

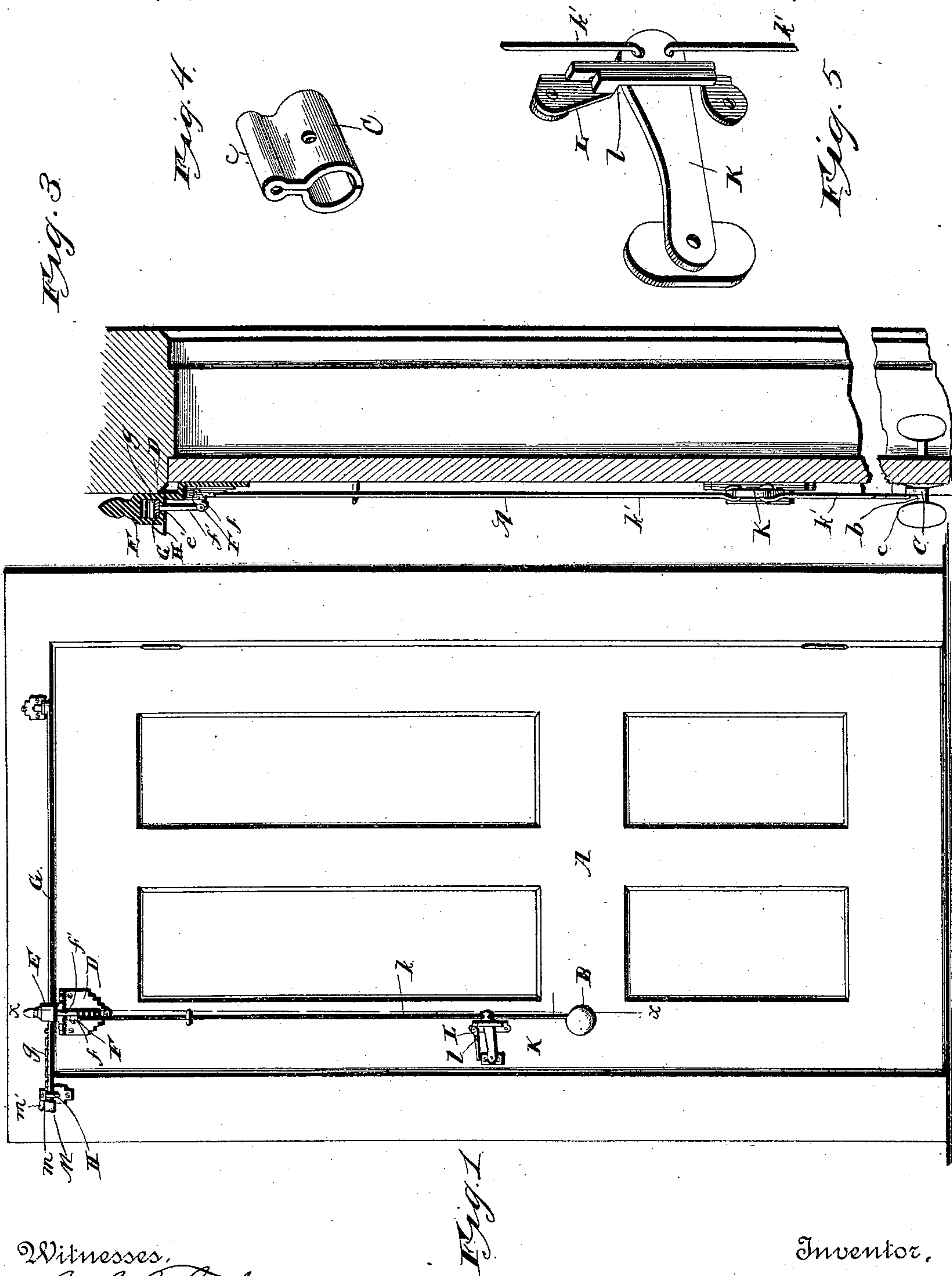
(No Model.)

