J. H. Barnes,

Latch.

No. 45,129. Patented Nov. 22, 1864.

Fig. 1

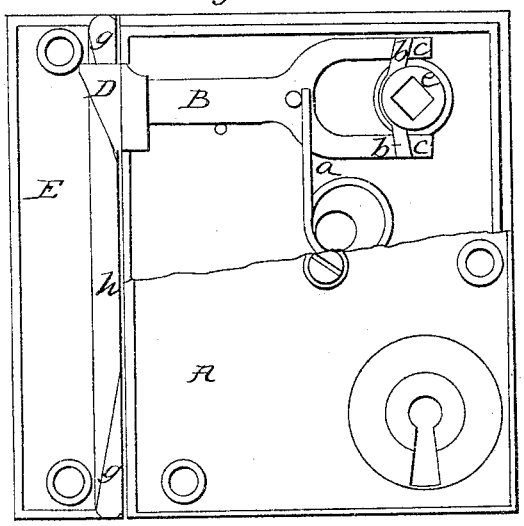


Fig. 3

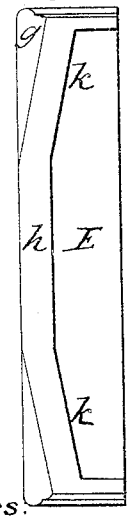
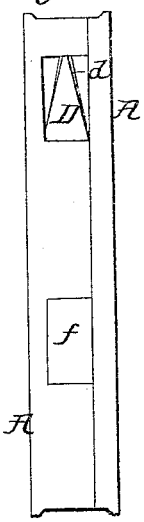


Fig. 2



Witnesses:

S. D. Law

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UNITED STATES PATENT OFFICE.

JOHN H. BARNES, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN KNOB-LATCHES.

Specification forming part of Letters Patent No. 45,129, dated November 22, 1864.

To all whom it may concern:

Be it known that I, JOHN H. BARNES, of the city of Brooklyn, Kings county, and State of New York, have invented certain new and useful Improvements in Locks and Latches; and I do hereby declare that the following is a full, clear, and exact description thereof, and of its mode and manner of operation, reference being had to the accompanying drawings and letters of reference marked thereon, and making a part of this specification.

My invention or improvement relates to that class of door or knob locks, and strikers for the same, known as "Janus-faced locks" or "right and left hand locks," and which can be applied to either a right or left hand door, as may be wished; and my invention consists in constructing the latch-head with three beveled surfaces, its end and two sides being beveled or inclined in vertical planes, substantially as hereinafter described, and combining such a latch with a striker or keeper or nosing having both the ends or corners of its lip against which the latch head or nose strikes beveled toward the ends of such striker, so that, whether such striker be fixed to a right or left hand door-casing, the latch-head, by reason of its inclined surfaces and the bevelings of the lip of the striker, will, upon closing the door, pass over and behind the lip of the striker, such striker also having on the inner side and at each end of its lip an inclined surface corresponding with the side inclined surfaces of the latch-head, against which the latch-head bears or rests after passing over and behind the lip of the striker.

To enable those skilled in the art to make and use my invention, I will now describe its construction and operation.

Figure 1 is a front view of a Janus-faced lock with part of the cap removed, showing the latch-bolt and the beveled end of the latch head or nose, and also the beveled corners or ends on the outside of the lip of the striker. Fig. 2 is an end view of the same lock, showing the beveled or inclined surfaces of the two sides of the latch-head. Fig. 3 is a side view of the striker, showing its inclined surfaces on the inner side of its lip, to correspond with the side bevels or inclines of the latch head, and showing also the beveled corners or ends of the outside of the lip.

Similar letters refer to similar parts in the several figures.

A represents the case of the lock, which may be rectangular, as shown in the drawings, or of any other form desired. Both sides of such case are made the same and finished equally well, so that whichever side is placed outward the lock presents a neat and finished appearance.

