

No. 685,578.

Patented Oct. 29, 1901.

J. C. DEGGIM.  
LATCH.

(Application filed May 27, 1901.)

(No Model.)

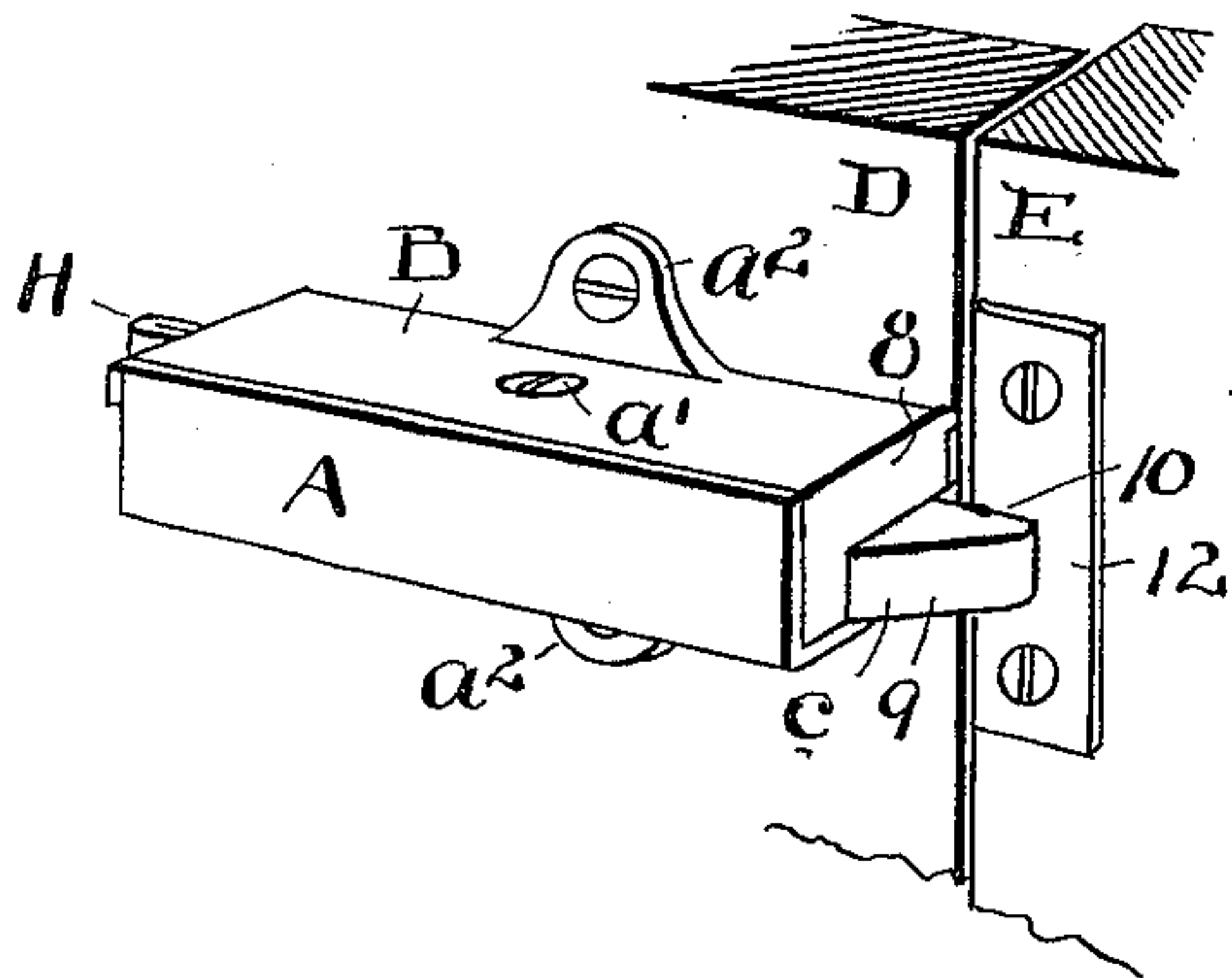


FIG. 1.

