

(No Model.)

2 Sheets—Sheet 1.

H. SCHNEEWIND.
GRAVITATING DOOR CLOSER.

No. 483,169.

Patented Sept. 27, 1892.

Fig. 1.

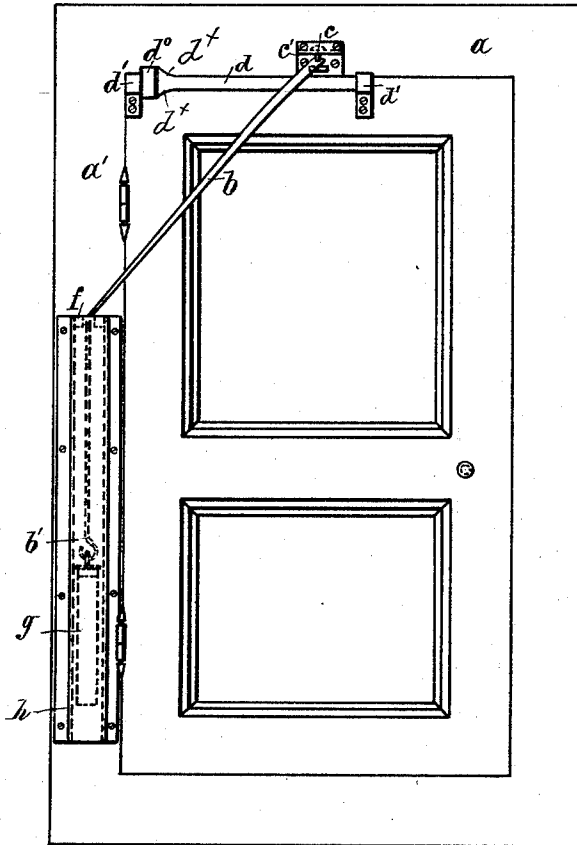


Fig. 3.

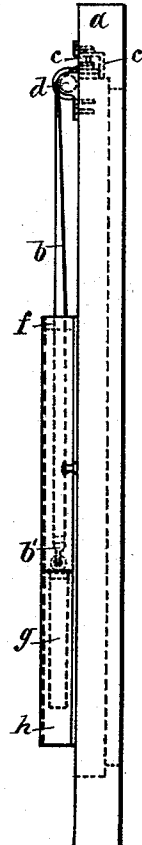
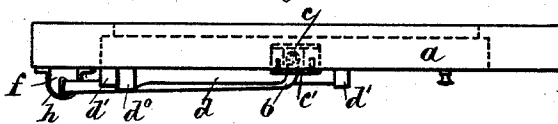


Fig. 2.



Inventor:

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By

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Witnesses:

E. R. Bolton

M. A. Walsh

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Fig. 4.

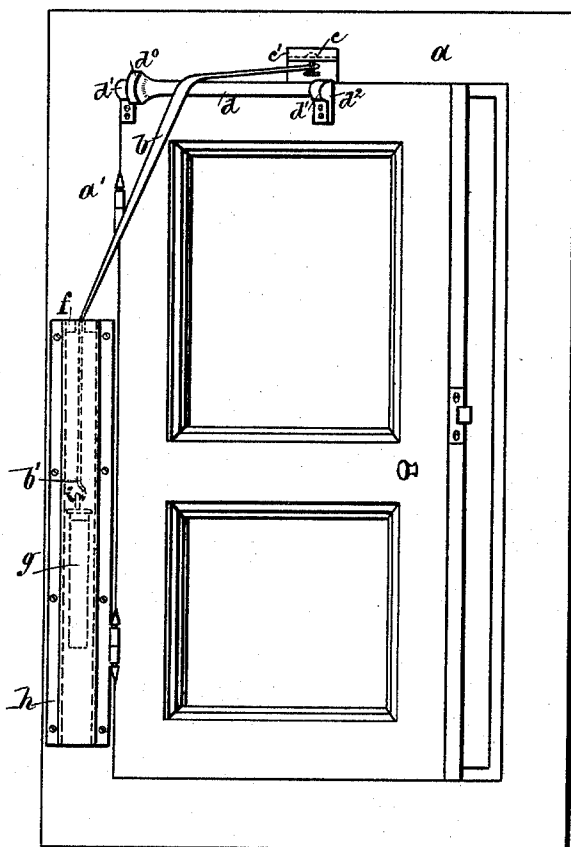
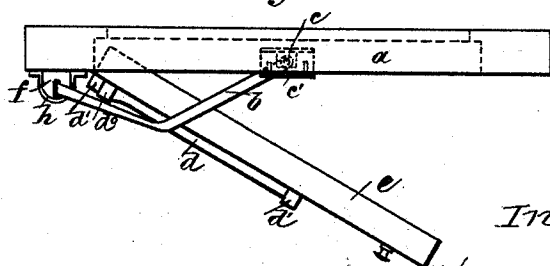


Fig. 5.



