

W. MEIER.
LOCK.

APPLICATION FILED APR. 22, 1910.

981,453.

Patented Jan. 10, 1911.

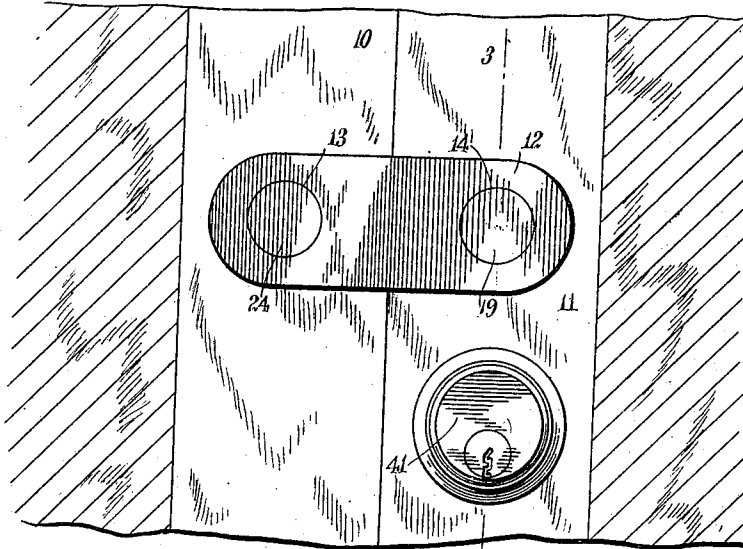


FIG. 1.

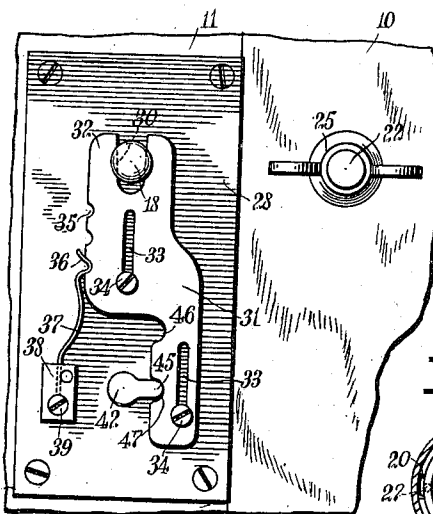


FIG. 2.

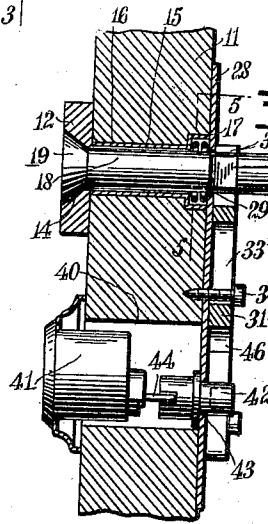


FIG. 3.

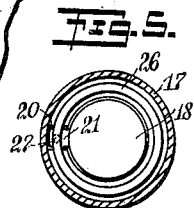


FIG. 5.

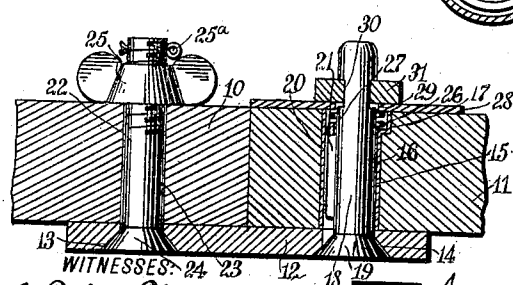


FIG. 4.

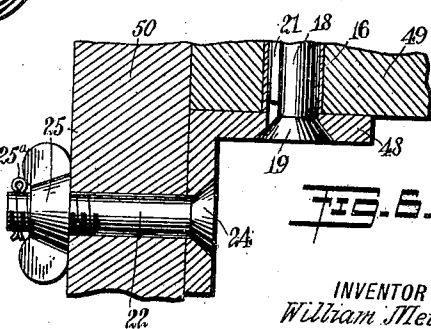


FIG. 6.

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LOCK.

981,453.

Specification of Letters Patent.

Patented Jan. 10, 1911.

Application filed April 22, 1910. Serial No. 556,946.

To all whom it may concern:

Be it known that I, WILLIAM MEIER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Lock, of which the following is a full, clear, and exact description.