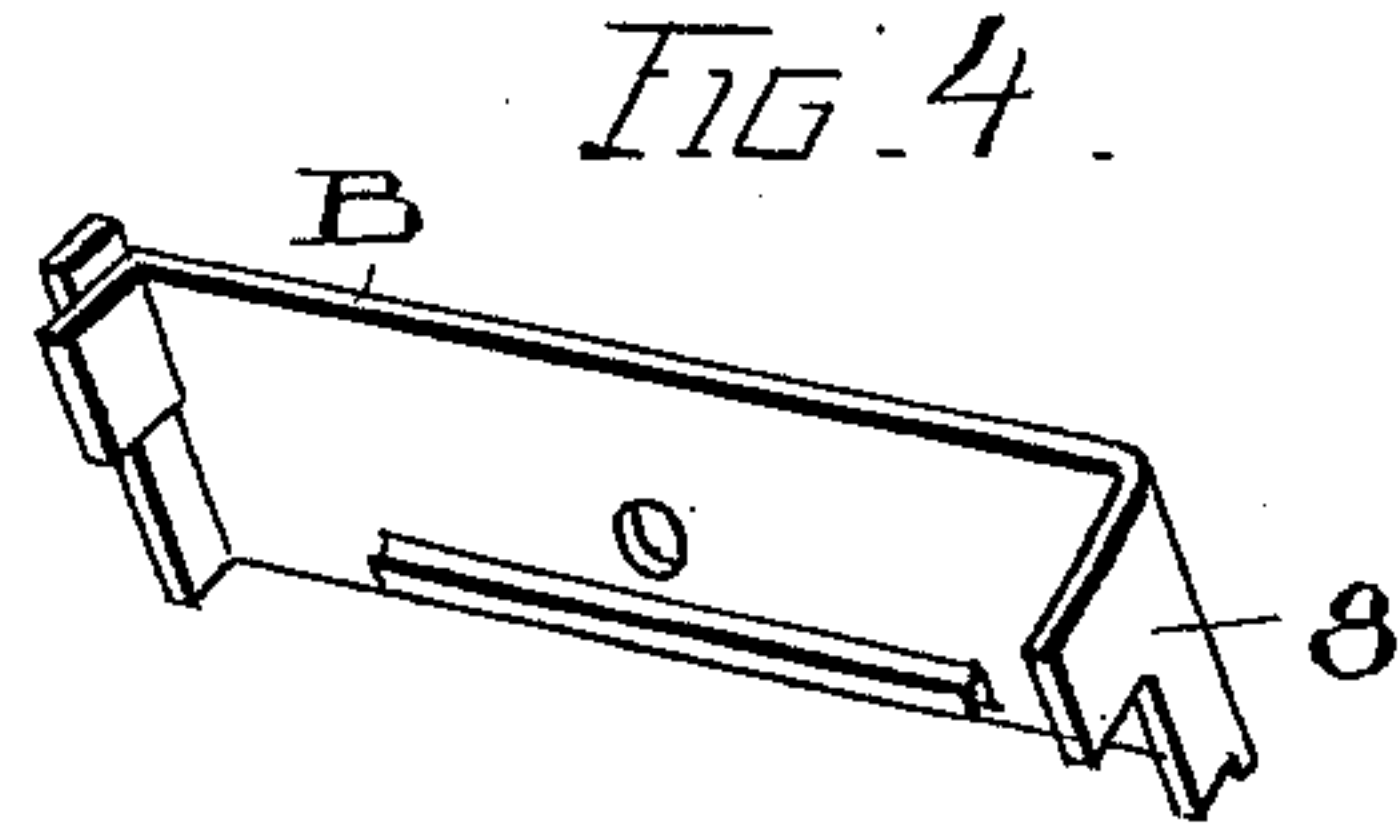


FIG. 4.

FIG. 2.

