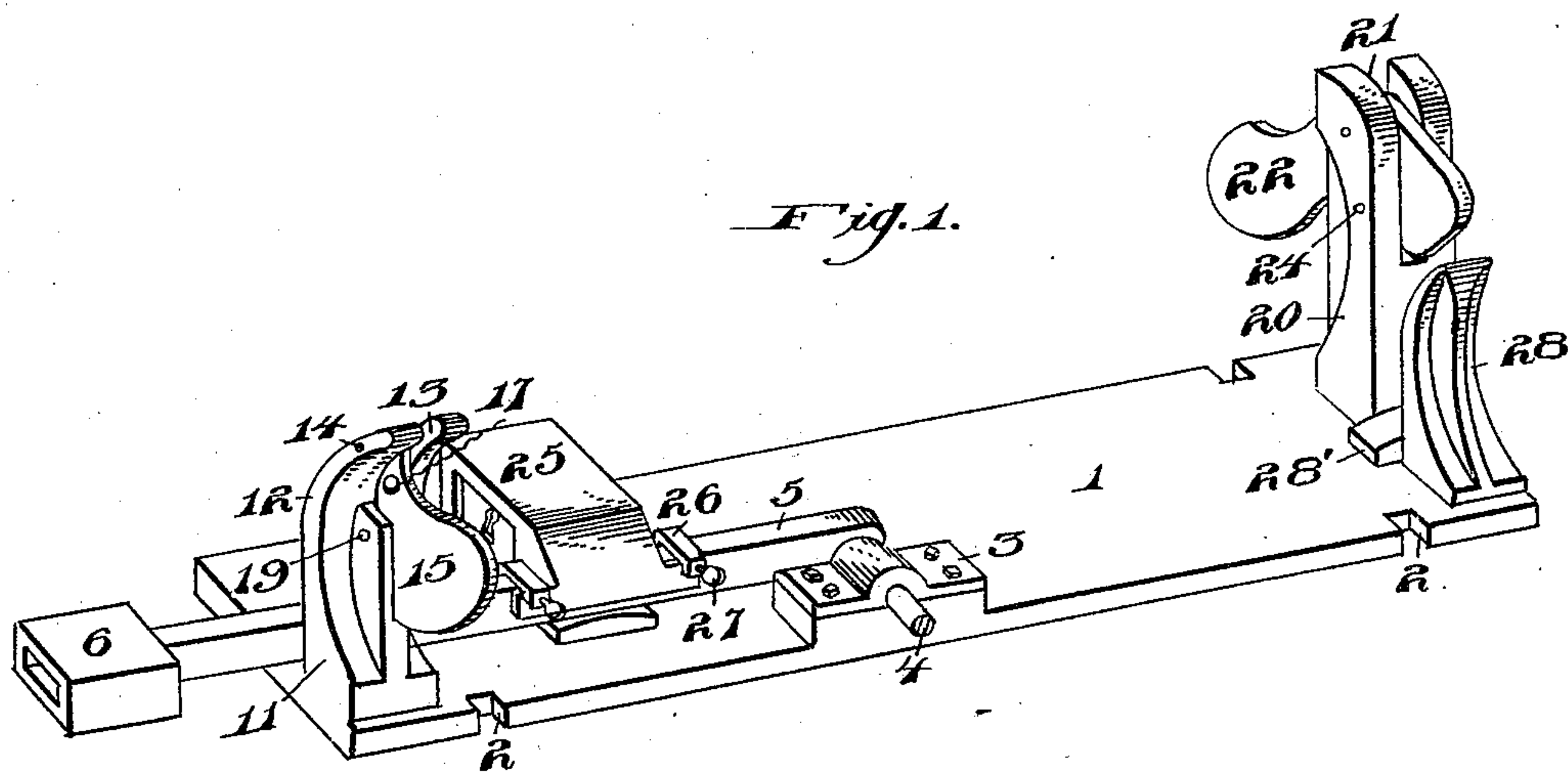
No. 636,294.

