W. A. C. Oaks,

Reversible Lock.

No. 81,529. Patented Aug. 25, 1868.

Fig. 1

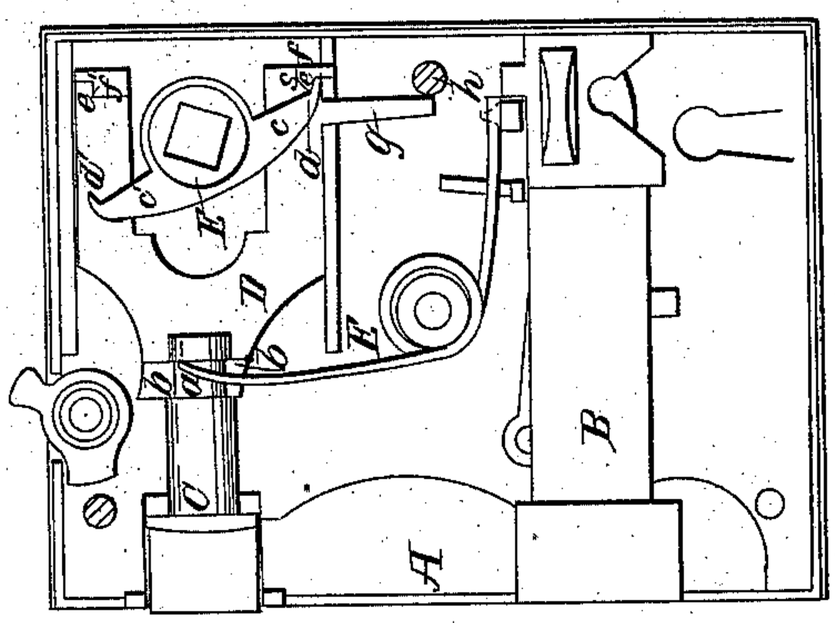
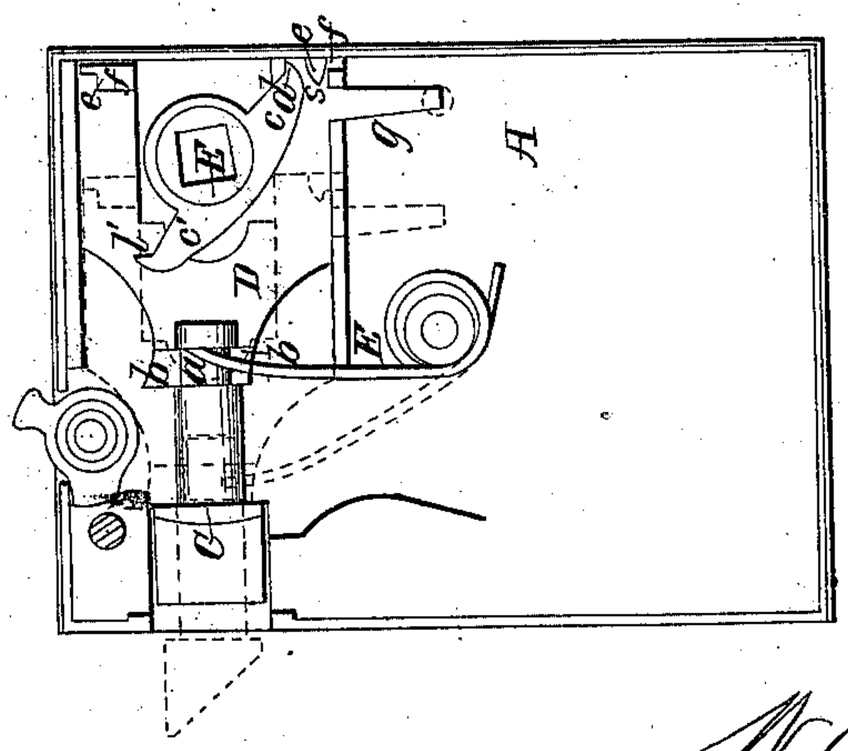


Fig. 2



Witnesses:

W. Crumby

A. Sellers

Inventor:

W. A. C. Oaks,

Per Brown Coombs & Co

Atty

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

United States Patent Office.

W. A. C. OAKS, OF READING, PENNSYLVANIA, ASSIGNOR TO W. M. GRISCOM, OF SAME PLACE.

Letters Patent No. 81,529, *dated August* 25, 1868.

IMPROVEMENT IN REVERSIBLE KNOB-LATCH.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, W. A. C. OAKS, of Reading, in the county of Berks, and State of Pennsylvania, have invented a new and useful Improvement in Reversible Latch-Locks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figures 1 and 2 represent face views of the interior of a reversible latch-lock, or same in part, showing my improvement as applied thereto in different positions of the latch and follower.

Similar letters of reference indicate corresponding parts.

My improvement in reversible latch-locks embraces—

Firstly, such a peculiar construction of the follower and bolt, or its yoke or slide, as that the back movement of the latch-bolt is effected for a given distance only by the follower, sufficient to secure the unlatching of the bolt, after which the latter is restrained by the follower from further motion backwards, though free to be otherwise forced inwards to effect reversal of the bolt.