2 Sheets—Sheet 1.

F. A. HOOVER.
DOOR CHECK.

No. 396,488.

Patented Jan. 22, 1889.



Witnesses.
Geo. G. Phelps
S. J. Riley

Inventor,
F. A. Hoover
By *his* Attorneys,
C. Shaw & Co.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

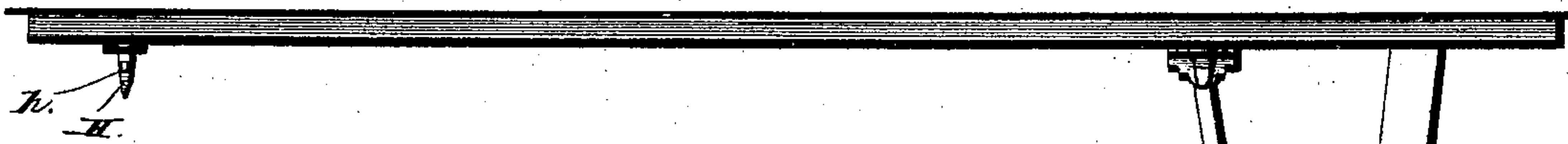


Fig. 6.

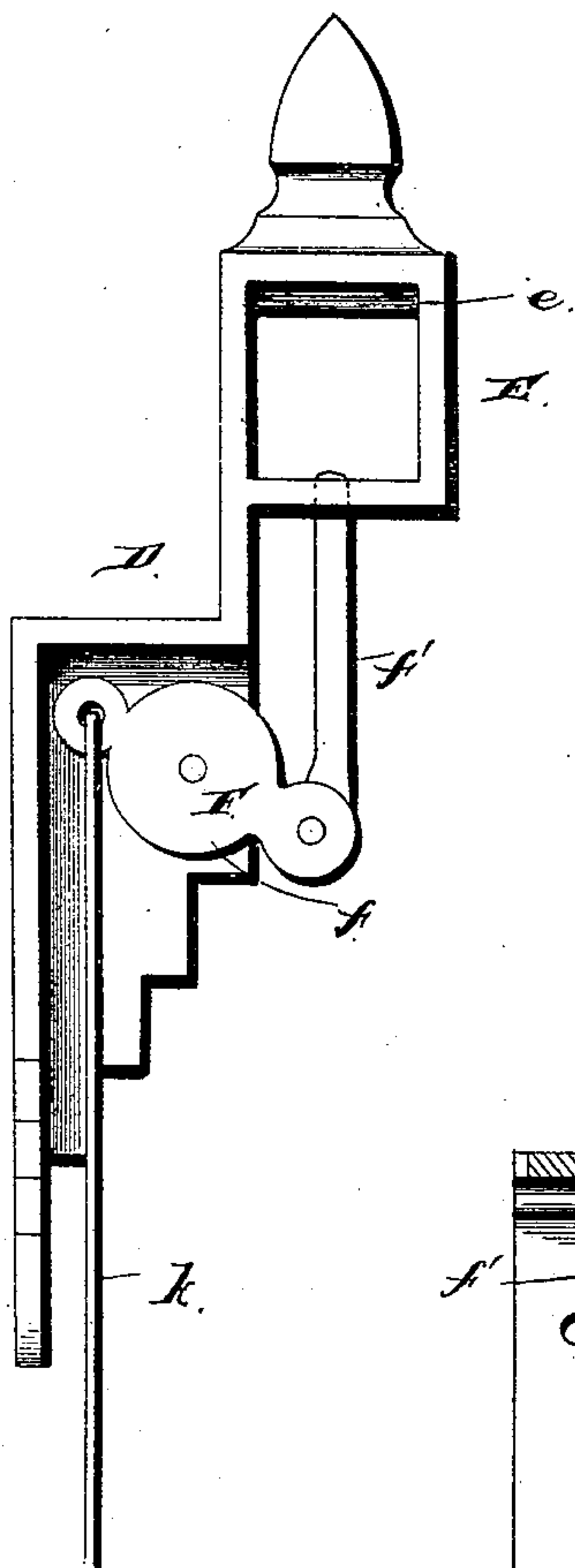


Fig. 7.

