(Model.)

M. J. MULLINS.

LATCH.

No. 244,921. Patented July 26, 1881.

Fig 2.

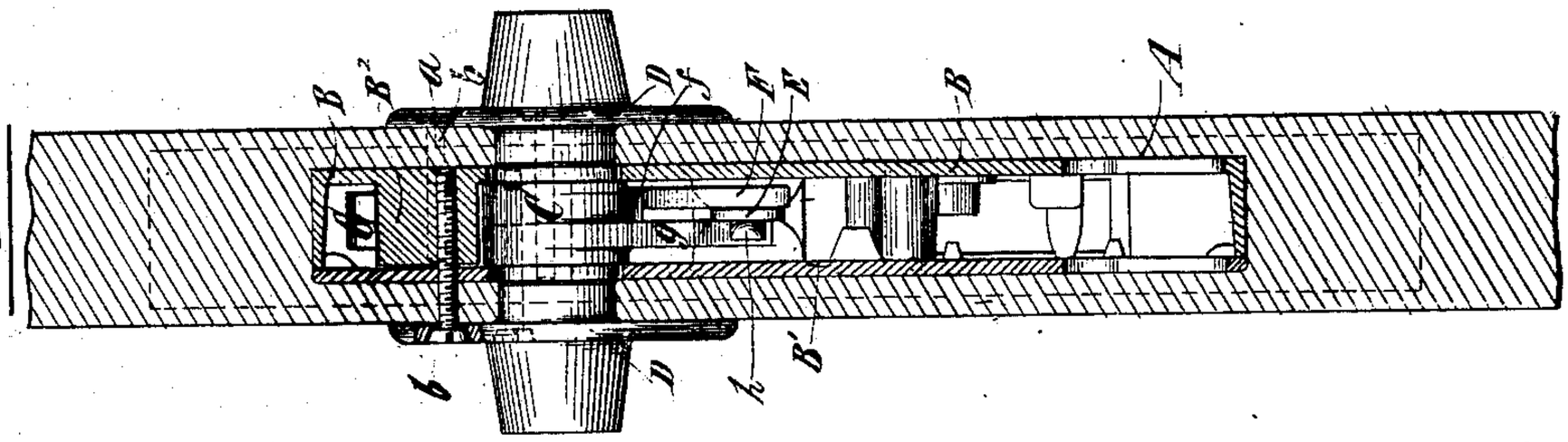
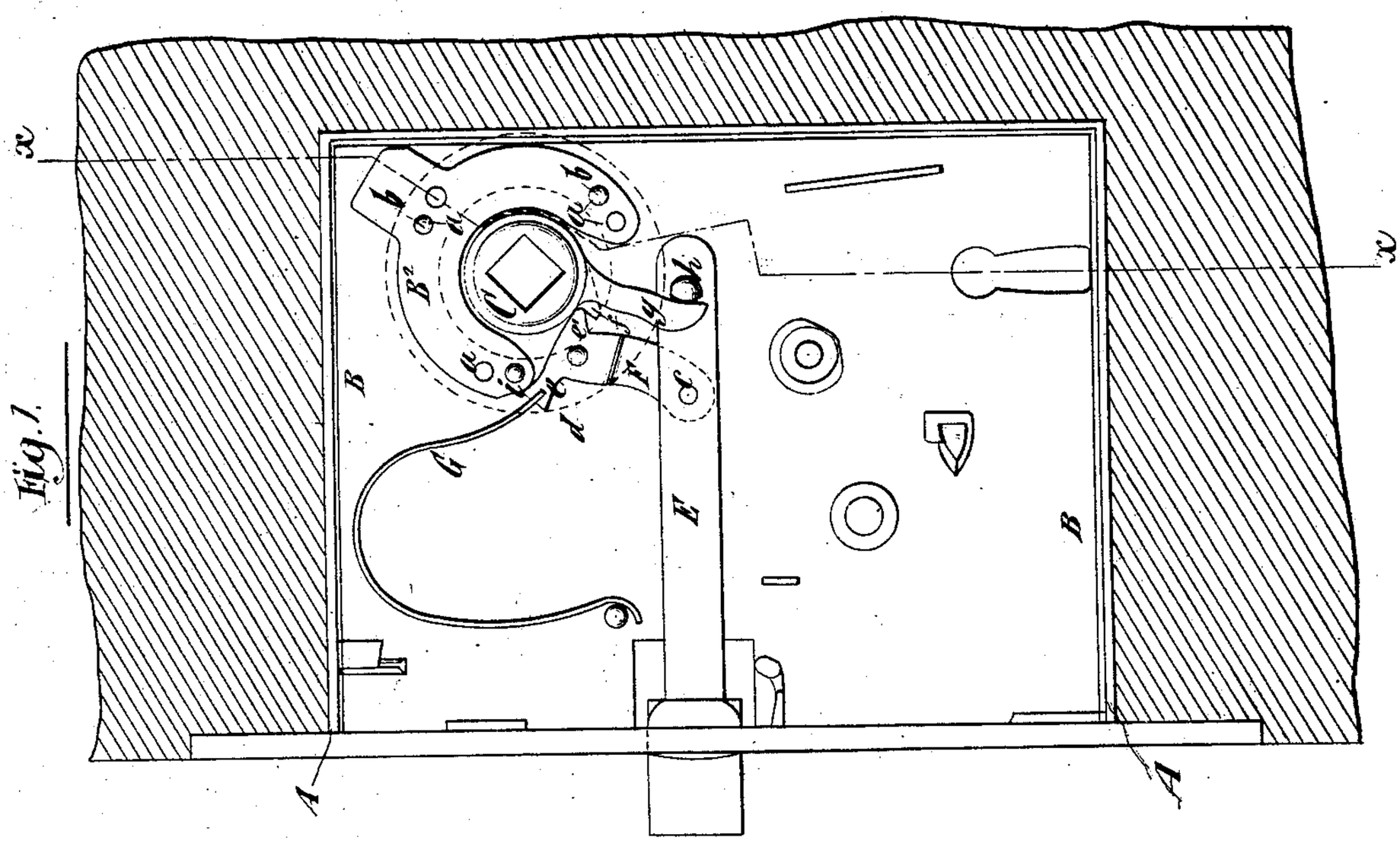


Fig. 1.



