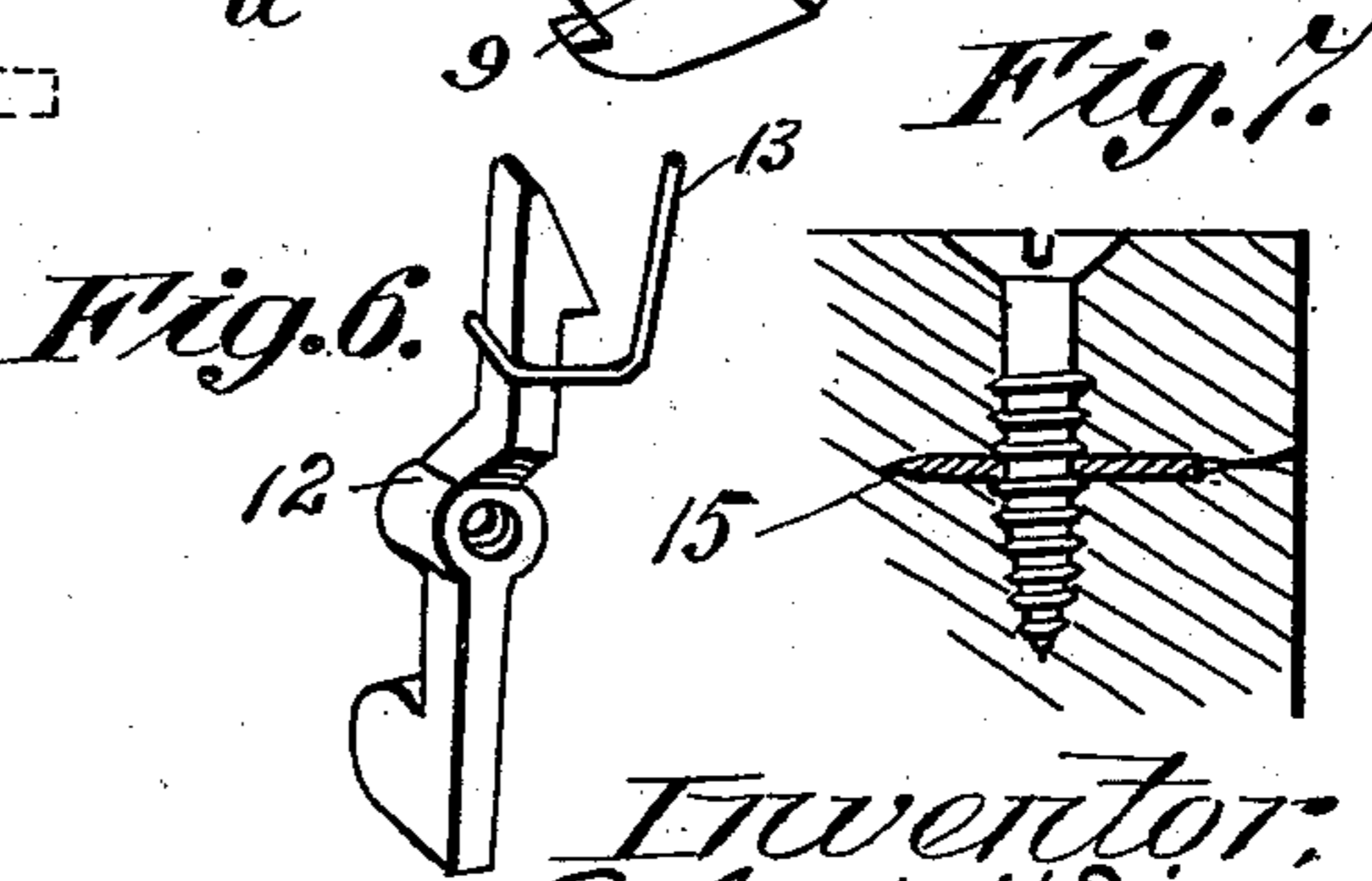
