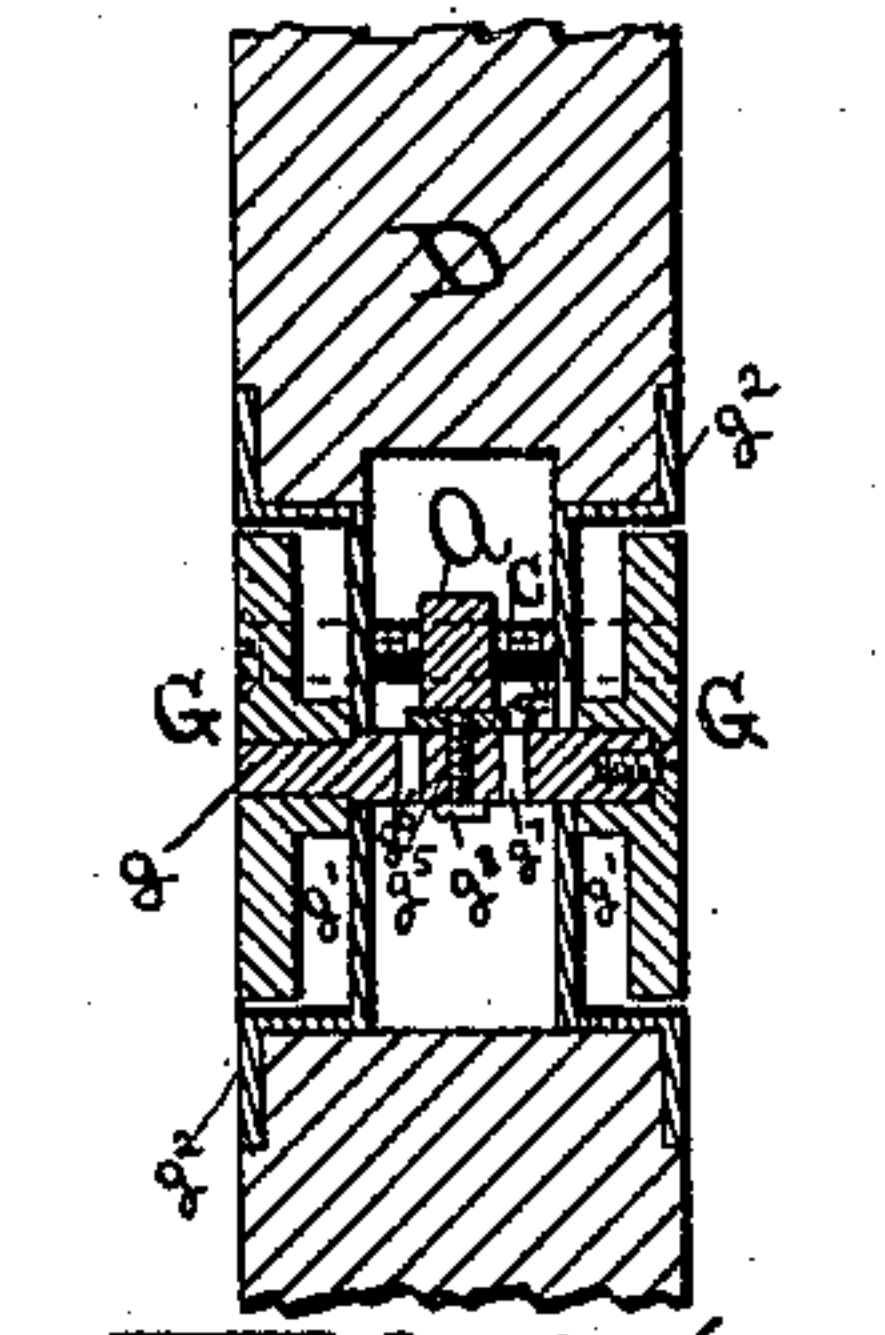
