

(No Model.)

C. R. CASE.
SLIDING DOOR FIXTURE.

No. 602,727.

Patented Apr. 19, 1898.

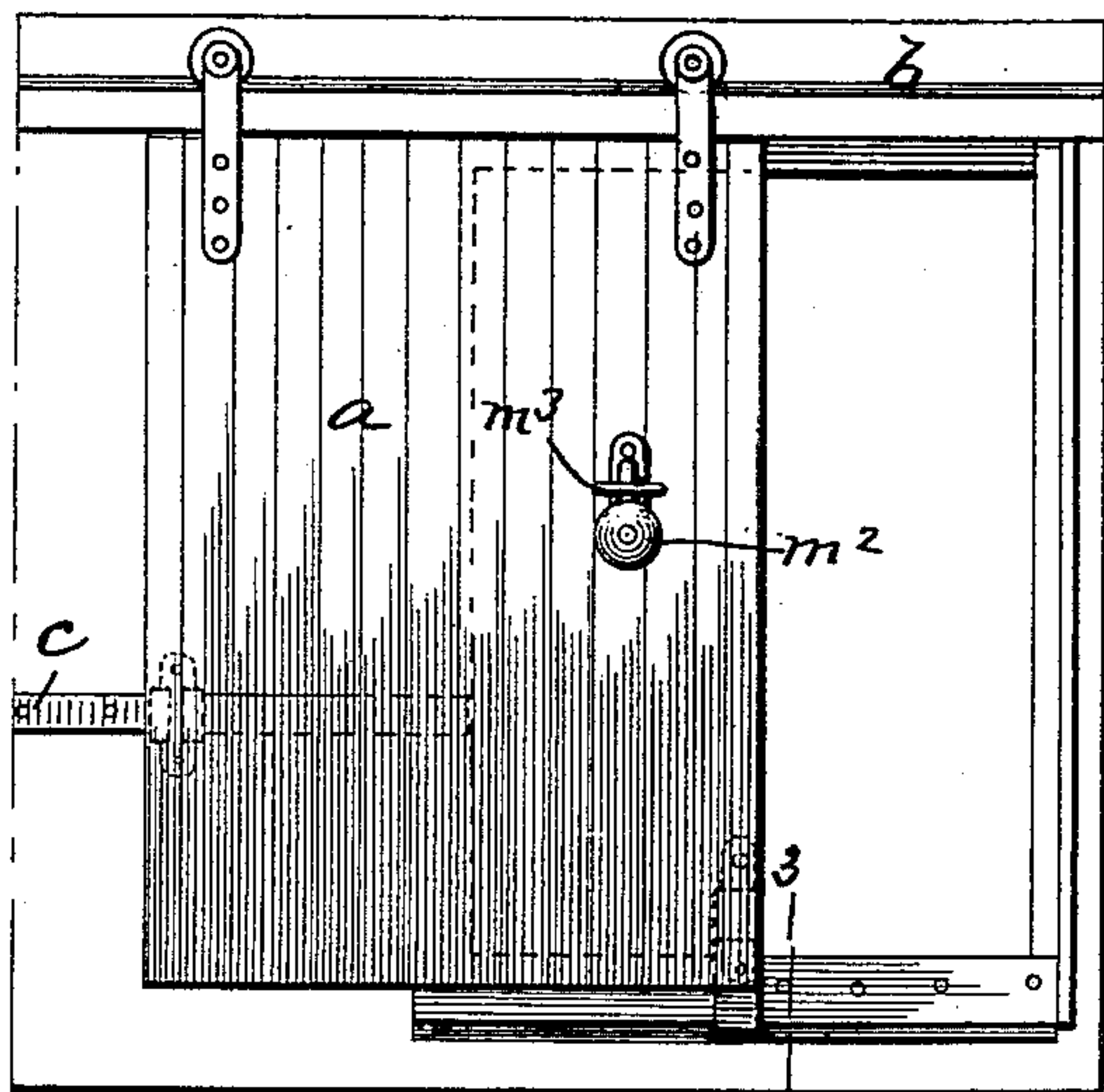


Fig. 1.

