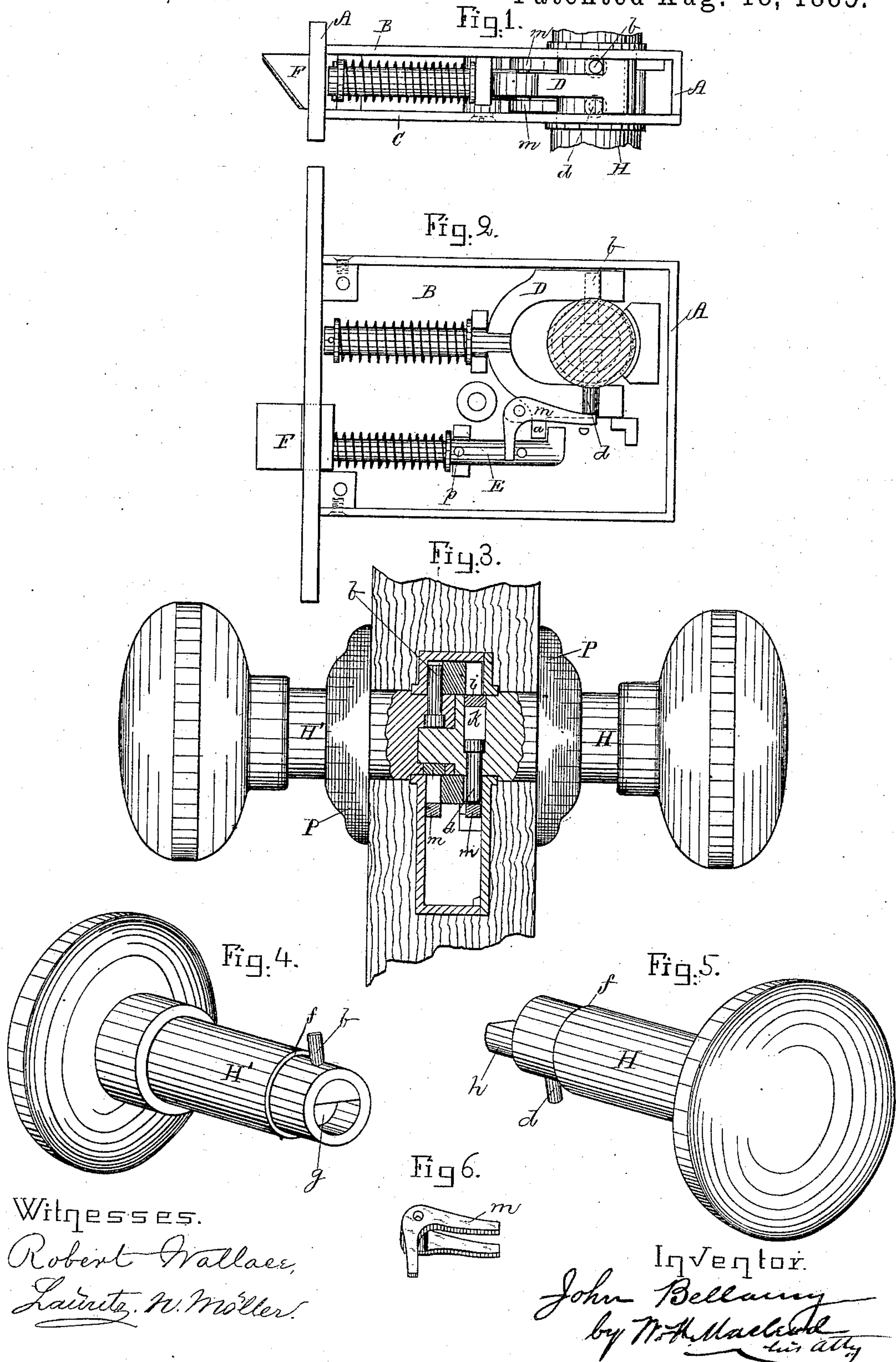


(Model.)

J. BELLAMY.  
KNOB ATTACHMENT.

No. 324,640.

Patented Aug. 18, 1885.



Witnesses.

Robert Wallace,  
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# UNITED STATES PATENT OFFICE.

JOHN BELLAMY, OF BOSTON, MASSACHUSETTS.

## KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 324,640, dated August 18, 1885.

Application filed April 18, 1885. (Model.)

*To all whom it may concern:*

Be it known that I, JOHN BELLAMY, of Boston, county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Knob Attachments, of which the following, taken in connection with the drawings accompanying and forming a part hereof, is a full, clear, concise, and exact description.

10 The object of my invention is the production of a simple knob-shank, which, when secured in position in the lock, will not rattle, and is not affected by the swelling or shrinking of the door; and it consists, chiefly, 15 in certain peculiarities of construction, hereinafter more fully described, whereby the knob-shanks are readily inserted and secured in the latch-case and thrown into operating contact with the yoke or talons by which the 20 bolt is drawn.

Figure 1 is a plan view of my latch with the top of the case removed. Fig. 2 is a side elevation thereof with one of the side plates removed. Fig. 3 is a vertical section of my 25 latch in position in a door with the knobs attached. Figs. 4 and 5 are perspective views of the knobs and shanks detached. Fig. 6 is a detail.

