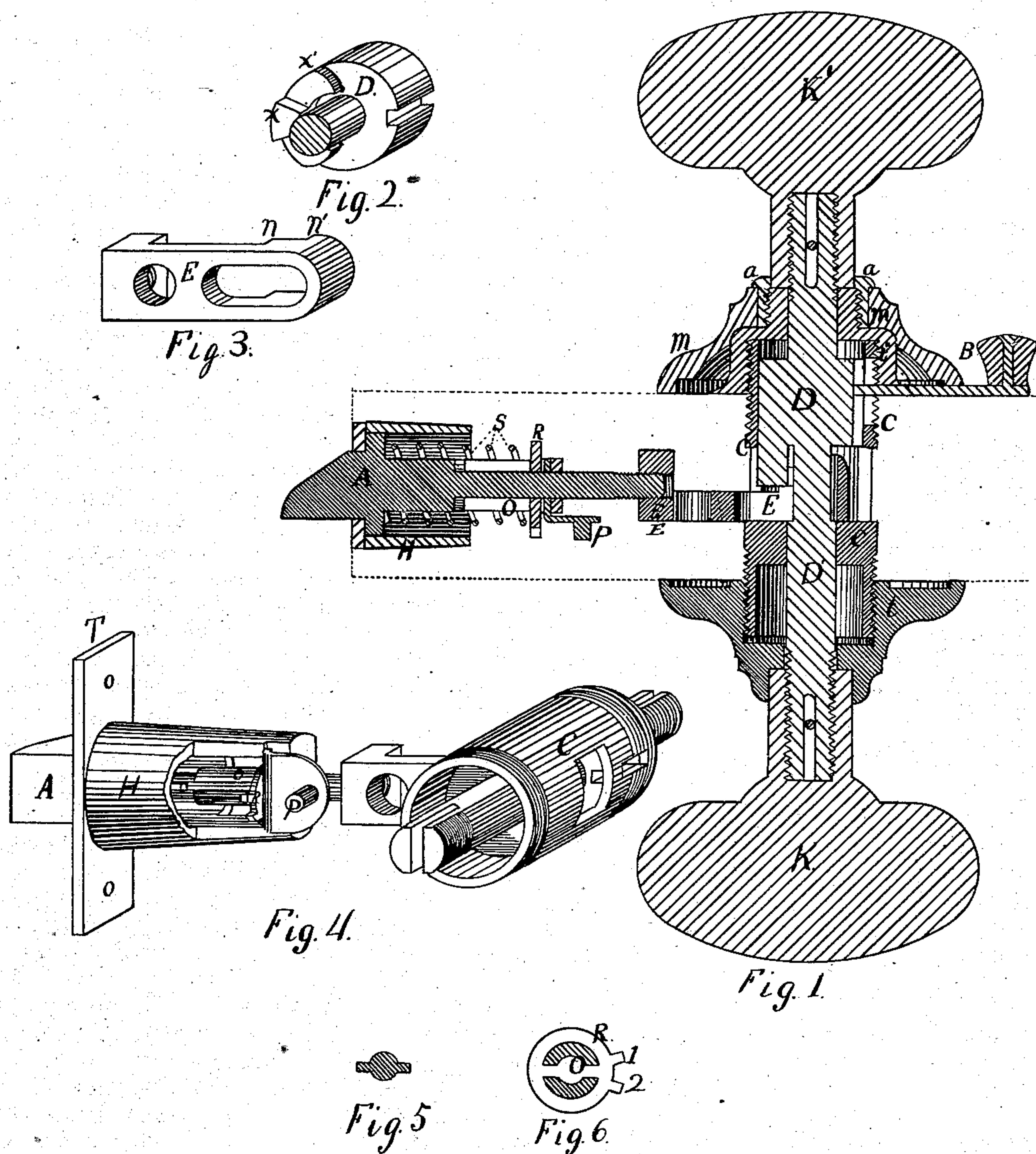


E. SKINNER.
Locking-Latches.

No. 158,811.

Patented Jan. 19, 1875.



Witnesses
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ELIAS SKINNER, OF GRAND RAPIDS, MICHIGAN.

IMPROVEMENT IN LOCKING-LATCHES.

Specification forming part of Letters Patent No. 158,811, dated January 19, 1875; application filed June 11, 1874.

To all whom it may concern:

Be it known that I, ELIAS SKINNER, of the city of Grand Rapids, county of Kent and State of Michigan, have invented a new and Improved Door Catch and Lock, of which the following is a full and complete description, reference being had to the accompanying plate of drawings and to the letters of reference marked thereon, and the same are made a part of this specification.

