(No Model.)

W. H. ANDREWS & H. H. SPARKS.

LOCK.

No. 291,663. Patented Jan. 8, 1884.

Fig. 1

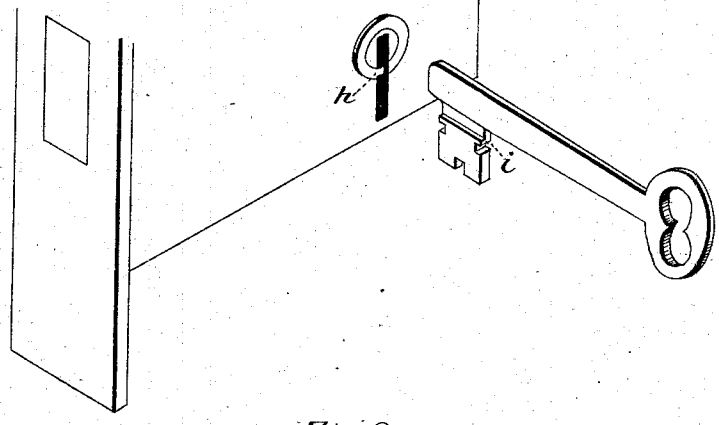


Fig. 2

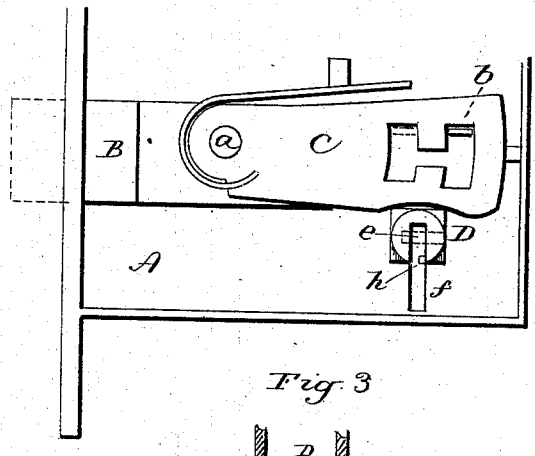
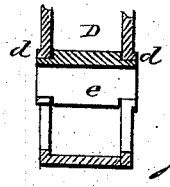


Fig. 3



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UNITED STATES PATENT OFFICE.

WILLIAM H. ANDREWS AND HENRY H. SPARKS, OF NEW HAVEN, CONN., ASSIGNORS TO MALLORY, WHEELER & CO., OF SAME PLACE.

LOCK.

SPECIFICATION forming part of Letters Patent No. 291,663, dated January 8, 1884.

Application filed June 11, 1883. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. ANDREWS and HENRY H. SPARKS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Door-Locks; and we do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view; Fig. 2, a side view, one of the plates of the lock removed; Fig. 3, a vertical central section through the key-hole.

This invention relates to an improvement in locks such as commonly used for doors, and may be either "mortise" or "rim," and particularly to that class in which the key is made from flat sheet metal, and in which a rotating barrel is arranged in the lock-case to receive the spindle portion of the key and serve as a bearing upon which to turn the key; and the invention consists in the construction as hereinafter described, and more particularly recited in the claim.

A is the lock-case; B, the bolt; C, the tumbler, hung to the bolt, as at *a*, and so as to work over the stump *b* in the usual manner—too well known to require description in this specification.

D is the barrel, having a circular projection, *d*, at each end, which works in a corresponding shaped seat in the two plates of the lock-case. The barrel is substantially square, as seen in Fig. 2, or at least with three sides. Through one side of the barrel is a longitudinal slot, *e*, corresponding to the key-hole *f* in the lock-plates, the width of the slot corresponding to the thickness of the key, the key being made from sheet metal, as seen in Fig. 1. At one side of the key-hole in each of the plates a projection, *h*, is made close up to the bearing of the barrels, and which projection extends, say, half-way (more or less) across the key-hole, so that at the periphery of the bearing the key-hole in the lock-plates is somewhat narrower than the bit of the key, and in the bit, close to the spindle, a longitudinal groove, *i*, is cut corresponding to the projection *h*, and so that when the key is inserted into the key-hole on one side the groove will follow the projection *h* on that side and serve as a guide for the key to conduct the spindle to its bearing in the opposite plate above the projection on that side. It will be understood that the projection *h* in the one plate is on the opposite side to the projection on the other plate, and so that the key may be inserted from either side. These two projections *h*—the one in the one plate and the other in the opposite plate—serve as a bearing on which the spindle will rest, and without which, it will be observed, if the key were introduced into the key-hole and barrel, it would fall fall downward out of place and have no support to retain it in its proper relative position to the barrel until it could be turned with the barrel to bring the key within the control of the bearings of the barrel. After the key has been thus inserted, it is turned in the usual manner, and with it the barrel is turned until the bit of the key will operate to raise the tumblers and throw the bolt in the usual manner. The upper side of the barrel is made flat, so that the tumbler will rest thereon under the force of the spring, and thus will serve to keep the barrel in its proper relation to the key-hole for the insertion of the key. When the key has been inserted and turned, say, to the locked position, as seen in Fig. 2, the second flat side of the barrel will receive the pressure of the tumbler-spring, the tumbler bearing on that side of the barrel, so as to hold the barrel and key in that position, from which it cannot be turned without first overcoming the power of the tumbler-spring, and this cannot accidentally occur; hence when the bolt is thrown and the key left in the lock it is held there against any accidental displacement; or when the key be turned to the unlocked position, as also seen in broken lines, Fig. 2, the tumbler catches the opposite flat side of the barrel before the bit of the key has come into line with the key-hole, and there arrests the barrel, and so as to hold the key in that position as it did in the opposite direction, and thereby prevent accidental displacement of the key when the bolt is drawn.

The opposite flat sides of the barrel serve as a check to the turning of the key, so as to indicate to the person operating the key that further turning is unnecessary unless he desires to remove the key.

From the foregoing it will be understood that we do not claim, broadly, a rotating barrel arranged in the lock to receive the spindle portion of the key, and which barrel will turn with the key; neither do we claim, broadly, a support which will hold the spindle of the key in the barrel and parallel therewith, as such, we are aware, is not new; but in previous constructions the support for the key has been in the barrel itself and independent of the case or plates of the lock—that is, by a groove through the barrel parallel with its axis, and the key constructed with a corresponding rib upon its side to enter and rest in said groove.

We claim—

The combination of the bolt and tumblers, the barrel D, arranged in bearings in the opposite plates of the lock, the said barrel constructed with a longitudinal slot, *e*, corresponding to the key-hole in the lock-plates, a projection, *h*, in the key-hole in the lock-plates at the bearings of the barrel, and the flat key, the bit constructed with a longitudinal groove, *i*, at its junction with the spindle, substantially as and for the purpose described.

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Witnesses:
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