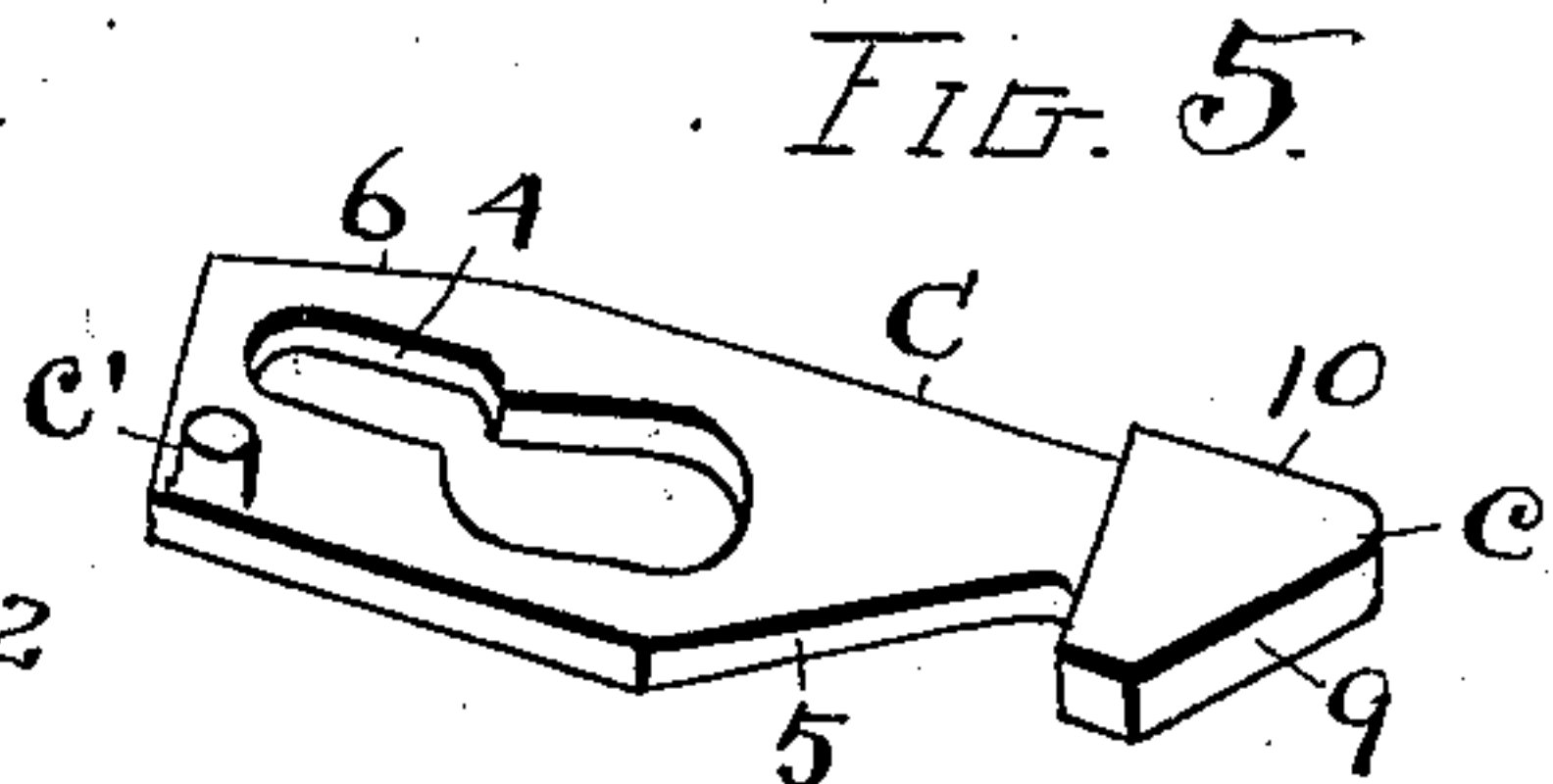