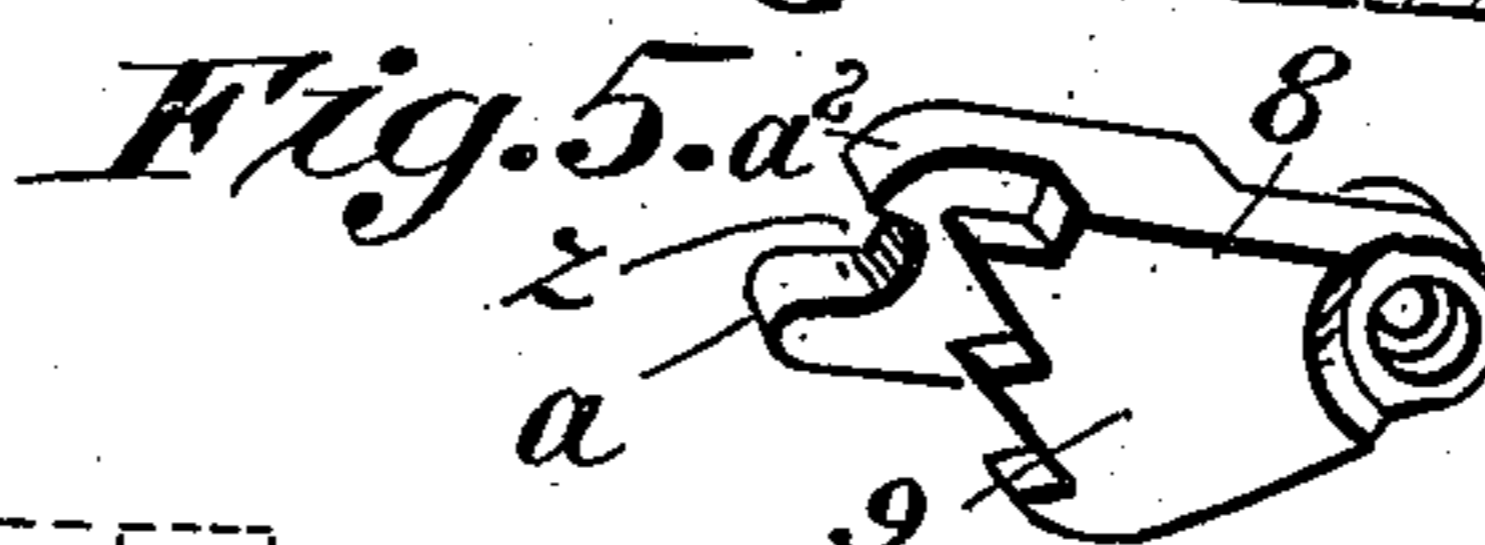
