R. McDowell.

Door Lock.

No. 88,577. Patented Apr. 6, 1869.

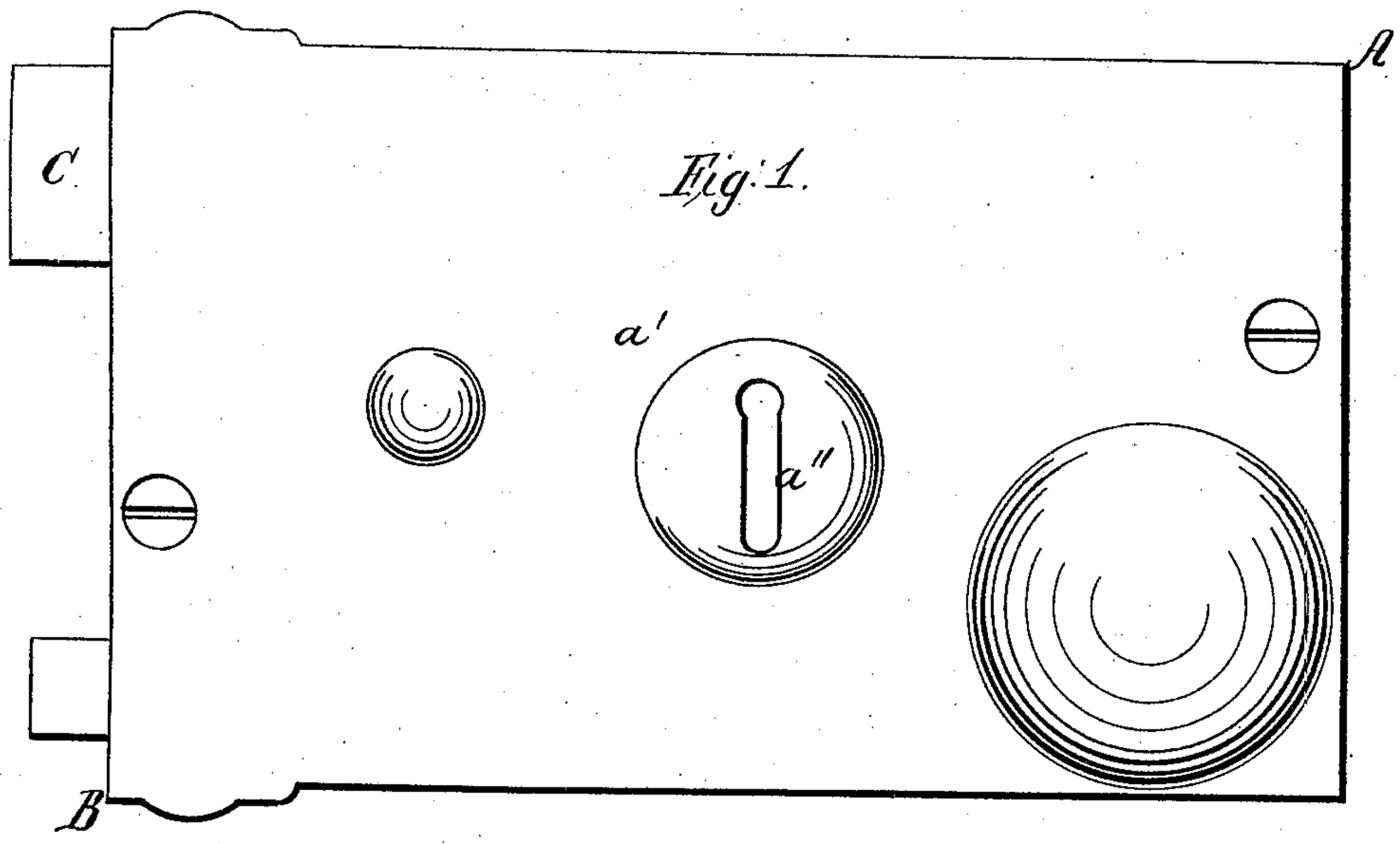

Fig: 1.