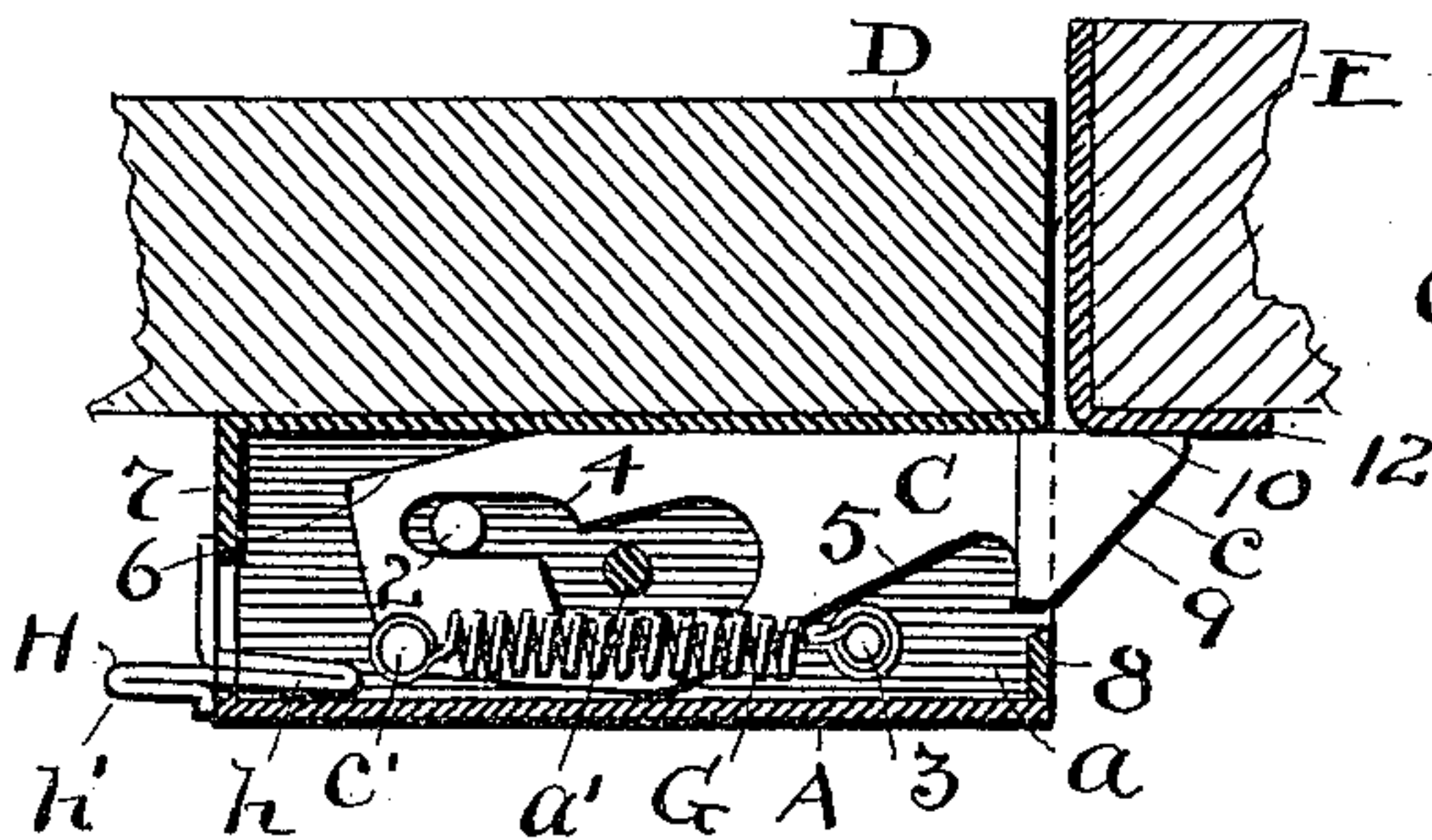


