

A. T. Brooks,

Reversible Latch.

N^o 55,052.

Patented May 29, 1866.

Fig. 3.

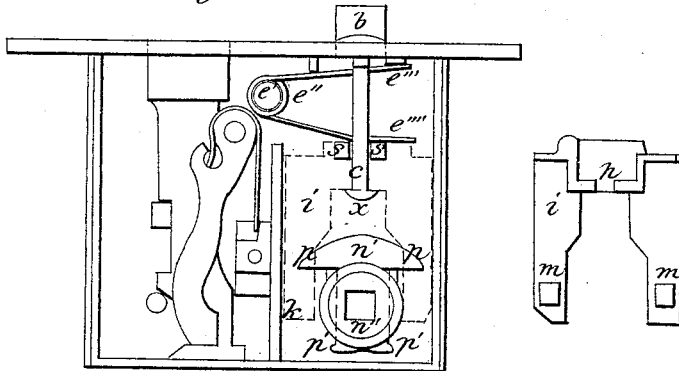


Fig. 2.

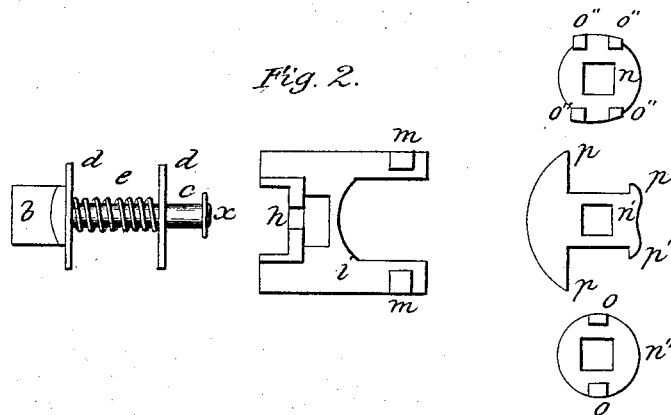
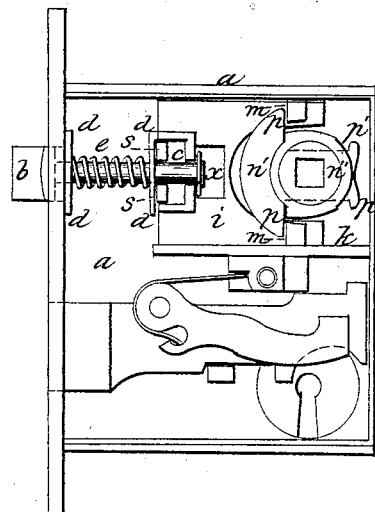


Fig. 1.



Witnesses:

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IMPROVEMENT IN REVERSIBLE LOCKS OR LATCHES.

Specification forming part of Letters Patent No. 55,052, dated May 29, 1866.

To all whom it may concern:

Be it known that I, ASA T. BROOKS, of New Britain, county of Hartford, and State of Connecticut, have invented certain new and useful Improvement in Reversible Latches; and I do hereby declare that the same is described and represented in the following specification and drawings, so as to enable others skilled in the art to make the same therefrom, reference being had to the drawings and letters marked thereon, which indicate like parts in each of the figures.

The nature of this improvement will be understood from the specification and drawings.

The motive which prompted and the object desired to be obtained by this improvement is to compress the mechanism of a lock and latch into the shortest possible space, and at the same time secure strength, simplicity, and perfect working of its parts, and at the same time allow the latch to be drawn forward through the face-plate and reversed, so as to render it either a right or left hand lock and latch.

