

(No Model.)

I. ANDERSON.
LOCK.

2 Sheets—Sheet 1.

No. 576,531.

Patented Feb. 9, 1897.

FIG. 2.

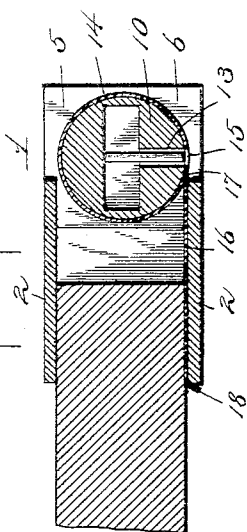


FIG. 3.

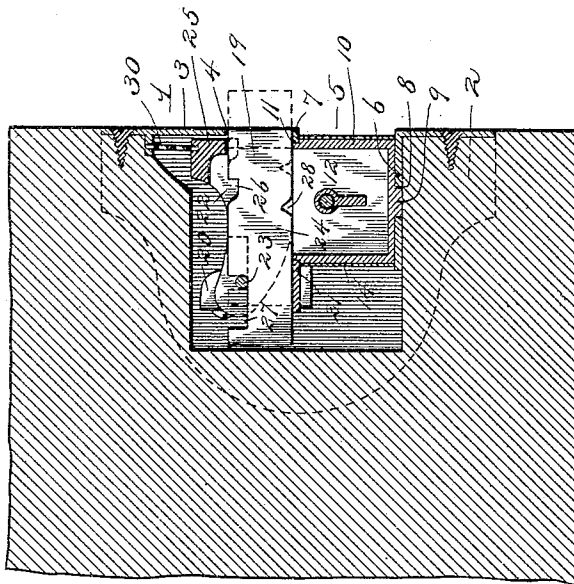
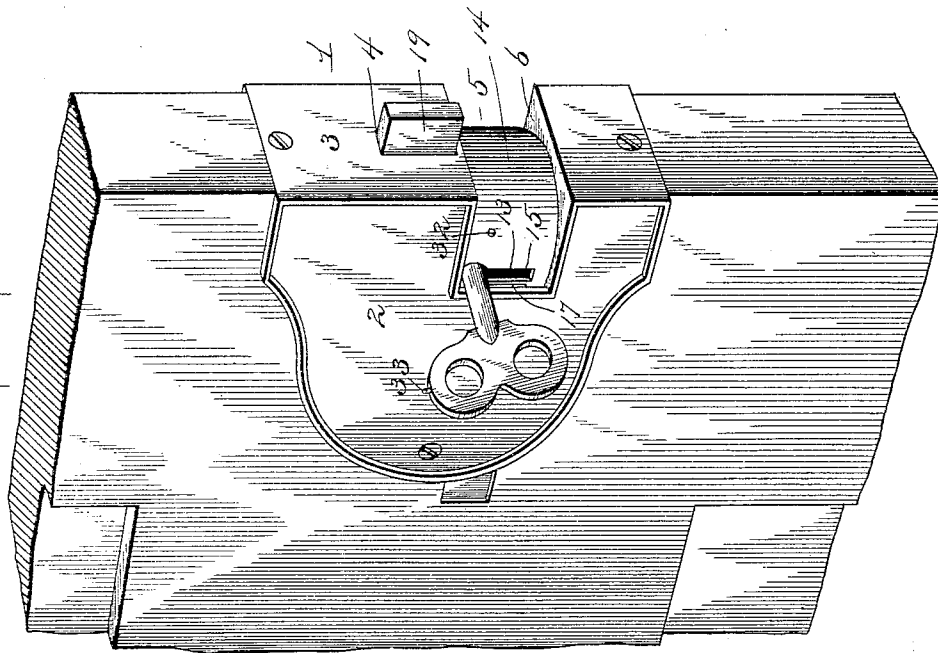


FIG. 1.



Inventor

Witnesses

Harry L. Ames.
R. M. Smith

By his Attorneys,

Isaac Anderson.

