

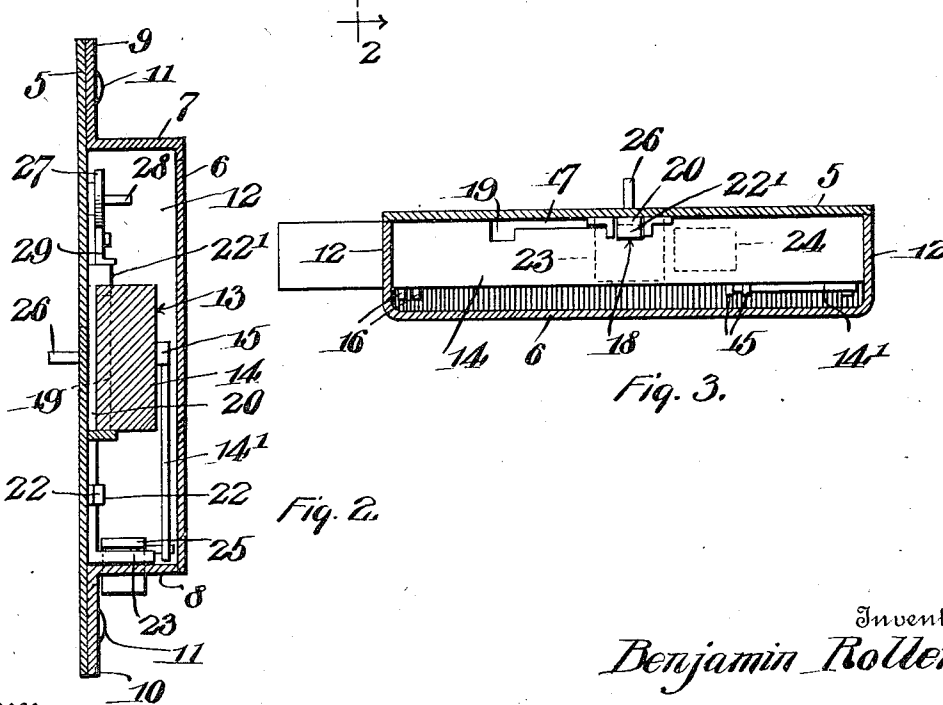
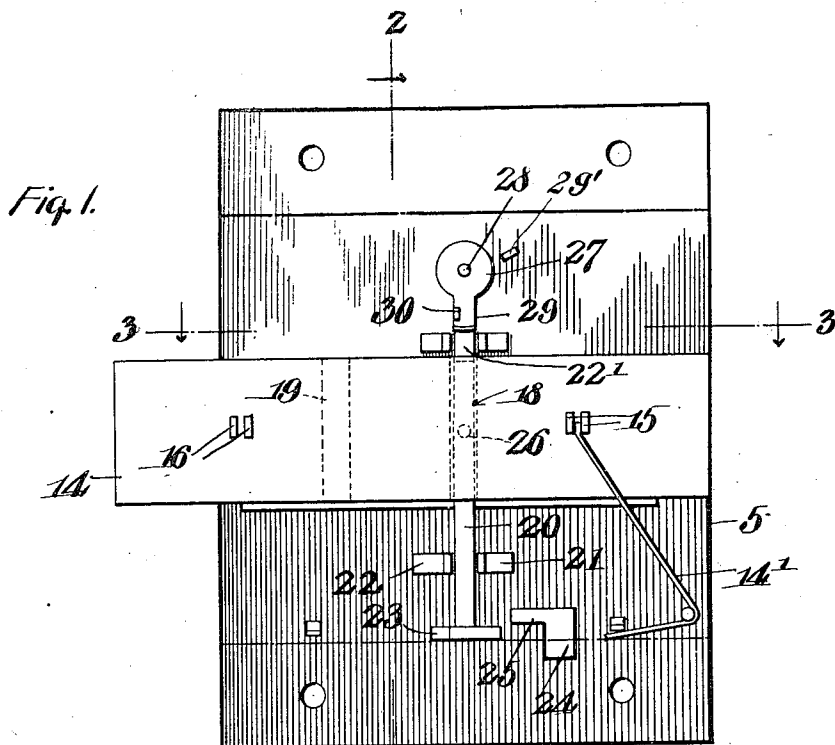
B. ROLLER.

LOCK.

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1,036,009.

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1,036,009.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BENJAMIN ROLLER, a citizen of the United States, residing at Helena, in the county of Phillips and State of Arkansas, have invented new and useful Improvements in Locks, of which the following is a specification.

This invention relates to improvements in locks and more particularly to the type provided with a sliding bolt.

One object of the invention is the provision of a lock particularly applicable to barn doors, gates and out buildings in which access may be had to both sides of the gate or door simultaneously and more particularly designed to replace the usual pad lock, usually employed to lock the doors of out buildings and gates.

With these and other objects in view, which will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims; it being understood that various changes in the form, proportion, size, and minor details of the device may be made, within the scope of the appended claims, without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, forming a part of the specification; Figure 1 is a front elevation of the device with the front plate removed. Fig. 2 is a sectional end view approximately on the line 2-2 of Fig. 1. Fig. 3 is a sectional plan view on the line 3-3 of Fig. 1.

Similar numerals of reference are employed to designate corresponding parts throughout.

The lock includes in its construction a casing, comprising a plain side plate 5 and a front side plate 6. The plate 6 is somewhat less in width than the plate 5 and at its opposite sides is provided with right angular extensions 7 and 8, which in turn terminate in outwardly extending portions 9 and 10, to bear on the inner face of the plate 5 and secured thereto by rivets or screws 11. With this construction it will be manifest that a space will exist between the plates 5 and 6, the opposite ends of the plate 6 being intumed, as shown at 12, and bearing on

the inner face of the plate 5, and provided with alining rectangular openings 13.

