

(No Model.)

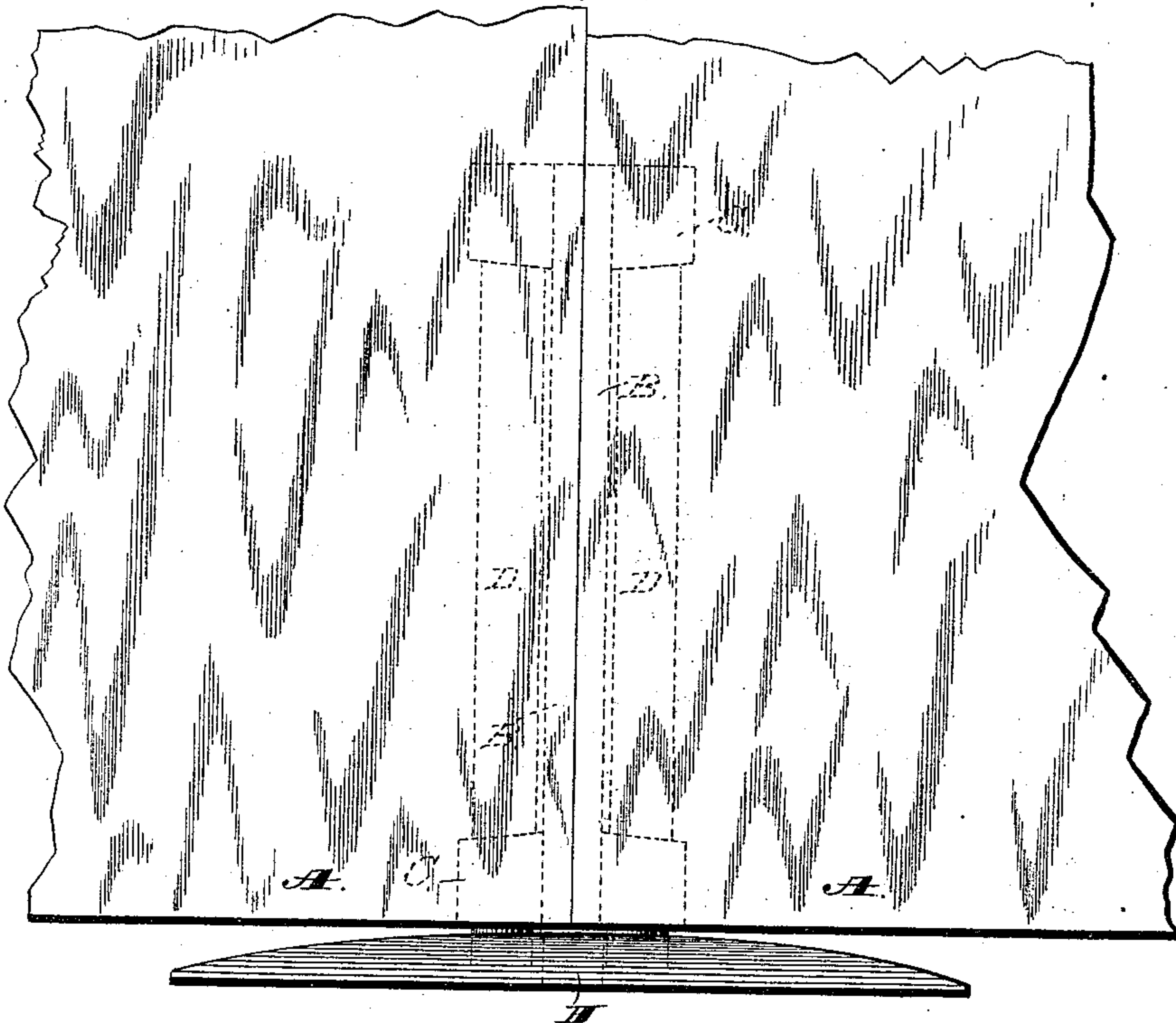
2 Sheets—Sheet 1.