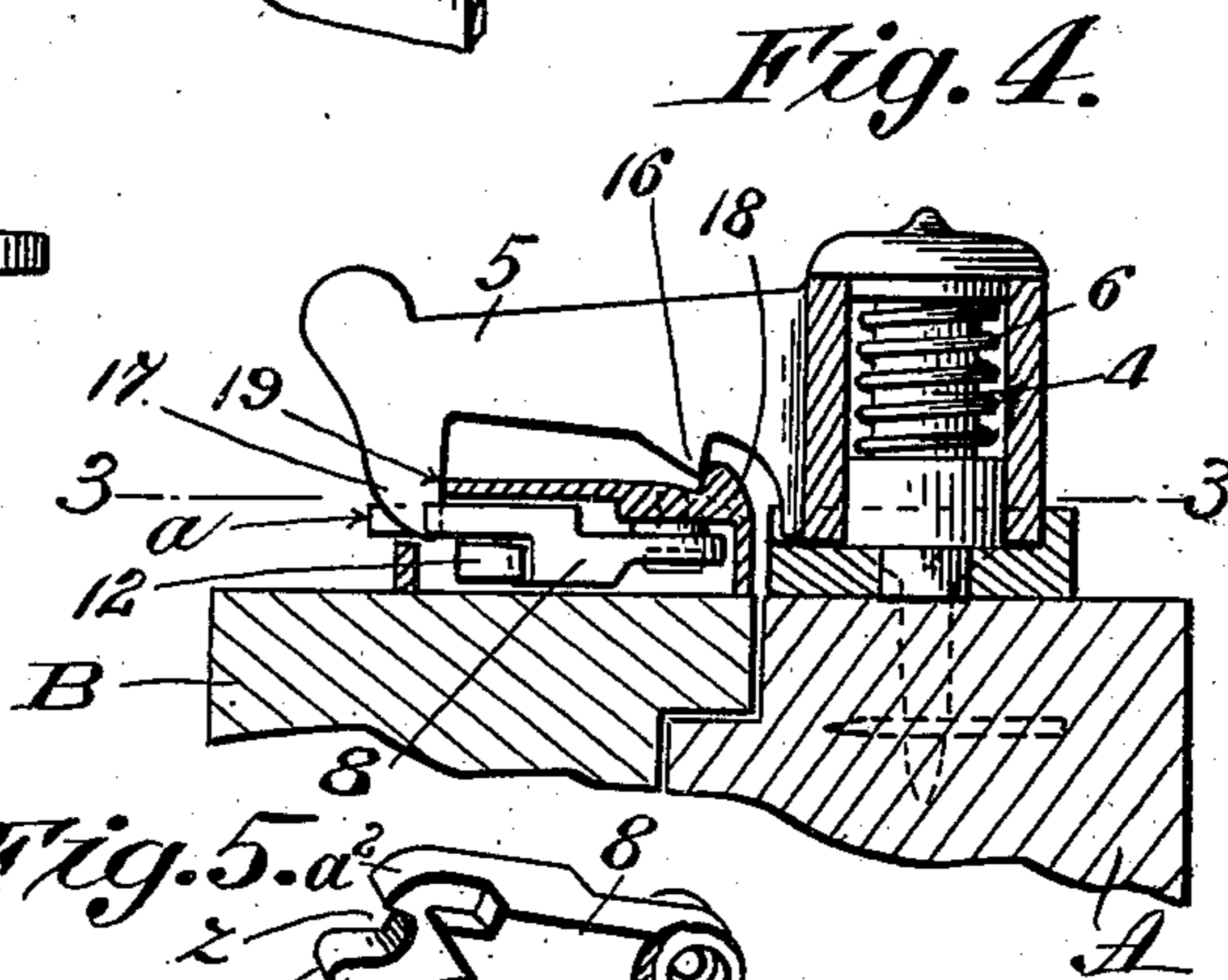
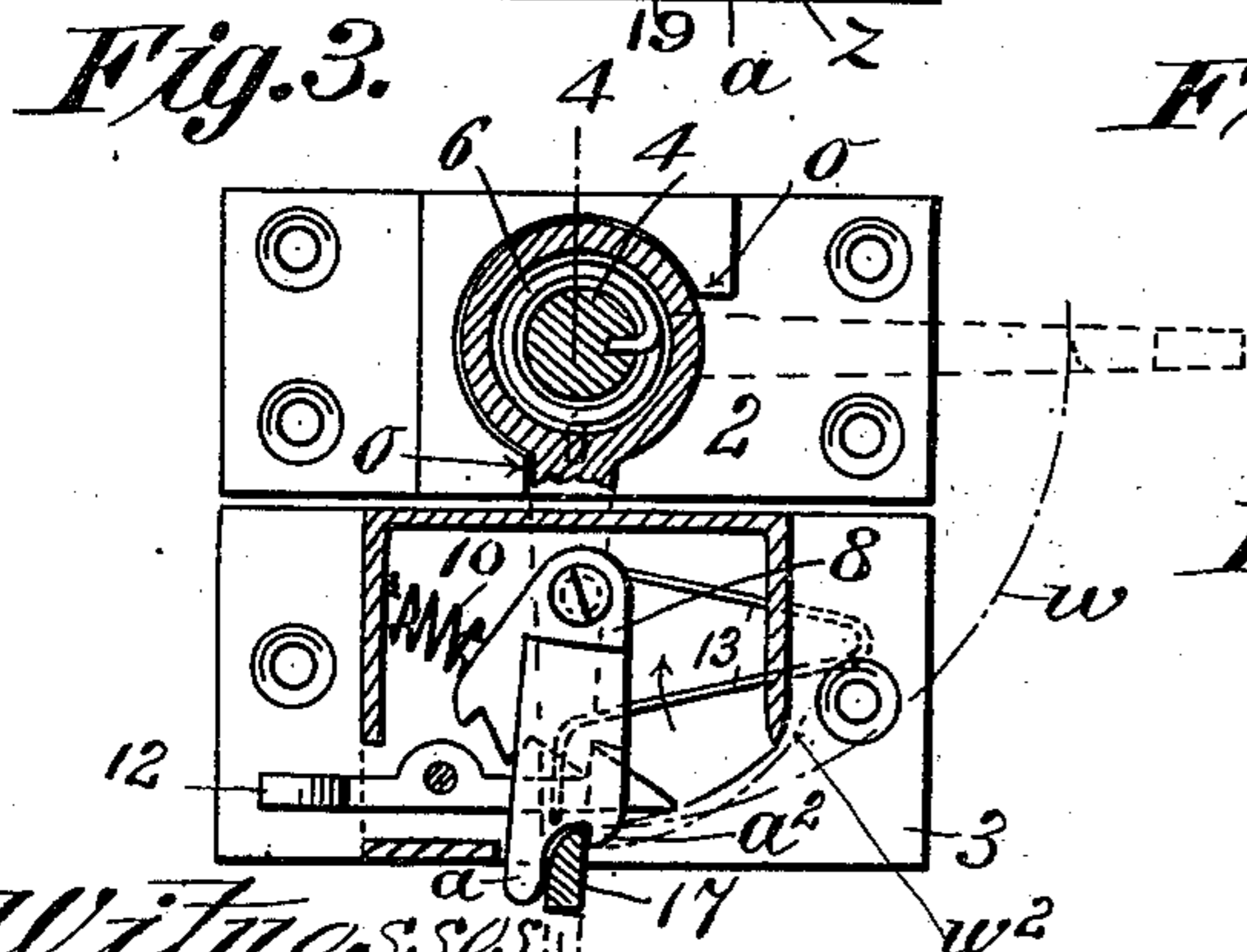