C. A. Snow & Co.

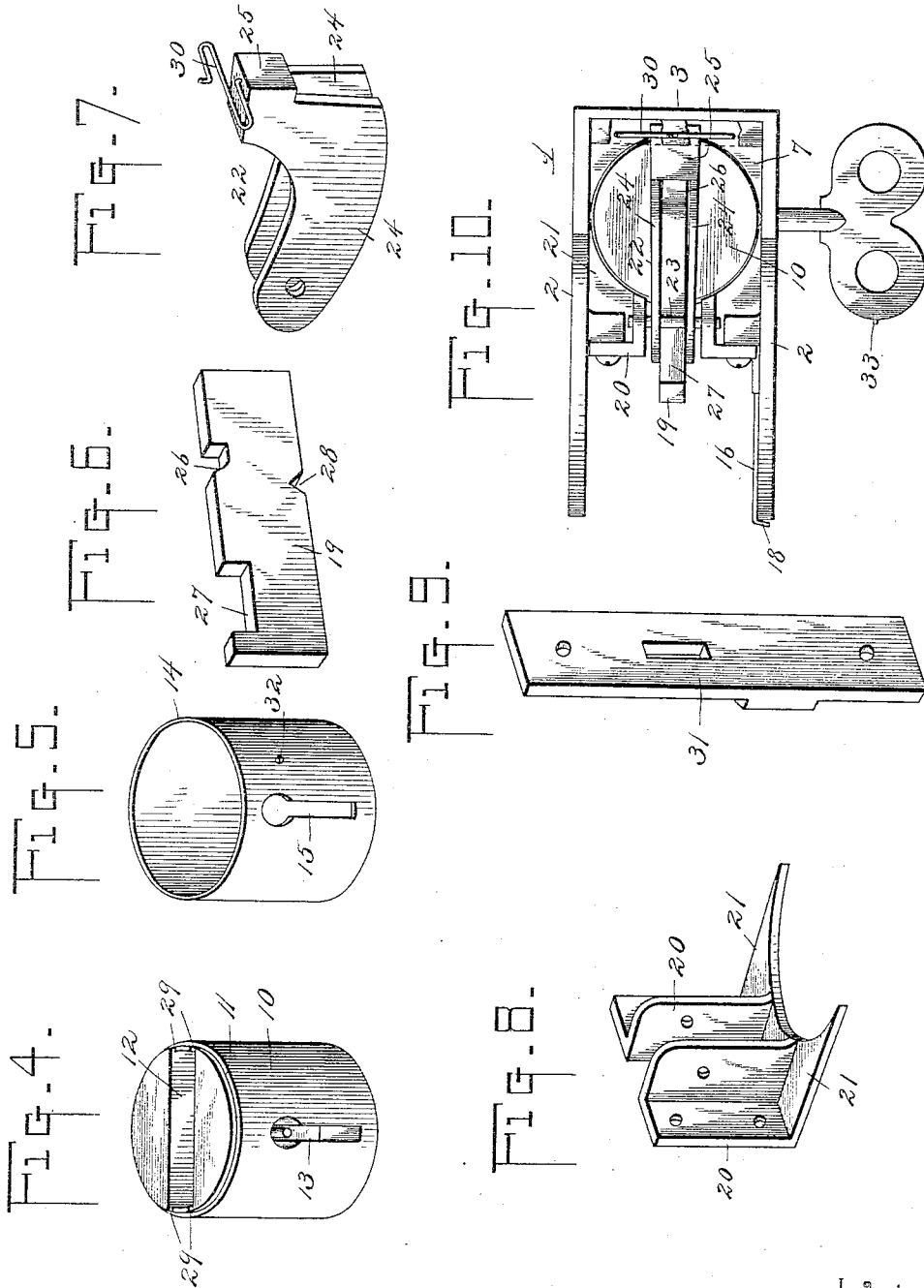
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UNITED STATES PATENT OFFICE.

ISAAC ANDERSON, OF DAYTON, OHIO, ASSIGNOR TO ROBERT W. HUTCHINSON,
OF MARCELLUS, MICHIGAN.

LOCK.

SPECIFICATION forming part of Letters Patent No. 576,531, dated February 9, 1897.

Application filed June 2, 1896. Serial No 593,963. (No model.)

To all whom it may concern:

Be it known that I, ISAAC ANDERSON, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Lock, of which the following is a specification.

This invention relates to locks; and the principal aim of the invention is to provide a lock which is reversible, so that it may be applied to either edge of any door, the said lock having a movable key-socket which is capable of being reversed without detaching the lock-case from the door.

A further object of the invention is to provide a lock-case with a rotatable portion having a keyhole at one side only, the said rotatable portion being capable of being reversed for bringing the keyhole either to the outside or inside of the door, thus adapting the lock to be worked from either side of the door, the arrangement being such that when the keyhole is brought to one side of the door the lock may not be worked from the opposite side of the door.