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UNITED STATES PATENT OFFICE.

MICHAEL J. MULLINS, OF NEW YORK, N. Y.

LATCH.

SPECIFICATION forming part of Letters Patent No. 244,921, dated July 26, 1881.

Application filed April 8, 1881. (Model.)

To all whom it may concern:

Be it known that I, MICHAEL J. MULLINS, of the city and county of New York, in the State of New York, have invented certain new and useful Improvements in Mortise-Locks or Knob-Latches, of which the following is a specification.

The objects of my invention are to provide a novel construction and arrangement of devices for transmitting motion from the spindle boss or hub to the latch-bolt, and to provide means for securely attaching the roses. These objects are accomplished by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 represents a section of a portion of a door and a side view of a mortise-latch embodying my invention, and inserted therein, the side plate of the case being removed; and Fig. 2 represents a transverse section upon the irregular dotted line *x x*, Fig. 1.

Similar letters of reference designate corresponding parts in both the figures.

A designates the mortise in the door, in which the latch is fitted; and B designates the case of the latch, which has one side plate, B′, removable, as is common.

C designates the spindle boss or hub, which fits in holes in the two side plates of the case; and D D designate the two roses, which are secured to opposite sides of the door. As clearly seen in Fig. 2, the wood upon the sides of the mortise A is quite thin, and if the roses D were secured by ordinary wood-screws in the usual way, the screws would not have a good hold in the wood and would be apt to work loose. In order to obviate this difficulty, I form upon the inner side of the back plate of the case a projection or hub, B^2, which is of circular or semicircular form, and is of a thickness nearly equal to the internal width of the case. The hub or projection B^2 is not a complete circle, but is open on one side, and the spindle hub or boss fits loosely within it. In the projection or hub B^2 are holes *a*, which correspond in position with the holes in the roses D, and are screw-threaded to receive screws *b*, by which the roses are secured. The screws of one rose pass directly into the case upon which the projection or hub is cast, while the screws of the other rose pass loosely through the removable side plate, B′, and into the projection or hub B^2. If rivets are employed in place of screws, the holes in the projection or hub should be coincident with the holes in the roses, and then the rivets may be inserted directly through the door and lock-case and through both roses.

In lieu of being made continuous from one end to the other, the projection or hub might be sectional—that is, composed of isolated hubs or sections arranged in a circular form.

It will be seen the form of the projection or hub B^2 precludes making the spindle boss or hub C in the usual way, with toes upon opposite sides, and I will now describe the mechanism of the latch.

E designates the ordinary latch-bolt, and F designates a lever-piece pivoted to the bolt at *c* and fulcrumed at *d*. The head of the lever F has two opposite ears or lugs, *e e′*, in the former of which one end of the spring G is fixed, and the latter of which is acted upon by a toe, *f*, upon the spindle boss or hub C. The boss or hub C has also a long toe or arm, *g*, which engages with a lug or projection, *h*, upon the bolt E. When the spindle-boss or hub C is turned in one direction the toe or arm *g*, acting on the projection *h*, draws in the bolt E, the spring G being deflected by the connection of the lever F with the bolt E, and when turned in the opposite direction the toe *f* acts upon the lug or ear *e′* and draws the bolt in by moving the lever F. It will also be observed that when the bolt is out, as in Fig. 1, the lug or ear *e* bears upon the projection or hub B^2 at *i*, and thereby forms a stop to prevent undue outward movement of the bolt E.

In lieu of the roses being separately secured by screws secured into the projection or hub B^2 from opposite sides, longer screws might be inserted loosely through one rose, the lock-case, and the door, and screwed into the opposite rose; but in this case, as well as where rivets are used, no projection or hub B^2 would be necessary. In any case, however, the screws or rivets, if inserted directly through the lock-case, would interfere with the working of the ordinary spindle boss or hub and lever, and therefore the bolt-actuating devices previously described are necessary.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a mortise lock or latch, the combination, with the rotating spindle boss or hub C, fitted in the sides of the lock or latch casing and constructed with the depending toes *f* and *g*, of the bolt or latch E, having the lug *h*, the upright lever F, connected at its lower end with the bolt or latch, the upper end of said lever being connected at one side with the spring G, and operated at the other side by the toes *f* and *g* of the rotating spindle boss or hub, substantially as described.

2. A mortise lock or latch casing having on the interior of one of its sides a laterally-projecting hub, B^2, provided with transverse apertures *a a* for receiving the screws or rivets *b b*, which attach the roses in place, in combination with the rotating spindle boss or hub C, having the depending toes *f* and *g*, and the upright lever F, connected with the bolt or latch E, the upper portion of the said lever being connected at one side with a spring and operated at the other side by the toes on the rotating spindle boss or hub, substantially as described.

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