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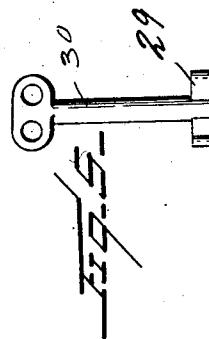
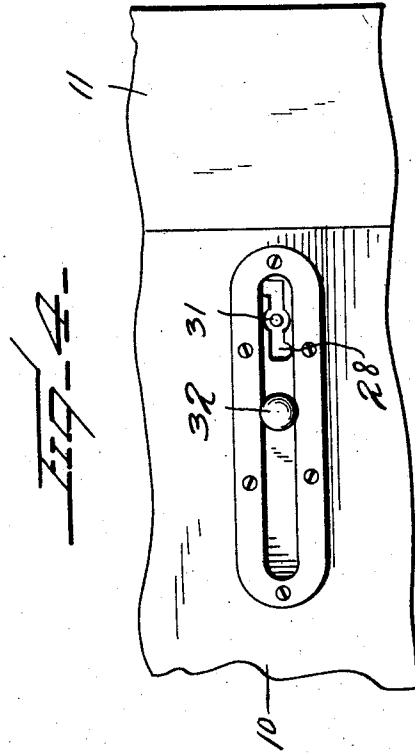
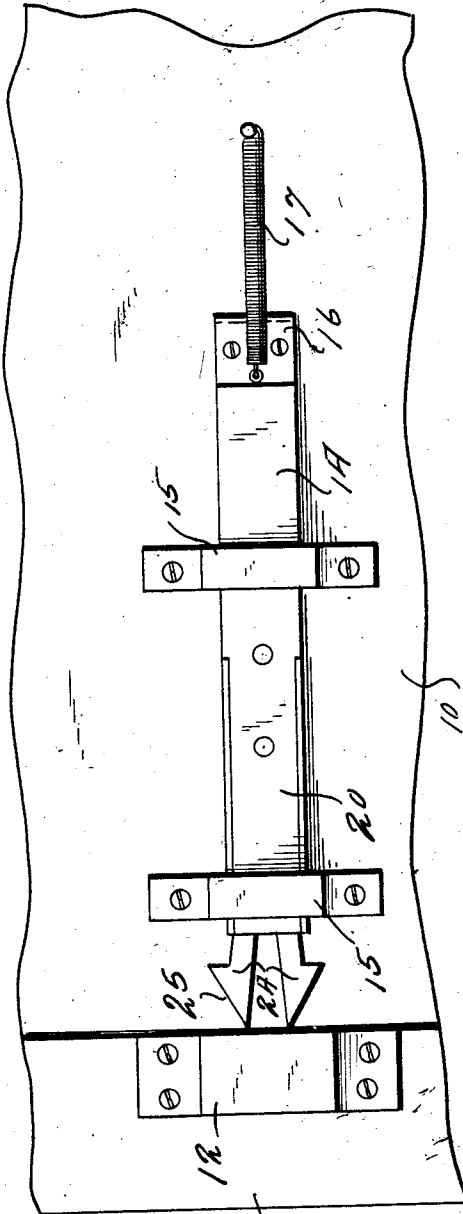
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DOORLOCK

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DOORLOCK.

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This invention relates to locking devices, and particularly to a lock including a bolt adapted to be mounted upon a door and extending through a keeper on the door jamb.

5 The general object of the invention is to provide a device of this character in which the locking bolt carries two spring expanded detents or latches which, when the locking bolt is shot, spring outward and engage the
10 keeper and prevent the retraction of the locking bolt until a key has been inserted to retract the detents.

A further object is to provide a device of this character which is very simple, which
15 may be readily applied, and which is thoroughly effective.

A still further object is to provide a device of this character which is particularly adapted for barn doors and the like, which
20 will automatically lock when the bolt is shifted, and in which the bolt may be shifted either from the inside or outside of the door after the door has been unlocked.

My invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a rear view of a door and portion of a frame showing my improved lock, the lock being partly broken away;

Figure 2 is a section on the line 2—2 of
30 Figure 1;

Figure 3 is a rear elevation of the door, jamb and lock showing the lock retracted;

Figure 4 is a face view of the door showing the keyhole and the means for shifting
35 the bolt;

Figure 5 is a view of the key;

Figure 6 is an end elevation of the key shown in Figure 5.

Referring to these drawings, 10 designates
40 a door and 11 the door jamb. The door jamb carries a keeper 12 which is formed to provide a recess 13. As illustrated, this keeper is a metallic strap as, for instance, of cast iron attached by machine screws or otherwise
45 attached to the jamb of the door and has an arched middle portion defining the outer wall of the aperture 13.

