(Model.)

2 Sheets—Sheet 1.

O. H. GILBERT.

LATCH OPERATING DEVICE.

No. 335,914. Patented Feb. 9, 1886.

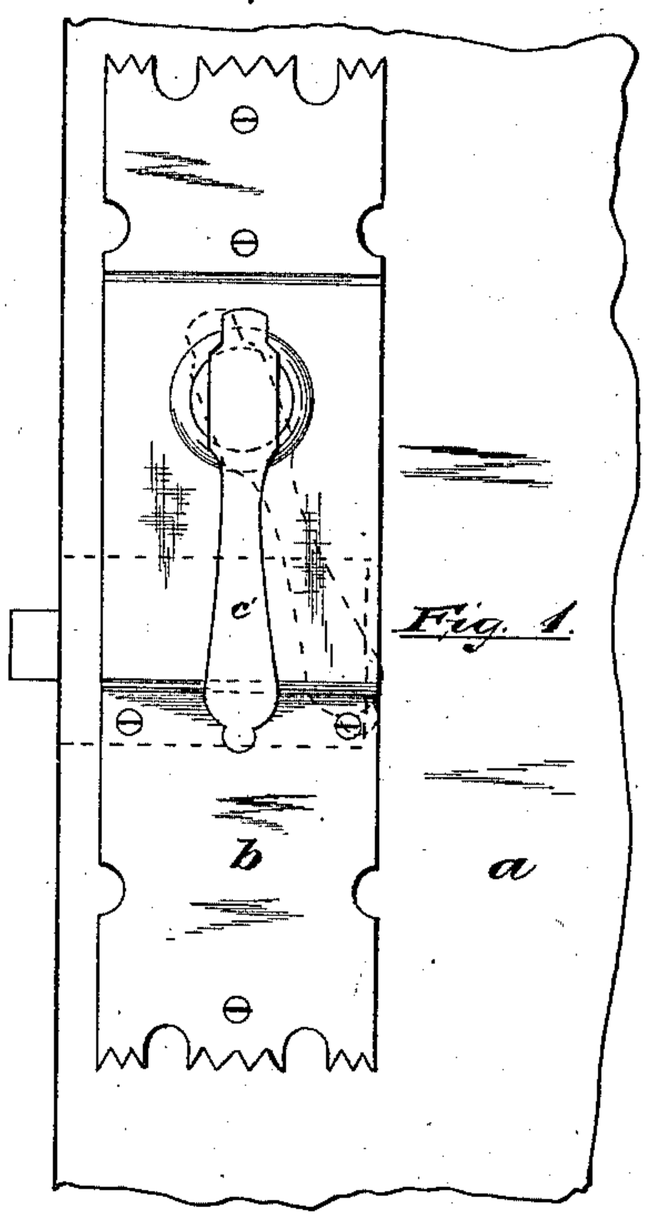

Fig. 1.

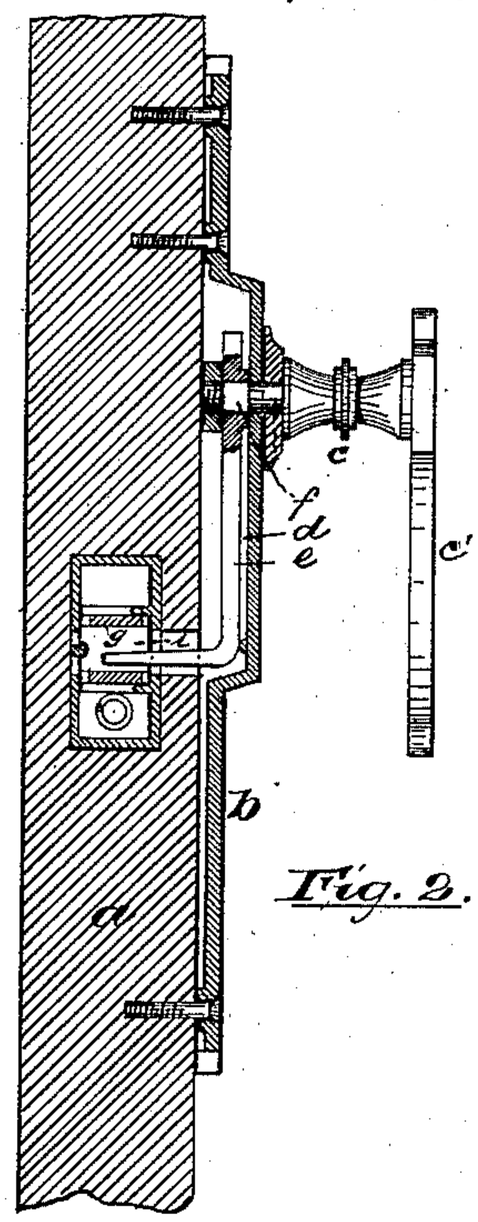

Fig. 2.