B is the latch-bolt, arranged within the case A, and operating backward and forward in the same manner that latch-bolts usually do, being held forward by the spring *a*, which is one of the several kinds in general use, and pressed or forced backward by the arms *b b* of the hub C acting against the projections *c c* when the knob is turned, or as the beveled end or head of the latch is pressed against the striker on the door-frame.

D is the projection or head of the latch. The only difference in construction between this latch-head and those in ordinary locks is in its beveled or inclined end, and also beveled sides. The beveled end of the latch-head is shown in Fig. 1, and the beveled sides of the same are shown in Fig. 2. The end of the latch-head is reduced or cut on an angle from its top and extreme end to a point on the bottom nearly or quite as far back as the end of the lock from which it projects. The two sides of the latch-head are reduced or cut on angles starting nearly or quite at the bottom, and nearly meeting at the top in a blunt edge. The parts of the latch-head where the edges of the end bevel meet the edges of the side bevels, as shown at *d*, Fig. 2, and which come in contact with the lip of the striker when closing the door, are slightly rounded; or the end bevel alone can be so rounded as to make a proper surface to come in contact with the striker. The opening in the end of the lock-case, where the latch-head works, and also that part of the latch-head which does not project beyond the lock-case, as represented in the drawings, are square; but both can be made to correspond with the side bevels of the latch-head.

E is the striker, which receives the tri-beveled latch-head D, and also the square lock-bolt, the head of which is shown at *f*, Fig. 2. This striker is substantially like those of ordinary locks, except that the corners *g g*, or

parts of its lip *h* where the latch-head D strikes when closing the door, are beveled, as shown in Figs. 1 and 3; and it also has inclined surfaces on the inner side of the lip *h* at each end of the striker, as shown at *k k*, Fig. 3. The bevels *g g* of the lip *h* incline in a downward and backward direction toward the ends of the striker, thus causing the latch-head D, when pressed against the lip *h*, to recede the more easily within the lock-case and pass over and behind the lip of the striker. The inclined surfaces *k k* on the inner side of the lip *h* correspond with the side bevels of the latch-head D, so that as the latch-head passes over and behind the lip it shall rest or bear one or the other of its entire side surfaces against one or the other of such inclined surfaces, and the door thus be held more firmly and securely. The inner inclinations, *k k*, do not extend far enough from the ends of the striker to prevent the ordinary square bolt passing behind the lip *h* and bearing against the flat surface of the striker.

Upon closing the door one of the rounded edges or inclines of the latch-head D, caused by the junction of the end bevel with the side bevels, will press against one of the beveled ends *g g* of the striker E, and the parts acting upon a shear motion, the latch-head will pass over and behind the lip *h* and rest or bear its side bevel evenly and securely against one of the inner inclinations, *k k*, of the lip of the striker.

The lip of the striker E having a twofold bevel, *g*, at each end, and also an inner inclined surface, *k*, at each end, the striker can be secured either end up, and consequently can be applied to a right or left hand door-casing. The latch-head D having an inclined or beveled surface on either side, the lock can be applied in the same manner as any Janus-faced lock on a right or left hand door. The reversing the lock and striker in nowise affects the action of the lock.

Although I have described my improvements as applied to a rim-lock, the same latch-head can be applied to a mortise-lock with a striker possessing bevels and inner inclined bearings corresponding with those of the striker; and, furthermore, my latch-head would work equally as well if arranged upsidedown in the lock-case, providing the bevels and inner inclined bearings of the striker be reversed to correspond.

My lock is simple in construction, is composed of few parts, is easily taken apart and put together, is not liable to derangement, and is quite cheap in construction.

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

1. The construction of the latch-head D, having three beveled surfaces, substantially as and for the purposes set forth.

2. The beveling of the outside ends, *g g*, of the keeper or striker E, substantially as and for the purposes set forth.

3. The arrangement of the inner inclines, *k k*, of the keeper or striker E, substantially as and for the purposes set forth.

4. The combination of the beveled latch-head D and keeper or striker E, for the purposes set forth.

JOHN H. BARNES.

Witnesses:
S. D. LAW,
W. R. RONALDS.