

No. 670,506.

Patented Mar. 26, 1901.

H. H. DENT.

LATCH.

(Application filed Nov. 28, 1900.)

(No Model.)

Fig. 1.

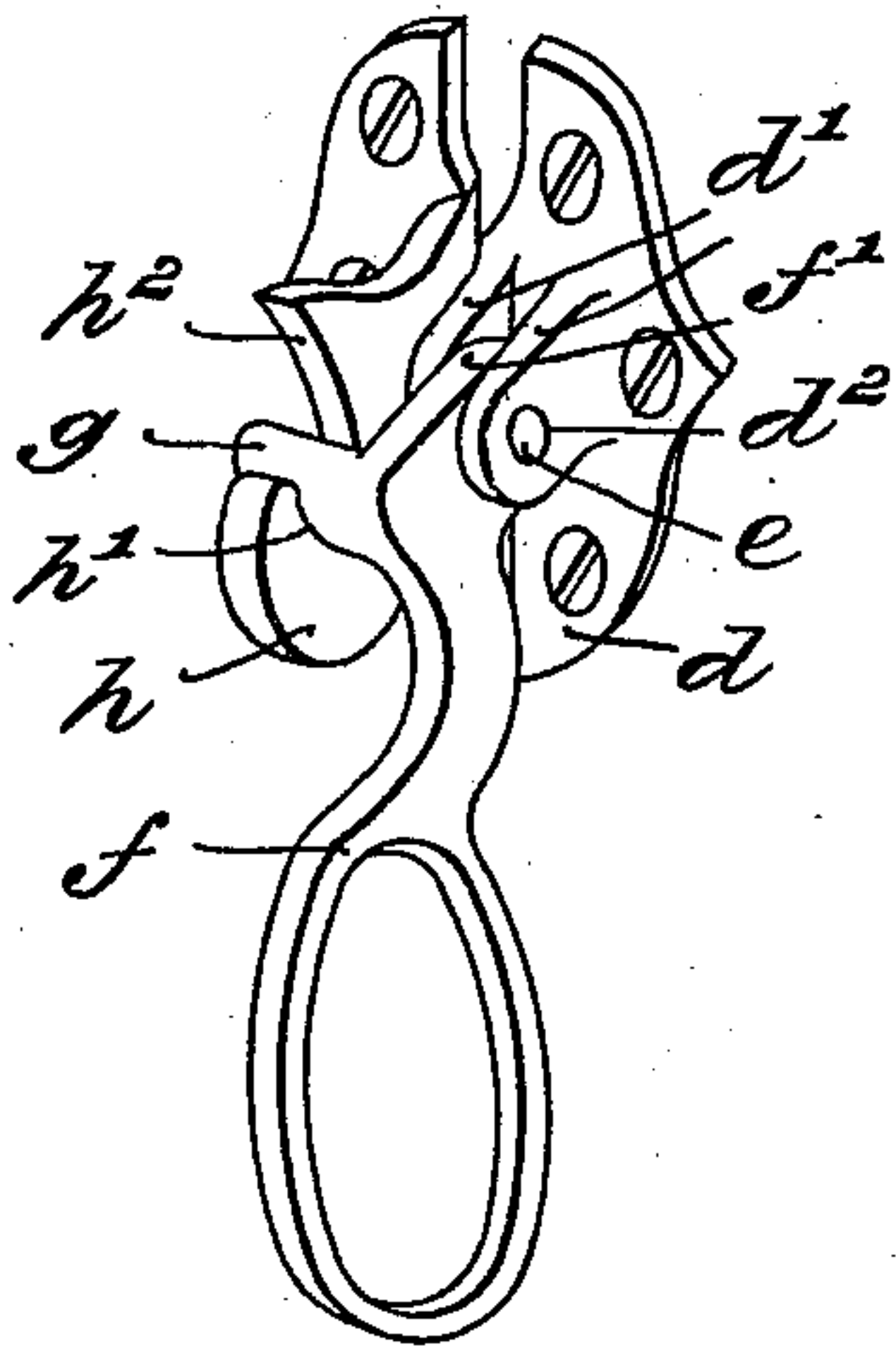


Fig. 2.

