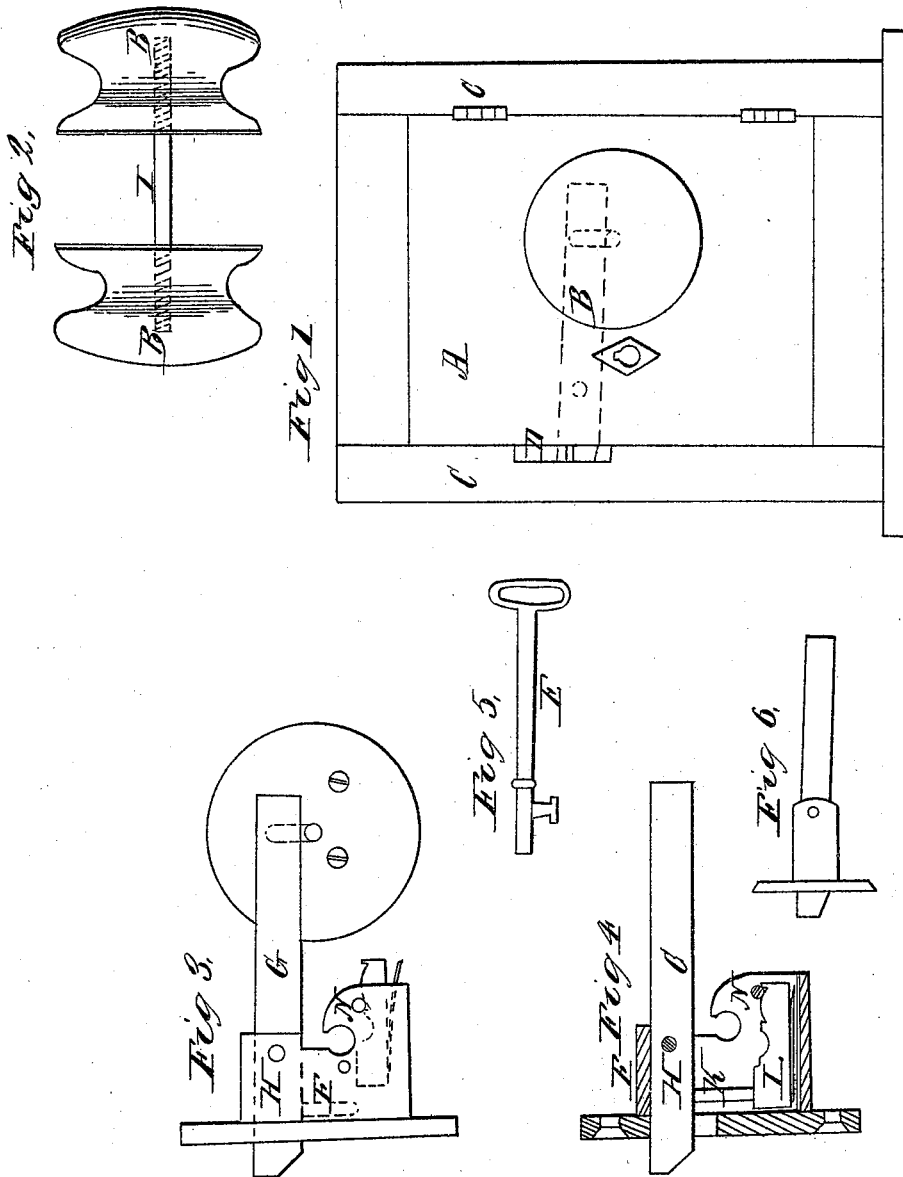


B. M. Bosworth,

Latch.

N^o 1,507.

Patented Mar. 6, 1840.



UNITED STATES PATENT OFFICE.

BENJN. M. BOSWORTH, OF WARREN, RHODE ISLAND.

DOOR-LATCH.

Specification of Letters Patent No. 1,507, dated March 6, 1840.