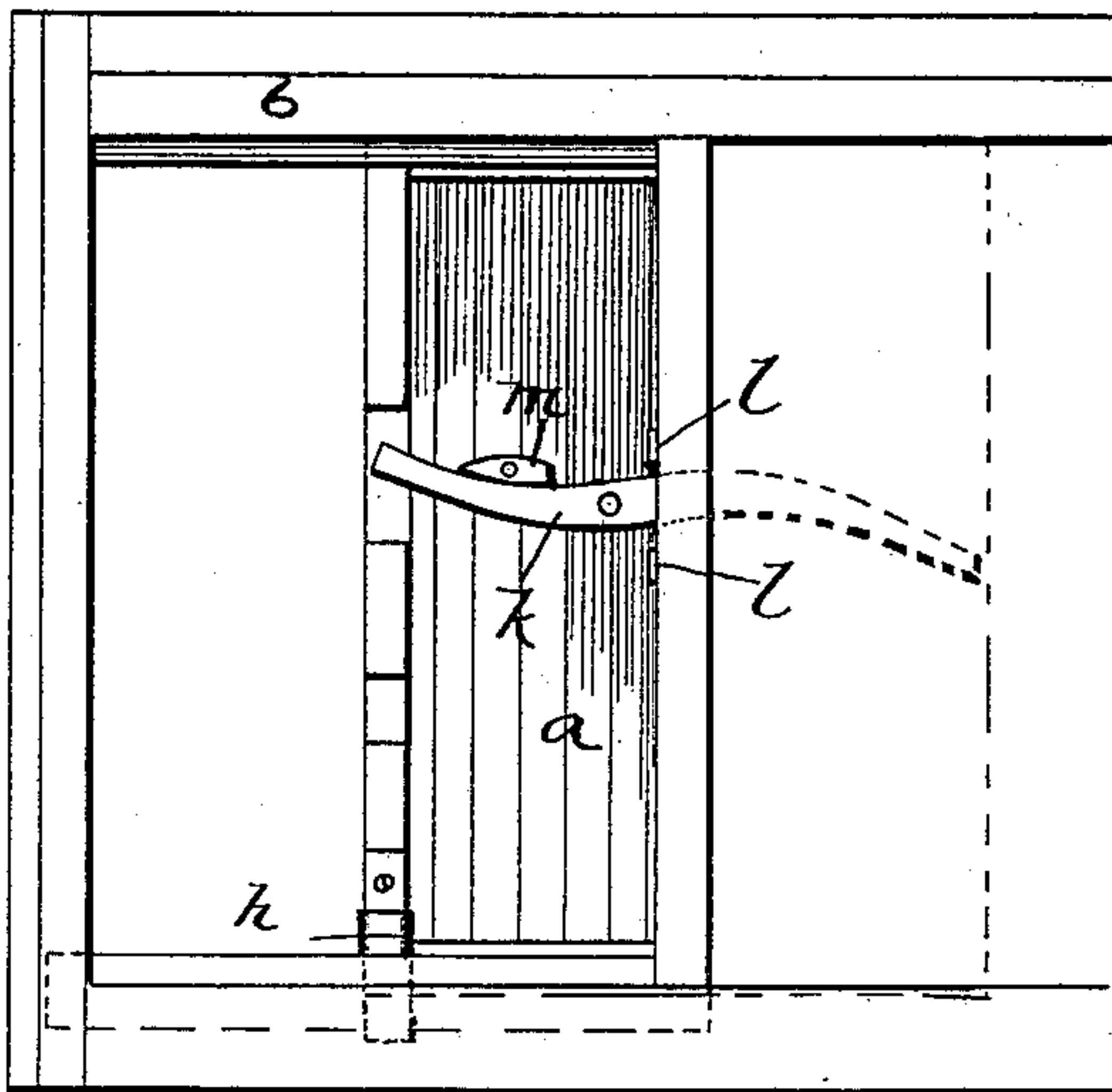


Fig. 2.