To all skilled in the art my invention will 30 be readily understood from the following description of a device embodying my invention, in which letters of reference to the accompanying drawings are used.

A represents the case of the mortise-latch, 35 of which B and C are the side plates. D is the yoke-shaped slide of well-known form, provided with a lug, *a*, which bears on a projection on the end of the bar E, which is attached to the bolt F, and which serves to 40 draw the same. The movement of the knob-shank H H' on its axis, either to the right or to the left, causes the pins *b* or *d*, respectively, to bear on the projecting ends of the yoke D, and force the yoke-shaped slide back, and thus 45 draw the bolt.

In order that the shank H H' may fit the holes in the case snugly, I separate it midway of its length, each half being rigidly secured to its own knob, and make that portion of 50 the ends of each shank which lies inside the latch-case somewhat smaller in diameter than

the other parts of the shank, so that the shoulders *f f* will abut against the side plates, B C, when the shanks are in position, thus taking any pushing strain which the knobs may receive. In order that the shanks may be joined 55 in the middle of the latch when it is in position in the door, and so joined that the pins *b d* shall project, as shown, Fig. 3, and thus actuate the yoke D, I construct it as follows: 60 The end of one shank is recessed, as shown at *g*, Fig. 4, while the end of the other is provided with a corresponding projection, *h*, Fig. 5. From a point on the inside of the recess *g* a hole is made to the outside of 65 the shank of sufficient size to receive the pin *b*, which is slightly enlarged or headed at its inner end to prevent it from slipping out of the hole. If the shank be turned so as to bring the pin *b* uppermost, and 70 the projection *h* be withdrawn from the recess *g*, the pin will drop down into the recess. When the pin is in this position, the shank may be inserted into the lock. If, after insertion, the shank be turned half round, 75 bringing the pin lowermost, the pin will drop down and project from the shank, leaving the recess *g* free. While in this position the shank H, fitted with projection *h*, is inserted 80 into the latch, the projection fitting the recess *g*, and fixing the pin *b* in the position relatively to the shank shown in Fig. 3. The shank fitted with the projection *h* has a hole, *k*, through it near the end, which is provided 85 with the pin *d* having a head on its inner end so fitted to the hole *k* as to prevent the pin from slipping out when the shank is in position shown in Fig. 3. The other end of the hole through which the pin *d* is inserted is plugged, as shown at *l*. When this shank H 90 is inserted into the latch the projection *h* is uppermost, and the pin *d* lies, therefore, wholly within the hole *k*. In this position the shank is inserted. The projection *h*, entering the recess *g*, locks the pin *b* in its projecting position, and if now the shanks be half turned 95 the pin *d* will drop down in position to engage with the projection on the lower arm of the yoke D, while the pin *b* will project in contact with the projection on the upper arm of the 100 yoke, (see Fig. 3,) thus securing the shank to the yoke and rendering the latch operative.



As will be obvious, the recess *g* and corresponding projection, *h*, may be varied in form, if desired.

For convenience in taking the knobs and 5 their shanks out of the door, I provide a bent lever, *m*, of the shape shown in Fig. 6, and pivot it at the bend to one of the plates. (See Fig. 2.) Forward of the pivot the lever is split to form two arms, one of which projects on either side of the yoke in order that 10 it may operate upon the pin *d*, whether the pin be located on one side or the other of the yoke. The other end of the lever *m* projects close to the bar *E*; and a pin, *p*, is so 15 set in the bar *E* as to come in contact with the lever *m* when the bar is pushed back sufficiently, which may be readily done by pressing the bolt *F*. The action of pin *p* on the lever *m* raises the other end of the lever and throws 20 the pin *d* back into the hole *k* in the shank. If, now, the knob be turned, the pin *d* is raised upward and kept in the hole *k*, and the shank may be readily withdrawn from the latch-case. As soon as it is withdrawn the pin *b* in 25 the other half of the shank will drop down into recess *g*, thus making it possible to withdraw the shank *H'* also from the lock.

It will be obvious that many simple forms of mechanism might be easily arranged to operate lever *m*; but I have shown what I consider the simplest and cheapest form. 30

The part *P*, Fig. 3, represents a rose or escutcheon secured to the door, which, although

not essential, improves the finish and appearance of the latch. 35

What I claim is—

1. The combination, with the case *A* and yoke *D* for actuating the bolt, of the recessed shank *H'*, fitted with sliding pin *b*, and the shank *H*, fitted with a projection, *h*, whereby 40 as the ends of said shanks are brought together the pin *b* is locked in a projected position, for the purposes and substantially as described.

2. The case *A*, yoke *D*, and shank *H'*, provided with recess *g* and pin *b*, in combination 45 with shank *H*, provided with projection *h*, hole *k*, and pin *d*, said pin *d* being free to slide in hole *k*, whereby as the shank is turned, bringing the hole *k* into a vertical position, 50 the pin *d* drops downward and projects below the shank in line to operate the lower arm of the yoke, substantially as shown and described.

3. The combination, with a knob-shank fitted with a sliding pin which acts to connect 55 the shank with the yoke or talons, of the case *A* and lever *m*, and means for actuating it, whereby said pin may be slid back into the shank and out of line of contact with said yoke, for the purposes and substantially as 60 described.

JOHN BELLAMY.

Witnesses:

WM. A. MACLEOD,  
ROBERT WALLACE.