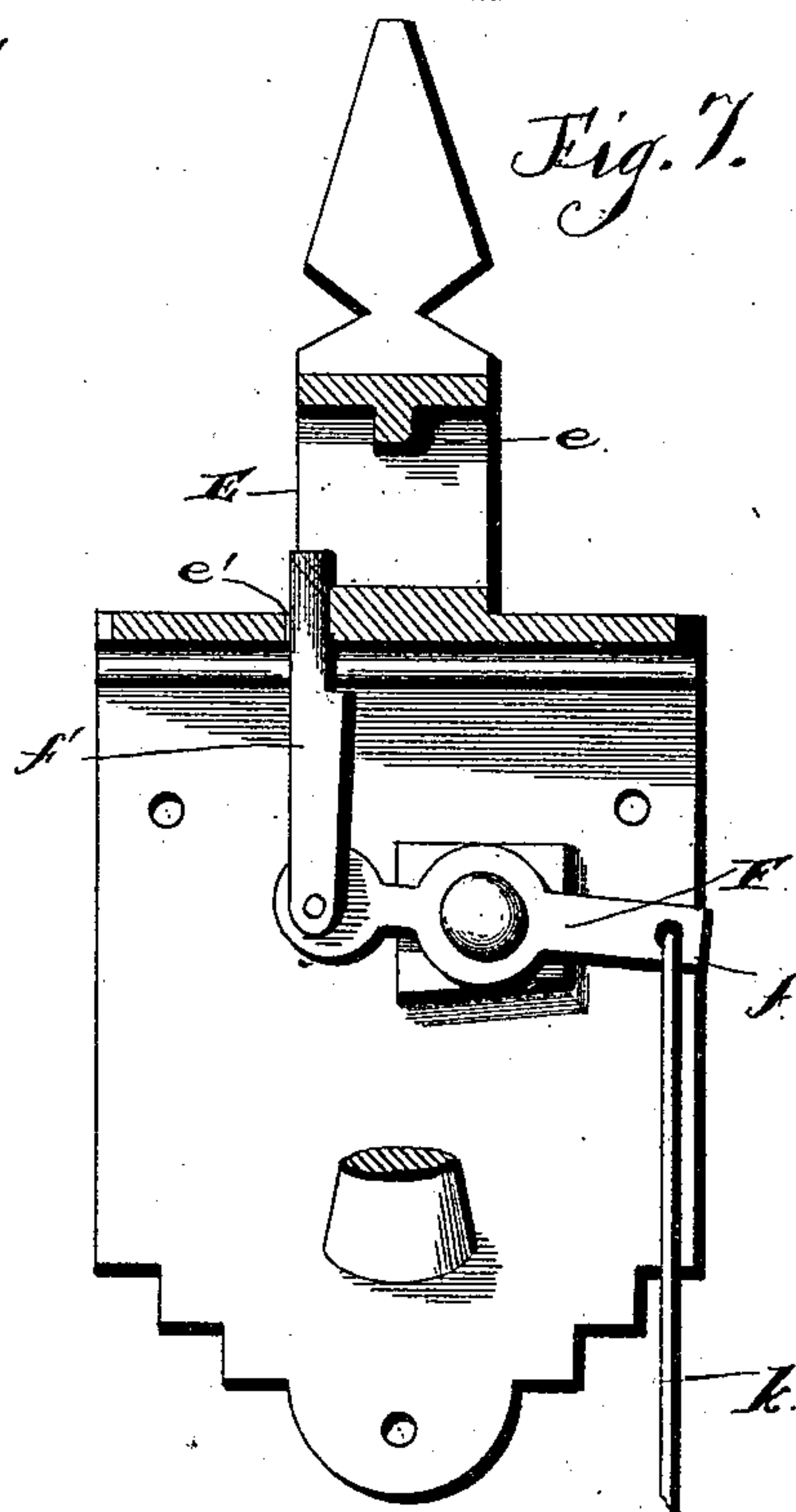
