(No Model.)

F. J. BIGGS.

REVERSIBLE LATCH.

No. 303,694. Patented Aug. 19, 1884.

Fig. 1.

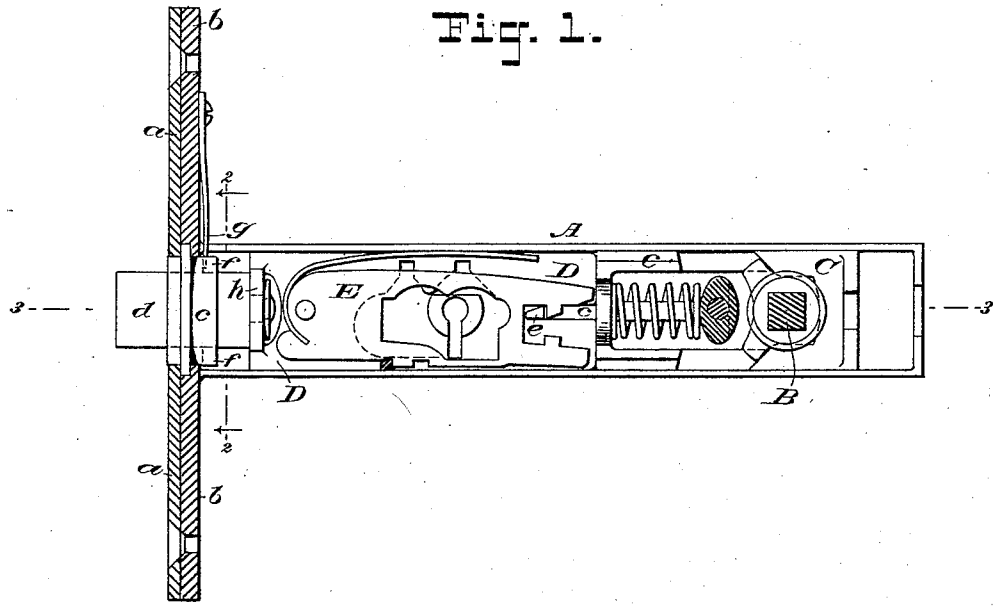


Fig. 2.

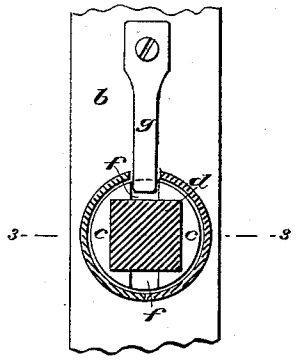
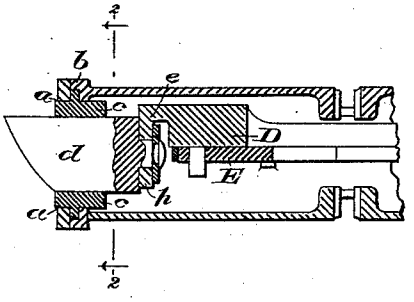


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK JAMES BIGGS, OF LONDON, ENGLAND.

REVERSIBLE LATCH.

SPECIFICATION forming part of Letters Patent No. 303,694, dated August 19, 1884.

Application filed April 9, 1884. (No model.) Patented in England October 2, 1883, No. 4,675.

To all whom it may concern:

Be it known that I, FREDERICK JAMES BIGGS, of London, England, have invented certain new and useful Improvements in Reversible Latches, of which the following is a specification.

My invention relates to reversible latches, or those which can be adapted to either a right-hand door or a left-hand door.

Figure 1 of the accompanying drawings is a vertical longitudinal section of one form of a latch or latch-lock embodying my invention. Fig. 2 is a fragmentary transverse section cut on the line 2 2 in Fig. 1; and Fig. 3 is a fragmentary longitudinal section on a horizontal plane, as denoted by the line 3 3 in Figs. 1 and 2.