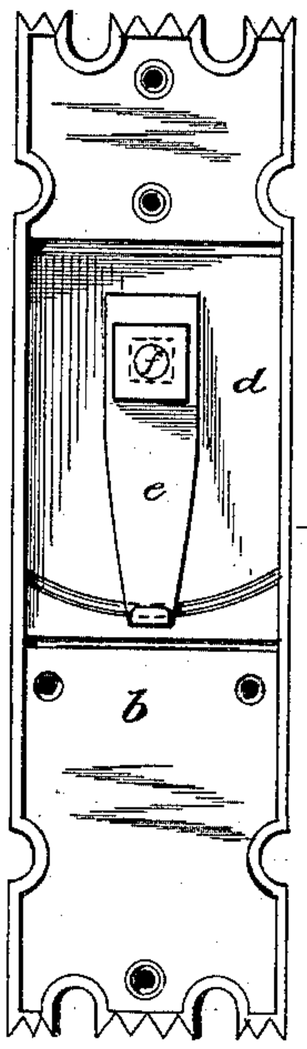

Fig. 3.

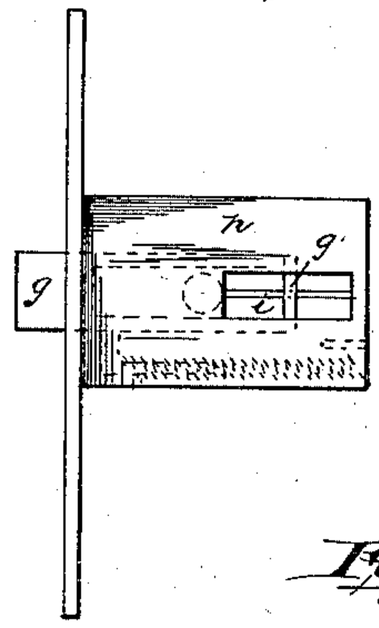

Fig. 4.

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(Model.) 2 Sheets—Sheet 2.

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LATCH OPERATING DEVICE.

No. 335,914. Patented Feb. 9, 1886.