In the drawings, Figure 1 represents a longitudinal sectional view of my invention, showing the inside arrangement of the whole device. Fig. 2 shows a portion of the knob-shaft, which is enlarged, forming a hub provided with cams which operates the catch-bolt, and also with a slot which receives the slide which locks the door from the inner side. Fig. 3 is the device which fastens the catch-bolt to the shaft and gives it its motion. Fig. 4 is a perspective view of the two cylinders, with a portion of one cut away, in order more fully to show the outside lock and its manner of operation. Fig. 5 is a sectional view of the catch-bolt with two flanges which form a part of the lock; and Fig. 6 is an end view of the small slotted cylinder, which fits upon the catch-bolt in such a manner that, when the door is unlocked, the flanges shown in Fig. 5 slide freely in the slots, and, when turned by the key either way, prevent the catch-bolt from being withdrawn, and thus lock the door from the outer side.

In Fig. 1, K and K' represent the knobs. K is attached in the form or manner I design in ordinary door-catches, and K' shows the method of using a porcelain-rose plate in connection with my invention. D' is the shaft, which extends through the door and is connected at either end with the knobs by means of a screw, as shown. C is a hollow cylinder, which incloses the shaft entirely between the two rose-plates, and it is provided with a screw-thread at either end, upon which are screwed the rose-plates *t* and *t'*, as shown, and by means of which parts of the lock are held compactly together. *t* is a rose-plate composed of a single piece of metal or any suitable material, and is firmly screwed upon the cylinder C, as already described. *t'* is a smaller piece of metal, constructed in substantially the same manner as

plate *t*, except it is much smaller and is provided with a screw-thread at its outer end, upon which is placed the nut *a a*, as shown in Fig. 1. *m* is a porcelain rose-plate, which fits over *t'*, and is held in place by nut *a a*, and may be used instead of a metal rose-plate, if desired. The shaft D' is enlarged, forming a hub at D, and provided with the cams *x x'*, as fully shown in Fig. 2. This hub is also provided with a slot, as shown in Fig. 2, and one may be made on the opposite side, to use, if more convenient. B, in Fig. 1, is a slide which is so arranged as to engage with the slot in D and thereby prevent the shaft from being revolved, and acts as a lock or bolt for the inner side of the door. H is a conical cylinder tapering from its face inward, and incloses the bolt A and its various attachments. E is a bar, provided with an elongated slot, through which the shaft D' passes. The bar E is provided with two projections or notches, as shown by *n* and *n'* in Fig. 3, and is so arranged that when the shaft is revolved *n'* engages with cam *x'*, which carries the hub E back until *n* engages with cam *x*, which carries it back still farther, the two combined being so arranged as to withdraw the catch-bolt A entirely from the catch and allow the door to be opened. By revolving the shaft in the opposite direction the catch-bolt A is pressed outwardly by means of the spring S until the opposite sides of the cams *x* and *x'* engage with the notches on the opposite side of E, and again withdraw the bolt. The catch-bolt A terminates in a screw, which engages with the bar E, and may be readily removed at any time. It is incased in the cylinder H, as shown, and is provided with the coil-spring S, as shown in Fig. 1. O is a small slotted sleeve incasing the tail of bolt A, and is provided with a ring, R, having pegs or projections 1 and 2, as shown in Fig. 6. P is the key-post, attached to a movable plate, so arranged that it may be removed. If no outside lock is desired, the part *o* may also be removed. When the catch-bolt A is pressed outwardly by the spring, as shown in Fig. 4, the sleeve *o* covers or incases one-half of the bolt, between the key-plate and the face-plate T. The part of the bolt A not so inclosed is provided with a flange on either side, as shown

in Fig. 5, which flanges, when the door is unlocked, slide in the slots in the sleeve O, shown in Fig. 6.

When the key is placed on the key-post P, its bit is brought in contact with the projections 1 and 2, and, by revolving the key, the sleeve *o* is removed from its ordinary position, so that the flanges of the bolt will not slide in the slots, thereby preventing the bolt A from being withdrawn and locking the door.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. The cams *x x'* upon the hub D, engaging with and operating upon the projections *n* and *n'* on the bar E, for the purpose of withdrawing the bolt A, substantially as described.

2. The slotted sleeve O, having ring R, provided with projecting pegs 1 and 2, in combination with the bolt A, provided with flanges for the purpose of locking the door from the outside, as shown and described.

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