Slidingly fitted in the openings 13 is a bolt 14, somewhat greater in length than the length of the casing, and designed to engage with a suitable keeper, not shown, to hold the part to which the lock is applied, in locked position.

Secured to the lower end 8 is the body portion of a U-shaped leaf spring 14', the terminals of which extend upwardly and one of which is secured between a pair of lugs 15 on one face of the bolt 14. It will be evident with this construction when the bolt is moved endwise and its engaging end moved in advance of the adjacent side of the casing, that one of the limbs of the spring will be tensioned, so that when said bolt is released it will be moved inwardly by the action of the said spring. While I have shown but one of the limbs in engagement with the bolt and adapted to actuate the bolt to move in one direction it will be readily understood when it is desired to have the bolt move in the opposite direction the spring 14' is removed and a similar spring is placed in engagement with lugs 16 remote from the lugs 15.

By reference to the drawings it will be seen that the bolt 14 is considerably less in thickness than the distance between the plates 5 and 6 and one face of the said bolt bears on the plate 5, the terminals of the spring 14 being arranged in the space between the opposite faces of the bolt and plate 6. Formed in this face of the bolt 14 adjacent to the plate 5 is a transverse recess 17, arranged at the medial portion of the bolt and corresponding in width to approximately one-fourth of the length of the bolt. Formed in the inner wall of the said recess 17 and at the opposite sides thereof are sockets 18 and 19, the function of which will presently appear.

What will subsequently be termed a latch includes a shank portion 20 slidingly fitted between protrusions 21 and 22 formed on the inner face of the plate 5. The length of the shank corresponds approximately to the distance between the lower end 8 of the casing and upper side of the bolt 14 and in thickness is somewhat less than the depth of the recess 17. The shank is arranged for movement in a plane perpendicular to the plane of movement of the bolt 14, and its

upper end is provided with an inwardly extending nose 22' of a size to be nicely received by either of the sockets 18 and 19. The shank terminates at its lower end in an inwardly extending right angular foot 23, extending to a point adjacent to the plate 6, as clearly shown in the drawings. Slidingly fitted in the lower end 8 of the casing is a button 24, the head of which extends through an opening in the end wall 8 adjacent to the foot 23. The inner end of the button is provided with an extension 25, adapted to be moved below the foot 23 when the latch is raised, thereby the nose will be held above the bolt 14.

The latch 20 is manually operated by means of a button 26 extending through an elongated slot formed in the plate 5, and it will be evident when the button 26 is moved upwardly until the nose is raised above the bolt that the latter will be free to move.

As shown in the drawings I prefer a gravity-actuated keeper to maintain the nose 22 against displacement in either of the sockets 18 and 19, this keeper being in the form of a disk 27 pivoted on a rod 28, extending inwardly from the plate 5 and directly above the latch. The disk is provided on its periphery with a radial lug 29 adapted to bear on the upper end of the nose 22 when the latter is in either of the sockets. Secured to the inner face of the plate 5 of the casing is a stop lug 29' designed to limit the movement of the lug 29 upon the withdrawal of the latter from engagement with the nose 22'. The outer face of the disk or that presented toward the plate 6 is provided with a stud 30, adapted to engage with the lug of a key insertible through a key-hole in the plate 6 and when so engaging to cooperate with the key to turn the disk, whereby the lug 29 will be moved upwardly and away from the nose, thus making it possible for the operator to lift the latch by means of the button 26.

The operation of the lock is as follows: As shown in Fig. 1 of the drawings the bolt 14 is in locked position, in such position the spring 14' is placed under tension and the bolt held in its locked position by means of the nose 22' engaging the socket 18, whereby the bolt 14 is held against the action of the spring 14'. In releasing the bolt the pin 26 is moved upwardly, carrying with it the

latch 20, thereby moving the nose 22' out of engagement with the socket 18 whereby the bolt 14' will be retracted by the reaction of the spring 14'. To again operate the bolt to its locking position, the rear end thereof is manually operated in a forward direction whereby the above operation is repeated.

From the foregoing, it is evident that I have provided a device which is comparatively simple in structure and inexpensive to manufacture, embodying few parts and these so arranged that the danger of derangement will be reduced to a minimum.

I claim:—

1. A lock comprising a casing, a vertically disposed latch bar slidingly fitted in the casing and having on one end a lateral nose, a spring-pressed bolt of greater length than the width of the casing slidingly fitted in the latter and manually operable in one direction, and movable in a plane perpendicular to the plane of movement of the latch bar, said bolt having on one side a notch to receive the nose, a keeper pivoted in the casing directly above the latch bar, and actuated by gravity to move into alignment with and bear upon the latch bar when the nose of the latter is in the socket, said keeper being operable by a key to move from engagement with the latch bar.

2. A lock comprising a casing, a bolt slidably fitted within the casing and manually operated in one direction, a spring for operating the bolt in its opposite direction, said bolt being formed with a pair of sockets, said sockets communicating with each other by means of a recess formed in the bolt, a manually operable latch bar slidably fitted within the casing and movable in plane perpendicular to the plane of the bolt, a nose formed on said latch bar, said nose adapted to engage one or the other of the sockets formed in the bolt whereby to hold said bolt in its locked or unlocked position, and a gravity operated keeper adapted to engage said latch bar to hold said bolt in its locked position.

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

BENJAMIN ROLLER.

Witnesses:

MASON OLDHAM,
SMITH WILLIAMS.