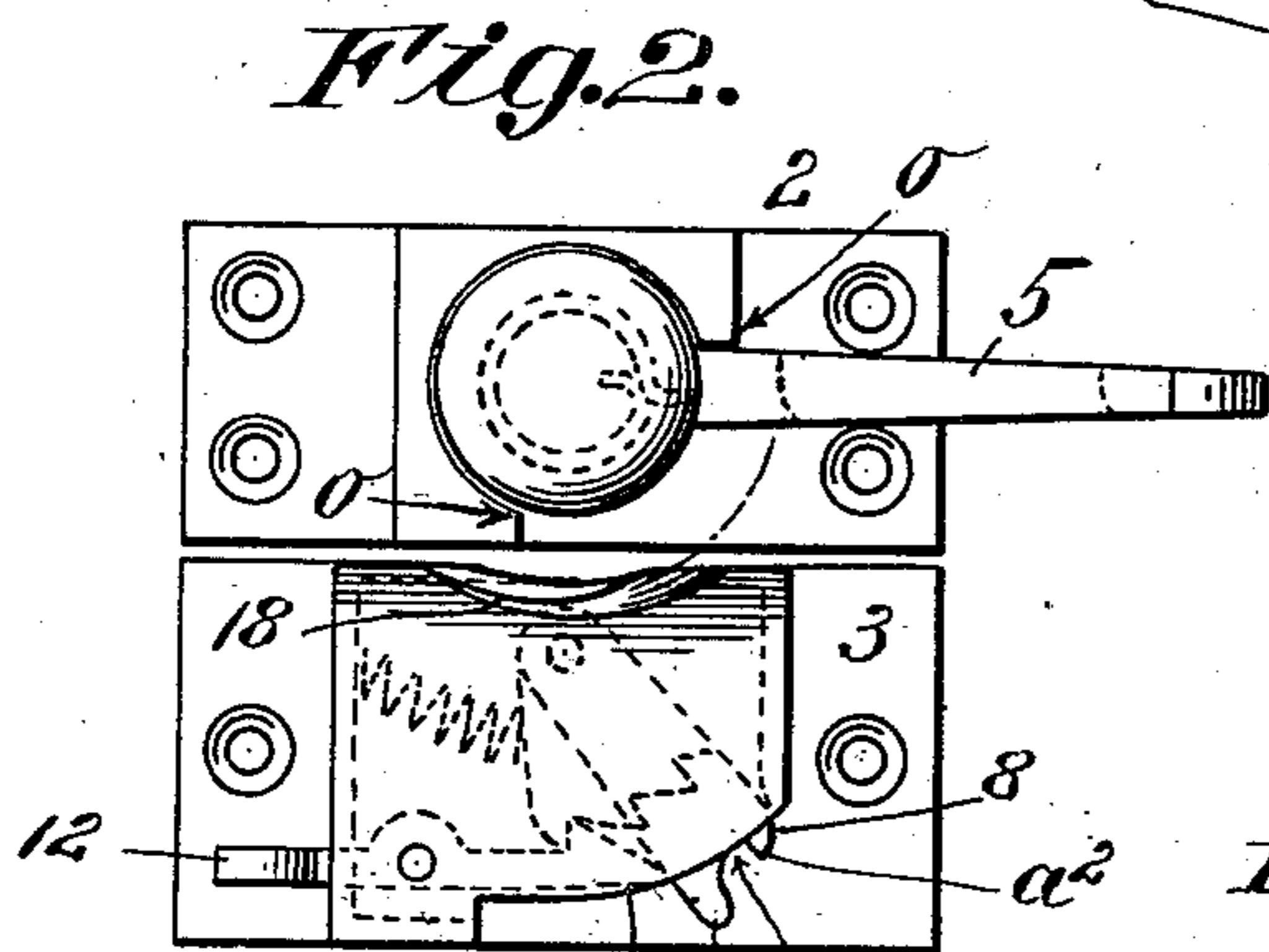