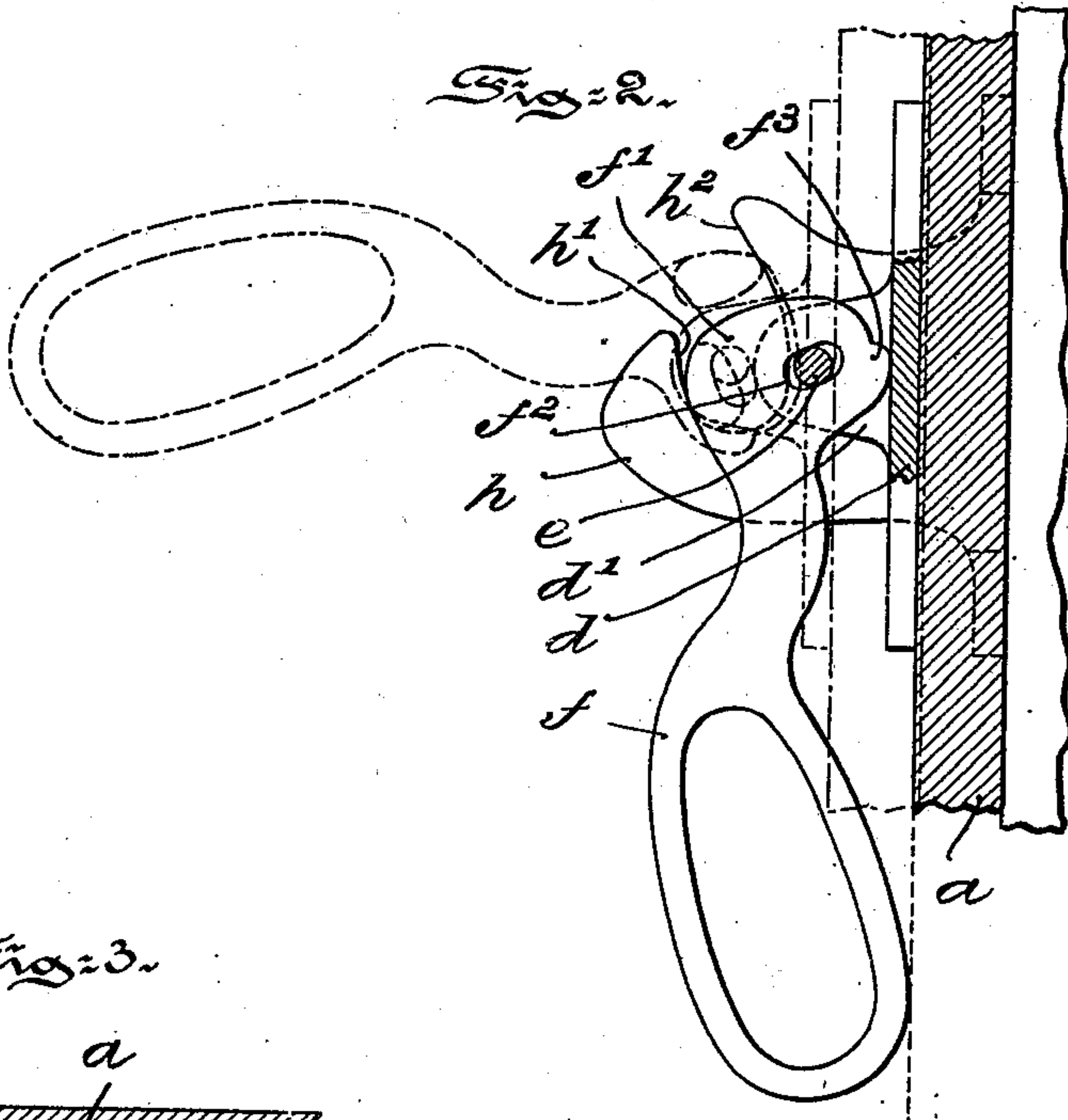


Fig. 3.

