(No Model.)

G. L. HOWLAND.

LATCH KNOB ATTACHMENT.

No. 297,402. Patented Apr. 22, 1884.

Fig. 1.

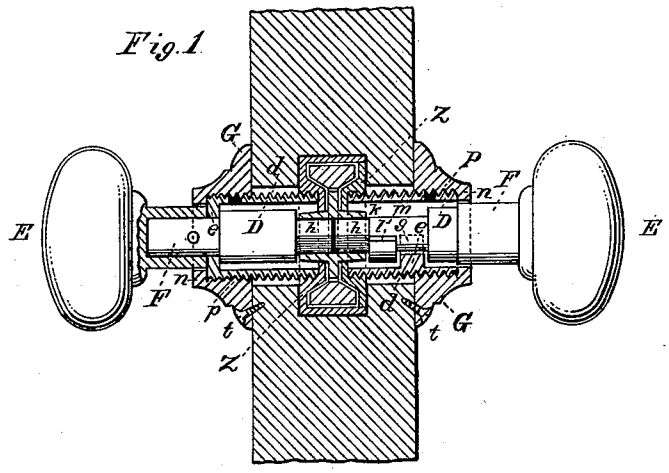


Fig. 5.

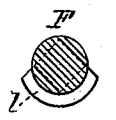


Fig. 6.

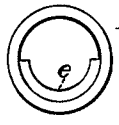


Fig. 2.

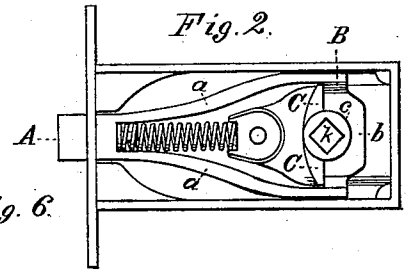


Fig. 7.

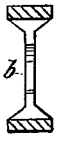


Fig. 8.

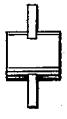


Fig. 4.

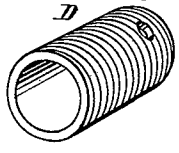


Fig. 3.

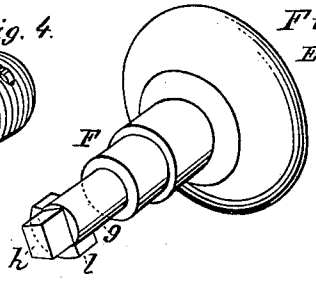


Fig. 9.

WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE LEWIS HOWLAND, OF TOPSHAM, MAINE.

LATCH KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 297,402, dated April 22, 1884.

Application filed January 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE L. HOWLAND, residing at Topsham, in the county of Sagadahoc and State of Maine, have invented certain new and useful Improvements in Combined Knob and Latch; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of this invention, and is a vertical section. Fig. 2 is a side view of the lock with the latch-bolt. Fig. 3 is a perspective view, showing the knob with its shank. Fig. 4 is a detail view, and so also are Figs. 5, 6, 7, 8, and 9, which show different parts.

This invention has relation to mortise knob-latches; and it consists in the construction and novel arrangement of devices, as hereinafter set forth, and pointed out in the claim appended.

The object of this invention is to provide simple and durable fastenings for the door-knobs and door-plates, and otherwise materially improving the lock.

In the accompanying drawings, the letter A designates the latch-bolt, having its open rear end spread, as at B, sufficiently to embrace the extent of the arms of the hub C. The arms *a a* of this rear end of the latch-bolt are connected by a rear bearing-bar, *b*, which joins the arms at right angles, forming bearings to engage the arms of the hub, and passes around the hub circularly, as shown at *c*. This cross-bar *b* is reduced in thickness to that of the arms of the hub, in order to give depth around the hub for socket-bearings formed on the lock-case, and make room for the attachment, by screw or otherwise, of the thimbles to socket-bearings, as indicated at *z*.

D indicates the thimbles, which are threaded on their outer surfaces, as at *d*. The inner surface of the thimble is smooth, except that it is provided with an interior flange-lug, *e*, passing around a portion of its inner wall.

E represents the knob, which, although usually provided with a solid shank, may be made with a shank recessed to receive a spindle forming a part of the shank. In the shank F, near the end thereof, is formed around it a groove, *g*, in which the flange-lug *e* of the thimble is designed to play. The inner end, *h*, of the shank is square, being adapted to fit into the square aperture *k* of the hub, passing half-way through said aperture, and meeting or nearly meeting the squared end of the shank of the opposite knob. Between the groove and the squared end is an abutment or circular lug, *l*, on the shank, which is adapted to engage the interior flange of the thimble, and in order to provide a passage for the interior flange into the groove an interspace, *m*, is left on the shank between the ends of the lug.

G represents the knob-rose, having an internal flange, *n*, around the outer end of its aperture. The interior portion of the aperture, as at *p*, is threaded to engage the thimble D. The diameter of the aperture at the flange *n* is sufficient to allow the shank of the knob to pass.

When the lock has been inserted into its mortise, ready for the knobs, each knob is connected to its thimble, the flange being turned into the groove. Then, the square end of the shank being placed in the hub, the end of the thimble is screwed into the socket in the lock-plate, so that the knob is held in position securely. The knob-rose is then screwed on the thimble up to the door, and a screw is inserted, as at *t*, which holds the rose firmly, preventing it from becoming loose by turning backward.

Sometimes I may prefer to make the thimble in two sections, and to secure it to the lock-case by means of flanges or by means of fastening-screws.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

In a lock, the combination, with the lock-case, constructed substantially as described, having the threaded recesses *z* to engage the inner ends of the externally-threaded thimbles D, of the thimbles D, having interior flanges, *e*, the knob-shanks having the lugs *l*, and the knob-roses, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE LEWIS HOWLAND.

Witnesses:
ERNEST L. GEDNEY,
FRANK C. WHITEHOME.