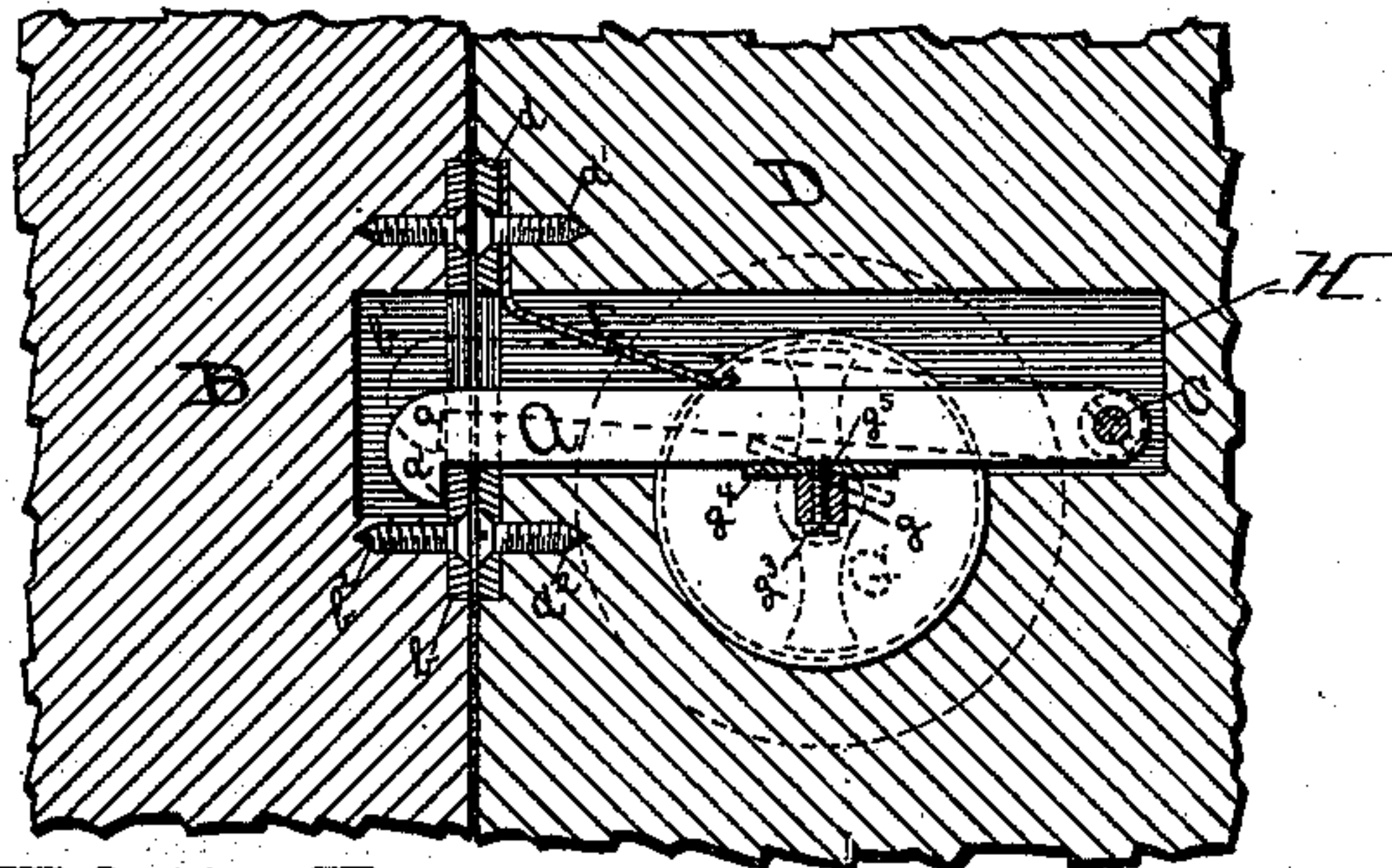