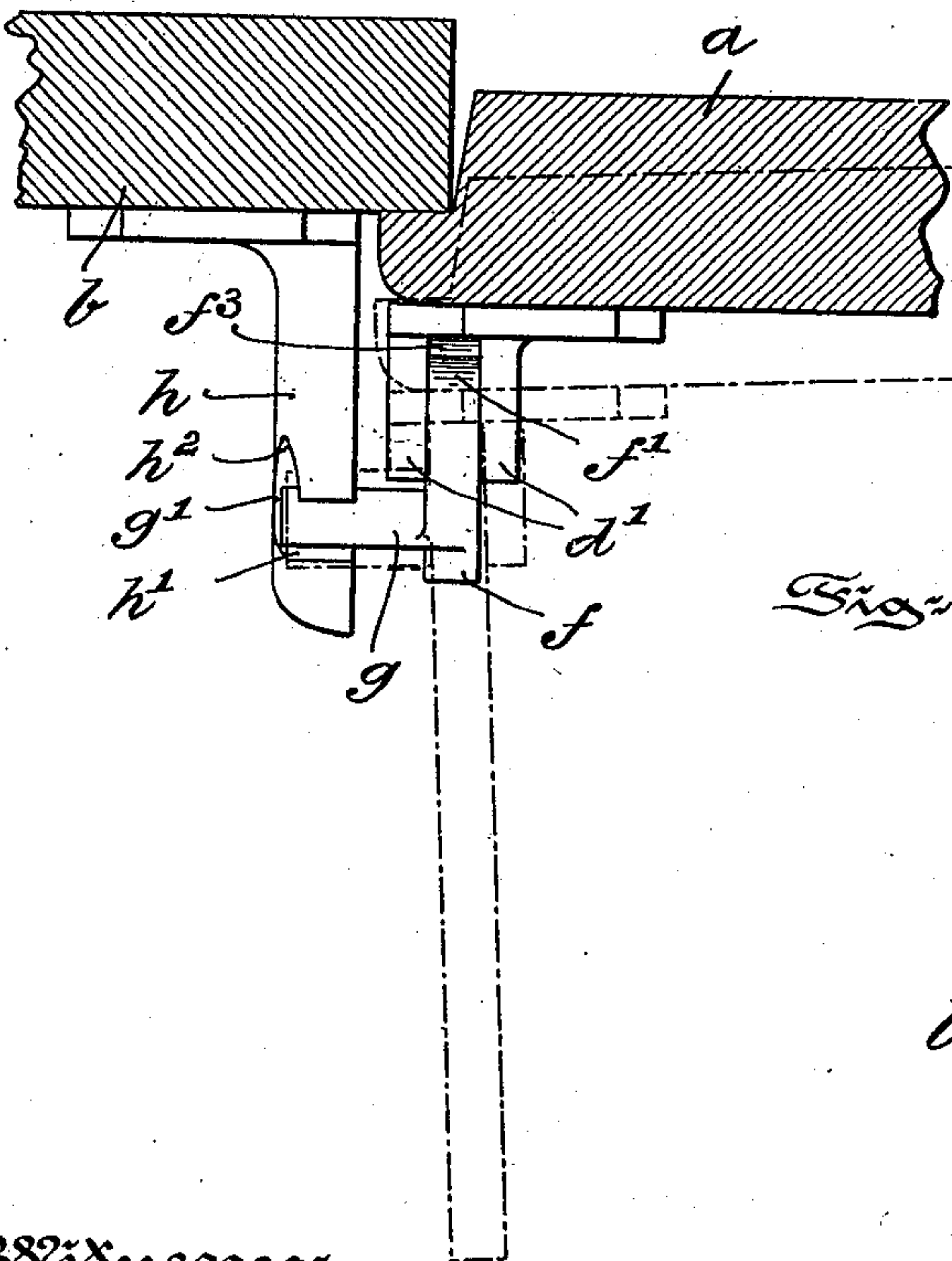