FIG. 5.

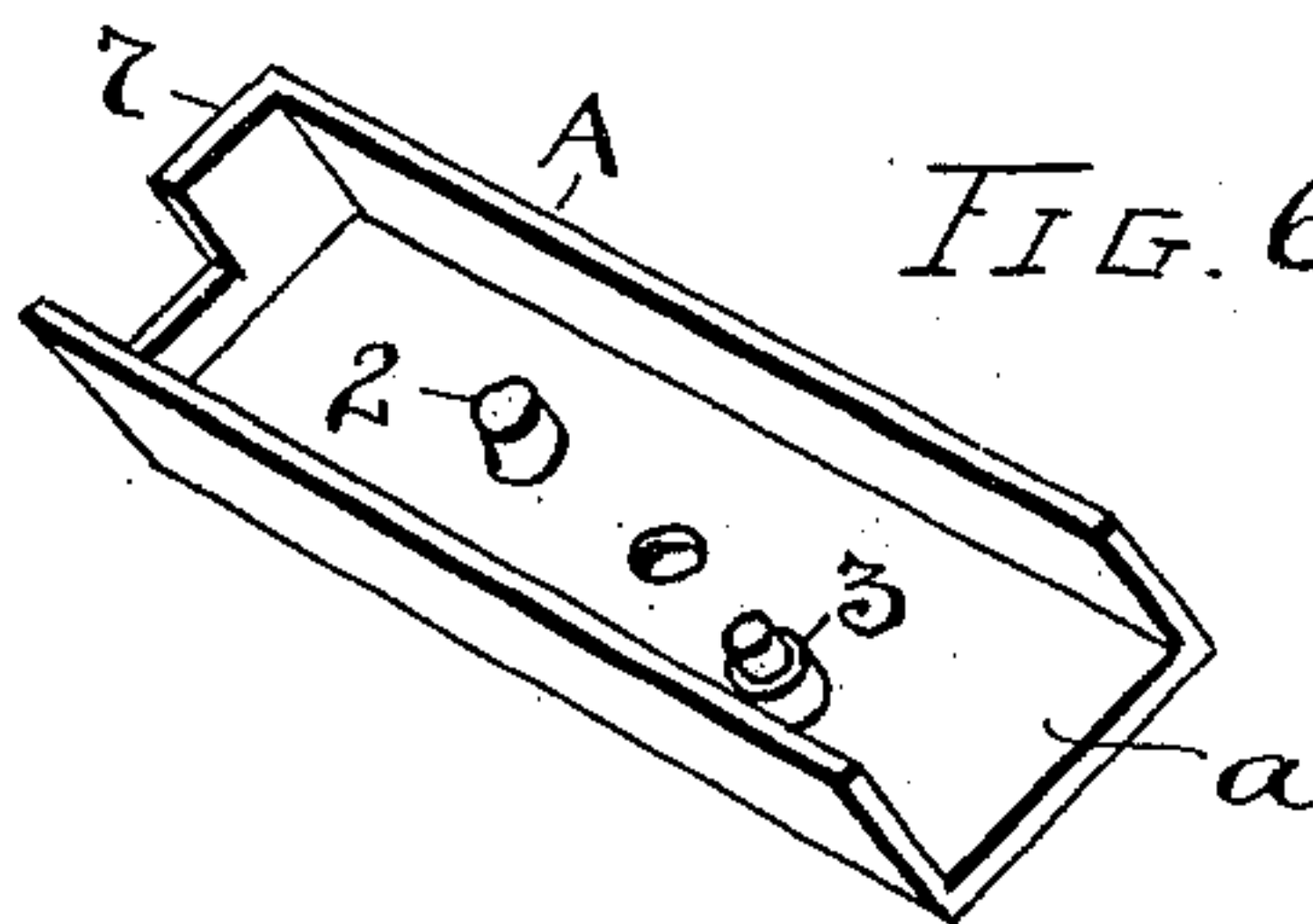


FIG. 6.