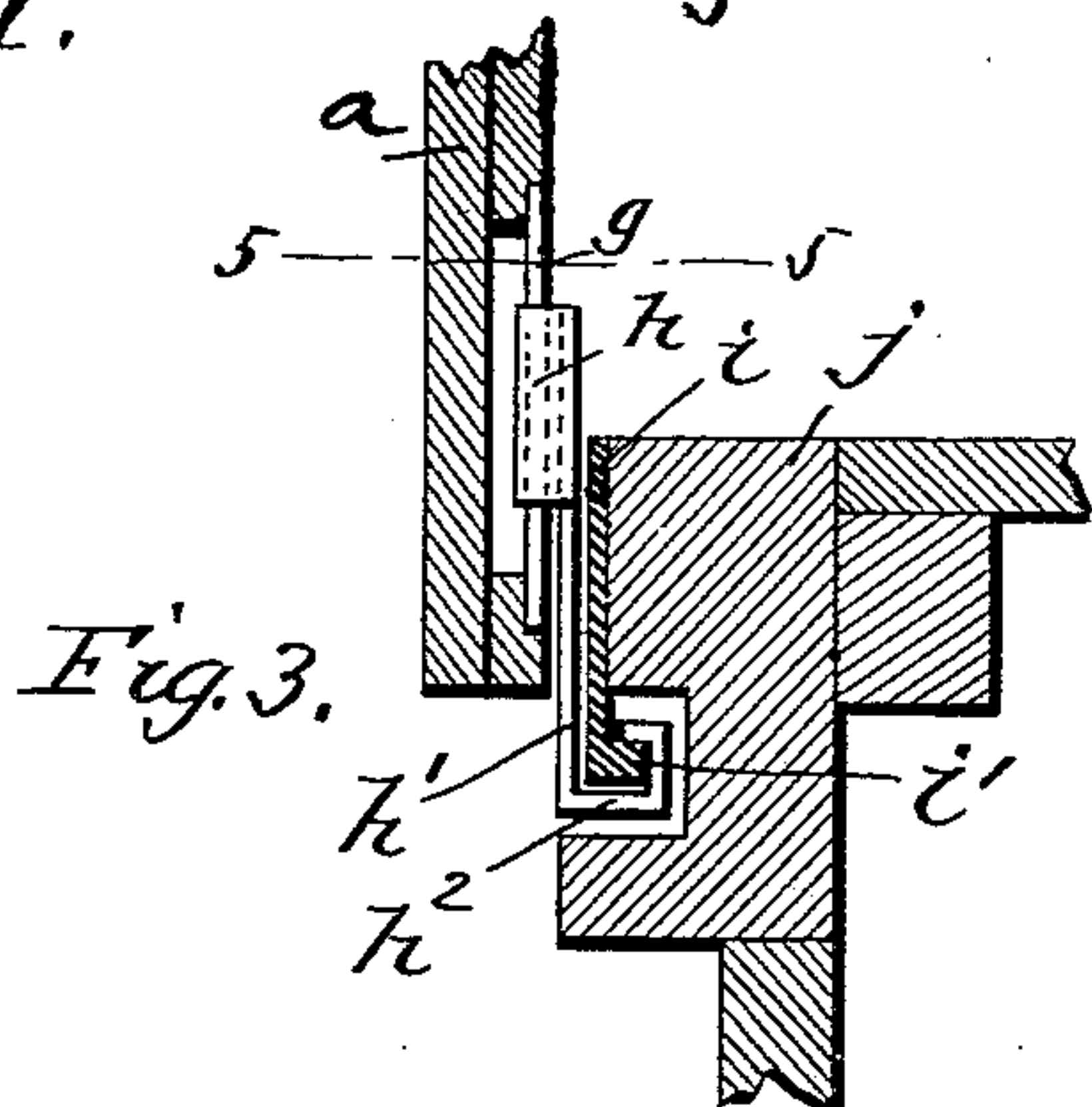


Fig. 3.