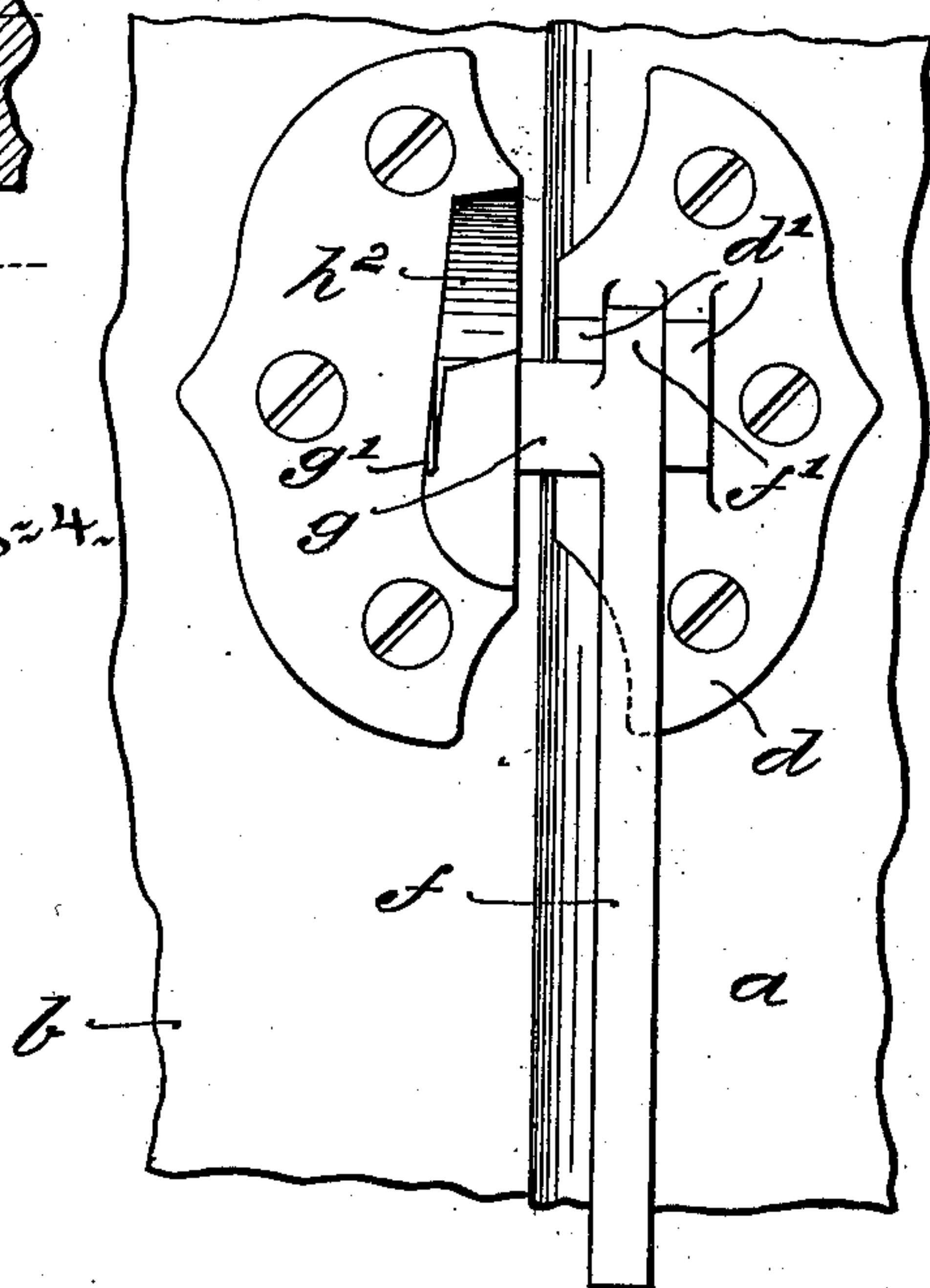