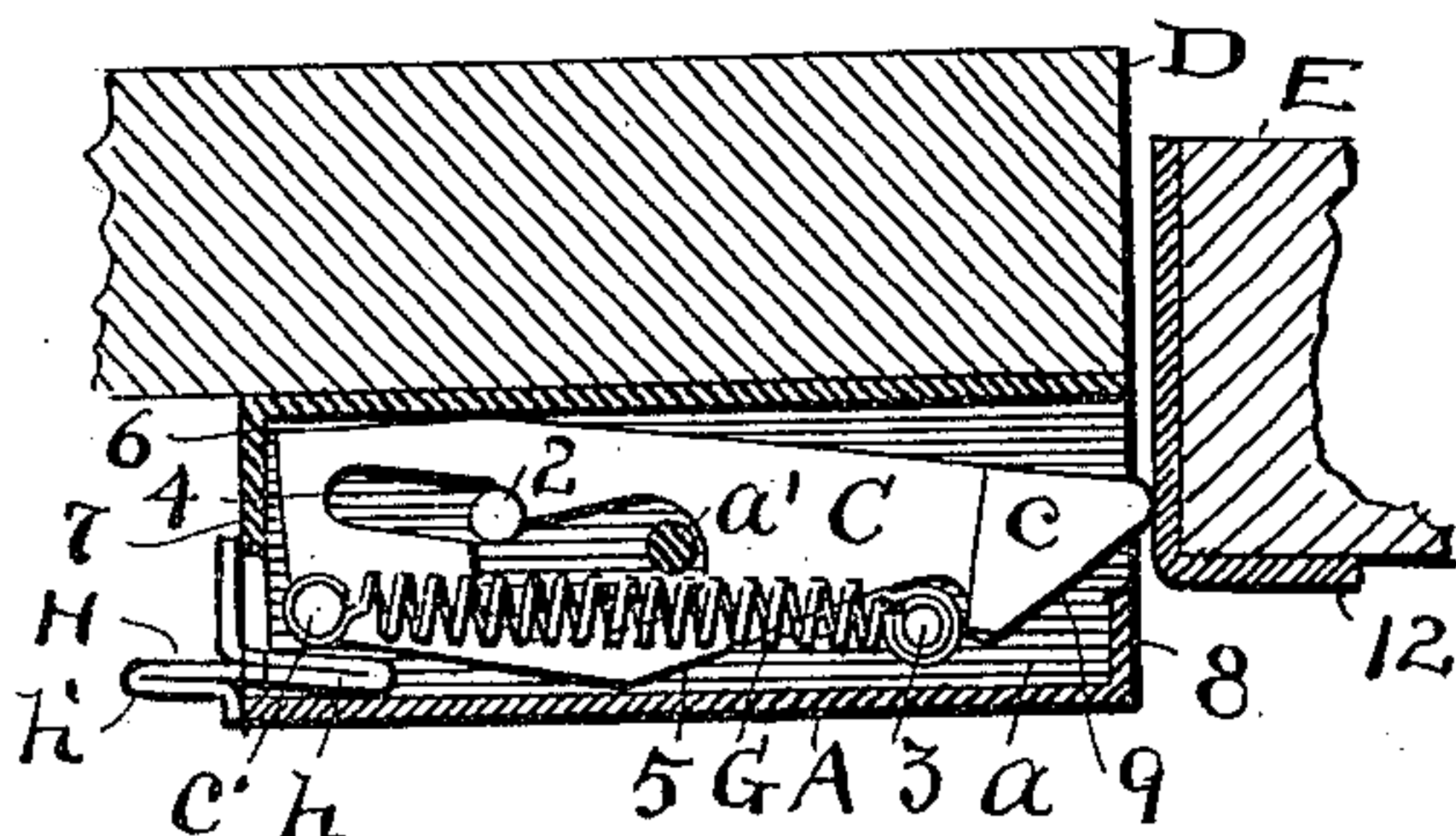


FIG. 3.

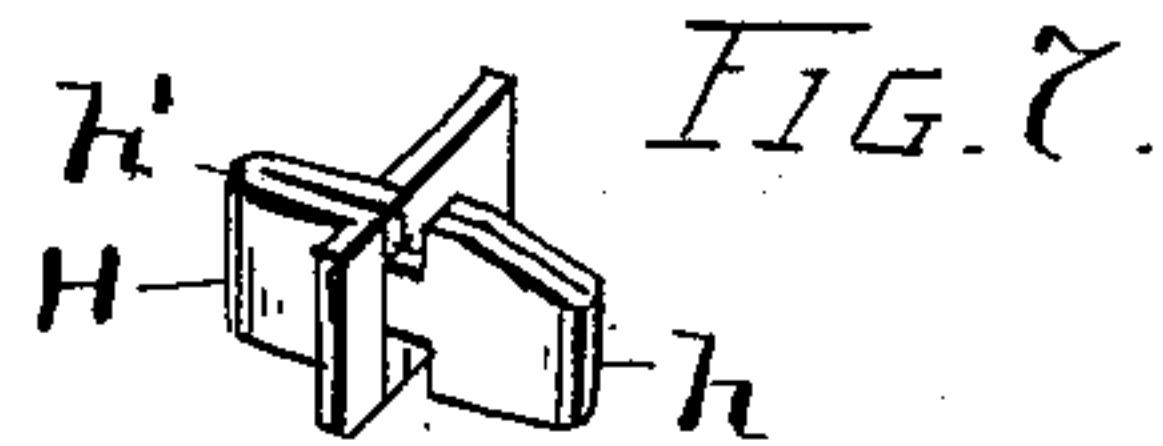


FIG. 7.