E. W. MARTIN.  
SLIDING DOOR LOCK.

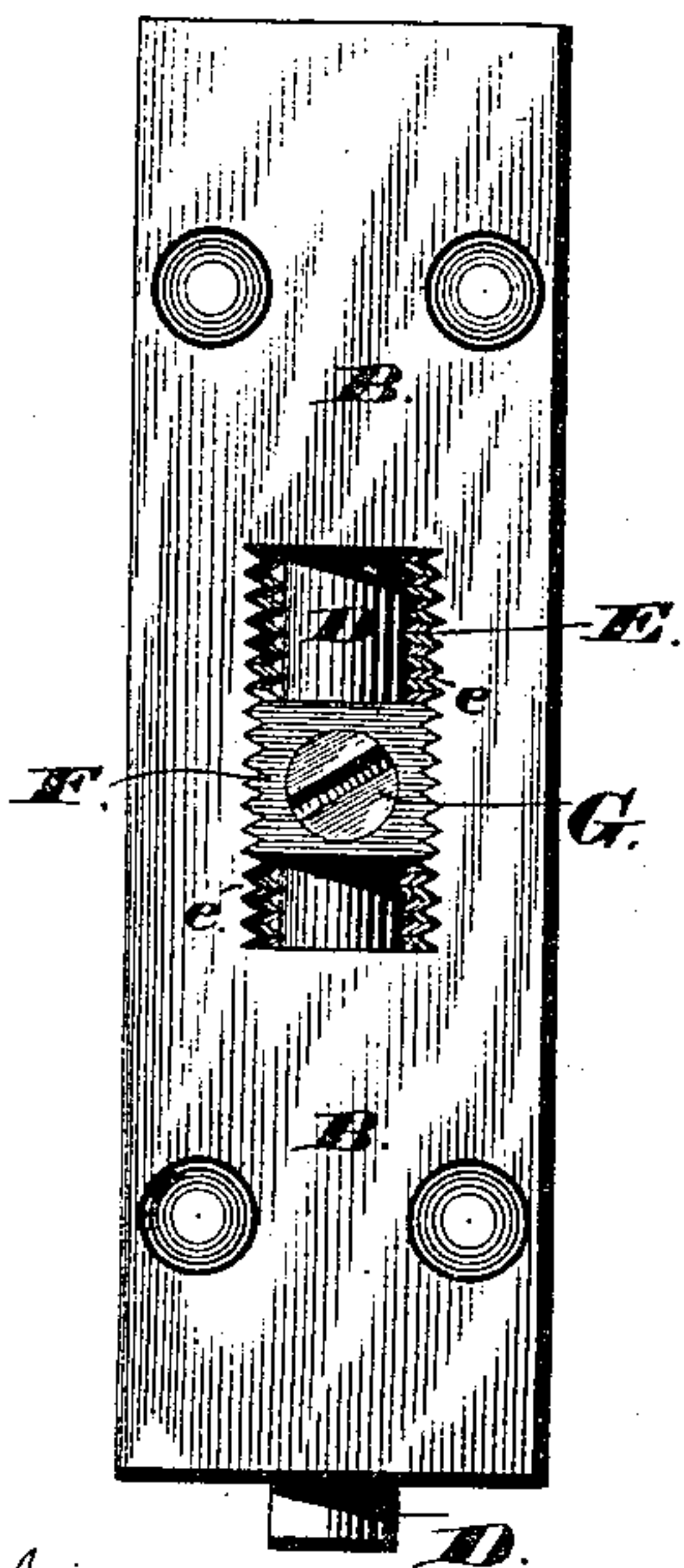
No. 310,064.

Patented Dec. 30, 1884.

