J. T. BICKEL.

LOCK AND LATCH.

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1,341,038. **Patented May 25, 1920.**

Fig. 1.

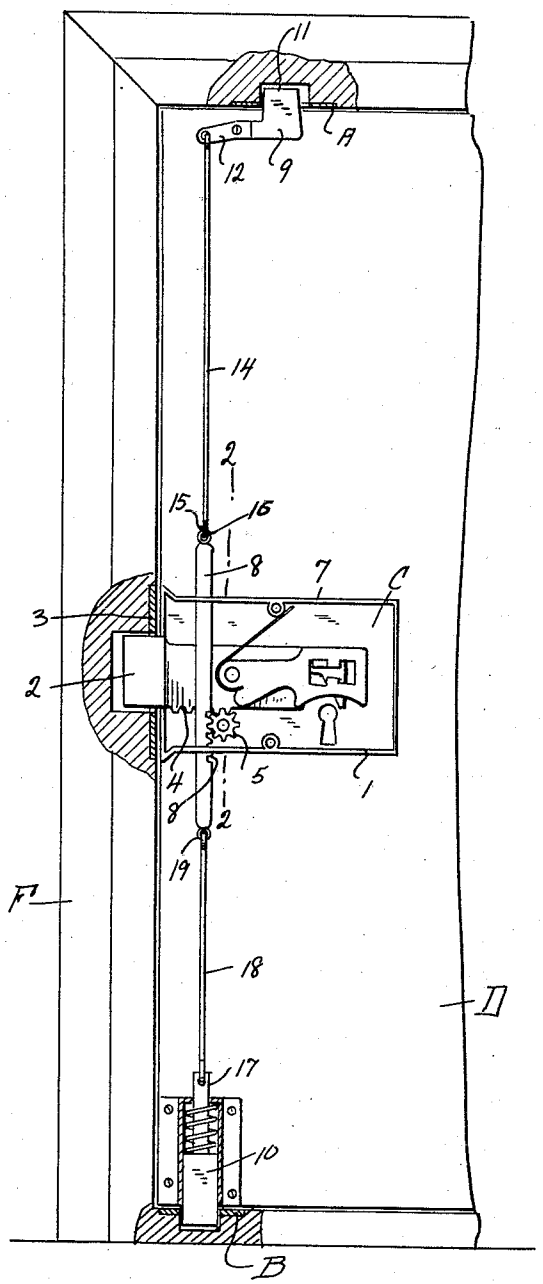
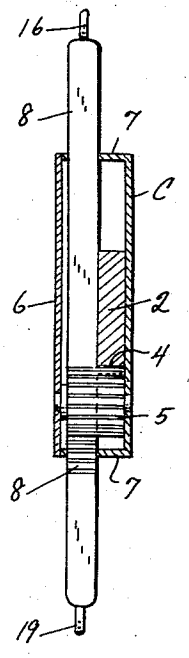


Fig. 2.



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LOCK AND LATCH.

1,341,038. Specification of Letters Patent. Patented May 25, 1920.

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To all whom it may concern:

Be it known that I, JAMES T. BICKEL, a citizen of the United States, residing at Mountain View, in the county of Howell and State of Missouri, have invented certain new and useful Improvements in Locks and Latches, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to certain improvements in locks and latches, and it is an object of the invention to provide a device of this general character whereby a door or other movable member may be effectually held in a closed position at a multiplicity of points.

It is also an object of the invention to provide a novel and improved device of this general character wherein an elongated member is operatively engaged with a sliding bolt of a lock so that said member is caused to move in unison with the bolt and wherein a latch is operatively engaged with each end portion of the member so that said latches are moved into a locking position upon outward movement of the bolt and vice versa.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved lock whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a fragmentary view partly in elevation and partly in section illustrating a lock and latch constructed in accordance with an embodiment of my invention and in applied position, and

Fig. 2 is a sectional view taken substantially on the line 2—2 of Fig. 1.

As disclosed in the accompanying drawings, D denotes a door of any conventional type and which coacts with the frame F or the like. L denotes a lock including a casing C and an endwise movable bolt 2 which, when extended, coacts in a well known manner with a keeper 3. The bolt 2 is adapted to be extended or retracted in a conventional manner through the instrumentality of a key.

Secured to or integrally formed with an edge of the bolt 1 is a rack 4 extending longitudinally of the bolt 1. The rack 4 meshes with a pinion 5 rotatably supported by and between the face plates 6 of the casing C. Slidably disposed through opposed edge walls 7 of the casing and substantially at right angles to the bolt 1 is an elongated rigid member 8. This member 8 is of a length to have its opposite end portions disposed exteriorly at all times of the casing C.

The frame F above and below the lock L, as herein disclosed, is provided with the keepers A and B having coacting therewith the latches 9 and 10. The latch 10 is of a swinging type and is provided with a head 11 adapted to extend within the keeper A. The latch 9 is also provided with a tail piece 12 having pivotally engaged therewith an end portion of a rod 14. The opposite end portion of the rod 14 is loosely engaged as at 15 with an eye member 16 carried by the adjacent end of the elongated member 8. The latch 10 includes a bolt 17 mounted for rectilinear movement and which engages within the keeper B and the inner end portion of the bolt 17 has loosely engaged therewith an end portion of a rod 18, the opposite end portion of the rod being loosely engaged with an eye member 19 carried by the adjacent end portion of the member 8.

The member 8 is also provided with a rack 20 with which the pinion 5 is in mesh, so that when the bolt 1 is extended for coaction with the keeper K, the member 8 will be moved in a direction whereby the latches 9 and 10 are caused to engage their coacting keepers A and B. When the bolt 1 is retracted, the movement of the member 8 results in the latches 9 and 10 being also retracted.

With my improved lock and latch it is substantially impossible to pry or spring a door open with a chisel or other tool as is now often done, so that my improved lock and latch is particularly advantageous in use for residences, stores, cellars and the like.

From the foregoing description, it is thought to be obvious that a lock and latch constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my inven-

tion is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

1. A device of the character described comprising a casing, a locking bolt including a rack slidable in said casing, a single operating member including a rack, said member extending through the casing, latches pivotally connected to each end of the operating member, a pinion rotatably supported by the casing and in mesh with each rack operated by the locking bolt whereby the single operating member is caused to unfasten the latches when the member is moved in one direction and to move said latches to their locked position when said member is moved in the opposite direction.

2. A device of the character described comprising a casing, a locking bolt including a rack slidable in said casing, a single operating member including a rack, said member being slidable transversely through said casing, latches pivotally connected to each end of the operating member, a pinion supported by the casing and in mesh with each rack and operated by the locking bolt to simultaneously cause the operation of said latches when the single operating member is moved in one direction.

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

JAS. T. BICKEL.

Witnesses:
J. P. SWAIM,
CARL BICKEL.