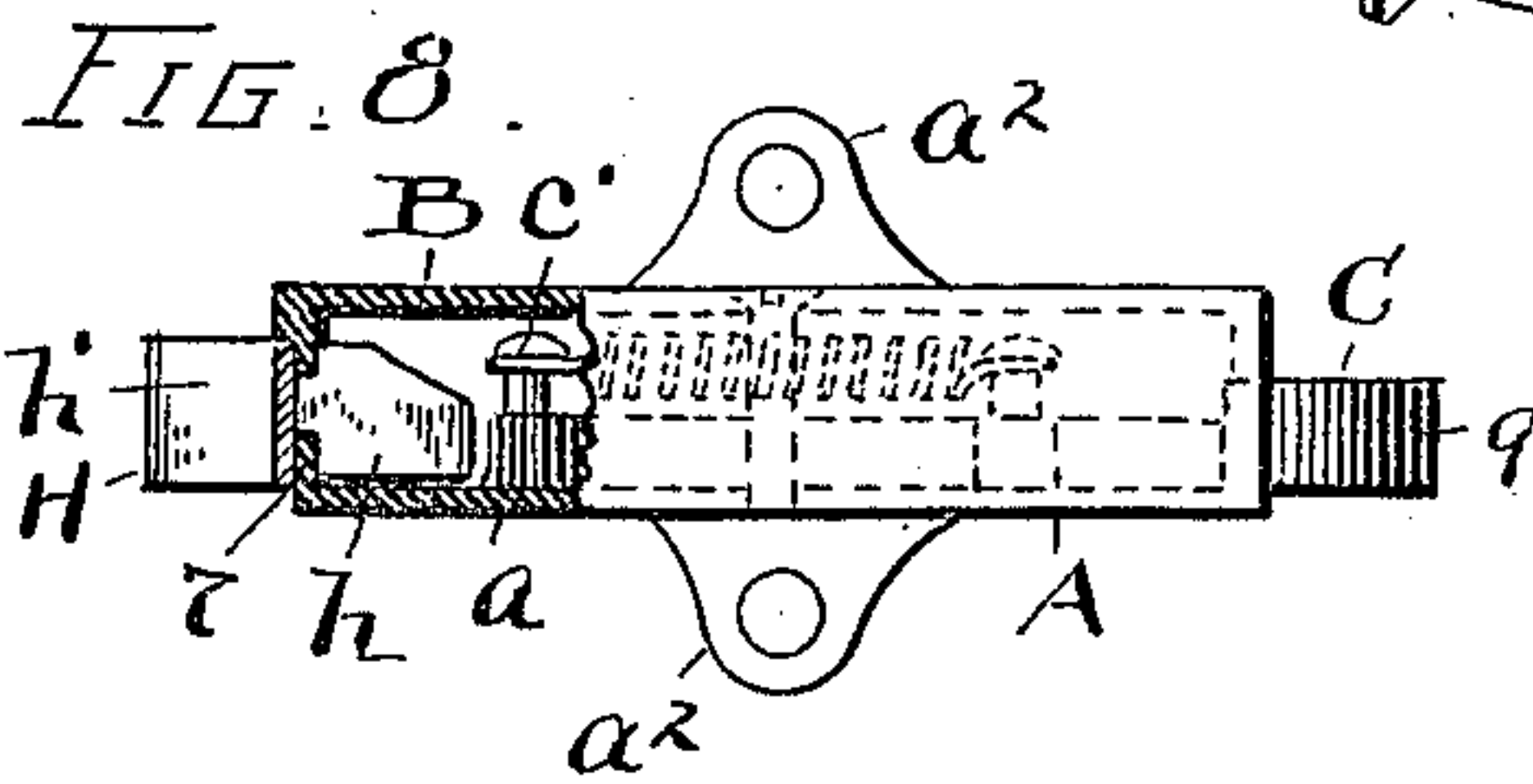


FIG. 8.

ATTEST  
V. B. Moore  
H. E. Mudra

INVENTOR.  
John C. Deggin  
By W. J. Fisher ATTORNEY



# UNITED STATES PATENT OFFICE.

JOHN C. DEGGIM, OF CLEVELAND, OHIO.

## LATCH.

SPECIFICATION forming part of Letters Patent No. 685,578, dated October 29, 1901.

Application filed May 27, 1901. Serial No. 62,030. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. DEGGIM, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Latches for Doors and Gates; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to latches for doors and gates; and the object of the invention is to provide a latch which will open and close automatically when the door or gate is opened and closed, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective elevation of my improved latch in working position on a door and engaged against the casing in closed position. Fig. 2 is a longitudinal section of the latch and a cross-section of door and casing with the latch closed, as in Fig. 1; and Fig. 3 is a like view of parts to Fig. 2, but with the latch fully open and the door only started to open, so that the point of the latch bears against the door-casing. Fig. 4 is a perspective inside view of the cover to the latch-casing. Fig. 5 is a perspective view of the latch member, and Fig. 6 is a perspective view of the latch casing or box. Fig. 7 is a detail of the lock for the latch, and Fig. 8 is a plain elevation of the entire casing with the latch therein and with the casing broken away at the rear to show the relation of the latch-lock thereto and therein.

In the latch thus shown A is the casing or box, and B is the cover or top part of the casing as an entirety.

C is the latch member or "latch" simply, as it will be hereinafter referred to for convenience.

D is the door or gate, and E the casing or jamb of the door or gate.

G is a spring connected with the latch, and H is the latch-lock.