The particular construction of latch-lock herein shown is that embodied in my application for patent on "latch-locks" filed on the same day as this present application, to which reference is hereby made for a particular description of the lock or latch mechanism.

Referring to the drawings, let A designate the lock-case, the body of which is shown as of cylindrical form, and the front plate, *b*, of which is supplemented by a face-plate, *a*. B is the knob-shank, which passes through the case; C, a slide or bolt which it operates; D, the sliding latch-bolt, and E a tumbler pivoted to the latter. When this tumbler is in engagement with a tooth, *e*, on the slide C, as shown in Fig. 1, the latch-bolt is in connection with the knob, and the device constitutes a knob-latch. The bolt D has a sliding motion only, being non-rotative. Its front end is provided with a perforated lug, *h*, to which the bevel-faced latch *d* is attached by a swivel-connection in such manner that the latch *d* may be rotated while the bolt remains stationary. This connection is best shown in Fig. 3.

In the front plate, *b*, and its face-plate *a* is formed a circular hole, and in this is placed a circular flanged disk, *c*, its flange entering a groove in the front plate and being confined in place by the plate *a*, so that when the latter is applied the disk is free to turn in the hole. This disk is provided with a rectangular hole through which the latch *d* passes freely, and in its rear side are formed two diametrically-opposite notches, *f f*. A leaf spring or catch, *g*, is fastened at one end to the back of the front plate, *b*, and its free end enters the case A through a recess and projects into one of the notches *f f*. If the latch is set for a right-hand door, it is obvious that to adapt it for a left-hand door it is only necessary to rotate the latch *d* one-half a revolution. To do this the spring *g* must be pressed back to free its end from the notch *f*. Then the latch *d* may be readily turned by the hand, the disk *c* turning with it, and when it has been completely reversed the spring *g* snaps into the other notch *f*.

My improved reversible latch possesses several practical advantages over reversible latches as made prior to my invention, such, for instance, as that shown in United States Patent No. 32,551, dated June 11, 1861. The latch *d* being swiveled to the bolt D, the latter need not be made to rotate as has heretofore been necessary. The bolt may also be arranged with its axis intersecting the axis of the knob-shank, instead of being necessarily placed considerably above or below the latter, as heretofore, thus favoring compactness, and enabling a cylindrical case to be used. The employment of a double front plate, *a b*, enables the disk *c* to be cheaply and securely mounted; and, finally, the catch, consisting of the leaf-spring *g*, is convenient of manipulation, as it can be readily sprung back by inserting a knife-blade or screw-driver between it and the front plate and prying it back. If, then, the latch *d* be turned but partly around, it may be left thus until the device has been fastened to the door, and be finally turned either to right or left, as may be necessary, when the latch will snap in and hold it.

So far as I am aware mine is the first reversible latch which has not to be turned either to right or left before it can be screwed to the door.

I claim as my invention—

1. In a reversible latch, the combination, with the latch-case and the disk *c*, mounted rotatively in the front plate thereof, of the latch *d*, arranged to work in a rectangular hole

in said disk, and the non-rotative bolt D, connected to said latch by a swivel-connection, whereby the latch *d* and disk *c* may be turned independently of said bolt, substantially as and to the effect set forth.

2. In a reversible latch, the combination, with the case, of the circular disk mounted rotatively in a hole in the front plate, and formed with notches *f f* in its rear face, a spring-catch, *g*, attached to the rear of the front plate, tending to spring toward the front into one of said notches, and adapted to be pressed backward to free it therefrom, and the latch *d*, substantially as set forth.

3. In a reversible latch, the combination, with the case, the front plate of which is made in two parts, *a* and *b*, with a circular hole formed through both and a circular groove formed between them, of the flanged circular disk *c*, arranged rotatively in said hole with its flange confined in said groove, and the latch *d* and bolt D, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

FREDERICK JAMES BIGGS.

Witnesses:
GEORGE C. BACON,
WALTER T. BROWNE.