(No Model.)

C. P. HERRMANN.

LATCH.

No. 491,285. Patented Feb. 7, 1893.

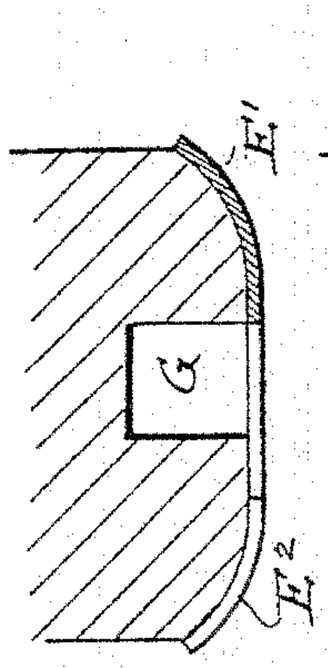

Fig. 4.

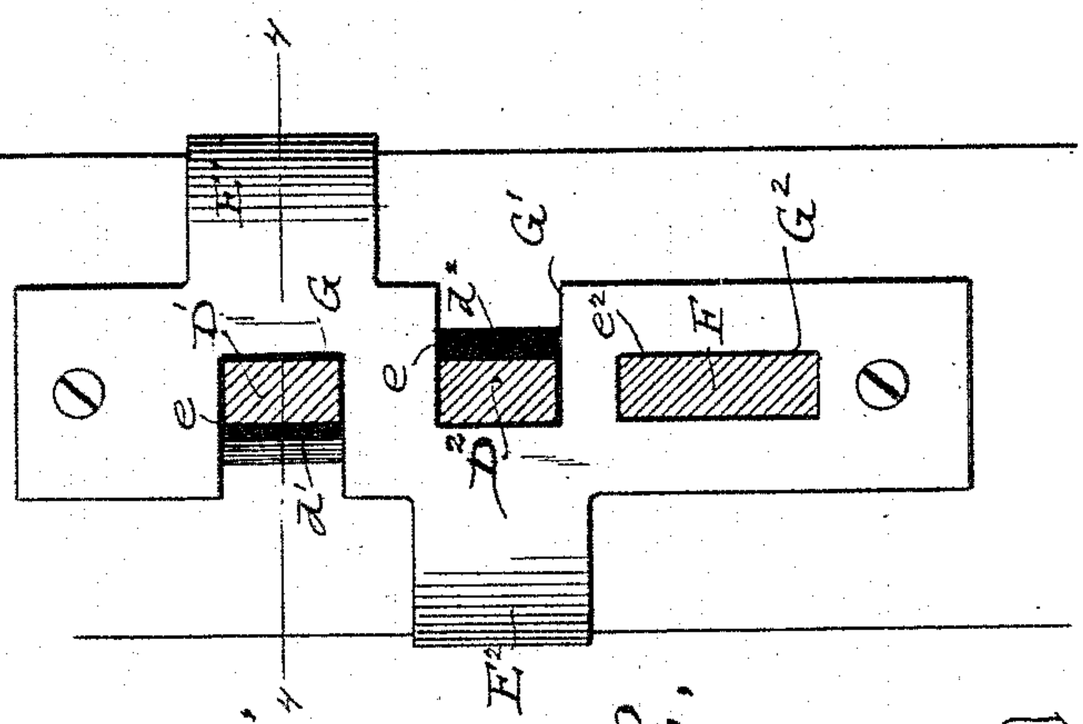

Fig. 3.

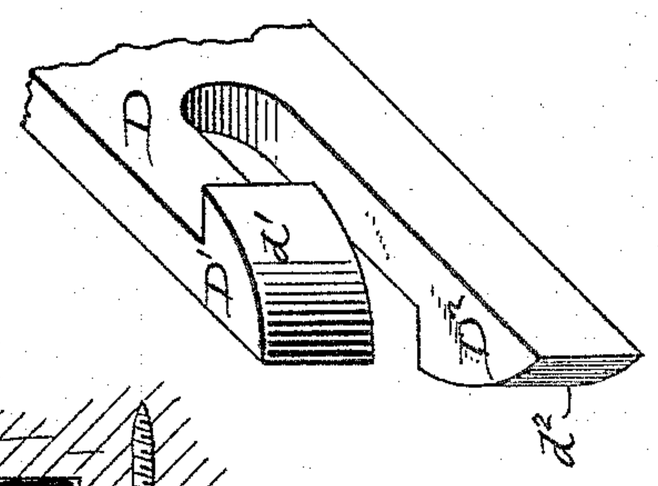

Fig. 2.