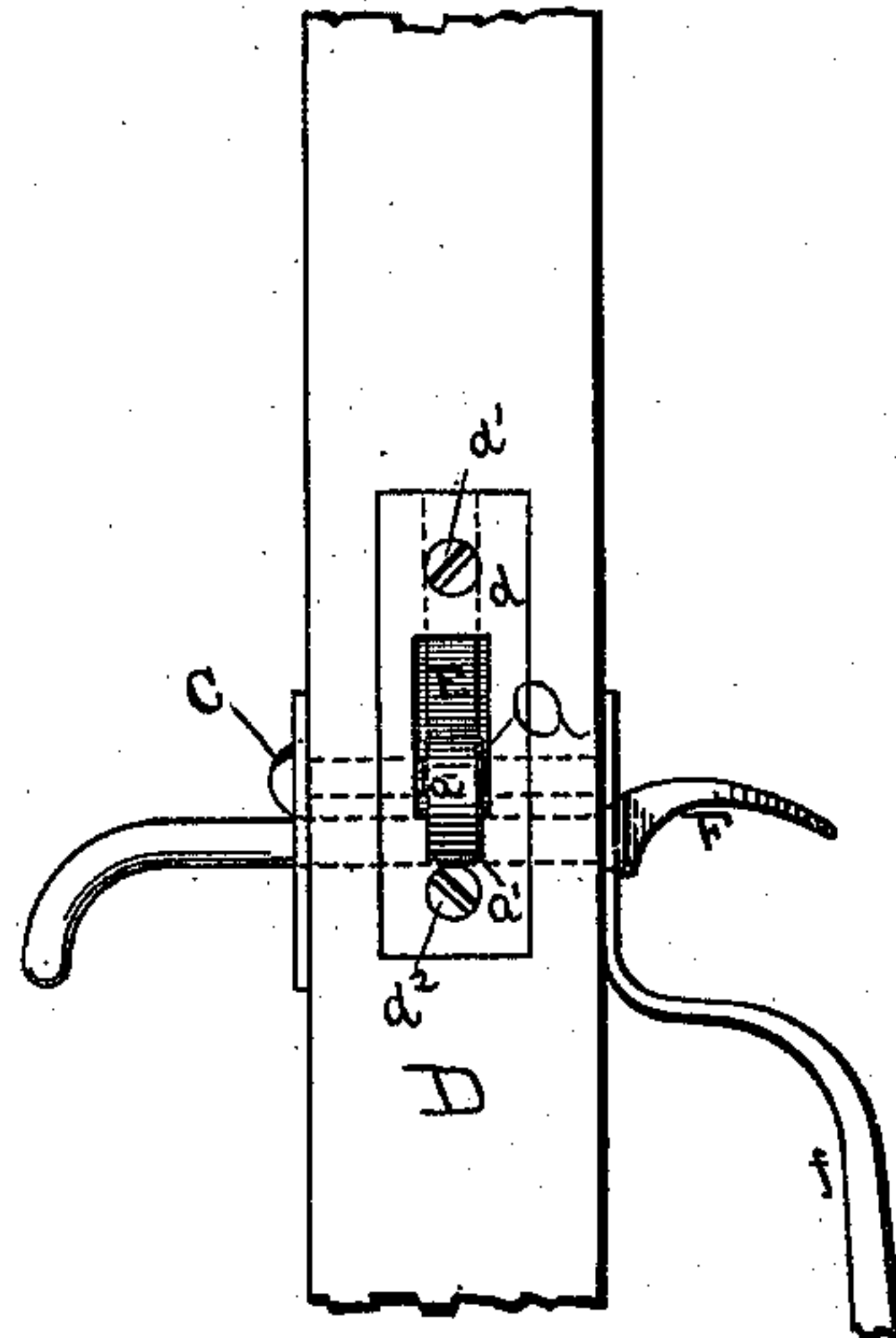