Witnesses:

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M. A. Walsh

Inventor:

Hugo Schneewind

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His Attorneys.

UNITED STATES PATENT OFFICE.

HUGO SCHNEEWIND, OF CREFELD, GERMANY.

GRAVITATING DOOR-CLOSER.

SPECIFICATION forming part of Letters Patent No. 483,169, dated September 27, 1892.

Application filed December 2, 1891. Serial No. 413,767. (No model.)

To all whom it may concern:

Be it known that I, HUGO SCHNEEWIND, a subject of the King of Prussia, residing at Crefeld, a city of Prussia, German Empire, have invented certain new and useful Improvements in Door-Locking Devices, of which the following is a specification.

The object of the present invention is a door-closer in which a broad band is fastened movably to the head-piece of the upright and which is kept pressed with its broadside in a slanting downward position by a weight attached to the other end onto a round rod fixed parallel to the upper edge on the door proper. When opening the door the round rod glides underneath the band and pushes it toward the end of the rod nearest the turning axle of the door, whereby the part of the band below the rod is drawn up with its weight. If the door is let loose, the band, drawn up under the influence of the sinking weight, glides in an opposite direction to the former along the rod, and thus causes the door to close.

In the accompanying drawings, Figure 1 is a front view of a door with my improved closing device attached. Fig. 2 is a top view of the same. Fig. 3 is a side view of the door when closed. Figs. 4 and 5 represent the door partly open in front and plan view, respectively.

My device consists, essentially, of a flat band *b*, secured at its upper end over the doorway to the head-piece *a* by means of a plate *c'*, having a peg *c* passing through the perforated end of the band. The band then passes downwardly in a diagonal direction to the door-jamb *a'*, to which the door is hinged, and the lower end is turned at right angles to the upper end and passes through a guide-block *f*, forming the top of a weight-box *h*, in which the weight *g* (shown in dotted lines) is adapted to move vertically it being held by the hook *b'* at the extreme lower end of the band. The diagonal portion of the band intermediate of its ends passes over a rod *d*, extending along the upper edge of the door and parallel therewith from a point a little to the right of its center to the hinged edge, it being held by the bearing *d'* at each end, having plates, as *d''*, Fig. 4, for closing the outer sides of the bearings and preventing longitudinal

displacement of the rod *d*. The rod *d* at its end nearest the hinged edge of the door is enlarged, as at *d''*, and has curved or inclined surfaces *d'''*, adapted to afford a bearing for the band when the door is fully open, and thus prevent jamming or cramping the band, which would be apt to result were a square shoulder provided at this point.

The operation of the device will be clearly understood, and it may be briefly stated as follows: When the door is closed, the band bears at its upper end on the rod *d* near the outer end thereof—that is, the end nearest the edge of the door. As the door is opened the middle diagonal part of the band is brought in contact with the rod, which moves under and along it, and each successive portion of the diagonal band acted on is nearer the hinged edge of the door, the band in effect sliding along the rod toward the hinged edge of the door as it moves over it until when the door is fully opened the band bears against the curved bearing *d'''*. When the door is released, the closing movement is rendered gentle, as the force of the weight, being applied first near the hinge, moves the door slowly and gradually, the full force of the weight acting when the door is closed to hold it so, and thus prevent any reaction or tendency to stand ajar.

I claim—

In combination, the door having the bar extending along its upper edge and the band attached to the door-frame over the door and extending from this point diagonally to the side of the door-frame to which the door is hinged and the weight attached to the lower end of the band and guided on the door-frame, the intermediate inclined portion of the band passing freely over the bar and adapted to slide longitudinally of said bar toward and from the hinges as the door is opened and closed, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HUGO SCHNEEWIND. [L. s.]

Witnesses:

EVANS BLAKE,
W. A. BLAKE.