J. POWERS.

DOOR LOCK FASTENER.

APPLICATION FILED AUG. 7, 1911.

1,020,157.

Patented Mar. 12, 1912.

Fig. 1

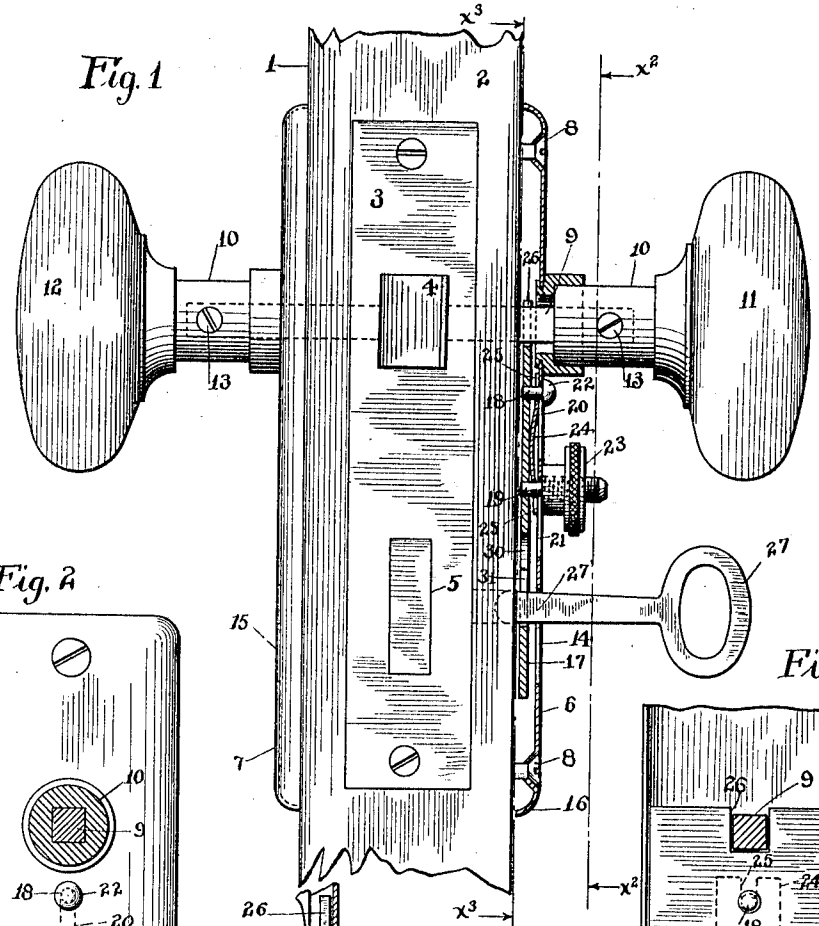


Fig. 2

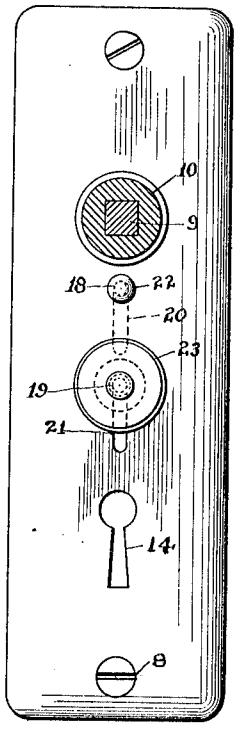


Fig. 4

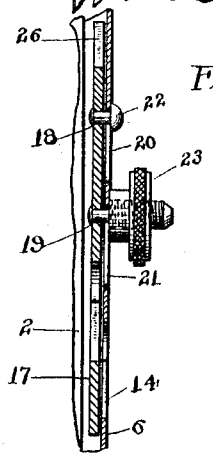
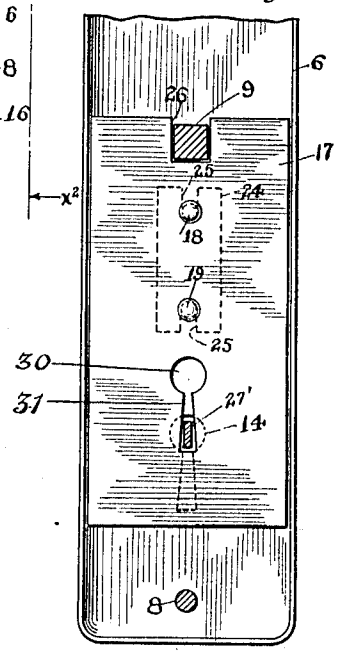


Fig. 3



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UNITED STATES PATENT OFFICE.

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DOOR-LOCK FASTENER.

1,020,157. Specification of Letters Patent. Patented Mar. 12, 1912.

Application filed August 7, 1911. Serial No. 642,871.

To all whom it may concern:

Be it known that I, JOHN POWERS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Door-Lock Fastener, of which the following is a specification.

This invention is an improvement on a previous patent of mine, No. 991,018, issued May 2, 1911, and relates to an inside fastener for door locks and the main object of the invention is to provide fastening means which locks the knob spindle from rotation, and in the same operation brings the locking member into position back of the key hole so as to lock the key from turning if the key is in the lock, the same device serving for locking the knob spindle and the key by simultaneous operation.

Another object of the invention is to provide means for securing the locking device in either locking or releasing position.

Other objects of the invention will appear hereinafter.

The accompanying drawings illustrate an embodiment of the invention, and referring thereto:

Figure 1 is an elevation, partly in section, of the edges of a door, showing an embodiment of the invention. Fig. 2 is a section on line x^2—x^2 Fig. 1. Fig. 3 is a sectional view on line x^3—x^3 Fig. 1. Fig. 4 is a vertical section showing a modification.