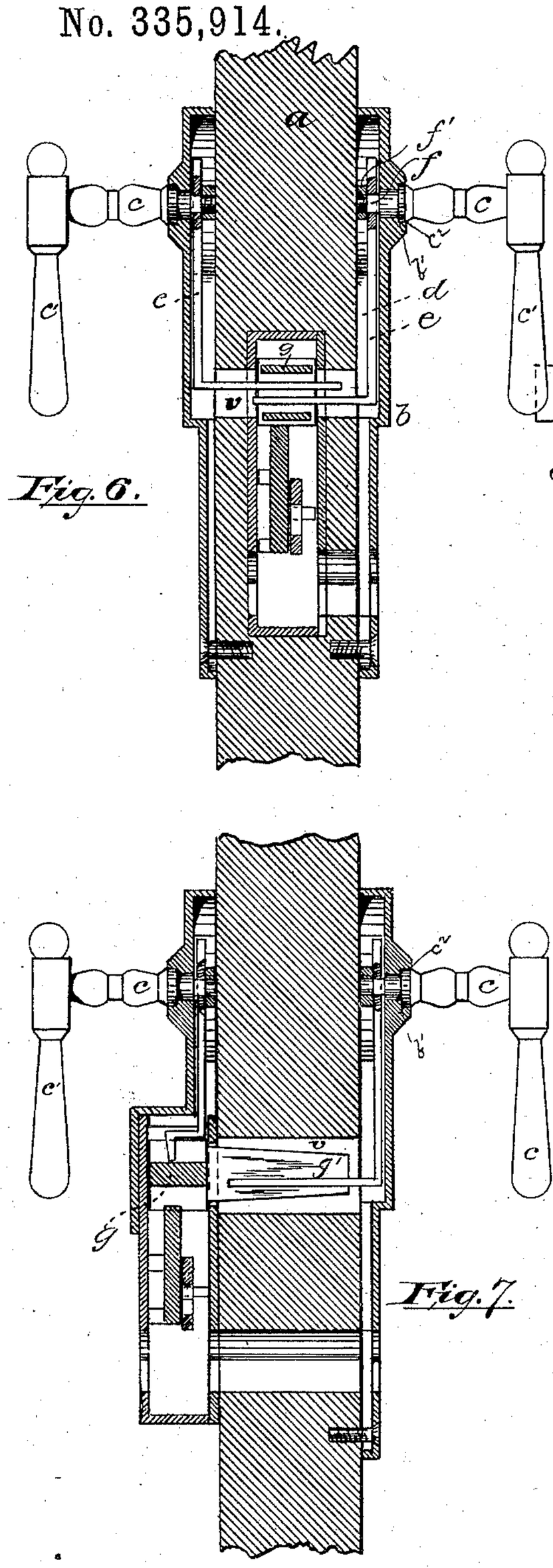

Fig. 6.

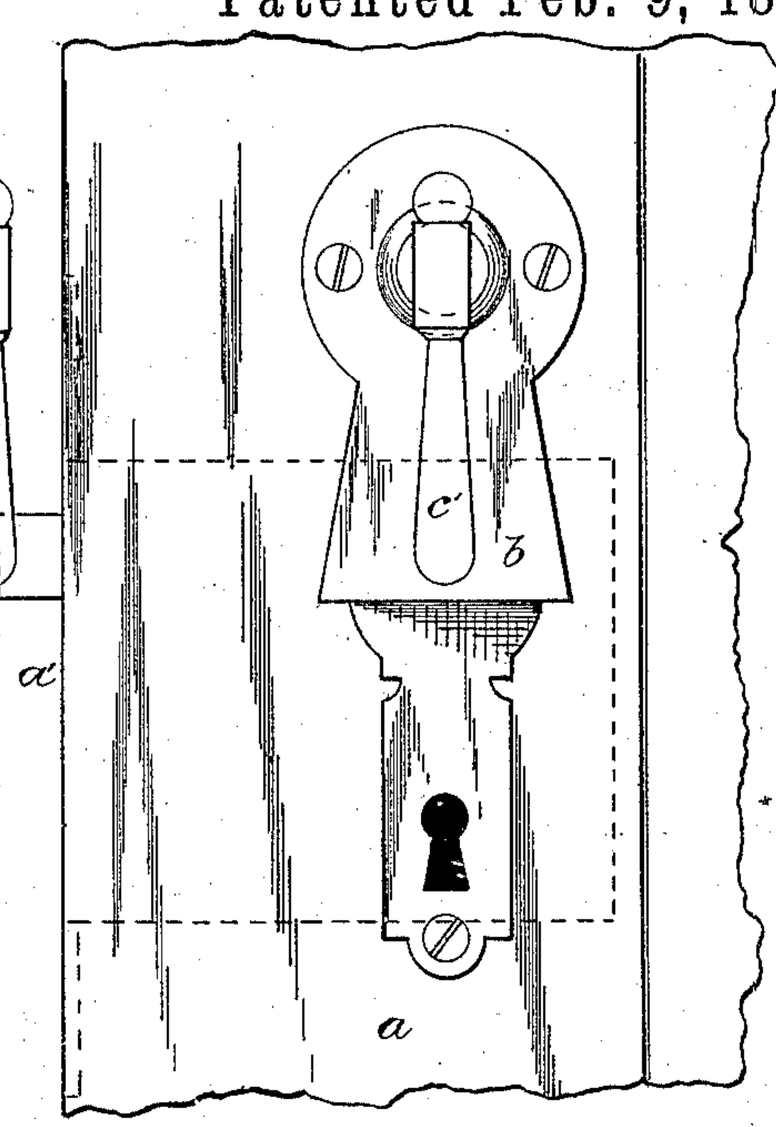

Fig. 5.

Fig. 7.