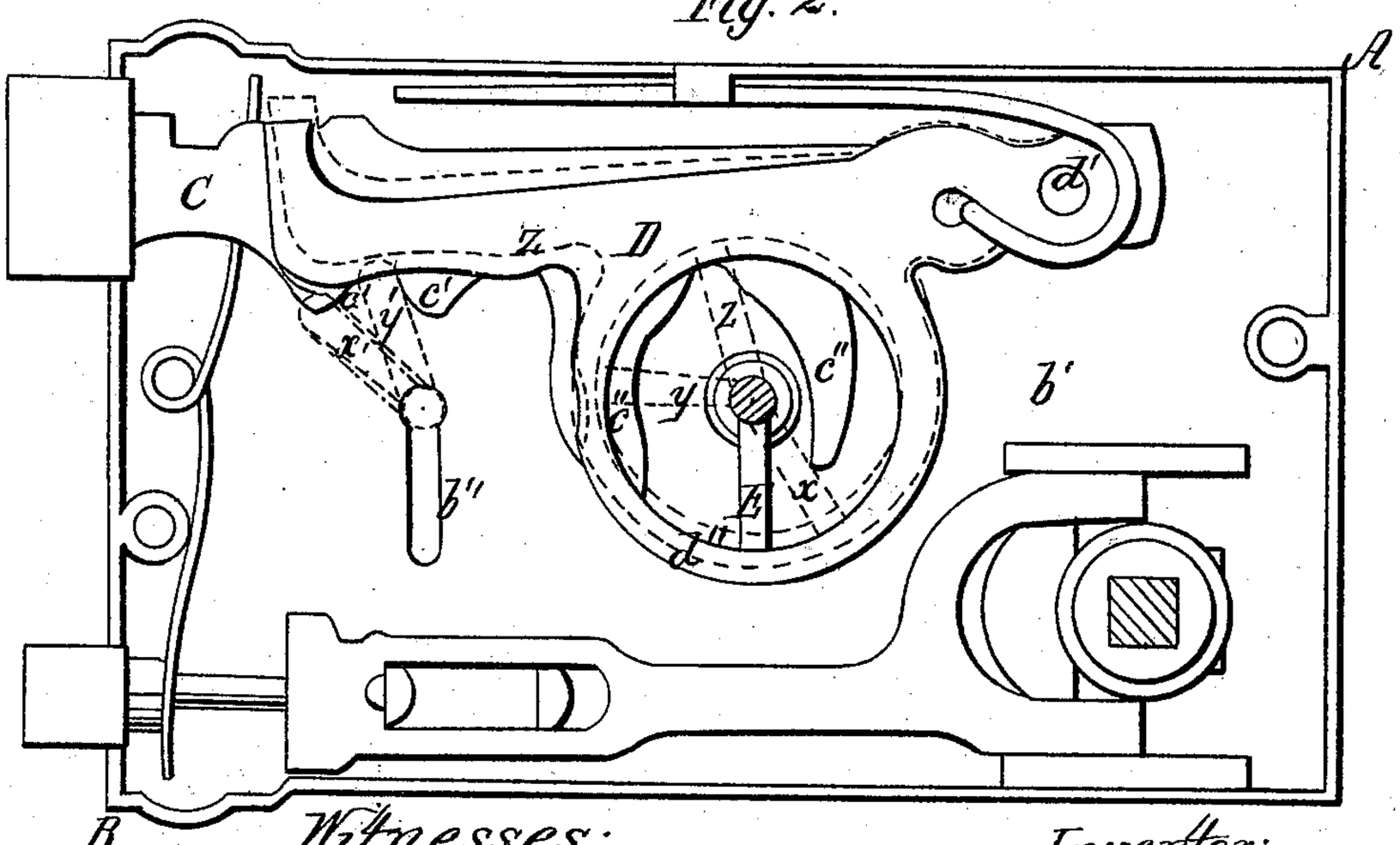

Fig: 2.

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R. McDOWELL, OF LAMBERTVILLE, NEW JERSEY

Letters Patent No. 88,577, *dated April* 6, 1869.

IMPROVEMENT IN DOOR-LOCKS.