A further object of the invention is to provide means for locking the rotatable portion of the case and other means for closing and concealing the keyhole.

With these and other objects in view the invention consists in an improved lock embodying certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claims hereto appended.

In the accompanying drawings, Figure 1 is a perspective view of the improved lock, showing also a portion of a door to which the lock is applied. Fig. 2 is a horizontal section through the same, taken in line with the sliding clutch. Fig. 3 is a vertical longitudinal section through the same, showing the two positions of the bolt in full and dotted lines. Fig. 4 is a detail perspective view of the rotatable key-socket. Fig. 5 is a similar view of the sleeve surrounding said socket. Fig. 6 is a detail perspective view of the lock-bolt. Fig. 7 is a similar view of the tumbler. Fig. 8 is a detail perspective view of the removable bracket in which the bolt and tumbler are

mounted. Fig. 9 is a similar view of a keeper to be used in connection with the lock. Fig. 10 is a plan view of the lock detached.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the lock-case, which may be formed in one or more pieces and which comprises the spaced parallel side plates 2, for embracing the edge of the door upon opposite sides, and the face-plate portion 3, which is let into the swinging edge of the door so as to lie flush therewith, the said face-plate 3 being formed with the opening 4, through which the lock-bolt reciprocates.

In order to carry out the present invention, the lock-case is provided with a substantially rectangular recess 5, extending back from the face-plate 3. The base of this recess 5 is provided with a flooring 6, formed by extending a web transversely across between the side plates 2, said web connecting the plates rigidly and serving to strengthen the lock-case. The upper portion of the recess 5 is partially covered by a segmental web 7. The web or flooring 6 is provided with a circular opening 8 near its center, which forms a bearing for a depending trunnion or short spindle 9 on the bottom of a rotatable key-socket 10. This key-socket is preferably of cylindrical form and its upper edge or end is rabbeted, as shown at 11, to engage the segmental web 7, above referred to. The cylindrical key-socket is thus mounted within the lock-case so as to turn upon a vertical axis, and it is provided with a central cavity 12, in which the bit of the key may work, and also with a keyhole 13, leading outward from said cavity to the periphery of the socket. By means of this construction the cylindrical key-socket may be rotated so as to bring the keyhole to either side of the door, and this may be done while the key is in the socket and without removing the key, the key being employed to turn the socket, although the socket may be turned without the aid of the key.

A sleeve 14 surrounds the cylindrical key-socket and is provided with a keyhole 15, which may be brought into alinement with

the keyhole in the socket-piece. The sleeve 14 is mounted loosely on the key-socket 10, so that it may be turned around the same, thus enabling the keyhole 13 to be covered and concealed. When the sleeve is turned to the desired position, it may be held locked by means of a sliding clutch 16 in the form of a metal strip sliding behind one of the plates 2 of the case and having a wedge-shaped end 17 for engaging between the sleeve 14 and the lock-case and provided at its opposite end with a lip 18, by means of which it may be slid into and out of engagement with the sleeve 14. This sliding clutch is preferably arranged upon the inside of the door, and by jamming in between the sleeve 14 and the lock-case the sleeve is held against rotation.

19 designates the lock-bolt, which slides at its front end through the opening 14 in the lock-case and at its opposite end is slidably supported in a bracket 20, removably fitted within the lock-case and held therein by suitable fastenings. This bracket 20 is provided with a segmental base portion 21, which embraces the upper end of the key-socket 10 within the rabbet 11 and serves, in connection with the web 7, to hold the key-socket in place.

22 designates the lock-tumbler, which is fulcrumed at one end upon a transverse horizontal pin 23 on the bracket 20. This tumbler comprises spaced cheek portions or plates 24, which straddle the bolt 19, and these plates are connected by means of a cross-piece 25 at their free swinging ends, the said cross-piece being adapted to engage with one or more notches 26 in the upper edge of the bolt 19 for holding the latter in or out. The bolt is also provided in its upper edge with a notch or recess 27, in which the transverse pin 23 is received and which permits the lock to reciprocate without being interfered with by said pin. The side plates or cheek portions of the tumbler extend below the plane of the key-notch 28 in the bottom edge of the bolt, in which the bit of the key is received for reciprocating the bolt, and the cylindrical key-socket 10 is formed in its upper end with notches 29, arranged at opposite ends of the cavity in which the bit of the key works, the said notches 29 being adapted to receive the bottom edges of the side plates or portions of the tumbler when the latter is depressed, the tumbler thus simultaneously locking the bolt and the key-socket and preventing the latter from being turned.