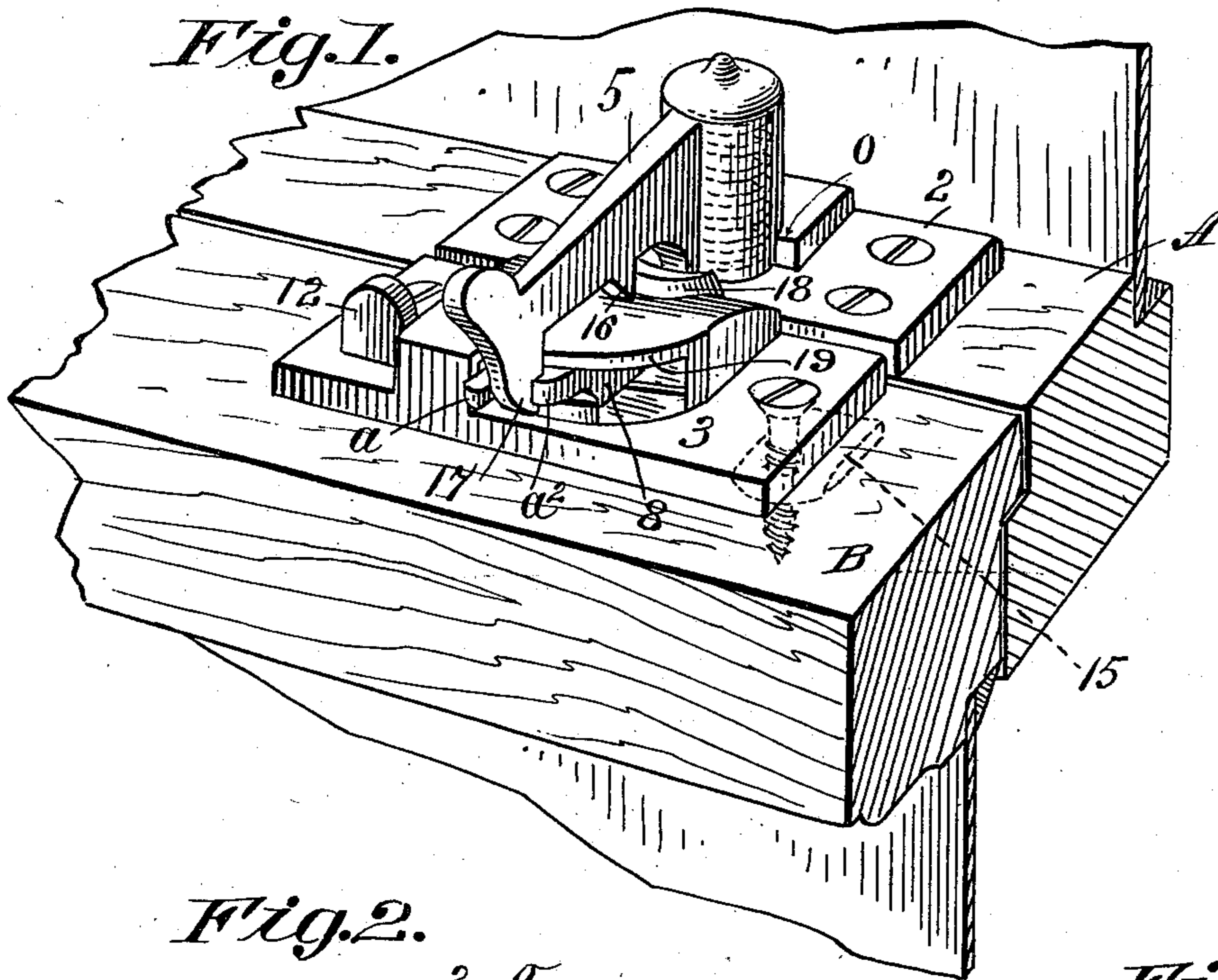