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, R. McDOWELL, of Lambertville, in the county of Hunterdon, in the State of New Jersey, have invented a new and useful Improvement in Locks for Doors; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of one of the said improved locks, and

Figure 2 the same lock, having the front covering-plate removed therefrom, like letters of reference indicating the same parts in both figures.

The object of my improvement is, to render the key by which the door is locked, from the inside of the building or room, a reliable security against unlocking the door by any key applied from the outside.

My invention consists, substantially as hereinafter described and specified, in providing the outside and the inner-side covering-plates, respectively, of the lock with a distinct, or separate key-hole for the same key, and corresponding notches and projections on the edge of the bolt, so constructed and arranged that the same key will lift the tumbler and operate the bolt, when used in either of the said key-holes, in connection with a slightly oval ring, rigidly projecting from the edge of the tumbler, and surrounding the key-hole of the inner-side plate of the lock, so that the said key, when introduced and operated, will always bear with the end of its radial portion against the inner edge of the said ring, and thus raise and lower the tumbler, and also prevent the bolt from being operated by any key introduced and operated in the key-hole on the outer side of the building or room.

Referring to the drawings,

A B is the body of the lock, *a′* being its inner-side plate and *b′* its outer-side plate;

C, the bolt;

D, the tumbler; and

E, the key.

The outer-side key-hole *b″* is made about half-way between the inner-side key-hole *a″* and the outer end of the body A B of the lock, and the respective notches and projections *c′ c′* and *c″ c″*, in the edge of the bolt C, are each made so as to be acted upon by the key, in the usual manner, excepting that the projections *c″ c″* are made much longer than heretofore, for the purpose hereinafter explained.

The tumbler D turns upon a pin *d′*, and when operated by the key in either of the two key-holes *b″ a″*, alternately releases and holds the bolt C, in the usual manner.

At one edge of the said tumbler D, there is a large oval ring *d″* formed, which surrounds the inner-side key-hole *a″*.

The longer inside diameter of the ring *d″* is equal to t vice the length of the radial part of the proper key, and this longer diameter, being nearly parallel with the length of the said tumbler D, the latter will be raised and lowered when the key is operated, for the purpose of moving the bolt C.

Operation.

When the key E is inserted in the key-hole *a″*, and operated, the extreme end of the radial part immediately comes in contact with the inside edge of the ring *d″*, and eventually lifts the tumbler, as indicated by the dotted lines 2, and drops the catch of the tumbler into appropriate stop-notch in the bolt C, the slot in the end of the radial portion of the key, at the same time, receiving the inner edge of the projections *c″ c″*, and moving the bolt C.

The key being left in the lock, after locking the door, it will be in contact either with the ring *d″*, at any point between the ends of the projections *c″ c″* of the bolt C, as indicated at E and the dotted line *x*, or in contact with both the ring *d″* of the tumbler D, and the forward projection *c″* of the bolt C, as indicated by the dotted lines at *y*.

Now, if a key be introduced through the outside key-hole *b″*, for the purpose of moving back the bolt C, its radial portion will first come in contact with the tumbler, as indicated by the faint lines *x′*, and be arrested, if the radial portion of the inside key E be in any of the positions below and between the projections *c″ c″*; but if the said key E be left in the position indicated by the dotted line *y*, the outside key will lift the tumbler D, and reach the position indicated by the faint lines *y′*, where it will be arrested by the projection *c′* of the bolt C, because the inside key E, being in the position indicated by the dotted lines *y*, will effectually prevent the bolt C from being moved backward.

It will therefore be seen that this lock cannot be opened from the outer side of the door, if the legitimate key be left in the key-hole on the inner side.

This device is simple, effective for the purpose, and not liable to get out of order from use.

Having thus fully described my improvement,

What I claim as new therein, and desire to secure by Letters Patent, is confined to the following, viz:

The two separate key-holes *a″ b″*, in the plates *a′ b′*, respectively, with the corresponding projections *c″ c″* and *c′ c′*, on the bolt C, and the ring *d″* of the tumbler D, the said parts being constructed and arranged to be operated and secured by the legitimate key E, substantially as and for the purpose described.

R. McDOWELL.

Witnesses:

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WM. H. MORISON.