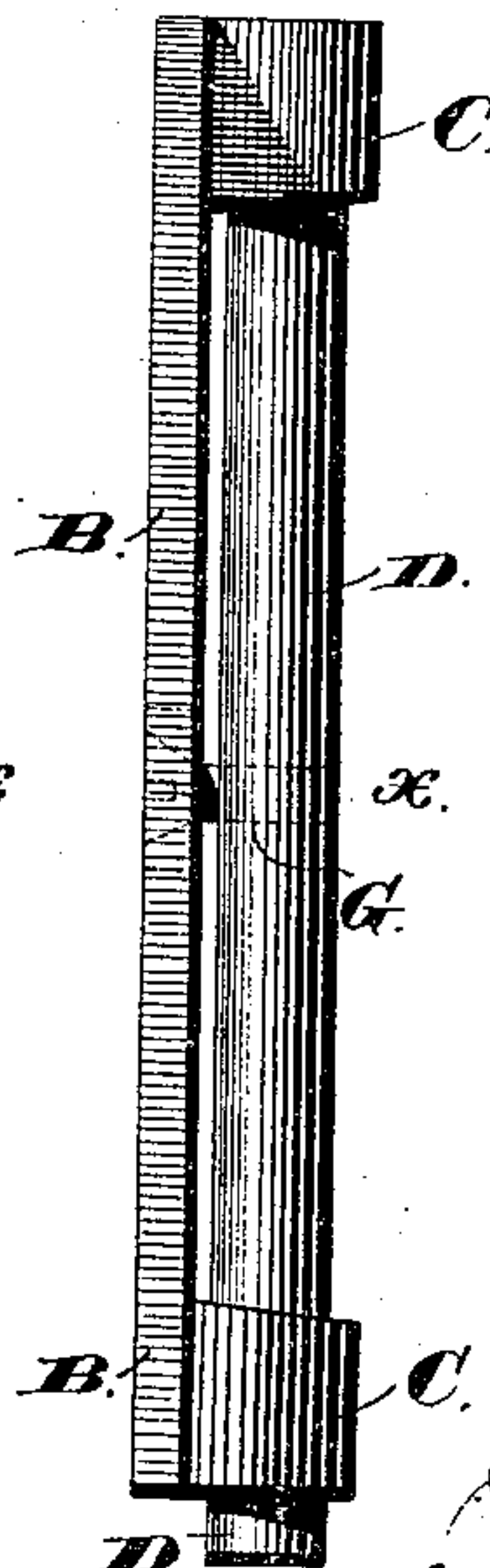
*Fig. 1.*



*Fig. 2.*



x



*Fig. 3.*

Witnesses:

Jas. C. Hutchinson.  
Henry C. Hazard

Inventor.

E. W. Martin  
by Prindle and Russell  
Attorneys.

(No Model.)

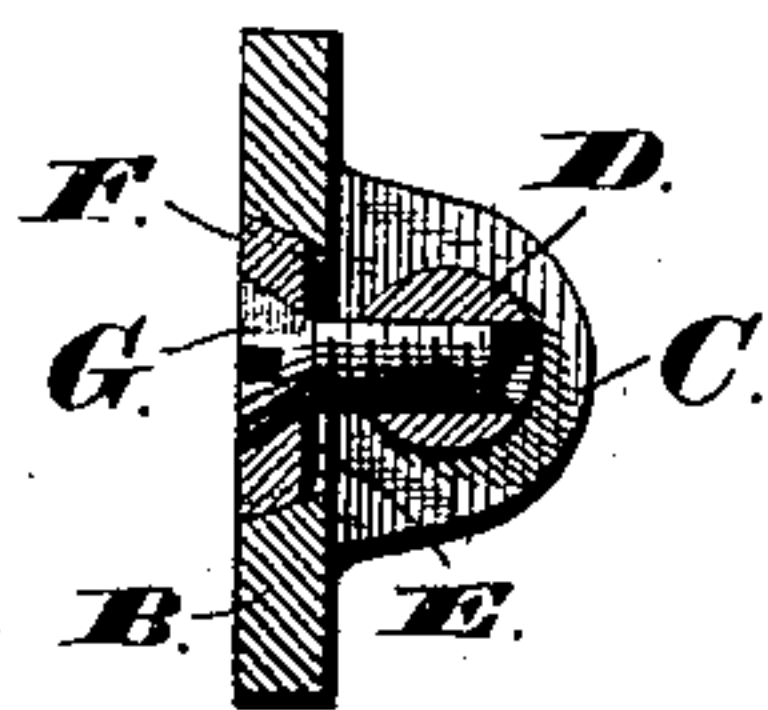
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E. W. MARTIN.  
SLIDING DOOR LOCK.