Patented Nov. 7, 1899.

M. SCHROYER.
AUTOMATIC SWITCH LOCK.

(Application filed Sept. 5, 1899.)

(No Model.)



WITNESSES :

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UNITED STATES PATENT OFFICE.

MARTIN SHROYER, OF FITZ HENRY, PENNSYLVANIA.

AUTOMATIC SWITCH-LOCK.

SPECIFICATION forming part of Letters Patent No. 636,294, dated November 7, 1899.

Application filed September 5, 1899. Serial No. 729,518. (No model.)

To all whom it may concern:

Be it known that I, MARTIN SHROYER, a citizen of the United States of America, residing at Fitz Henry P. O., in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Switch-Locks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in switch-locks, and has for its object to provide novel means whereby a switch may be easily operated and locked and to provide a guard which is connected to and operative with the switch-lever and which is adapted to fit over the lock to protect the latter from dust, dirt, snow, and rain.

A further object of the invention is to construct a switch-lock in which the parts may be easily removed and new ones substituted therefor in case of breakage, all parts being extremely simple in construction, yet strong, durable, effectual in their operation, and comparatively inexpensive to manufacture.

Briefly described, the invention consists of a suitable base with a switch-lever pivoted thereon and a lock arranged to engage and lock said lever in the closed position. A cover is connected to the switch-lever and is movable therewith, the cover fitting over the lock when the switch is closed and fully protecting the same from dust, dirt, and the like. Supplemental means is provided for locking the lever in the closed position in case the lock proper is broken, this supplemental means assisting in holding the switch-lever in the closed position. A hand-manipulated lock is also provided for holding the switch-lever in the position to which it has been moved to open the switch, all of which parts will be hereinafter more specifically described, and then particularly pointed out in the appended claims.

In describing the invention in detail reference will be had to the accompanying drawings, forming a part of this specification, and wherein like numerals of reference will be employed to designate similar parts throughout the several views of the drawings, in which—

Figure 1 is a perspective view of my im-

proved switch-locking mechanism. Fig. 2 is a top plan view of the same. Fig. 3 is a perspective view of a portion of the base, showing the standard on one end thereof and the casing containing the lock proper. Fig. 4 is a perspective view of the supplemental locking-pawl arranged adjacent to the lock proper. Fig. 5 is a like view of the locking-pawl which holds the switch-lever in the position to which it has been moved to open the switch. Fig. 6 is a detail perspective view of the switch-lever. Fig. 7 is a detail view in perspective of the guard or cover for the casing containing the lock proper.

Referring to the drawings by reference-numerals, 1 indicates the base-plate, which is or may be provided with notches 2 for securing by spiking to the cross-tie or other support. This base-plate has suitably arranged thereon, preferably near its one edge, a bearing 3, in which is journaled a shaft 4, having the one end of the locking or switch lever 5 connected thereto, the free end of this lever extending beyond the base-plate and having a suitable weight 6 thereon. This locking or switch lever is recessed on its one face, as at 7, (see Fig. 6 of the drawings,) for the reception of the locking-bolt 8, which operates through the end of the casing 9 mounted upon the base 1, this casing containing the lock proper, which may be of any convenient form. Adjacent to the end of the casing 9 through which the bolt 8 operates I secure upon the base 1 a suitable block 10, which is adapted to act as a support for the switch-lever and prevent the weight of the same resting upon the locking-bolt 8.

Mounted upon the end of the base 1 that is adjacent to the lock and its casing is a standard 11, slightly curved at its upper end, as at 12, and provided with a centrally-arranged vertical slot 13. Within this slot is pivotally mounted by means of a pin 14 the supplemental locking-pawl 15, having the aperture 16 to receive the pin 14 and having also a larger aperture 17, which is adapted to receive the hasp of a padlock in order to secure the lever in the locked position in case the lock proper should become broken or disarranged. The movement of this locking-pawl 15 is limited by providing a pin 19 in the

standard 11, which operates in a curved slot 18 in said pawl.