E. H. DIMOCK.
SASH LOCK.

APPLICATION FILED FEB. 1, 1901.

NO MODEL.



Witnesses
J. D. Gifford
H. D. Clemons

Inventor:
Edwin H. Dimock
by *Chapin & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

ELWIN H. DIMOCK, OF DORCHESTER, MASSACHUSETTS.

SASH-LOCK.

SPECIFICATION forming part of Letters Patent No. 723,843, dated March 31, 1903.

Application filed February 1, 1901. Serial No. 45,653. (No model.)

To all whom it may concern:

Be it known that I, ELWIN H. DIMOCK, a citizen of the United States of America, residing at Dorchester, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Sash-Locks, of which the following is a specification.

This invention relates to sash-locking devices for locking the meeting-rails of the outer and inner window-sashes; and the objects of the invention are to provide locking devices of this class of improved construction in respect to security against forcible operation thereof by burglars and in respect to improved means for drawing the said meeting-rails so firmly one against the other as to effectually exclude air and dust, and, furthermore, providing improved means for releasing the locking devices and leaving the sashes free for the usual sliding movements, all as hereinafter fully described, and more particularly pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view of portions of two window-sashes and of complete sash-fastening devices constructed according to my invention. Fig. 2 is a plan view of the sash-fastening devices, showing parts thereof both in full and in dotted lines in the positions they occupy when they do not connect the sash-bars. Fig. 3 is a sectional view on line 3 3, Fig. 4, showing certain parts in positions they occupy when the sashes are locked. Fig. 4 is a side elevation of the sash-fastening devices, partly in section, and an end view of the sash-bars. Fig. 5 is a perspective view of the locking-lever holder. Fig. 6 is a perspective view of the holder-trigger and of a portion of the trigger-spring. Fig. 7 is a sectional view of a part of one of the sash-bars and of a screw-anchor embedded therein, showing a plate-screw engaging said anchor.

Referring to the drawings, A indicates the bar of the outer and B the bar of the inner sash of a window on which the sash-fastening devices are secured. The sash-fastener plates for the outer and inner sashes are indicated, respectively, by 2 and 3, and said plates are secured by screws to said sashes, as shown. In order to guard as far as possible against forcibly drawing said screws out