To all whom it may concern:

Be it known that I, BENJAMIN M. BOSWORTH, of Warren, county of Bristol, and State of Rhode Island, have invented a new and useful Latch and Lock for Securing Doors, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is the outside of the door represented as closed and showing the latch locked behind the catch, which is let into the door casing in the usual manner, and also one of the handles and the key hole. Fig. 2 represents the handles and the shaft which connects them together and circular plates placed between the handles and door to prevent wearing or rubbing the door. Fig. 3 represents the stock, latch, end of the bolt, spring, one of the circular plates and shaft—the bolt being unlocked, or thrown back. Fig. 4 represents the stock with the front plate removed in order to expose to view the whole of the latch and a projection from the under side of it and the bolt for locking the latch and the spring under the bolt for steadying it,—the bolt being represented as locked or thrown forward. Fig. 5 represents a key. Fig. 6 represents a single latch without the bolt for locking it, the stock containing it being made much smaller than the other.

Similar letters refer to similar parts in the figures.

The door A, handles B, casing C, catch D, and key E, are made in the usual manner.

The stock F, when designed for a latch with a bolt, is cast of iron or brass about two inches deep, one inch wide at top, one and an half inch wide at bottom—half an inch thick and hollow to receive the latch, bolt, and spring; and perforated through the face with an oblong mortise to allow the latch to extend through the stock and beyond the face sufficiently far to take hold of the catch in the usual manner of latches which catch on the under side. The face of the stock projects beyond the top and bottom of the stock to form flanges for screws to pass through to secure it to the door. A mortise is made in the edge of the door to receive the stock, latch and bolt and is of

sufficient size, where the latch is placed, to allow it to play up and down therein.

The latch G consists of a plain bar of iron about four inches long, $\frac{1}{2}$ inch wide and $\frac{1}{4}$ inch thick, moving on a horizontal pin H as its fulcrum, passing through the stock and through the latch about one third its length from the outer extremity thereof, leaving the inner extremity longer and heavier.

An oblong mortise is made transversely through the door running up and down a sufficient distance to admit the shaft I of the handle B, (over which the latch G is placed) to move freely up and down therein in order to raise the long arm of the latch and depress the short arm and thus detach the short arm from the catch—in the door casing.

A slot is made in the washers from the center extending upward to allow the shaft to move therein, with screw holes in the washers to fasten them to the door so as to hold the shaft about $\frac{1}{16}$ th of an inch below the latch when it is latched.

The door is latched in the following manner.—In closing the door the shorter end of the latch in passing under the catch, which is an inverted inclined plane, descends and lifts the longer end and as soon as the short end has passed the catch the long end descends by its greater weight and raises the shorter end and hooking it behind the inclined catch,—the latch assuming an horizontal position and resting over the shaft of the handles and nearly touching it. To unfasten the latch the handles and shaft are raised together which elevates the long end and depresses the short end and disengages it from the catch—the shaft moving in the oblong mortise in the door. In order to lock the latch with a key and bolt a projection K must extend down from the under side of the latch G about $\frac{3}{4}$ th of an inch, under which an horizontal bolt L, of the usual form, is thrown forward by a common key E which will thus prevent the short end of the latch from being depressed and the long end from being raised and thus will be locked as represented in Fig. 4 until the key is inserted and turned and the bolt thrown back again to its former position as

represented in Fig. 3. The spring under the bolt is designed to keep the bolt pressed upward against a small pin N for holding it steady. The before described proportions and dimensions may be varied.

What I claim as my invention and desire to secure by Letters Patent consists in—

The before described mode of disengaging the latch from the catch by raising the han-

dles and shaft perpendicularly in an oblong vertical slot in the door and thus causing the shaft to raise the longer end of the latch and depress the short end so as to disengage it from the catch.

BENJAMIN M. BOSWORTH.

Witnesses:

WM. P. ELLIOT,

EDMUND MAHER.