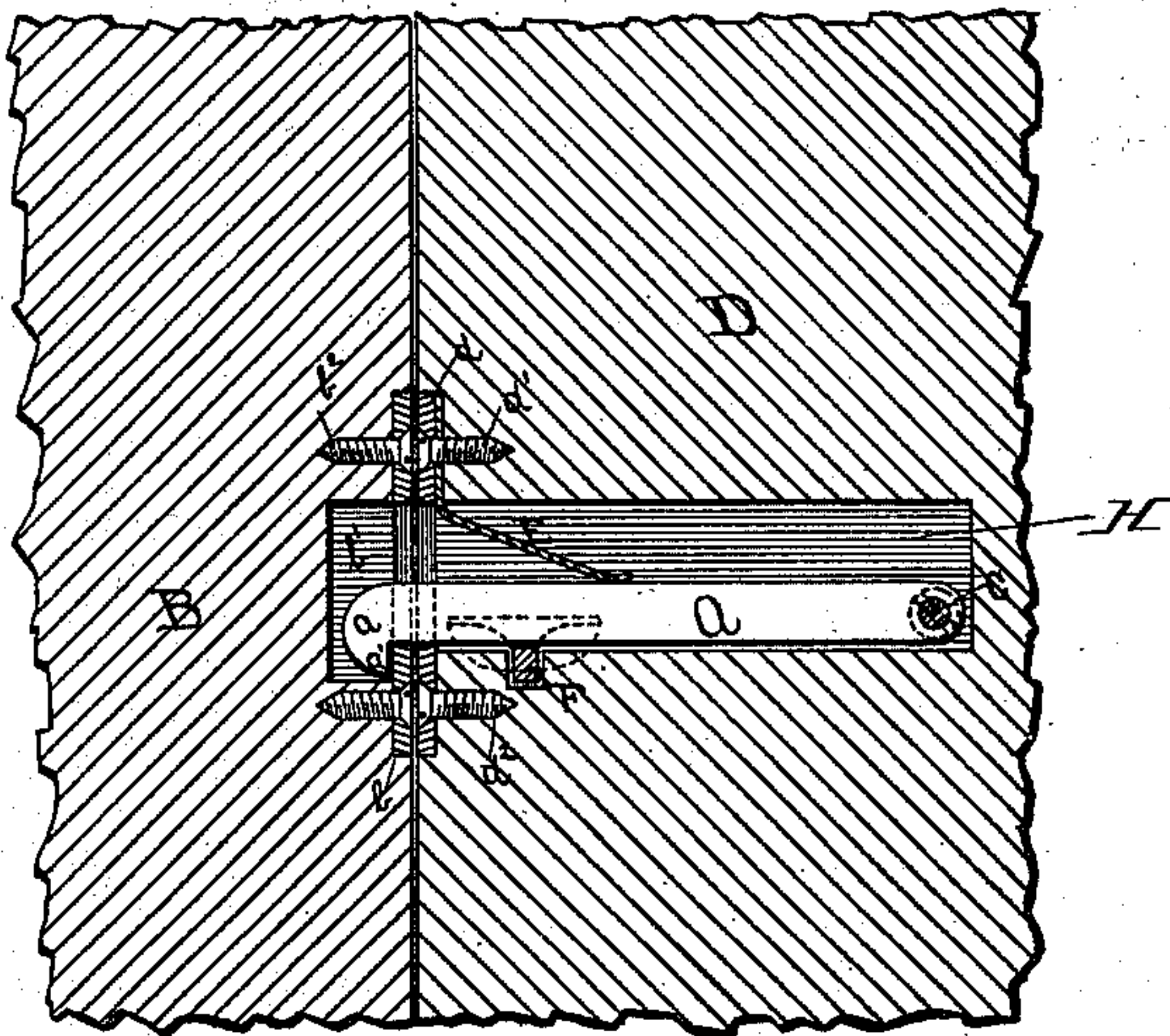