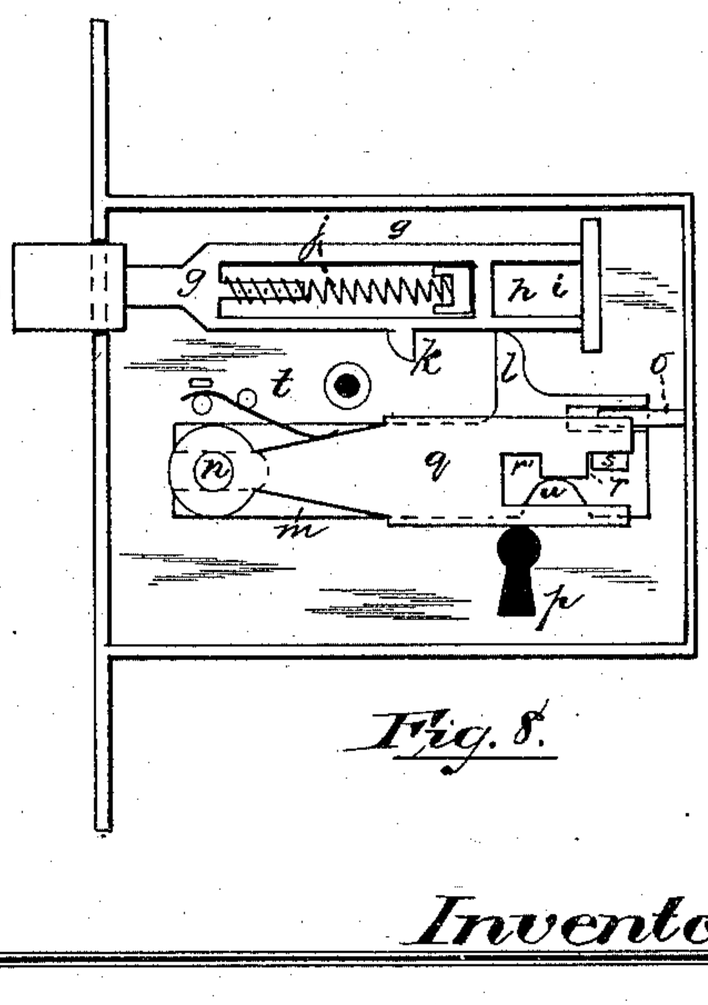

Fig. 8.

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UNITED STATES PATENT OFFICE.

ORVELLAS H. GILBERT, OF NEWARK, NEW JERSEY.

LATCH-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 335,914, dated February 9, 1886.

Application filed November 6, 1884. Serial No. 147,252. (Model.)

To all whom it may concern:

Be it known that I, ORVELLAS H. GILBERT, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Latch-Operating Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in latch-operating devices, the general object thereof being to provide a simple, cheap, and effective latch-drawing mechanism that may be secured firmly to the door without the liability of becoming loose, and which may be adjusted either to right or left hand doors without necessitating any change therein.

The invention consists of a recessed rose-plate adapted to be secured upon a door above a lock-mortise, and having an arm extending down within the recess in the rose, bent to enter into engagement with the latch, and secured to one end of the shank, and an eccentric handle integrally united with the other end of said shank, said handle and arm extending downward in the same direction, and parallel one with the other, substantially as illustrated in the drawings, and described and claimed hereinafter.

Referring to the accompanying drawings, embodied in two sheets, in which like letters of reference indicate corresponding parts in each of the several figures, Figure 1, Sheet 1, is a front view of one form of my device applied to a door. Fig. 2 is a vertical section of the same. Fig. 3 is a back view, showing a lever or finger for retracting the door-latch; and Fig. 4 illustrates said door-latch arranged in its case and adapted to be inserted in a mortise in the door. Fig. 5, Sheet, 2, shows the handle in combination with a latch capable of being locked, and Fig. 6 is a vertical section of the same, showing the lock as a mortise-lock and handles working on both sides of the door. Fig. 7 is a section showing a rim-lock and the latch-operating mechanism modified to work therewith, and Fig. 8 is a plan of the lock.

In said drawings, *a* is a door, of which *a'* is the edge opposite the hinged edge thereof. *b* is a plate furnishing bearings for the handle-shank *c*, which plate may be extended, as shown in Figs. 5, 6, and 7, to form an escutcheon for the key-hole. Said plate *b* is hollowed out or recessed longitudinally on the back or inner side to form a chamber, *d*, into which an angular portion, *f*, of the handle-shank projects. Upon said angular portion is fitted and secured, by means of a suitable nut, *f'*, or by riveting, a finger or arm, *e*, which extends inside the chamber downward in the same direction and parallel with the handle *c'*, and engages at its free end a recess, *h*, of the latch *g*, the said finger being preferably bent to effect such engagement, as indicated in Figs. 6 and 7. The shank-perforation in the rose-plate is provided with a shoulder, *b'*, with which a shoulder, c^2, on the shank engages.

The handle *c'* is set eccentrically on the shank *c*, being preferably cast integrally therewith, to cause the person opening the door to grasp said handle at the side of the shank corresponding to that from which the finger projects.