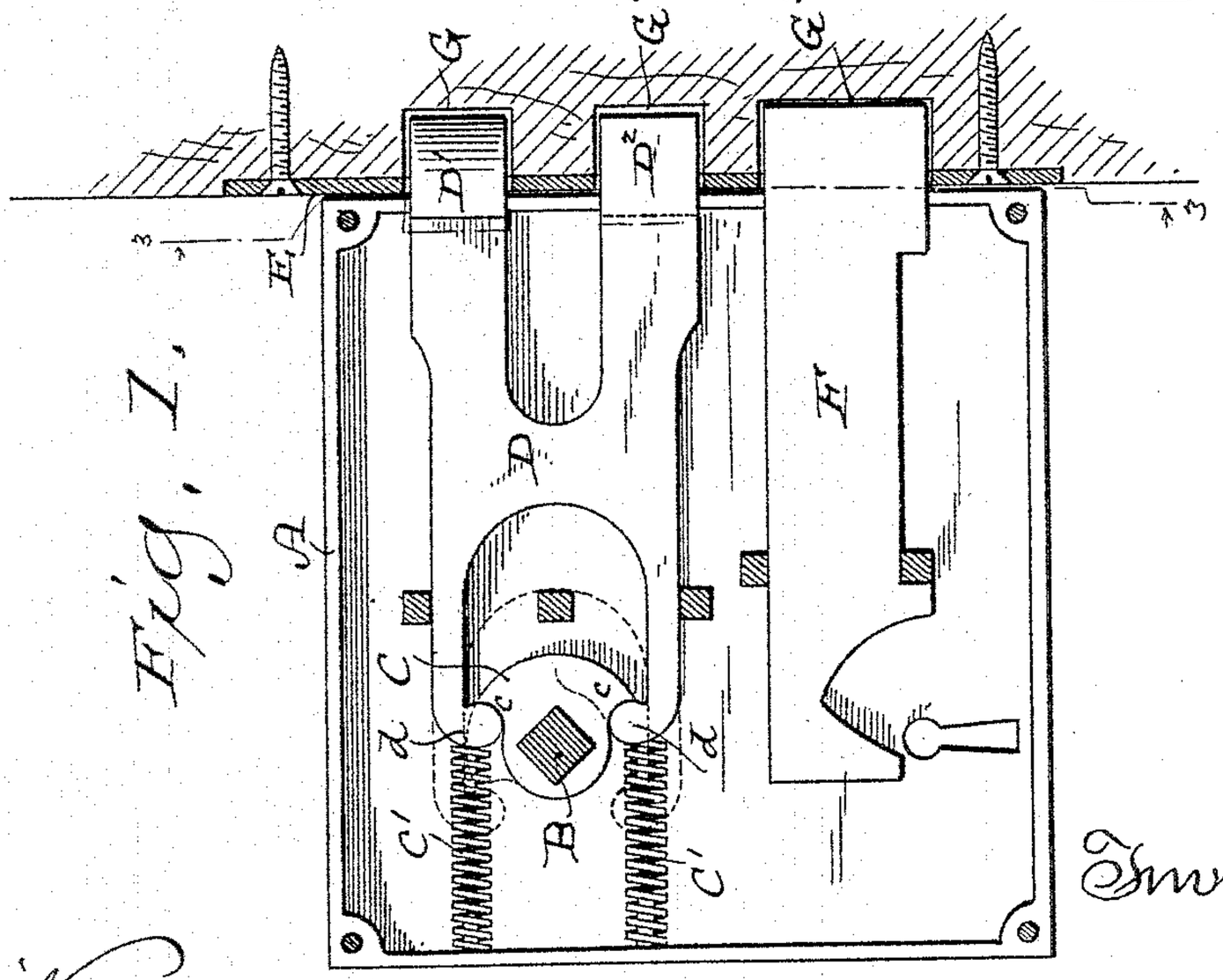

Fig. 1.

