

No. 814,076.

PATENTED MAR. 6, 1906.

C. A. PIKE.
WEATHER STRIP.

APPLICATION FILED MAR. 6, 1905.

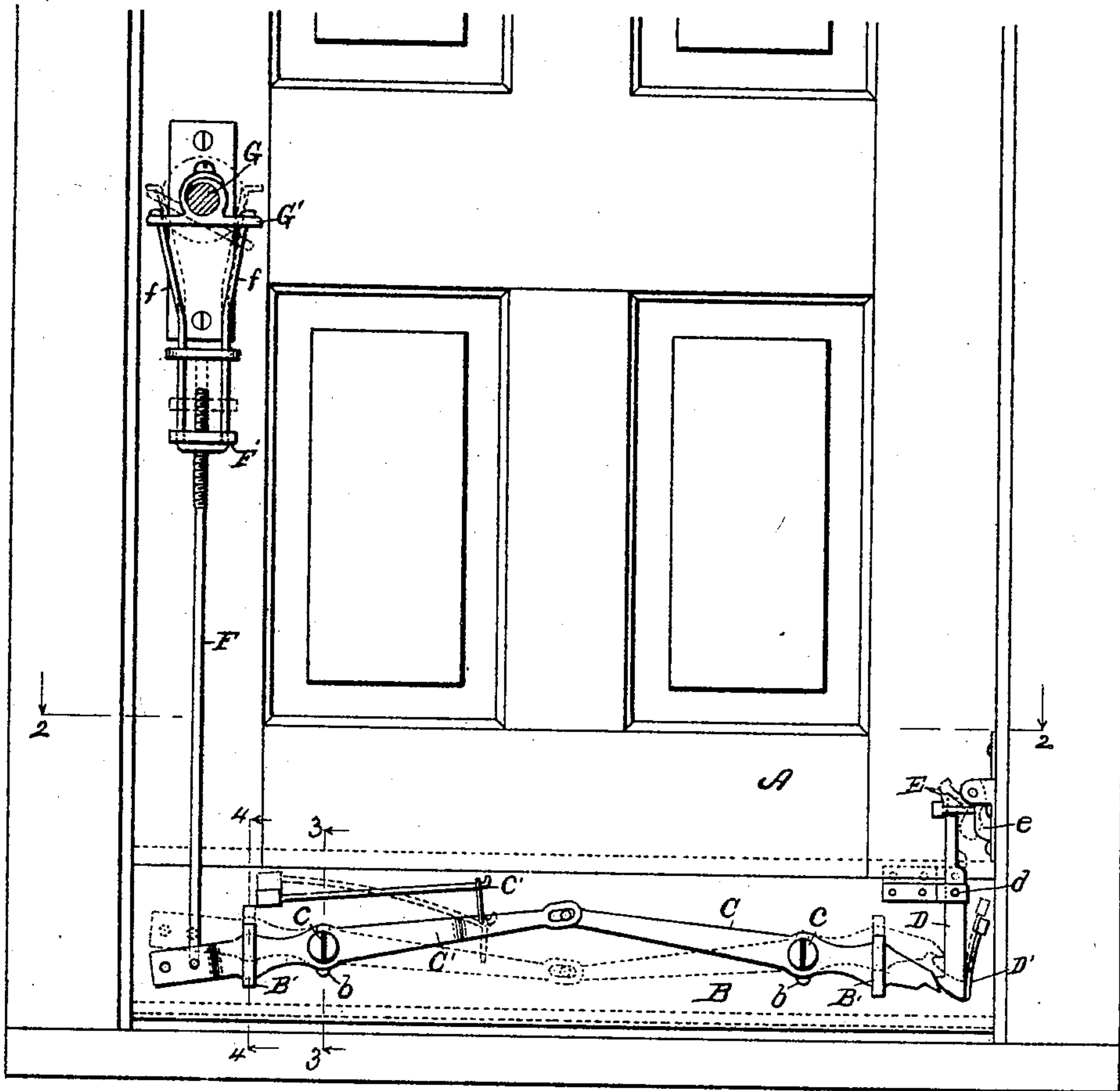


Fig. 1

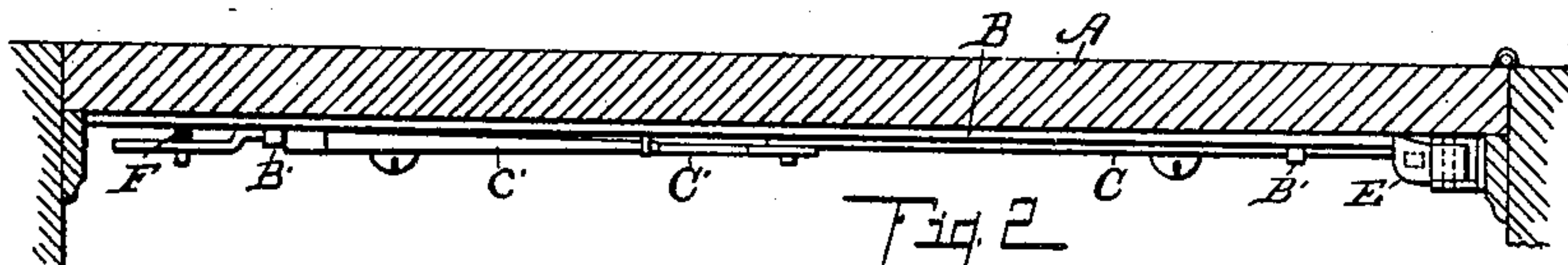


Fig. 2

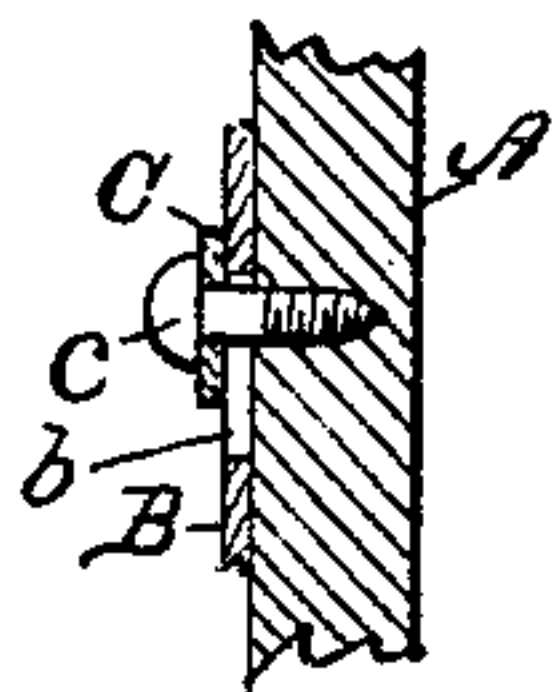


Fig. 3

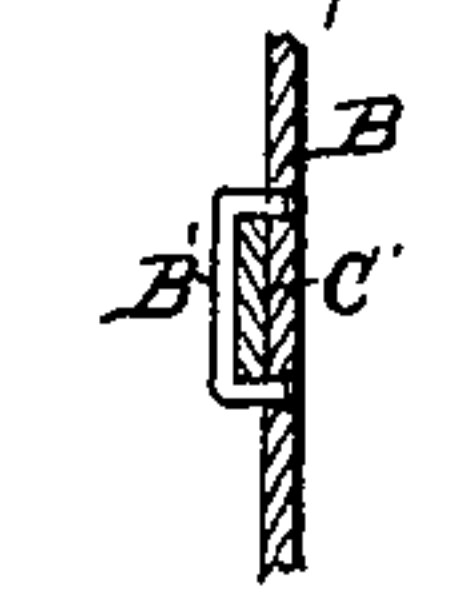


Fig. 4

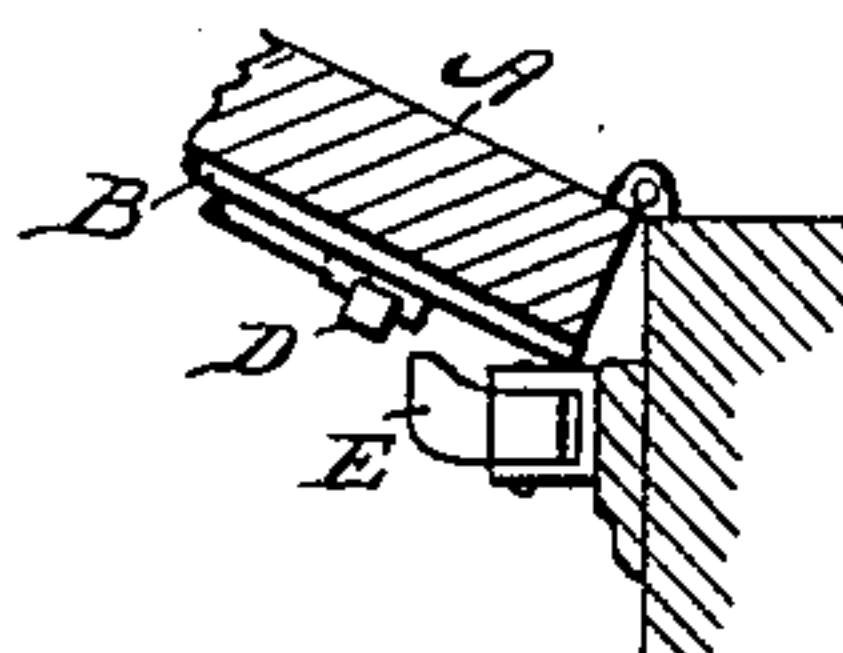


Fig. 5

Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES A. PIKE, OF PAW PAW, MICHIGAN.

WEATHER-STRIP.

No. 814,076.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed March 6, 1905. Serial No. 248,585.

To all whom it may concern:

Be it known that I, CHARLES A. PIKE, a citizen of the United States, residing at the village of Paw Paw, in the county of Van Buren, State of Michigan, have invented certain new and useful Improvements in Weather-Strips, of which the following is a specification.

This invention relates to improvements in weather-strips for doors.

The objects of this invention are, first, to provide an improved weather-strip for doors by the use of which the door-sill may be dispensed with, if desired; second, to provide an improved weather-strip for doors in which the wear on the floor or door-sill, where a door-sill is used, is reduced to a minimum; third, to provide an improved weather-strip for doors adapted to form a tight joint when the door is closed and one which does not materially add to the power required to open or close the door; fourth, to provide an improved weather-strip for doors embodying the above features which is