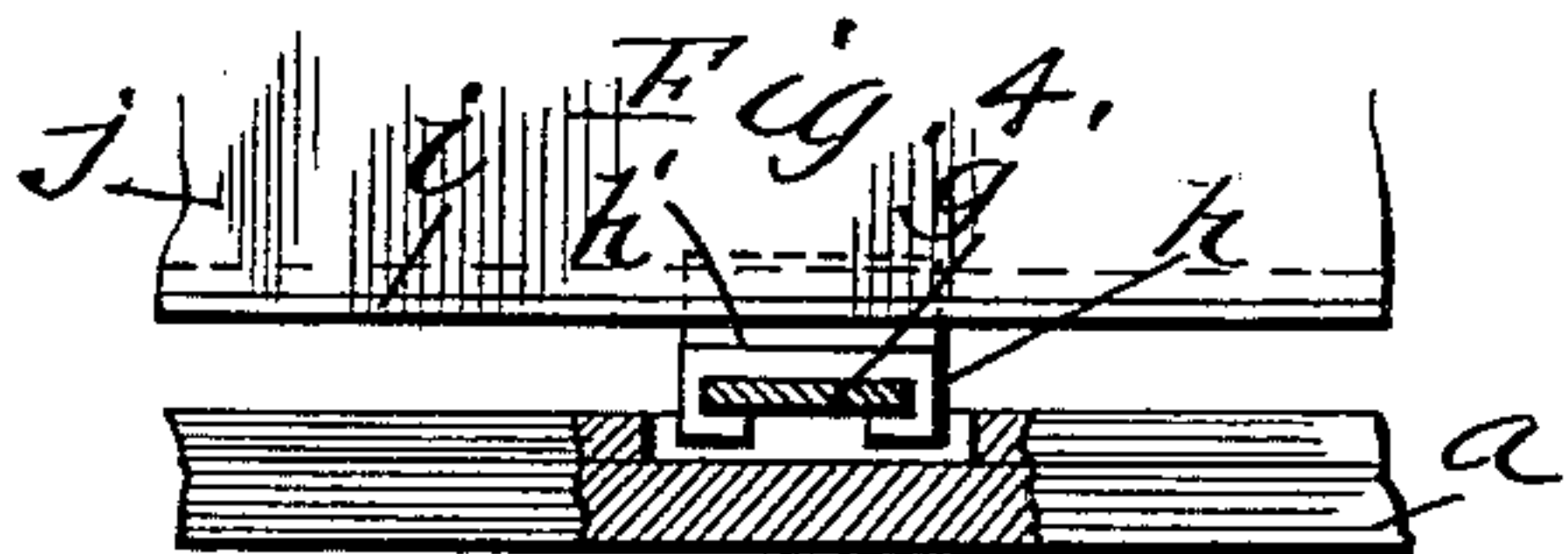


Fig. 4.