Mounted upon the door 10 is the bolt 14 which is mounted within the guides or metallic
50 straps 15 which are attached to the face of the door in any suitable manner. The bolt is urged rearward against a stop 16 by means of a spring 17 of any suitable character. The door immediately beneath the bolt
55 is longitudinally slotted, as at 18.

The bolt at its forward end is formed with

a longitudinally extending kerf or slit 19 extending from that end of the bolt adjacent the keeper 12 and the lateral walls of this slit or kerf are closed by plates 20 which are
60 attached to the walls of the slot by machine screws, by welding or in any other suitable manner. Disposed within this recess or kerf 19 are the two latches or detents 21 and 22, both having the same character, that is, being
65 pivoted upon pivots 23 passing through the side walls of the recess and the extremities of these detents or latches extending out beyond the bolt and having the outwardly extending teeth or shoulders 24, the forward
70 faces of which are forwardly and inwardly beveled, as at 25. The inner ends of these detents 21 and 22 are forced toward each other by means of a U-shaped spring 26 disposed between the jaws of the detents and
75 forward of the pivots thereof. The rear ends of the detents are each formed with recesses 27 constituting wards and one side wall of the recess, that is, the side wall which faces the slot 18 is formed with a keyhole
80 opening 28 through which the bit 29 of a key 30 may be inserted. The keyhole 28 has, of course, the form of the bit. The bit is a double bit, that is, it extends in opposite
85 directions from the central tubular shank of the key, and when it is turned in one direction it will act to spread apart the inner ends of the latches 21 and 22 against the action of the spring 26, thus causing the hooked ends of these latches to move toward each other.
90 When the key is released, of course, the spring 26 acts to force the hooked ends of the latches apart from each other.

A central pin 31 projects out through the keyhole 28 and the tubular bit of the key
95 fits upon this pin as upon an axis. Preferably the bolt 14 is provided with a pin 32 which projects out through the slot 18 so that the bolt may be shifted into engagement with the keeper 12 by hand from the exterior of the door without the necessity of
100 inserting the key to act as a handle to shift the bolt.

The operation of this device will be obvious from what has gone before. The bolt
105 is normally retracted by the spring 17 but when the bolt is shifted forward through the guide straps 15, the forwardly inclined ends of the detents or latches 21 and 22 will strike the side inclined walls of the aperture 13 and they will be forced inward until
110 the heads of these latches have cleared the

rear face of the detent, whereupon the latches will spring outward under the force of the spring 26, thus locking the bolt from any retraction. Of course, the bolt under these circumstances locks the door against opening movement.

If it be now desired to open the door, the key is inserted through the keyhole 28 and turned, which will force the rear ends of the latches apart, forcing the forward ends toward each other, until the heads of the latches will clear the keeper 12 and then as soon as this has been accomplished the spring 17 will retract the bolt. If it be desired to open the door from the inside, assuming that the door is locked, the extremities of the latches may be readily forced toward each other by the fingers without the aid of a key, whereupon the spring will retract the bolt, or the bolt may be shifted rearward by hand. The bolt might be entirely enclosed within a casing so as to provide a slot 18 on each face of the casing through which a key would have to be inserted in order to retract the heads of the latches from engagement with the keeper. In this case, of course, the keeper would have to be closed.

I claim:—

1. A door and a jamb coacting therewith, the jamb being formed with a keeper, a bolt mounted upon the door for sliding movement toward and from the keeper; a spring

urging said bolt rearward, the forward end of the bolt being transversely recessed, a pair of latches disposed within said recess and pivotally supported intermediate the ends, the forward end of each latch terminating in a head having a detent face and a forwardly and inwardly inclined face, a spring urging the forward ends of the latches apart, the rear ends of the latches being formed with key wards and one face of the bolt being formed with a keyhole, the door having a longitudinally extending slot through which a key may be inserted into said keyhole to thereby spread the rear ends of the latches apart.

2. The combination with a door and a jamb, the jamb having a keeper, of a bolt slidably mounted upon the door, the bolt carrying latches in its forward end adapted to be inserted through the keeper, the latches having heads adapted to engage over the keeper when the latches are so inserted through the keeper, a spring urging the forward ends of the latches outward, key actuated means inserted through the door for retracting the forward ends of the latches to permit the withdrawal of the latches from the keeper, means normally retracting the bolt, and means whereby the bolt may be manually shifted.

In testimony whereof I hereunto affix my signature.

JACOB M. HARRINGTON.