of the sash-bars by burglars for the purpose of disconnecting the fastening and opening the window, metallic anchors 15 (see Figs. 1, 4, and 7) are inserted in one or both of said sash-bars, as shown, each being perforated for the engagement of each plate-holding screw therewith, thereby guarding as far as possible against said forcible withdrawal of the plate-screws. On said outer sash-bar A is fixed, as aforesaid, the fastener-plate 2, on which is fixed a post 4, on which the sash-locking lever 5 is hung to swing, as below described. Said plate 2 has thereon two abutments *o o*, against which said lever swings, thereby limiting its swinging movements. A spiral spring 6 within the hub of said locking-lever 5 has one extremity attached to said post 4 and the other to said lever and serves to swing said lever out of engagement with the inner sash-fastener plate 3, as below set forth. Said lever is also provided with two downwardly-projecting parts 16 and 17 on its under edge for engagement with different parts of the inner sash-plate 3 when the lever is swung to draw the sashes together and lock them. Also a depending part of said lever, as shown in Fig. 4, is adapted to engage abutments *o o* (see Fig. 2) on said plate 2 and arrest the swinging movements of said lever. Said inner sash-plate 3 has on its rear border an upwardly-projecting cam 18, with which the said depending projection 16 on the locking-lever 5 engages when swinging to draw the two sash-rails together preparatory to locking the same. Said cam being near the axis about which said lever turns provides, together with the said part 16 on the lever, which is also near said axis and which engages said cam, powerful means for drawing said sash-bars so closely together that wind and dust are excluded. The extremity of said locking-lever 5, on which is the projection or arm 17, when swung to fully lock the sashes together, as in Figs. 1 and 4, brings said arm to a stop in a position on the curved outer border of the plate 3 directly opposite the axial line of the post on which said lever swings, and at the same time said cam-engaging part 16 of the lever 5 bears closely against said cam 18. Hence the locking together of said sashes is of such a character as fits the parts for great resistance against any attempt

to disconnect the sash-rails in any way other than by swinging the locking-lever. As illustrated in Figs. 1 and 4, said plate 3 has a hollow portion rising above the rectangular part thereof which lies against the sash-bar B, and in said hollow portion are arranged the following instrumentalities for automatically locking the free end of the bar 5 when in the position shown in Figs. 1 and 4, whereby the sash-bars are held in engagement, as aforesaid, and for permitting said bar to swing clear of the plate 3 and its devices, whereby the sash-bars A and B become disconnected: A latch 8, Fig. 5, is pivotally connected within said plate 3 in the position indicated in the several figures of the drawings, the outer end of which has a slot z therein, forming a long and short arm, respectively indicated by a and a^2 , on the free end thereof. Said latch has on its under side a toothed segment 9, in which the extremities of the teeth thereof are in a line sufficiently back of the outer ends of said long and short arms a and a^2 to provide for introducing one end of a trigger, Fig. 6, thereunder, on the side of which is a hook, as shown, which, induced by a spring 13, engages the teeth of said segment 9, said trigger being pivoted on the fastener-plate 3, as shown clearly in Fig. 3 and elsewhere, and adapted by pressing the outer end thereof to disengage said hook from said ratchet-teeth, thereby letting the latch 8 (induced by a spring 10 between a part of the plate 3 and said latch 8) swing to the position shown in dotted lines in Fig. 2, and the sash-locking lever 5, actuated by its spring 6, to assume the position there shown disconnected from the sash-bar B. The said latch 8 may have one or more teeth.

The actions of the moving parts of the within-described sash-locking devices when the bars A and B are locked and unlocked are as follows: When the sash-bars are unlocked, the positions of said parts are as shown in Fig. 2, the operating or sash-locking lever 5 there lying longitudinally over the outer window-sash bar A, the latch 8 (the position of which is shown in dotted lines in said Fig. 2) being swung to that position by the spring 10, Fig. 3, following the disengagement of the trigger 12 therefrom in the manner described. The spring 13 then returns the trigger to the position relative to the latch shown in Fig. 2, the short latch-arm a^2 in the position shown in said last-named figure not obstructing the movement of the lever 5 away from the latch to the position there shown. In locking the sash-bars together, as in Fig. 1, the end of said operating-lever 5 is grasped, and it is swung toward the inner sash-bar B, the projection 16 on said lever coming in contact with one end of the cam 18 before the lever reaches the short arm of the latch 8, but immediately passing said arm and striking the long arm a of said latch. At this point said lever 5 and the latch 8 move together; but owing to the difference