automatically controlled by the opening and closing of the door; fifth, to provide an improved weather-strip for doors embodying the above features which is simple and economical to produce and durable in use and is capable of being applied without in any way mutilating the door.

Further objects and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined, and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail elevation view of a door having my improved weather-strip applied thereto, the weather-strip being shown in its inoperative position by dotted lines. Fig. 2 is a detail horizontal sectional view taken on a line corresponding to line 2 2 of Fig. 1. Fig. 3 is a detail view taken on line 3 3 of Fig. 1, showing the manner of attaching the weather-strip to the door and of the supporting and actuating levers. Fig. 4 is a detail sectional view taken on line 4 4 of Fig. 1. Fig. 5 is a detail sectional view show-

ing the means for tripping the locking-dog for retaining the weather-strip in its elevated or inoperative position.

In the drawings the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines, and similar letters of reference refer to similar parts throughout the several views.

Referring to the drawings, the door A is of the usual or any desired construction. A plate B, extending across the bottom of the door, is secured thereto by screws c. These screws are arranged in the vertical slots b in the plate, so that the plate may be adjusted up and down, as is indicated by dotted lines in Fig. 1. This plate B is preferably made of sheet metal. The plate B is operated by a pair of levers C and C'. These levers are pivoted on the screws c and are connected to the plate B by loops B', through which they are arranged. (See Figs. 1 and 4.) The inner ends of these levers are connected by a slot-and-pin connection, so that the lever C is operated from the lever C'. By thus connecting the levers and connecting them to the plate both ends of the plate are elevated or lowered together. A spring c' is carried by the plate B and is connected to the inner end of the lever C', its tendency being to hold the inner ends of the levers upward, and thereby throw the plate downward, so that as soon as the levers are released the plate is thrown downward thereby.

The plate B is held in its elevated position by the locking-dog D, which is adapted to engage the outer end of the lever C when the same is in its elevated position. The dog D is pivoted on the bracket d, carried by the plate B. This dog is held normally in its engaging position by a spring D', which bears on the lower end thereof. The dog D is released by the trip E, having a weight e thereon, which is pivoted on the door-casing. This trip is pivoted so as to allow the elevation of the dog D along with the plate B. (See dotted lines in Fig. 1.) As soon as the door is opened this trip falls down into its engaging position and when the door is again closed engages and trips the dog, thereby releasing the lever C and allowing the plate to drop.