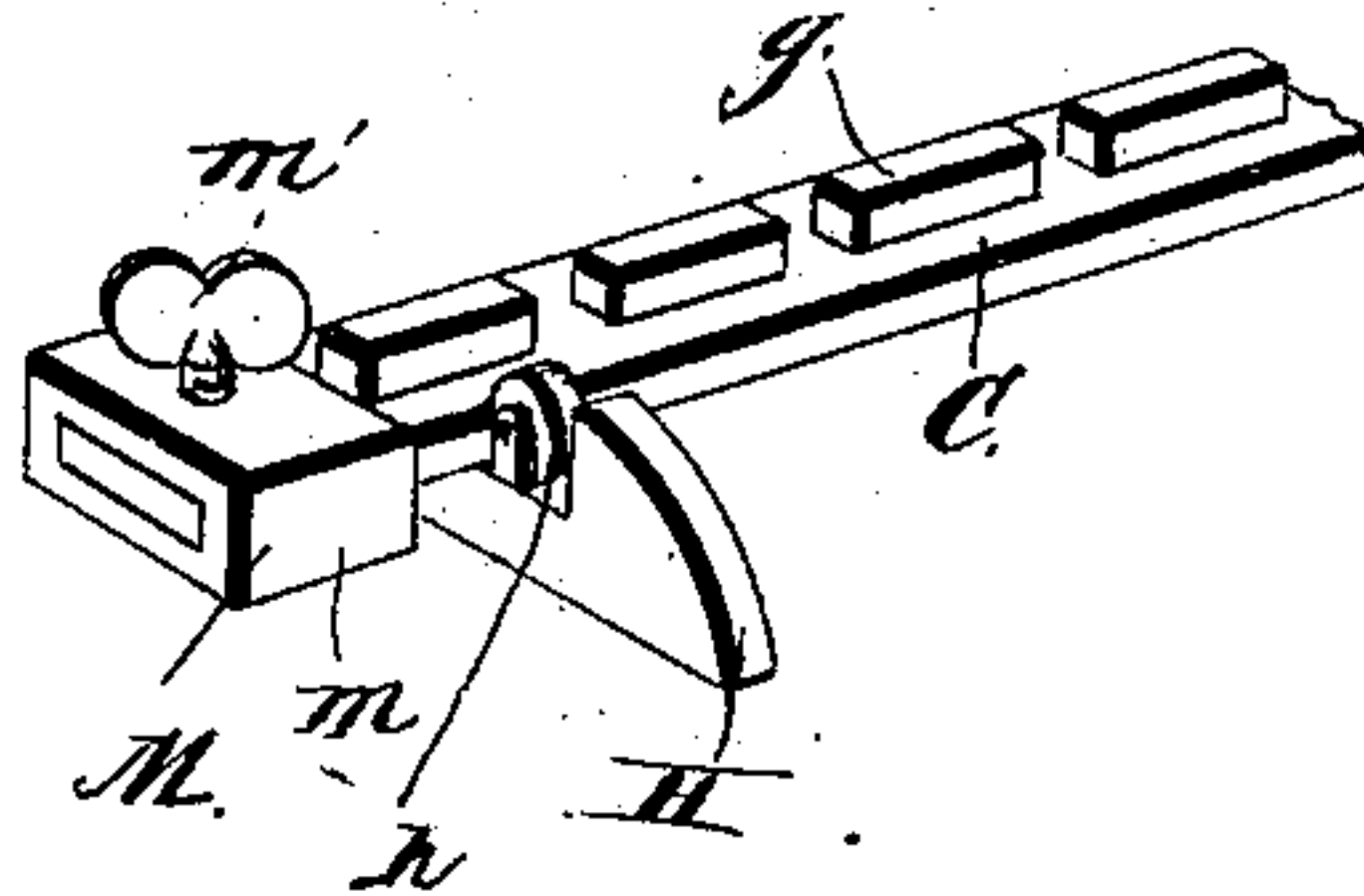