In the mechanism thus shown and referred to it is designed that the latch shall have a dual action and movement to the end that it will automatically open and close by the

mere swinging of the door to opening or closing position. This necessitates certain peculiarities of construction of all the parts, as will now appear. Thus the casing is a practically-closed part when all assembled and has a flat bottom *a*, on which latch C rests with its own flat bottom side, and said bottom *a* has two studs or posts 2 and 3, while latch C has a longitudinal slot 4 at its rear running over or on post 2 and an incline 5 at its edge and front running on post 3. The head *c* of the latch is shouldered at the top of said incline, so that said shoulder serves as a stop for the backward and downward run of the latch, Fig. 3. The rear inner edge of the latch is formed with an inclined or slanting edge portion 6, which is thrown against the wall of the casing, Fig. 3, when the latch is full open, and then also does the latch bear on post 2 at the inner end of slot 4, as seen in Fig. 3.

Screw *a'*, which locks cover B on body A, passes through a large opening in the middle of the latch, so as not to interfere with operations, and ears *a''* serve to fasten the casing in place. In this instance it is supposed to be secured upon the door; but it will operate as well on the door-casing.

Casing-body A is open at its front and closed at its rear by wall 7 except a notch or recess for lock H, while cover B has a right-angled front portion 8, closing the front of the casing except an opening for the head *c* of the latch. This head has an inclined edge 9, which acts as similar inclines in latches ordinarily act when a door is closed, while the opposite edge 10 of the head is straight. When the door is shut, the latch bears with its straight edge 10 on the latch-engaging plate 12 or its equivalent on door-casing E, Figs. 1 and 2; but when the door is drawn or pressed open the latch yields both laterally and rearwardly, as in Fig. 3. In this movement the position of the latch is shifted at both ends, and the rear end accommodates itself to the needs of the front end. Spring 9 is fixed at its front on post 3 on the casing and at its rear end to post *c'* on the latch, so that it exerts a constant pull forward or outward of the latch to engaging position.

The laterally-slidable lock H has a tongue *h* projecting within the casing and notches at the base of the tongue running in the in-



wardly-extending edges of the casing at the rear, Fig. 8, and a finger portion *h'* outside serves to push the lock to either engaging or disengaging position. This or any equivalent construction of lock may be used for the latch. When the lock is carried inward, (shown in Fig. 2,) it comes behind the latch and the latch is locked against all movement. This serves to lock the door at any time, night or day, and it is so effective that nothing but a breaking of the lock will enable the door to be opened.

Both posts or projections 2 and 3 might be pins or their equivalent through the casing, and the rear end of the latch may stop against the casing, or any other stop or limit to its backward movement may be used. In the present case the stop is mostly or wholly by head *c* engaging post 3. Slot 4 runs parallel to the straight edge of the latch, and its chief use is to form a straight bearing against post 2 to keep the rear end of the latch in place. Therefore except for a spring-supporting post *c'* back on the rear end of the latch the whole rear part outside of pin 2 might be omitted. When the door closes, the inclined or beveled edge 9 of the latch strikes, and the latch runs back in a straight line. When the door is opened, the pressure is against straight edge 10 of the head, and then both a tilting and a rearward movement of the latch takes place.

As here shown, the casing is attached to the outside of the door; but it may be set into a mortise or recess therein. In that case a modification of lock H would be required.

What I claim is—

1. A latch having a straight edge at one side and a beveled edge at one end, a slot in said

latch parallel to said straight edge and an inclined edge at the front opposite said straight edge, in combination with a casing having a side wall against which the straight edge of said latch bears, separate projections for said slot and inclined edge, and a spring to normally keep said latch in striking position, substantially as described.

2. In latches for doors and gates, a casing and a latch movable lengthwise and laterally therein and having an inclined edge, and a fixed projection in the casing on which said edge has sliding engagement in the lateral and tilting movement of the latch, in combination with a laterally-slidable lock having a tongue to engage said latch, notches at the base of said tongue and inwardly-extending edges on said casing engaged within said notches, substantially as described.

3. In latches for doors and gates, a latch constructed with a straight edge 10 and a beveled head *c*, an inclined edge 5 running to said head to form a shoulder at the base thereof, and a slot 4 parallel with said straight edge, in combination with a casing having a projection 2 to extend within slot 4, a projection 3 to engage said latch at its incline 5, and a spring G to normally hold said latch out in striking position and in working engagement with said projections, substantially as described.

Witness my hand to the foregoing specification this 18th day of May, 1901.

JOHN C. DEGGIM.

Witnesses:

R. B. MOSER,  
H. E. MUDRA.