30 indicates a serpentine spring interposed between the top of the tumbler and the lock-case for pressing the tumbler into engagement with the bolt and key-socket. Any form of keeper 31 may be used in connection with the lock above described.

From the foregoing description it will be seen that the lock-case is provided with what may be termed a "rotatable" portion, said portion having been also heretofore designated as the "key-socket." It will be seen

that this rotatable portion or key-socket may be instantly reversed for bringing the keyhole of the lock either upon the inside or the outside of the door, and that when said keyhole is turned to one side of the door it will be impossible to unlock the door from the opposite side, as there is no place to insert the key. It will be apparent also that by means of the sleeve which surrounds the rotatable portion of the case or the key-socket the keyhole may be covered and entirely concealed, and the sleeve itself may be locked against fraudulent manipulation by means of the sliding clutch described. To facilitate the turning of the sleeve 14, the latter is provided with a socket or opening 32, adapted to be engaged by a pin, stud, or other projection 33 on the key, as shown in Figs. 1 and 10. In addition to these advantages the lock is applicable to either edge of a door, not requiring to be made in rights and lefts.

Any desired ornamental finish may be imparted to the lock-case, and it will be understood that the lock is susceptible of changes in the form, proportion, and minor details of construction, which may accordingly be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new is—

1. A lock having that portion in which the keyhole is formed movable so that said keyhole may be presented at either side of a door, substantially as described.

2. A lock having a rotatable portion which is provided with a keyhole adapting the key to be inserted substantially at a right angle to the axis of rotation, substantially as described.

3. A lock having a movable part which is provided with a keyhole and made reversible, adapting the keyhole to be shifted from one side of a door to the other, substantially as described.

4. A lock having a reversible key-socket adapted to be swung on a vertical axis for bringing the keyhole to either side of the door, substantially as described.

5. A lock having a cylindrical key-socket, in combination with a sleeve surrounding the same loosely and adapted to be turned for covering and concealing the keyhole, substantially as described.

6. A lock having a cylindrical key-socket, in combination with a sleeve surrounding said key-socket and adapted to be turned for concealing the keyhole, and a clutch for engaging said sleeve, substantially as and for the purpose described.

7. In a lock, a reversible key-socket, and a sleeve surrounding said socket and adapted to be moved for covering and concealing the keyhole, in combination with a movable clutch adapted to engage between said sleeve and a fixed part of the lock-case, substantially as and for the purpose described.

8. In a lock, the combination with the lock-bolt and the tumbler, of a reversible key-socket having provision whereby it is adapted to be engaged by the tumbler and held from moving, substantially as described.

9. In a lock, the combination with the bolt, of a reversible key-socket, and a tumbler adapted to engage the bolt and also adapted to simultaneously engage the key-socket for holding the latter against movement, substantially as and for the purpose described.

10. The combination with a lock-case formed with a recess as described, of a cylindrical key-socket mounted in said recess and adapted to turn therein for reversing the position of the keyhole, a bracket removably fitted in the case and having a portion which engages and forms a bearing for the key-socket, the reciprocating bolt, and the pivoted tumbler fulcrumed on said bracket and cooperating with the bolt and key-socket, substantially in the manner and for the purpose described.

11. In a lock, the combination with the bolt, of a reversible key-socket, a tumbler adapted to engage the bolt and also adapted to simultaneously engage the key-socket for holding the latter against movement, and a spring bearing against said tumbler for holding the

latter in engagement with the bolt and key-socket, substantially as described.

12. A lock having a rotatable cylindrical key-socket, in combination with a sleeve surrounding the same and provided with a socket or opening adapted to receive a pointed instrument, whereby the sleeve may be turned relatively to and upon the key-socket for covering and concealing the keyhole, substantially as described.

13. In a lock, the combination with the lock-case, of a reciprocating bolt having notches in its upper and lower edges, a tumbler fulcrumed at one end upon a transverse pin crossing the plane of the bolt and extending through one of the notches therein, the said tumbler comprising parallel side plates adapted to embrace the bolt and connected at their swinging ends by a cross-web which engages the bolt, and a spring interposed between the tumbler and a fixed point, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ISAAC ANDERSON.

Witnesses:

E. BECKER,

ED. J. MANCHESTER.