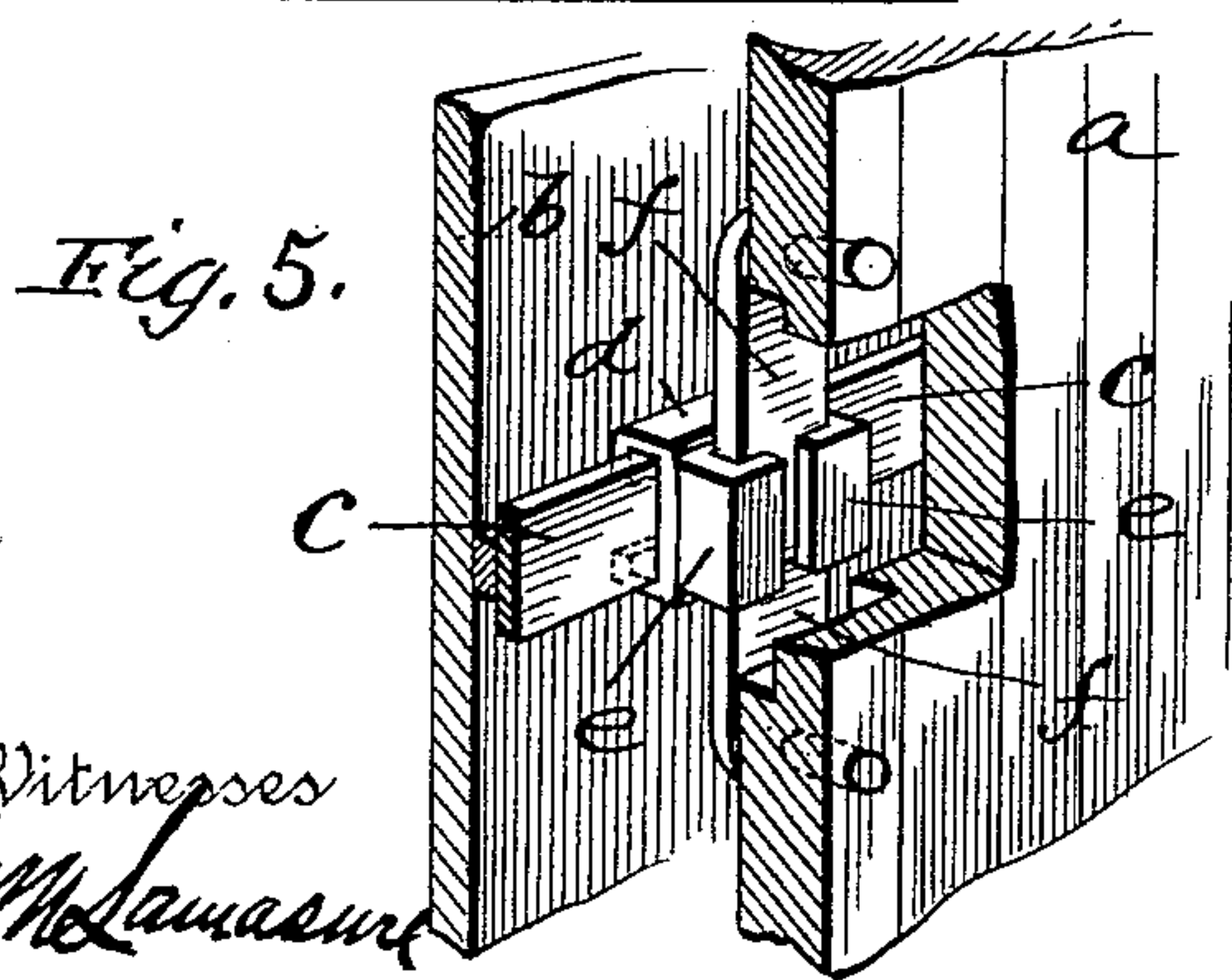


Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES R. CASE, OF ALLEN'S HILL, NEW YORK.

SLIDING-DOOR FIXTURE.

SPECIFICATION forming part of Letters Patent No. 602,727, dated April 19, 1898.

Application filed July 16, 1897. Serial No. 644,785. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. CASE, a citizen of the United States, residing at Allen's Hill, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Sliding-Door Fixtures, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

10 Figure 1 is a front elevation of a sliding door provided with my improvements; Fig. 2, an elevation of the opposite or inner side of the door; Fig. 3, a detail section on the line 3 3 of Fig. 1; Fig. 4, a detail horizontal section taken on the line 5 5 of Fig. 3; Fig. 5, a detail perspective of the sliding connection between the door and its structural support.

The object of this invention is to provide simple devices for preventing the door from being swung outward away from the structure supporting it both when closed and opened, the construction of the devices being such that the settling or warping of the structure carrying the door or the door itself will not interfere with the ready opening and closing of the door, as more fully hereinafter set forth.

The invention will be best understood by reference to the drawings, in which the letter 30 *a* designates the door swung by suitable hangers from an overhead track, the track being supported by the structure *b*, which may of course be a freight-car, warehouse, barn, or other structure. Fastened to the side of the structure, at one side of the door-opening, is a horizontal rail *c*, which is set off from the structure a short distance, leaving its upper and lower edges free to be engaged by a sliding clip *d*, whose upper and lower edges are bent inward and toward each other, so as to embrace the respective upper and lower edges of the rail, the clip being thereby held to the rail, but being slidable thereon. Attached to clip *d* is a similarly-shaped clip *e*, whose 45 vertical edges are bent inward and toward each other, so as to loosely embrace the respective vertical edges of a plate or bar *f*, carried by the door at or near its inner edge, this plate being fastened by bolts at its upper and lower ends, so that the clip *e* cannot slip off either end. The door is recessed behind the plate *f*, as shown in Fig. 6, or it may