At the opposite end of the base is arranged an upright standard 20, which is provided
5 with a centrally-arranged vertical slot 21 in order to permit the pivotally securing therein of the locking-pawl 22. The movement of this pawl is also limited by a pin 24, passing through the standard and operating in a
10 curved slot 23, provided therefor in the pawl.

A guide 28, having a curved inner face, is secured to the base in close proximity to the standard 20, and a supporting-block 28' is secured to the base between said guide and
15 standard, upon which the lever may rest when in the open position.

A dust guard or cover 25 is attached to the locking-lever 5 by means of clamps 26, having set-screws 27 to secure said cover to the
20 lever, and when the switch is closed this guard or cover fits neatly over the casing containing the lock.

The operation of my improved switch-lock is as follows: A key is inserted through the
25 keyhole in the casing 9 into engagement with the lock mechanism and the locking-bolt 8 drawn within the casing by the turning of said key, so as to disengage said bolt 8 from the switch-lever, and by lifting upon the
30 heavier end of the pawl 15 the pivoted end of the same is drawn within the vertical slot 13, so as to permit the throwing of the lever to open the switch. As the lever engages the pivoted end of the pawl 22 it raises the heavier
35 end of the same and passes underneath this pawl, when the heavier end of the same falls by gravity and prevents the lifting of the switch-lever without previously lifting the heavier end of said pawl, so as to draw the
40 pivoted end of the same within the vertical slot 21. When, however, this heavier end of the pawl 22 is raised, the switch-lever may be again thrown into the position to lock and to close the switch, and as it engages the inclined
45 face of the locking-bolt 8 this bolt is depressed within the casing 9 until it is in registry with the recess 7, when it will engage in the same and lock the lever. The lever during this downward movement has passed beneath the
50 pawl 15, and the heavier end of the same falls by gravity, so as to cause the pivoted end of the same to project over the lever. This locking-pawl 15 may be used for securing the lever when it is desired to leave the locking-
55 bolt depressed within the casing 9 out of en-

gagement with the lever, which is sometimes desired where the switch is considerably used.

In case of the lock becoming broken or disarranged a padlock may be inserted in the aperture 17, which will prevent the movement
60 of the pawl 15, and consequently the raising of the switch-lever, until such padlock is removed from the pawl.

While the construction as shown and described appears to embody the preferable
65 form of my invention, yet I do not wish to unduly limit myself to this construction, as it will be observed that various changes may be made in the details of construction without departing from the general spirit of the
70 invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters
Patent, is—

1. A switch-locking mechanism comprising
75 in combination with a suitable base and a switch-lever pivotally mounted thereon, a lock arranged upon the base and having a locking-bar adapted to engage said switch-lever, a standard arranged at each end of the
80 base, a pawl pivotally secured in each of said standards, and a cover rigidly connected to the switch-lever and operative therewith to inclose the lock when the switch-lever is closed, substantially as shown and described. 85

2. In a switch-locking mechanism, the combination with a suitable base and a switch-lever pivotally mounted on said base, of a lock arranged on the base and having a locking-bar adapted to engage the switch-lever, and
90 a cover rigidly connected to the switch-lever to be operative therewith and adapted to inclose the lock when the switch-lever is closed, substantially as shown and described.

3. In a switch-locking mechanism, the combination with a suitable base and a switch-lever pivotally mounted thereon, of a lock arranged on the base and adapted to engage
95 said switch-lever, a pivotally-mounted pawl arranged at either end of the base, and a cover connected to said switch-lever to be operative therewith and adapted to inclose the lock when the switch-lever is closed, substantially
100 as described.

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

MARTIN SHROYER.

Witnesses:

JOHN NOLAND,
E. W. ARTHUR.