Secondly, the invention consists in such a construction of the follower and bolt or yoke, as that when the bolt is pushed back beyond the limit of its action by the follower, said arms are or may be disengaged from gear with the bolt, to allow of the protrusion of the latter for the purpose of effecting its reversal.

Referring to the accompanying drawing, A represents the case of the lock; B is an ordinary locking-bolt to the same, and C the latch-bolt. This latter bolt, which is of a reversible character, to adapt the lock to right and left-hand positions or actions, is freely or loosely hung by a journal, *a*, in the forward end of the yoke D, as between projections or sides *b b*, to an open slot, which forms a simple and cheap mechanical construction or mode of attaching the bolt to the yoke, and of allowing it to be turned when required, said bolt, when not drawn out for the purpose of reversal, being guided at its nose or forward end by a suitable construction of the case.

E is the follower, for operating the latch-bolt, by turning a knob-spindle, in gear with the hub of the same, as usual. The arms *c* and *c'* of this follower are so formed and the yoke so constructed as that, in the ordinary operation of working the bolt, said arms will allow of the latter being forced a given distance backwards for its nose to enter the case, so as to be out of locking projection, but no further, so far as the action of the follower in the bolt is concerned, the arms *c* and *c'* being made, say, with hook-nosed ends *d d*, or the one arm *c'* having such construction, and the opposite arm *c* a less prominent similar shape, or the two arms being otherwise equivalently constructed, so that the action of the follower on the bolt through the yoke is restricted, as specified, by, say, after such limit to the back movement of the bolt has been reached, either arm at its hooked end bearing down on a step, *e*, of the yoke-projection *f* or *f'*, against which the follower acts, without exerting any further tendency (as shown in fig. 1) to move back the yoke, but the latter being so hung and constructed as that when force is applied to the bevel or nose of the bolt, as, for instance, by the thumb, and the bolt pressed further back, till the yoke, say, strikes the back of the case, then the follower can be turned sufficiently far to cause it to be disengaged from gear with the yoke, as represented by black lines in fig. 2, when the bolt C, with the yoke, is forced or thrown outwards far enough for the nose or bevel of the bolt to protrude clear of the edge of the case, when the bolt can be reversed, as is represented in the act of being done by red lines in fig. 2. After this, the bolt and yoke may be pushed back, and the gear with the follower be re-established.

To accomplish this action of the follower and yoke, the one projection, *f*, is cut away or bevelled, as at *s*; also, it may be, the step *e* of such projection, made slightly bevelled or inclined, which gives a ready clearance for the one arm *c* of the follower to disengage with the yoke, and for the latter afterwards to shoot outwards, and subsequently to have its gear with the follower re-established.

If desired, the other projection, *f'*, may be similarly constructed, as regards the clearance *s*, and the arm *c'* be suitably formed, so that the follower may be turned in either direction to disengage it with the yoke, and to admit of the gear being established again; but to prevent confusion, it is preferred to construct these parts

so that the disengagement can only be effected from the one side of the follower, or by turning it in the one direction.

As it is seldom or never desirable to reverse the bolt C when the lock or lock-case is on the door, but only when transferring or locating the same, accordingly as the position, so far as concerns its regular action, is required to be right or left-handed, I cause the back movement of the yoke D, necessary to effect its disengagement with the follower, in order that the bolt may be reversed, as described, to be restrained or prevented by, say, an arm, *g*, of the yoke in the rear movement of the latter to effect unlatching, coming in contact with or striking the screw *h*, which passes through the case to secure the lock to the door. On taking out said screw, however, to remove the lock or case, the parts are then free to be operated, as described, for reversal of the bolt, without taking off the lock-cover or plate.

To effect the shooting of the latch-bolt C and yoke D, I employ the same spring, E, as is used to control the tumbler of the locking-bolt, by extending the one end of it so as to bring it into lock or gear with the yoke at or over the journal *a*, which arrangement of the spring also serves to keep the latch-bolt C down, or to its place, within the open slot formed by the side projections *b b* on the yoke, and prevents it from rattling.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The follower E, or its arms *c c'*, constructed substantially as described, in combination with the steps *e* on the yoke-projections *f f'*, or their equivalents, arranged in such manner as that the back movement of the latch-bolt is effected for a given distance only by the follower, and so restricted by the gear of the follower with the bolt or yoke, without, however, preventing the bolt from being moved further back by direct application of force to it, essentially as herein set forth.

2. So constructing the follower-arms and bolt or yoke, against which they act to draw back the bolt, as that when the latter is pushed back beyond its unlatching-position, as described, and the follower slightly further turned, said arm or arms are disengaged from gear with the bolt or its yoke to allow of the protrusion of the bolt sufficiently beyond the front edge of the case to admit of its reversal, substantially as specified.

W. A. C. OAKS.

Witnesses:
D. YOUNG JONES,
JOHN H. RUTH.