Fig. 8.



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UNITED STATES PATENT OFFICE.

FRANCIS AUGUSTINE HOOVER, OF KIMEO, KANSAS.

DOOR-CHECK.

SPECIFICATION forming part of Letters Patent No. 396,488, dated January 22, 1889.

Application filed September 8, 1888. Serial No. 284,907. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS AUGUSTINE HOOVER, a citizen of the United States, residing at Kimeo, in the county of Washington and State of Kansas, have invented a new and useful Improvement in Door-Checks, of which the following is a specification.

The object of my invention is to provide improvements in door-checks, and arrange the same so that when the door is closed it will form a secure lock for the door to prevent the same from being opened from the outside.

The invention consists in a certain novel construction and combination of devices fully described hereinafter in connection with the accompanying drawings, and specifically pointed out in the appended claims.

In the drawings, Figure 1 is a front view of a door provided with the improved check. Fig. 2 is a top plan view of the same, partly open, to show the disposal of the parts in this position. Fig. 3 is a vertical sectional view on the line *x x* of Fig. 1. Fig. 4 is a detail view of the sleeve which embraces the shank of the door-knob. Fig. 5 is a similar view of the catch. Fig. 6 is a detail view of the bracket. Fig. 7 is a similar view of a slightly modified form of bracket. Fig. 8 is a similar view of the stop-block and part of the swinging arm.

Referring by letter to the drawings, A designates the door, which is provided with the ordinary revoluble knob B, having a shank, *b*; and C designates a sleeve embracing the said shank and provided with a spindle, *c*, the said sleeve being secured to the shank by means of a set-screw or similar device.

D designates a bracket, which is secured to the door near or at its upper edge, and a short distance from its free edge, and the bracket is provided on its upper side with an upwardly-extending guide loop or box, E, which is provided at its upper side with a depending transverse rib or projection, *e*. The lower side of this loop or box is provided with an aperture, *e'*, and on the bracket is mounted the latch F, which consists of the short lever *f* and the vertical bolt *f'*, attached at its lower end to one end of the lever and projecting at its upper end through the aperture *e'*.

G represents the swinging check-arm, which is pivoted at one end to the casement of the

door, a short distance from the hinged edge of the latter, and operates at its free end in the loop or box E, over the upper end of the bolt *f'*. The upper side of this arm is provided with a notched rib or rack, *g*, the notches in which are adapted to fit the transverse rib or projection on the upper side of the loop or box. When the swinging arm bears on the bottom of the loop or box, it will slide freely therethrough and allow the door to swing freely; but when the arm is raised at its free end, by depressing the free end of the short lever *f*, and thereby elevating the bolt *f'*, one of the notches in the rib or rack engages the depending rib on the upper side of the loop or box, and the door is locked firmly in place until the arm is allowed to drop.

H represents a catch arranged on the casement near the free edge of the door, which is adapted to engage the end of the swinging arm when the door is closed, and thereby lock the latter. A small anti-friction roller, *h*, is arranged on this catch, provided with a suitable rubber or elastic periphery, whereby as the swinging arm rises over the roller into the catch it is forced firmly to the rear, thereby compressing the door into its rabbets, and thus effectually excluding wind and moisture. The end of the swinging arm must be elevated slightly, as will be understood, in order to disengage it from the catch.

K represents a small swinging link, which is pivoted at one end to the door near its free edge and above the knob, and is connected at its free end to the free end of the lever *f* by means of the rod or wire *k*, and the spindle on the sleeve C is also connected to the free end of this link by a rod or wire, *k'*, whereby, when the knob is turned, the free end of the link is depressed, and the free end of the lever *f* is similarly operated, thereby elevating the swinging arm, as before described. L represents a locking-arm, which is pivoted above the link K, and is provided with a shoulder, *l*, adapted to bear on the upper edge of the said link and hold it in its depressed position.