Witnesses
Geo. W. Young.
John E. Giles.

Inventor
Charles P. Herrmann.
By H. G. Underwood
Attorney

UNITED STATES PATENT OFFICE.

CHARLES P. HERRMANN, OF MILWAUKEE, WISCONSIN.

LATCH.

SPECIFICATION forming part of Letters Patent No. 491,285, dated February 7, 1893.

Application filed February 5, 1892. Serial No. 420,428. (No model.)

To all whom it may concern:

Be it known that I, CHARLES P. HERRMANN, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Latches for Doors; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to door fastenings and relates more particularly to a latch for swing doors, or those which are arranged to open toward either side of the wall in which they are located.

The object of the invention is to provide an improved latch for doors of this class, which shall be capable of automatically engaging with the holding plate when the door is swung into its closed position, from either direction, so as to hold said door from movement upon its hinges until it is freed by the use of the knob.

The various features of the invention will be more particularly hereinafter described and pointed out in the appended claims.

In the accompanying drawings illustrating my invention:—Figure 1. is a view in side elevation, of the working parts of my improved device, and showing one of the side plates removed. Fig. 2. is a perspective view of one of the parts. Fig. 3. is a vertical sectional view taken on line 3—3 of Fig. 1. Fig. 4. is a horizontal sectional view taken on line 4—4 of Fig. 3.

In said drawings:—A represents the casing which is similar in form to the casing of an ordinary door lock, B the spindle to which the knobs or handles are secured, said spindle being provided with the usual plate C located within the casing and provided with projecting portions *c c* adapted for engagement with the latch to retract the same within the casing in the usual manner. The latch D is provided with rearwardly extending arms having projections *d d* adapted to engage with the projecting portions *c c* of the plate C, and spiral springs C′ C′ are conveniently provided for pressing the latch outwardly, said springs being arranged to bear at one end against the inner surface of the casing and at the other end against the inner ends of the arms upon the latch D.

The latch bar D is provided with two arms D′ D² arranged to extend to the outside of the casing and having oppositely beveled surfaces *d′ d²* for engaging with the holding plate E which is secured to the door casing in the ordinary manner. This holding plate is provided with outwardly curved projections E′ and E² arranged respectively in line with the oppositely beveled ends of the two portions D′ D² of the latch bar D, these projections E′ E² being located upon opposite sides of the door casing as illustrated more particularly in Fig. 3. Suitable sockets *e* and *e′* are provided for the reception of the two ends of the latch bar, and a similar socket or opening *e²* is provided for the reception of a locking bolt F, if desired, although I would have it understood that said bolt may or may not be used in connection with my improved latch, the locking bolt forming no portion of my present invention. Suitable recesses G G′ and G² are provided in the woodwork of the door casing to receive the ends D′ D² of the latch bar and the end of the locking bolt F.

The operation of my improved device is as follows:—The door being opened and allowed to swing shut from either side will bring one of the beveled ends of the latch bar into engagement with the corresponding projection on the plate E, so as to retract the latch and permit the two ends thereof to pass into engagement with the sockets in said holding plate, in which condition the door will be held from movement in either direction until the latch is freed by the operation of the handle in the usual manner. It will be seen that this operation is accomplished with equal facility without regard to the direction in which the door is opened and that the engagement of the two ends of the latch bar within the sockets effectually hold the door against movement in either direction.

I would have it understood that I do not desire to limit myself to the precise form of construction and arrangement of parts illustrated in the drawings and herein described as various modifications may obviously be made in the details of construction without departure from my original invention.

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

A latch for swing doors, comprising a holding plate secured to the door casing and provided upon opposite sides with laterally extending curved projections arranged at different elevations, and with notches or sockets, in line with said projections, and a latch bar provided at one end with two oppositely beveled projections arranged one above another and in line with the projections on said plate, and adapted to engage with said notches or sockets when the door is in its closed position, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

CHARLES P. HERRMANN.

Witnesses:

JOHN E. WILES,

H. G. UNDERWOOD.