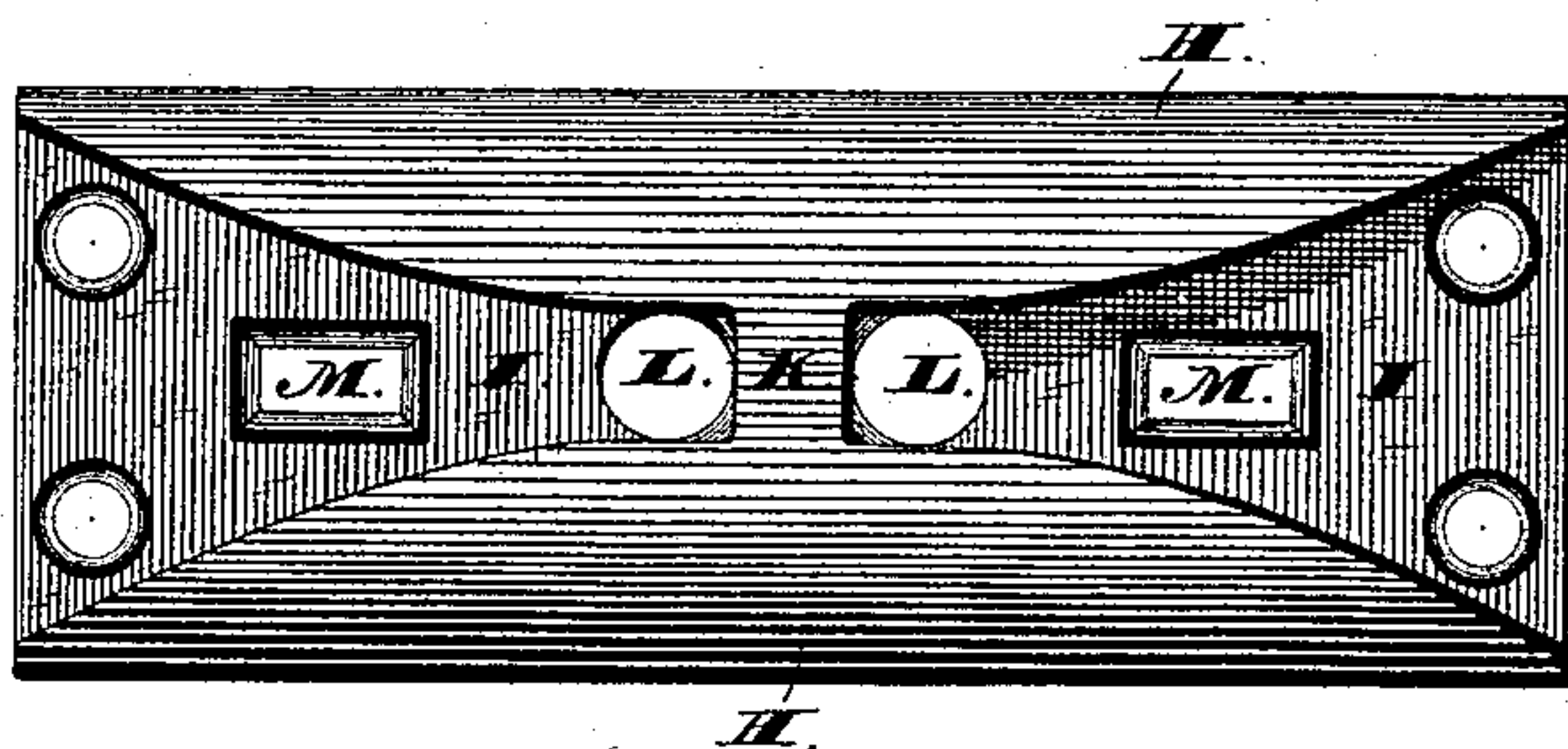
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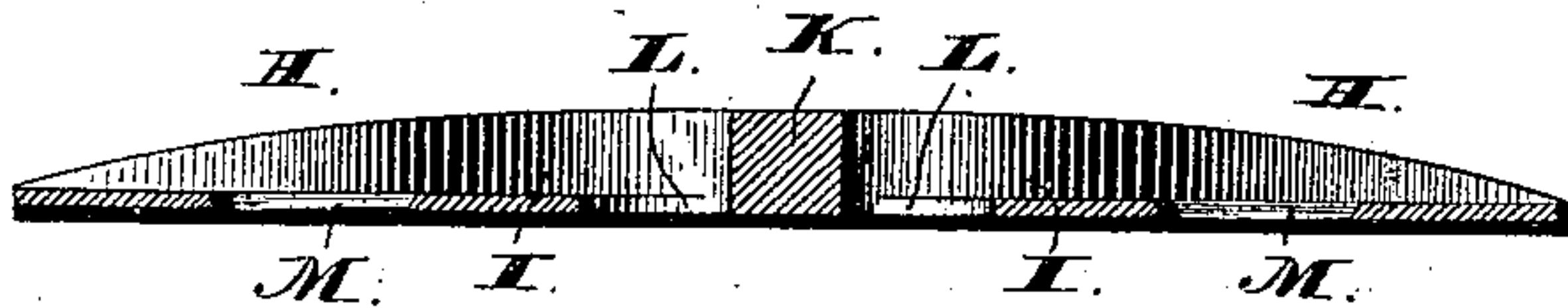
*Fig. 4.*