The outer end of the lever C' is connected by the link F and yoke f to the spindle of the door-knob. The upper end of the rod F is threaded to engage the cross-piece or plate

F', carried by the yoke, so that the link can be adjusted to suit requirements. The arms of the yoke F are arranged through suitable slots in the cross-piece G'. By thus connecting the yoke to the knob-spindle the same is lifted no matter in which direction the knob may be turned. This throws the outer ends of the levers C and C' upward, and the lever C is engaged by the locking-dog D, so that the plate B is held in its elevated position until the dog D is tripped. This takes place upon the closing of the door, so that the door may be manipulated as desired, the plate B being held out of its engaging position. As soon as the door is closed the dog is tripped and the plate is forced downwardly by the spring c'.

By the use of my improved weather-strip sills may be dispensed with, if desired, the joint when the door is closed being comparatively tight, and at the same time the door may be opened or closed without friction on the floor. My improved weather-strip is also very desirable, as it can be applied to doors of common construction without making any changes therein or in any wise mutilating the same, it being only necessary to insert two screws therein and to attach the supporting-bracket for the trip E to the casing. The yoke G' is readily secured to the spindle of the door-knob without removing the same by means of the clip g. A further advantage is that the device does not add materially to the power required for operating the door. I have illustrated and described my improved weather-strip for doors in detail in the form preferred by me on account of its structural simplicity and durability. I am, however, aware that it is capable of considerable variation in structural details without departing from my invention.

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

1. The combination with a door, of a plate having vertical slots therein; screws arranged through said slots for securing said plate to said door; a pair of levers, having a pin-and-slot connection at their inner ends, pivoted on said screws; loops on said plate through which the outer ends of said levers are arranged; a spring carried by said plate connected to the inner ends of said levers; a locking-dog carried by said plate adapted to engage the rear lever; a trip for said locking-dog mounted on the door of the casing; and connections from said levers to the latch of the door, for the purpose specified.

2. The combination with a door, of a plate having vertical slots therein; screws arranged through said slots for securing said plate to said door; a pair of levers, having a pin-and-slot connection at their inner ends, pivoted on said screws; loops on said plate through which the outer ends of said levers are ar-

ranged; a spring carried by said plate connected to the inner ends of said levers; and connections from said levers to the latch of the door, for the purpose specified.

3. The combination with a door, of a plate having vertical slots therein; screws arranged through said slots for securing said plate to said door; a pair of levers, connected to each other and to said plate, pivoted on said screws; a spring carried by said plate for applying tension to said levers; a locking-dog carried by said plate adapted to engage the rear lever; a trip for said locking-dog mounted on the door-casing; a cross-piece secured to the spindle of the door-knob; a yoke having its arms arranged through said cross-piece; and a link adjustably secured to said yoke and to the front lever, for the purpose specified.

4. The combination with a door, of a plate having vertical slots therein; screws arranged through said slots for securing said plate to said door; a pair of levers, connected to each other and to said plate, pivoted on said screws; a spring carried by said plate for applying tension to said levers; a locking-dog carried by said plate adapted to engage the rear lever; a trip for said locking-dog mounted on the door-casing; and connections from said levers to the latch of the door, for the purpose specified.

5. The combination with a door, of a plate adjustably mounted thereon; a pair of pivotally-mounted levers connected to each other and to said plate; a spring for applying tension to said levers; a locking-dog adapted to engage the rear lever; a trip for said locking-dog pivotally mounted on the door-casing; a cross-piece secured to the spindle of the door-knob; a yoke having its arms arranged through said cross-piece; and a link connected to said yoke and to said lever, for the purpose specified.

6. The combination with a door of a plate adjustably mounted thereon; a pair of pivotally-mounted levers connected to each other and to said plate; a locking-dog adapted to engage the rear lever; a trip for said locking-dog pivotally mounted on the door-casing; a cross-piece secured to the spindle of the door-knob; a yoke having its arms arranged through said cross-piece; and a link connected to said yoke and to said levers, for the purpose specified.

7. The combination with a door, of a plate adjustably mounted thereon; a pair of pivotally-mounted levers connected to each other and to said plate; a spring carried by said plate for applying tension to said levers; a locking-dog adapted to engage the rear lever; a trip for said locking-dog pivotally mounted on the door-casing; and connections from said levers to the latch of the door, for the purpose specified.

8. The combination with a door, of a plate

adjustably mounted thereon; a pair of pivotally - mounted levers connected to each other and to said plate; a locking-dog adapted to engage the rear lever; a trip for said locking-dog pivotally mounted on the door-casing; and connections from said levers to the latch of the door, for the purpose specified.

In witness whereof I have hereunto set my hand and seal in presence of two witnesses.

CHARLES A. PIKE. [L. s.]

Witnesses:

C. SCHEMZLE,
WM. KILLEFER.