In the accompanying drawings, Figure 1 is a face view of a lock and latch having its closing plate removed, so as to show the working mechanism of the latch. Fig. 2 are detached portions of the latch laid out separately, so as to show the construction of the several parts in detail.

a is the case, made in the usual way. *b* is the latch. *c* is the latch-spindle. *d* are spring pressure-plates arranged upon the spindle *c*. *e* is a spring arranged upon the spindle *c*, between the pressure-plates *d*. The back end of the *c* is headed in any proper manner, so as to hold it (the spindle) in its proper place in the hole or slit *h*, formed in the protuberance on the front part of the slide *i*. This slide *i* is made so as to work freely between the protuberances *k* and the side of the case. It is also provided with bosses *m*, which are acted upon by the spindle-hub in the usual way, and, in itself considered, is much like those now in common use.

n n' n'' are (when put together) what is called the "spindle-hub," and when fitted together, and its bearings made in the usual way, is secured firmly in working position between the plates of the case in the usual way. Hubs have heretofore been made in two or

more parts in certain cases, as where the spindle is also made in two parts, so that the spindle on one side of the latch would operate one part of the hub while the spindle on the other side of the latch operates the other part of the hub, or, in other words, one part of the hub turns independently of the other. Such a hub constitutes no part of this invention, for it will be clearly seen that the part *n n''* laid over in opposite directions, so as to show the plan of their inner surface, and how they are constructed, so as to utterly prevent the one part turning without the other part.

o are bosses arranged upon the inner face of the hubs so that the bosses *o* on the part *n''* will just fill the space between the bosses *o'* on the part *n*. Said bosses are also made of such length as to just allow the middle part *n'* to fit closely and move freely between the bosses. This piece *n'* has projections *p* on one end, which operate to move the slide *i* in the same manner as those now in use. It is also provided with detents *p'*. Thus this middle actuating-piece *n'* is allowed to move freely back and forth in the center of the hub when it is free from the spindle, and is held closely and firmly in the hub when the spindle is inserted into its place, the latch *b* and spindle *c* having a properly-formed head on the back end thereof, and pressure-plates *d d'*, with a spring *e* placed between them, are inserted through the face-plate from the inside, the plate *d* taking its bearing against the inside of the face-plate of the latch-case, and the plate *d''* against the detents *s*, formed on the case, while the pressure of the spring *e* bears equal against each of them. The back end of the spindle is placed in the slit *h*, and the head *x* of the spindle is placed inside thereof, so that as the slide is drawn back by the turning of the spindle or hub the latch will also be drawn back, taking with it the plate *d*, which is reacted upon and thrown forward, when left free to act, by the action of the spring *e*, and when it is desirable to reverse the latch it is only necessary to remove the spindle from the socket of the hub and pull upon the outer end of the latch *b*, when in doing so the plate *d'*, with the slide *i* and the actuating center-piece *n'* of the hub, will be drawn forward therewith, compressing the spring sufficient to allow the latch to be turned a half-turn, or so

as to render the latch either a right or left hand, and when the latch is again turned into its proper position the spring *e* (now contracted) will react and draw the latch back into its proper position.

Fig. 3 shows a modification of this improvement and how the latch *b* and slide *i* may be actuated and held in their proper place and position by what I call a "coil-spring," *e''*, extending forward from its axis-pin *e'* when not held by the action of the knob-spindle, one arm of which, *e'''*, bears against both the inner end of the latch *b* and the inside of the face-plate, or projections formed upon the case. The other arm, *e''''*, bears against both the detents *s* and the end of the slide *i*, thus avoiding the use of the plates *d*. The distance between the outside edge of the actuating or middle piece, *n'*, of the hub and the rear end, *x*, of the spindle *c* is about the same as the projection of the latch *b* out from the face-plate, so that after having drawn the latch forward and turned it a half-turn, or produced a reverse position thereof in the face-plate, by simply pressing the end of the latch back even with the face-plate the rear end, *x*, of the

spindle *c* will act against the middle-piece, *n'*, and produce a true even orifice, or nearly so, in the hub to receive the knob-spindle.

I believe I have thus shown the nature, construction, and operation of this improvement, so as to enable others skilled to make and use the same therefrom.

What I claim, therefore, and desire to secure by Letters Patent, is—

1. A latch-hub made in two or more parts acting conjointly with each other, substantially as and for the purpose described.
2. The arrangement of the several parts in the manner substantially as described, by virtue of which the spring is made to act in the double capacity of actuating and holding the latch and slide respectively in place.
3. The combination of the latch-bolt *b*, spring *e*, with or without the plate *d*, slide *i*, and two or more part hubs, substantially as and for the purpose described.

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Witnesses:

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