*Fig. 5.*



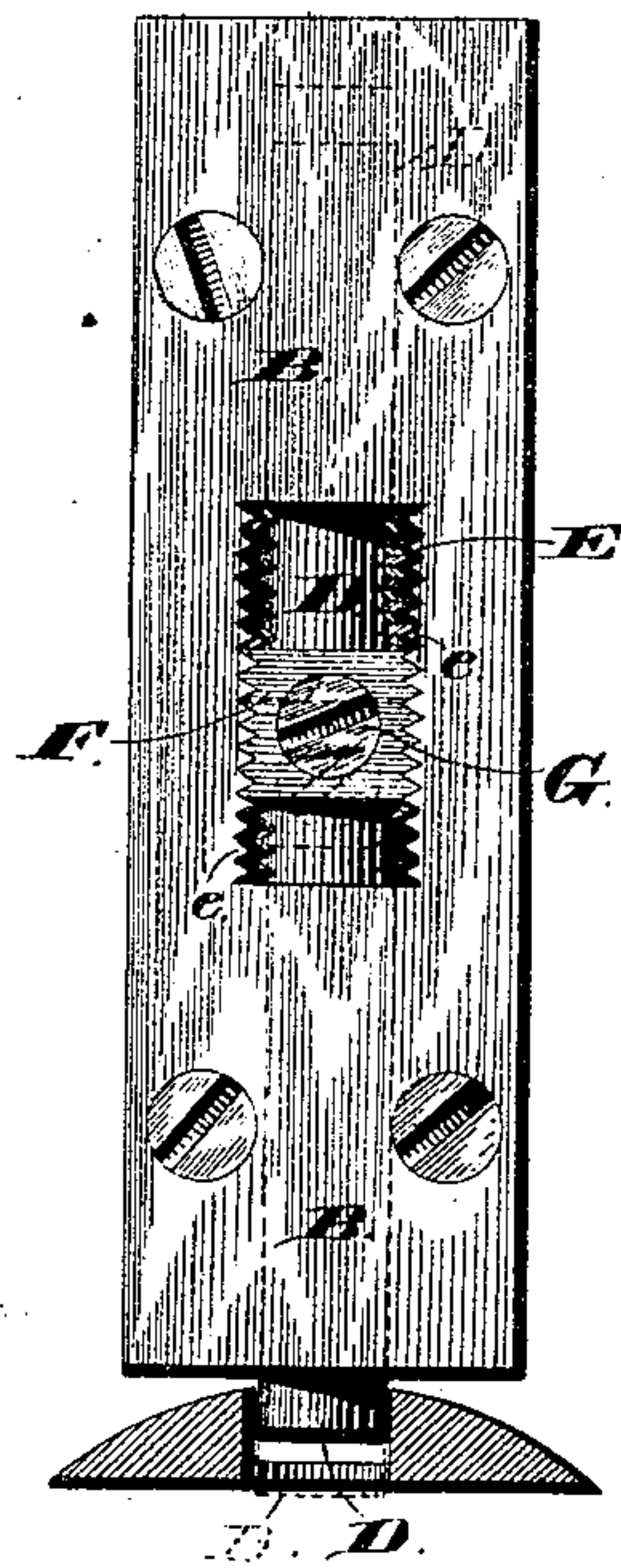
*Fig. 6.*



*Fig. 8.*



*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

EDWARD W. MARTIN, OF LANSINGBURG, NEW YORK.

## SLIDING-DOOR LOCK.

SPECIFICATION forming part of Letters Patent No. 310,064, dated December 30, 1884.