The operation of the improved check will be readily seen. It is evident that as the hinged end of the door and the pivoted end of the swinging check-arm are not in vertical alignment the free end of the said arm will

move longitudinally through the loop or box on the free edge of the door as the latter is swung on its hinges. Therefore, to check the door at any desired point, raise the swinging arm, (by engaging the locking-arm with the swinging link,) and thereby engage one of the notches of the rib or rack with the depending rib in the said loop or box. The door will swing freely, except when the swinging arm is in engagement with the said rib. As the door is closed the free end of the swinging arm is raised and engaged with the catch, in which position it will securely hold the door closed. When it is desired to lock the door so that it cannot be opened from the outside, disengage the lower end of the rod or wire *k'* from the spindle *c*. The free end of the swinging arm is provided with an adjustable stop, *M*, which consists of a block, *m*, provided with an opening adapted to fit on the end of the said arm, and a set-screw, *m'*, to lock it in position thereon.

The bracket shown in the drawings is designed, as will be evident, for doors which fit into casements which are not flush therewith; and in Fig. 6 I have illustrated a slightly-modified form of bracket, which is designed for use on doors which fit flush with the face of the casement, the only difference of importance being that the lever *f* is arranged parallel with the base-plate of the bracket instead of perpendicular thereto.

Having thus described my invention, I claim—

1. In a door-check, the combination, with the bracket secured to the door and provided with a guide loop or box having a rib or projection, *e*, of the swinging check-arm pivoted at one end to the casement and operating at its free end in the loop or box, the said arm being provided with a notched rib or rack which is adapted, when the arm is elevated, to engage the rib or projection *e*, and the latch arranged under the free end of the said arm and adapted to raise the same, substantially as and for the purpose specified.

2. In a door-check, the combination, with a guide loop or box arranged at the upper edge of a door and provided with the rib or projection *e*, of the catch arranged on the casement at the free edge of the door, and the swinging check-arm pivoted to the casement, operating in the guide loop or box, and adapted to engage the said catch when the door is closed, the said swinging arm being provided with a notched rib or rack to engage the rib *e*, substantially as and for the purpose specified.

3. In a door-check, the combination, with a guide loop or box arranged on a door, of the

swinging arm pivoted to the casement and operating in the said loop or box, and the adjustable stop *M*, arranged on the said arm, substantially as specified.

4. In a door-check, the combination, with a guide loop or box arranged on a door, of the swinging arm pivoted to the casement and operating in the guide loop or box, and the catch *II*, secured to the casement at the free edge of the door and provided with an anti-friction roller, *h*, provided with a rubber or elastic periphery, the free end of the swinging arm being adapted to engage the said catch, substantially as and for the purpose specified.

5. In a door-check, the combination, with a guide loop or box, *E*, provided with a depending rib or projection, *e*, of the swinging check-arm *G*, operating at its free end in the said loop or box, the latch arranged under the free end of the swinging arm and adapted, when operated, to raise the same and engage it with the rib or projection *e*, and the revoluble door-knob connected by suitable rods or wires with the said latch, whereby, when the knob is turned, the latch is operated, substantially as specified.

6. In a door-check, the combination, with the guide loop or box provided with the rib or projection *e*, and the swinging check-arm operating at its free end in the loop or box, and adapted, when elevated, to engage the rib or projection, of the latch mounted on the door and adapted to engage the swinging arm, the rods or wires connecting this latch to the revoluble door-knob, the swinging link connected at its free end to the said wires or rods, and the locking-arm adapted to engage the swinging link to hold the swinging arm in its elevated position, substantially as specified.

7. In a door-check, the combination, with the guide loop or box *E*, provided with the rib or projection *e*, the swinging check-arm operating at its free end in the loop or box, and the latch mounted on the door and adapted to operate the swinging arm, of the sleeve *C*, arranged on the shank of the revoluble door-knob, the swinging link connected at its free end to the latch and the sleeve by the rods or wires *k* and *k'*, and the locking-arm *L*, adapted to engage the swinging link, to hold the swinging arm in its elevated position, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FRANCIS AUGUSTINE HOOVER.

Witnesses:

G. G. GOODWIN,

R. S. MCCONNELL.