While a handle arranged eccentrically upon a shank is preferred, yet a knob-handle can be employed for operating the levers; but in turning the knob the hand is liable to come in contact with the door-jamb, since the movement of the knob must be from right to left to withdraw the latch. With the eccentric handle the movement is the same as the latch—away from the jamb—thus avoiding the striking of the hand.

Because of the finger or arm extending down and engaging with the latch, the escutcheon or handle-plate can be elongated and secured to the solid part of the door above and below the lock-mortise, making it specially adapted for thin doors. As will be noticed in Fig. 6, the bent ends of the fingers or arms from each side of the door overlap each other, thereby permitting the furniture to be used on doors of varying thickness. The latch *g* is provided with a suitable recess, *h*, to receive said finger

or arm *e*, and a bearing, *i*, against which the finger *e* presses in throwing back the latch. Said latch is thrown outward to fasten the door by a spring, *j*.

When the latch is employed with locking mechanism, I form a lug, *k*, Fig. 8, thereon, adapted to engage a corresponding lug, *l*, on a sliding key-bolt, *m*, held in position by a pintle, *n*, and a lug, *o*, of the lock-case.

In Fig. 8 the key-bolt is shown as having been thrown back, so that the lug *l* will allow a free movement of the latch when the latter is influenced by the finger *e*. To lock the latch the key is inserted in the key-hole *p* and turned. This raises a tumbler, *q*, pivoted on the pintle *n* and formed to lock said key-bolt, and allows the key to enter the key-bolt recess *u* and throw said bolt forward, so that the lug *l* engages the lug *k* and prevents the latch *g* from being retracted. The tumbler is provided with recesses *r r'*, and the key-bolt with a stop-projection, *s*, adapted to enter said recesses.

The process above described of raising the tumbler and throwing the key-bolt carries the stop-projection from the said recess *r* to the recess *r'*, in which it is held, and the said key-bolt is thereby prevented from sliding. The spring *t*, bearing against the side of the tumbler, holds the latter in engagement with the said stop with greater security.

In a rim-lock I may form on the latch *g* a finger, *g'*, Fig. 7, which projects into a recess or opening, *v*, in the door to meet the finger *e*.

It is not broadly new to cast an eccentric handle integrally upon a shank provided with an extension which projects in a line with the shank into the latch or lock-case and is adapted to draw the latch. By this construction the rose-plate must be screwed directly over the opening in the door for the extension, and opposite the lock-mortise, so that on thin doors there will be but little wood left on each side of the lock in which to insert the screws which hold the rose in position; consequently the handle and plate are certain to work loose. In this device the movement of the handle is toward and from the door, and not parallel therewith.

In my improved devices the rose is secured above the lock-mortise, the long screws entering the solid wood, or, when the escutcheon is a part of the rose, also below the mortise, thereby firmly attaching the furniture to the door. I am able to accomplish this by employing the arm secured to the end of the shank within the recess *d* in the rose-plate, extending down within the said recess, as previously described, and entering the recess in the door opposite the latch is adapted to draw the same.

Another advantageous result of using the long arm is that a handle of sufficient length for grasping and increased leverage may be arranged vertically on the door swinging either from right to left, or vice versa, without interfering with the key, which may be left in the door. When the handle is arranged other than vertically, as found in some devices, the same furniture cannot be used on either right or left hand doors because of interfering with the jamb; but by my arrangement and construction the same piece of furniture may be used in either way without necessitating the slightest change in the parts. Furthermore, as the movement of the handle follows the movement of the arm, because they extend downward in the same direction and are parallel, in drawing the latch the motion is always away from the jamb, or from the opposite door, when used on double doors, avoiding the liability of striking the knuckles.

Having thus described my invention, what I claim as new is—

1. The combination, with a handle set eccentrically upon a shank and cast integrally therewith, of a recessed plate, said shank bearing and working pivotally in said plate, an arm secured to the shank and extending down within the recess or chamber in said recessed plate parallel with and in the same direction as the handle, and provided with a bent end adapted to engage with and actuate a latch, substantially as set forth.

2. The combination, with a door having latching mechanism arranged therein, and a recess or recesses, *v*, of a recessed plate, a shank bearing and working pivotally in said recessed plate and provided with a handle set eccentrically thereon and cast integrally therewith, and a lever or arm extending downward within the recess in the same direction as and parallel with the eccentric handle and secured to said shank within the recess in said plate, provided with a bent arm or finger-piece adapted to enter the said recess *v* in the door and engage with and actuate the latch, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

ORVELLAS H. GILBERT.

Witnesses:

CHARLES H. PELL,

F. F. CAMPBELL.