Application filed June 4, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD W. MARTIN, of Lansingburg, in the county of Rensselaer, State of New York, have invented certain new and useful Improvements in Sliding-Door Locks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

10 Figure 1 shows portions of two sliding doors, each provided with my centering and locking device; Fig. 2, a view in front elevation of such device detached; Fig. 3, a view of the same in side elevation; Fig. 4, a transverse horizontal section of the same on line *xx* of Fig. 3; Fig. 5, a plan view of the grooved centering-plate to engage and guide the lower end of the adjustable bolt; Fig. 6, a longitudinal vertical central section of the same; Fig. 7, a detail view showing the operation of the adjustable bolt and plate, and in dotted lines the bolt as set down into one of the bolt-holes in the plate to lock the door; and Fig. 8, a detail view showing the serrated adjusting-plate and the screw passing through the same into the bolt.

25 Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to provide an improved adjustable centering device for sliding doors, adapted, also, to be used for locking either of the doors, as desired, to make it stationary; and to this end my invention consists in the construction, arrangement, and combination of parts, as hereinafter specified.

35 In the drawings, A A designate the lower front or forward portions of two sliding doors of the ordinary construction, hung from suitable rollers above in the well-known way. It is desirable in this class of doors that some means be provided to hold the lower sides or bottoms of the doors from swinging, and to guide and hold them as the doors are closed, so that their contiguous upright forward faces or edges shall stand opposite and close to each other in the same vertical plane. I have therefore set into the front edge of each door, at the lower end thereof, and fastened, preferably with screws, a plate, B, which on its back near each end is formed with a guide-loop or fixed sleeve, C, for the guidance of the ends of the vertically-sliding bolt D. This bolt can of course be of any desired shape; but I pre-

fer to make it cylindrical, or nearly so. It is, as shown, to be made of such length that it can be slid down to project below the lower edge of the plate B and the door, while its upper end still remains in and is guided by the upper one of the guide-loops C C. Each plate B is near its middle portion formed with an oblong longitudinal slot, E, having its sides beveled outward and serrated or formed with teeth *e c.* A plate, F, correspondingly beveled and serrated on its sides to fit the beveled and serrated sides of the slot, is provided, through which a screw, G, passes and is tapped into the bolt. With this construction, while the screw is screwed in to draw the plate F inward toward the bolt, so that its serrated sides engage the serrations on the slot sides, the plate will obviously be held most firmly against movement along the slot, and the bolt will also be kept from vertical movement. If the screw be loosened to allow the serrated sides of the plate F to be disengaged from the sides of the slot, the plate can be moved up or down freely, as desired, to adjust the bolt and regulate the distance to which its lower end projects beyond the door-bottom. When the desired adjustment is made, the screw G is screwed in again, and the plate and bolt are thereby fixed and locked from movement, as already described.

To engage the projecting lower ends of the bolts on each door, and properly guide them and the doors as the latter are closed together, I provide the stationary plate H, fastened in place just below the point at which the door-edges come together. Such plate is rounded or beveled off toward each end, as shown, so that the lower edges and corners of the doors will not catch against said ends. The middle portion of the plate is of such height as to be close to the bottom edge of the doors brought together over it. The upper face of this plate is, as shown, grooved longitudinally, the grooves I I extending from each end nearly to the middle of the plate. As shown, each groove stops short of such middle line, leaving a solid portion, K, of the full height of the plate between the inner or contiguous groove ends. At such inner ends these grooves are of a width equal to the diameter of one of the projecting bolt ends. From their narrow inner ends the grooves widen or flare outward



to their outer ends. With this construction, as the doors are slid together, the bolt ends projecting below their bottoms will be received by the wide ends of the grooves, and guided as they pass along, until when the doors are closed together the bolt ends are situated in and held closely by the narrow inner ends of the grooves. The doors will thus be brought into line and held with their contacting faces in the same plane, so that they cannot swing.

In the plate at the inner or forward ends of the grooves, and just below the bolt ends, when the doors are shut together, I provide the openings or holes L L, adapted to receive the bolt ends, if the bolts should be pushed down. With this construction, if it be desired, either of the doors can be made stationary and locked against being slid back. To do this, the screw G is loosened to disengage the serrated plate from the slot sides, and the plate and bolt are slid down until the bolt end enters the hole L in the plate H, as shown in Figs. 7 in dotted lines. The screw is then tightened up again to seat the serrated beveled sides of the plate firmly against the beveled serrated sides of the slot, and the plate and bolt are thereby locked from movement.