1 designates a door having set into the stile 2 thereof a lock 3, of the usual form of door lock, provided with a latch bolt 4 and lock bolt 5. Escutcheon plates 6 and 7 are secured to the inside and outside of the door respectively by means of screws as shown at 8. The latch bolt 4 is operated by means of a square knob spindle 9 connected thereto by suitable mechanism, not shown, the ends of the knob spindle being secured in the shanks 10 of the door knobs 11 and 12 by means of screws 13 so that when either the inner or outer knob of the door is turned, the knob spindle is turned to throw the latch bolt back so that the door may be opened. The lock bolt 5 may be operated independently of the latch by means of a suitable key 27 inserted through either key hole 14 or 15 in the escutcheon plates 6 and 7 respectively.

The escutcheon plates 6 and 7 are each made of sheet metal having their edges turned back, as indicated at 16, so that the body portion of the plate is raised from the face of the door, leaving a space between the face of the door and the body portion of the plate. The fastener consists of a flat metal keeper plate 17 secured to the back of the plate 6 by means of studs 18 and 19 which pass through vertical slots 20 and 21 respectively in the plate 6. The upper stud 18 is provided with a head 22 engaging on the outside of the escutcheon plate and the lower stud is screw-threaded to receive and engage the thumb nut 23 on the outside of the plate 6, said thumb nut serving as a handle for raising and lowering the plate and also serving as means for clamping the plate in either raised or lowered position. A flat bow spring 24 may be provided between the keeper plate 17 and the escutcheon plate 6, said spring being held in place by means of studs 18 and 19 which engage in slots 25 in the upper and lower edges of said spring. The thumb nut 23 also serves for adjusting the pressure of said spring by drawing the keeper plate toward the escutcheon plate 6.

The keeper plate 17 is provided with a slot 26 which engages the square knob spindle 9 when moved into its upper position. When the keeper plate is in engagement with the knob spindle as above described, the knobs 11 or 12 cannot be turned to throw the latch bolt. Said keeper plate 17 is preferably extended down so as to extend back of the key hole 14 and is provided with a key hole slot 30 inside of said key hole, said key hole slot having a narrow lower portion or slot 31 adapted to engage a flattened portion of the key indicated at 27′ so as to prevent the key from being turned when the keeper plate is in raised position. Thus, the same operation of the keeper plate locks the knob spindle from turning, it being assumed that the key has been left in the lock when the fastener is being used.

The spring for frictionally engaging the keeper plate may be omitted as shown in Fig. 4, the parts being otherwise as above described, and the function of the thumb nut 23 in that case being simply to clamp the keeper plate in said position and to serve as a handle for the keeper.

In the operation of the device, the key being inserted and the door being closed and locked by the key, and the key left in the lock the inside fastener or keeper plate 17

is pushed up by means of the thumb nut 23 bringing its squared slots 26 and 31 in engagement respectively with the squared portion of the knob spindle and with the flattened portion of the key the side walls of both slots 26 and 31 extending vertically so as to fit and interlock with the knob spindle and the flattened portion of the key respectively, thereby preventing both the knob spindle and key from turning, and also preventing the key from being pushed out by engagement of the keeper plate back of the ward of the key.

What I claim is:

1. The combination with a lock having a square knob spindle, a bolt and an escutcheon plate provided with a key hole for receiving a key to operate said bolt, a key extending through said key hole and having a flattened portion, said escutcheon plate having upper and lower slots, a keeper plate sliding within said escutcheon plate and having studs extending through said slots, one of said studs being screw-threaded, a thumb nut on said screw-threaded stud on the outside of the escutcheon plate serving as handle and clamping means for the keeper plate, said keeper plate having slots in its upper and lower portions for engagement respectively with the knob spindle and with the flattened portion of the key, to prevent rotation of the spindle and key.

2. The combination with a lock having a square knob spindle, a bolt and an escutcheon plate provided with a key hole for receiving a key to operate said bolt, a key extending through said key hole and having a flattened portion, said escutcheon plate having upper and lower slots, a keeper plate sliding within said escutcheon plate and having studs extending through said slots, one of said studs being screw-threaded, a thumb nut on said screw threaded stud on the outside of the escutcheon plate serving as handle and clamping means for the keeper plate, said keeper plate having slots in its upper and lower portions for engagement respectively with the knob spindle and with the flattened portion of the key to prevent rotation of the spindle and key, and a bow spring between the keeper and escutcheon plates, engaging said plates and said studs.

3. The combination with a lock having a square knob spindle, a bolt and an escutcheon plate provided with a key hole for receiving a key to operate said bolt, a key extending through said hole and having a flattened portion, said escutcheon plate having upper and lower slots, a keeper plate sliding vertically within said escutcheon plate and having studs extending through said slots for guiding said keeper plate, one of said studs being provided with means on the outside of the escutcheon plate serving as a handle for the keeper plate, said keeper plate having a slot at its upper end having vertically extending side walls for engaging with the knob spindle when the keeper plate is raised to prevent rotation of the knob spindle, and said keeper plate having a keyhole slot in its lower portion, the narrow portion of said keyhole slot having vertically extending side walls adapted to engage with the flattened portion of the key to prevent rotation of the key when the keeper plate is raised, and a spring between said keeper plate and escutcheon plate and frictionally engaging with the keeper plate for holding said keeper plate in raised or lowered position.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 28th day of July, 1911.

JOHN POWERS.

In presence of—
ARTHUR P. KNIGHT,
GLADYS RUSSELL.