(No Model.)

W. H. THOMAS.
LATCH FOR SLIDING DOORS.

No. 402,493.

Patented Apr. 30, 1889.



WITNESSES

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WILLIAM H. THOMAS, OF JENKINTOWN, PENNSYLVANIA.

LATCH FOR SLIDING DOORS.

SPECIFICATION forming part of Letters Patent No. 402,493, dated April 30, 1889.

Application filed January 2, 1889. Serial No. 295,219. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. THOMAS, a citizen of the United States, residing at Jenkintown, in the county of Montgomery and State of Pennsylvania, have invented certain new and useful Improvements in Latches for Sliding Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, reference being had to the accompanying drawings.

My invention has relation to latches for use in doors sliding within partitions, and has for its object the provision of a simple, cheap, and efficient device for securing such doors when closed, and permitting of the ready unlatching of the same without the aid of a key or the provision of the usual tumbler-lock.

My invention consists in the peculiar construction and combination of parts, as herein- after fully described and claimed.

Referring to the accompanying drawings, Figure 1 represents my improvements in use on a pair of inside doors and operated by an ordinary thumb-latch. Fig. 2 is an end elevation of one of said doors with my improvements thereon. Fig. 3 represents my improvements applied as in Fig. 1, but operated by a handle or knob. Fig. 4 is a vertical transverse section through the center of the handle in Fig. 3.

A represents the latch-arm, formed with the rounded head *a*, which head is twice as wide as arm A, so as to form a projection or hook, *a'*, below the lower edge of said arm for engagement with the plate *b* in the edge of door B, there being the usual socket, *b'*, provided in door B, to allow of freedom of movement of latch-head *a*. Plate *b* is secured to door B by screws *b²* in the usual manner.

Latch-arm A is journaled or hinged on screw C, which screw passes through the door D and is securely embedded therein, this form of hinge for the latch-bar doing away with the usual boss formed on one of the plates of a lock-casing, as has heretofore been provided, and allowing of the ready withdrawal and insertion of said latch-bar without disturbing any of the other parts, the door itself forming the walls for the latch in place of the ordinary mortise-lock. Door D is provided with a

plate, *d*, similar to plate *b*, secured in the edge of said door by screws *d'* *d²*.

E is the spring, which exerts a downward pressure on the latch-bar A and actuates the same. This spring is secured at its upper end between the edge of door D and the inside of plate *d*, and is secured against dislodgement from its position by screw *d'*, passing through a hole in said spring, thus doing away with the series of alternating lugs on the lock-casing, between which lugs the spring is usually held in frictional contact.

In Figs. 1 and 2 I have shown the latch-arm A in position for operation by the ordinary thumb-latch, F, *f* being the handle of the same. This means of operation can be employed where it is not essential that the door slide back flush with the edge of the partition.

In cases where it is desired to have the doors slide all the way into the recess in the partition I provide the construction shown in Figs. 3 and 4, in which G are the handles, secured on square shaft *g* in the usual manner, said handles rotating in circular depressions *g'*, formed in plates *g²*, in which plate shaft *g* has its bearings. Secured to shaft *g* by a screw, *g³*, is a small plate, *g⁴*, forming a cam, screw *g³* passing through hole *g⁵* in shaft *g* and into the cam-plate *g⁴*. Shaft *g* has other holes, *g⁶* *g⁷*, similar to *g⁵*, so as to permit of the adjustment of the position of the cam-plate *g⁴* to different thicknesses of doors. As shown by the dotted lines in Fig. 3, when shaft *g* is turned by handles G, the latch-bar A will be raised in the recess H by cam-plate *g⁴*, after which the door can be slid or rolled back flush with the edge of the partition, as above suggested. To draw the doors out of the position in the partition, there will be provided the ordinary door-pulls. Obviously, if cam-plate *g⁴* be turned in a direction the reverse of that shown in Fig. 3, the result will be the same. Therefore it matters not on which door the latch is placed, or even if it be placed upside down.

As will be readily understood, my improvement relates solely to a simple, cheap, and effective latch, and is in no wise a lock for sliding doors.

I am aware that spring-actuated locking-bars have been heretofore employed in mor-

tise-locks, said bars being operated by a key and said spring and bar being supported on and between the casings of said mortise-locks. I therefore do not wish to be understood as claiming such lock.

What I do claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the thumb-latch F, of latch-arm A, having its bearing on screw C, said arm being actuated by spring E, which spring is secured in place between plate *d* and the edge of door D by screw *d'*, passing through said plate and spring and into said door, as and for the purpose set forth.

2. The combination, with latch-bar A, actuated by spring E and having its bearing on screw C, of the cam-plate *g'*, adjustably secured to shaft *g* of handles G by screw *g'*, as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of December, A. D. 1888.

WILLIAM H. THOMAS.

Witnesses:

THOMAS A. HEGER,

R. DALE SPARHAWK.