I prefer to make the plate H longitudinally adjustable by making in its bottom longitudinal oblong holes or slots M M, with beveled upper edges. Through these slots pass the fasteningscrews, whose beveled heads engage the beveled edges of the slots. If desired, the serrations upon the beveled sides of the plates F F and the slots E E can be dispensed with; but I prefer to use them.

I have found it very desirable to make my guiding-bolts adjustable, because of the variations in the heights of pendent sliding doors after they have been hung for some time.

Rigid projections on the bottoms of the doors have heretofore been used, but are worse than useless if the door sags or hangs a little lower on account of any expansion of the door or slight loosening of the joints between the parts of which it is made. With my adjustable bolt, if the bottom of the door hangs lower or higher by expansion or contraction of the door, this change in height can be compensated for by adjusting the bolt so that its lower end shall project the required distance to properly act with the grooved plate to guide and hold the door.

Having thus described my invention, what I claim is—

1. In combination with a pendent sliding door, an adjustable guiding lug or projection for the lower edge of the door, substantially as and for the purpose described.
2. In combination with a pendent sliding door and a grooved guiding-plate below its lower edge, an adjustable bolt on the door, with its lower end projecting below the bottom of the door and adapted to engage the groove in the plate, substantially as and for the purpose described.

3. In combination with a pendent sliding door and a grooved guiding and centering plate below its lower edge, a bolt projecting below the bottom of the door to engage the groove in the plate, and means, substantially as described, for fixing the bolt at any point of adjustment, with its end projecting below the door-bottom the desired distance, all substantially as and for the purpose described.

4. In combination with the door, the plate set into its forward face, at or near its bottom, the bolt guided in suitable guides on the plate and adapted to be projected below the door-bottom, and means for adjusting and fastening the bolt at any desired adjustment, substantially as and for the purpose described.

5. In combination with the plate formed with a longitudinal slot having beveled sides, the bolt sliding in suitable guides on the back of the plate, the beveled plate adapted at its sides to fit the sides of the slot, and a screw passing through such plate and tapped into the bolt, substantially as and for the purpose described.

6. In combination with the plate formed with an oblong longitudinal slot having serrated beveled sides, the plate with correspondingly beveled and serrated sides or edges adapted to engage the sides of the slot, the sliding bolt on the back of the main plate, and a screw passing through the small adjustable plate into the bolt, substantially as and for the purpose described.

7. The centering and holding plate for pendent sliding doors, provided on each end with outwardly-flaring grooves adapted to receive and guide projections on the bottoms of the doors, substantially as and for the purpose described.

8. In combination with the pendent sliding doors provided on their bottoms, at or near their forward edges, with guiding lugs or projections, the plate adapted to be placed below the point of meeting of the doors, provided with two grooves, each flaring toward the end of the plate and contracted at its other end to about the width of the lug or projection, substantially as and for the purpose described.

9. In combination with the two pendent sliding doors provided at their forward lower corners with guiding lugs or projections projecting below the door-bottom, the plate arranged longitudinally below the doors at their point of meeting, provided on its upper side with grooves extending from each end of the plate nearly to the middle point thereof and flaring from their inner ends outward to the outer ends of the plate, substantially as and for the purpose described.

10. In combination with a pendent sliding door, the guiding-bolt normally projecting below the door-bottom and adapted to be adjusted up or down, as desired, and the guide-plate provided on its upper side with a guiding and centering groove for receiving and guiding the end of the bolt, and with a hole



at the forward end of the groove, into which the bolt end can be thrust to lock the door, substantially as and for the purpose described.

11. In combination with the two pendent sliding doors provided at the bottoms of their forward edges with guide-bolts normally projecting below the door-bottoms, and adapted to be adjusted up and down and fixed as desired, a centering guide-plate provided on its upper side with grooves to receive and guide the ends of the bolts, and at the forward or inner ends of the grooves with holes, into which the bolt ends can be thrust down as desired, substantially as shown and described.

12. In combination with the pendent sliding

doors provided on their bottoms with projecting guiding lugs or projections, the centering-plate provided with grooves to receive, guide, and hold these lugs or projections as the doors are slid together, made adjustable longitudinally, substantially as and for the purpose described.

Signed at Troy, New York, this the 15th day of May, 1884, and in the presence of two witnesses whose names appear attached hereto.

EDWARD W. MARTIN.

Witnesses:

EDMUND BRODERICK,  
CLARENCE E. McNUTT.