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## LATCH.

SPECIFICATION forming part of Letters Patent No. 670,506, dated March 26, 1901.

Application filed November 28, 1900. Serial No. 37,978. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY H. DENT, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Latches, of which the following is a specification.

My invention has relation to that class of door closers and openers wherein a pivoted lever or latch is provided with a lug or stud adapted to engage in a keeper to force the door tightly shut when operated in one direction and to start the door open when moved in the opposite direction, and in such connection it relates to the construction of the lever or latch its fulcral support, and the keeper for the latch.

The principal objects of my invention are, first, to so pivot the lever or latch in the plate or seat supporting the same that in the act of clamping the door to its seat strain upon the pin or bolt forming the pivot or fulcrum is removed, and, second, to so fashion the keeper that in the opening of the door and before disengagement of the latch from the keeper the door is pried open by the movement of the latch within the keeper.

The nature and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a perspective view of a latch and its keeper embodying main features of my invention, the same being disengaged from the door and the door jamb or seat. Fig. 2 is a vertical sectional view of the latch and adjacent parts, showing in full and dotted lines the operative and inoperative positions of the lever-fastener of my invention\*for refrigerator and other doors. Fig. 3 is a top or plan view of the latch and keeper, with the door and jamb illustrated in cross-section; and Fig. 4 is a front elevational view of Fig. 3.

Referring to the drawings, *a* represents the door, and *b* the jamb or seat. Upon the door *a* is suitably secured a plate *d*, having two projecting studs *d'*, in each of which is formed an opening *d<sup>2</sup>* for the reception of a pin or bolt *e*, which forms the pivotal support or fulcrum for the latch or lever *f*. This latch or

lever *f* has a cam or eccentric *f'* fitting between studs *d'* and provided with an obliquely-arranged slot *f<sup>2</sup>*, through which the pin or bolt *e* passes to unite the lever or latch *f* to the plate *d*. On the inner face of the cam-plate *f'* is formed an auxiliary cam *f<sup>3</sup>*, adapted as the latch or lever *f* is pressed downward to press inwardly against the base of the plate *d*, as illustrated in Fig. 2. Upon the outer portion or face of the cam *f'* is formed a laterally-projecting lug *g*, adapted to fit into a recess *g'* of the keeper *h*. The keeper *h* is provided with two oppositely-arranged wings *h'* and *h<sup>2</sup>*, of which one, *h'*, is concaved to form the seat for the lug *g* and the other, *h<sup>2</sup>*, is upwardly and forwardly made to project to lie in the path of the lug *g* when this lug is elevated out of the seat in the wing *h'*, as clearly illustrated in dotted lines in Fig. 2 of the drawings.

The operation of the device is simple. When the door is pushed shut, the lever *f* is depressed to force the lug *g* into the seat *g'* of the wing *h'*. When now the lever *f* is still further depressed, the cam *f'* of the lever *f* is forced inward by the weight *h'* of the keeper and by reason of the slotted connection with the pin or bolt *e* is permitted to bear directly upon the plate *d* of the door *a*. The door will thus be tightly jammed into its seat without strain upon the pivot *e* of the latch. When the door *a* is to be opened, the latch *f* is thrown upward until the lug *g* strikes upon the wing *h<sup>2</sup>*, when the door will be initially pried or forced open by the impingement of the lug *g* upon the said wing. By pulling upon the lever *f* the door will then come open easily and without any oblique pressure upon the door while in its seat.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A lever or latch provided with a laterally-projecting lug and a cam on its body provided with a slot, a keeper, wherein the lug is adapted to enter, a plate provided with two studs between which the lever or latch is adapted to be pivoted, and against which plate the cam is adapted to bear, and a pin or bolt passing through the two studs and the slotted body of the lever or latch to form the

pivotal support for the lever in said plate, all arranged so that when the lug engages the keeper and the cam bears against the plate, the strain upon the pivot is relieved, substantially as and for the purposes described.

5 2. In a fastening device of the character described, a plate provided with two projecting studs, a lever provided with a cam or body pivoted between said studs and bearing upon  
10 said plate, said body being slotted, and a pin passing through the studs and the slot of said

body to form the fulcrum support for the lever in the studs, substantially as and for the purposes described.

In testimony whereof I have hereunto set  
my signature in the presence of two subscribing witnesses. 15

HENRY H. DENT.

Witnesses:

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