in the radial movements of the engaged parts—i. e., the lever and latch—the depending part 17 of the lever 5 becomes entered in said slot, and said engaged parts finally come to a stop against a part of the fastening-plate 3, as shown in Fig. 1, and coincident with this stop the hook of the trigger 12 becomes engaged with one of the teeth of said latch, as shown in Fig. 3, and so remains until the trigger shall be swung to disengage its hook from said latch, as heretofore described. Thus the locking-lever 5 in its movements to and from a sash-locking position, as illustrated in Figs. 1 and 2, swings alternately both free of and engaged in said slot z in the outer end of said latch, which alternate actions are due to said differences in the radial movements of the extremity of the latch and the part of said lever engaged thereby.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, of the United States, is—

1. Sash-fastening devices embodying a locking-lever hung to swing on one sash-bar, a projection thereon for engagement with lever-locking devices on the opposite sash-bar, a spring acting to swing said lever out of said engagement, said lever-locking devices comprising a pivoted latch engaging said lever projection, and a trigger automatically engaging said latch and holding said latch and lever in sash-locking position, substantially as described.

2. Sash-fastening devices embodying a locking-lever hung to swing on one sash-bar, pending projections on said lever for engagement respectively with lever-locking devices and with a cam on the opposite sash-bar, a spring acting to swing said lever out of said engagement with said lever-locking devices, which comprise a pivoted latch and a cam engaging, respectively, said lever projections, and a trigger automatically engaging said latch, and holding said lever in sash-locking position, whereby said sash-bars are held one against the other, substantially as described.

3. Sash-fastening devices embodying a locking-lever hung to swing on one sash-bar, a pending projection on said lever for engagement with lever-locking devices on the opposite sash-bar, a spring acting to swing said lever out of said engagement, said lever-locking devices comprising a pivoted latch whose outer extremity engages said lever projection, and having one or more teeth thereon, and a trigger automatically engaging one of said latch-teeth and holding said lever in sash-locking position, substantially as described.

4. Sash-fastening devices embodying a locking-lever hung to swing on one sash-bar, a projection thereon for engagement during its swinging sash-locking movements with a pivoted holding-latch on the opposite sash-bar, lever-locking devices on said opposite sash-bar comprising said latch in the outer extremity of which is a slot between two arms

of different lengths, in which slot said lever projection engages, a spring actuating said latch against the locking movement of said lever, and a trigger engaging said latch and retaining said lever in a sash-locking position, substantially as described.

5. Sash-fastening devices comprising a locking-lever pivotally mounted on a plate supported on one sash-bar, a second plate on the opposite sash-bar, lever-locking devices on said second plate consisting of a swinging latch 8 having a shorter radius than said locking-lever, said latch and locking-lever being located in a position of substantial alignment, when in sash-locking position, thereby constituting a toggle connection whereby the sash-bars may be drawn together.

6. Sash-fastening devices comprising a locking-lever pivotally mounted on a plate supported on one sash-bar, a second plate on the opposite sash-bar, a cam projection on the second plate and lever-locking devices also on said second plate whereby by the engagement of said cam and lever the two plates may be brought into substantially the same plane, and whereby by the engagement of said lever with said locking devices the said two plates may be drawn together, substantially as described.

30 7. Sash-fastening devices comprising a lock-

ing-lever pivotally mounted on a plate supported on one sash-bar, a second plate on the opposite sash-bar, lever-locking devices on said second plate consisting of a swinging latch having a shorter radius than said locking-lever, means of engagement between the latter and said latch, whereby the swinging movement of the locking-lever will draw the sash-bars together, a detent for said locking devices, and a spring for said locking-lever, whereby the latter is moved in one direction with the release of the detent, substantially as described.

8. In a sash-lock, two plates located on opposite sash-bars, a locking-lever on one of said plates, a vertical cam projection on the other plate, and a pivoted latch on said second plate, having a shorter radius and movable in a plane parallel with that of said locking-lever, means of engagement between said locking-lever and cam, and between said lever and latch, whereby the vertical adjustment of said plates may be effected in advance of their horizontal adjustment, substantially as described.

ELWIN H. DIMOCK.

Witnesses:

H. A. CHAPIN,
K. I. CLEMONS.