be set off from the door after the manner of the rail *c* to permit the clip *e* to slide vertically on the plate. It will be observed that 55 this simple device guides the door in its to-and-fro movements, and by reason of the sliding connection both to the door and to the structure no settling or distortion of the structure or the door will cause the parts to wedge 60 or bind, the clip being free to move up or down upon the door to accommodate itself to the distortion of the rail. It will be observed that the rail *c* does not support the door vertically, (the hangers being depended upon 65 for that purpose entirely,) but simply guides the lower part of the door and prevents it being swung away from the structure by the wind or by animals pushing against the door from the inside. Heretofore the most serious 70 objection to doors of this class has been that by reason of the sagging of the structure or the supporting-rails the door soon begins to bind and wedge and frequently cannot be closed at all. Another objection has been 75 that the doors are often blown off by high winds. These objections are obviated by my simple fixtures.

A device involving the same principle as the above-described sliding connection is employed at the lower front corner of the door 80 to hold and guide it at that point. Fastened to the inner side of the door, at its lower front corner, is a vertical plate *g*, which is loosely grasped by a clip *h*, similar to the clip *e*, and 85 depending from this clip is a plate *h'*, whose lower end depends below the lower edge of the door and is bent inward and upward and then outward, forming a hook *h''*, which engages over an inward-turned flange *i'*, formed 90 or secured on the lower edge of a sill-plate *i*, this plate being fastened on the face of the sill-beam or floor-plank *j*, and the sill-beam or floor-plank being longitudinally recessed to permit the hook *h''* to slide back and forth 95 upon said flange. It will be observed that the sliding connection between the clip *h* and the door permits the sill or the door to sag without binding the parts. This device assists in preventing the door being swung outward or being blown off, it being particularly efficacious when the door is shut, as is obvious. 100

I desire it understood that I do not wish to confine myself to any particular variety of

sliding doors, as my improvements are applicable to all varieties, whether swung from above or mounted on rollers or otherwise. I desire it understood, also, that I do not confine myself to the specific construction shown and described, as the same may be varied without departing from the spirit of the invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of a support, provided with a door-opening, a sliding door, means for supporting the door on the support, and means for guiding the door, said means consisting essentially of a device connecting the free part of the door to the support, said device having a sliding connection to the support and to the door, the sliding connection to the door being at an angle to that of the support and being in a substantially vertical plane, whereby the door may sag vertically without binding.

2. The combination of a support, a sliding door, and means for supporting the door on the support, a rail on the support, and a device slidingly connecting the door to said rail, said device having a sliding connection to the door at an angle to the rail, the sliding connection to the door lying in a substantially vertical plane, whereby the door may sag without binding.

3. The combination of a support, a sliding door, means for attaching the door to the support, a rail attached to the support to one side of the opening, a plate attached to the door in a substantially vertical plane, and a

device connecting the rail to said plate and having a movable connection with each.

4. The combination of a support, a sliding door thereon, means for slidingly connecting the door to the support, said means consisting of a rail attached to the support at one side of the door-opening, a plate attached to the door and arranged in a substantially vertical plane, and a device connecting said rail to the plate, said device consisting of a pair of clips slidingly engaging respectively the rail and the plate and having a substantially vertical movement on the latter, substantially as described.

5. The combination of a support provided with a door-opening, a sliding door adapted to slide across said opening, a clip connected to the lower front corner of said door and having a substantially vertical movement thereon, and a flanged plate extending across the door-sill and having a sliding connection with said clip, substantially as described.

6. The combination of a support provided with a door-opening, a sill-plate provided with an inward-turned flange extending across said door-opening, a clip having a substantially vertical sliding connection to the lower front corner of the door and provided with a hook-like extension engaging said flange, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES R. CASE.

Witnesses:

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JOHN A. LAMBERT.