This invention relates to locks, and has reference more particularly to a device of this class, comprising a removable bolt adapted to secure in position a hasp used for fastening a door or the like, a movable member having means for holding the bolt in place at the inside of the door or other closure, and key-controllable means for actuating the movable member.

The object of the invention is to provide a simple, strong and durable lock for fastening doors, shutters and other closures, which is inexpensive to manufacture, which can be easily manipulated, which can take the place of the usual pad-lock or other device used for fastening a hasp in position, which is so constructed that it is extremely difficult to effect an unauthorized opening of the lock, and which affords little purchase for the use of a jimmy or other tool, in effecting an unauthorized entry.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a front elevation of a part of a pair of double doorshaving an embodiment of my invention applied thereto; Fig. 2 is a rear elevation of the inside of the doors, showing the back of the lock; Fig. 3 is a vertical section on the line 3—3 of Fig. 1; Fig. 4 is a horizontal section of the doors, showing the lock in place; Fig. 5 is an enlarged section on the line 5—5 of Fig. 3; and Fig. 6 is a horizontal section of a base of a door and its frame, showing a modified form of my invention.

Before proceeding to a more detailed explanation of my invention, it should be clearly understood that the key-controllable means associated with the movable member which holds the bolt in place, may be of

any suitable form. I have shown for example, key-controllable mechanism forming part of what is generally known as a "Yale" paracentric lock, but I do not wish to confine myself to this particular device. The hasp may be of any suitable form, and consists preferably of a strong, flat bar, which can be countersunk in a suitably formed recess of the door. I employ a lock bolt and a keeper bolt, the heads of which are preferably countersunk in openings of the hasp, with their outer faces flush with the hasp, so that the lock presents practically no point at which it can be successfully attacked by means of a jimmy or other implement, to effect an improper opening of the lock. However, these and other details of construction can be varied in accordance with individual preference and special conditions, without departing from the underlying spirit of the invention.

Referring more particularly to the drawings, I have shown a pair of double doors 10 and 11. The hasp 12 consists of a flat bar of iron or other suitable metal, the ends of which may be rounded. It has near the extremities, tapered openings 13 and 14, and in an operative position extends across the adjacent longitudinal edges of the doors. The door 11 has therethrough an opening 15 in which is arranged a lining sleeve 16 having at the inner end an enlargement 17, for a purpose to appear hereinafter. The lock bolt 18 has a beveled head 19 and is removably received in the sleeve 16, the head 19 being located in the opening 14 of the hasp, and fitting snugly therein. The sleeve 16, at one side has a longitudinal offset forming a guide groove 20 which receives a correspondingly formed and laterally extended guide rib 21 of the lock bolt. A keeper bolt 22 is arranged in a suitable opening 23, through the door 10, and has a head 24, which seats in the opening 13, as does the head 19 in the opening 14. At the inner end, the keeper bolt is threaded, and has a retaining wing nut 25, and a cotter pin 25^a.

A helical spring 26 is arranged within the enlargement 17 of the sleeve, and has a laterally disposed end which abuts against the extremity of the guide rib 21 when the lock bolt is in place. At the inside of the door 11 is the back plate 28 of the lock, which has an opening 29 registering with the sleeve, and smaller in diameter than the enlarge-

ment of the sleeve, so that the spring 26 can seat against the back plate. The spring thus tends to project the lock bolt.

At the inner, projecting end, the lock bolt 5 has at opposite sides, corresponding transverse grooves or recesses 30, formed to receive the bifurcated ends 32 of a movable member 31 which is arranged to slide upon the back plate, and has guide grooves 33 10 which receive guide screws 34. The latter serve to hold the movable member slidably in position. It has at one edge a plurality of notches 35 adapted to be engaged by the rounded end 36 of a spring detent 37, mounted in a socket 38. The latter carries the 15 spring, and is fastened upon the back plate by means of a screw 39.

Below the lock bolt, the door 11 has an opening 40, in which is positioned the key-controllable mechanism 41. This is positioned at the outside of the door, so that it can be operated from that side. An operating member 42 is rotatably positioned in an opening 43 of the back plate, and is operatively associated with the key-controllable 25 mechanism by means of a connection 44. The operating member has a laterally extending finger 45 adapted to engage recesses 46 and 47 of the movable member 31, so that when the key is turned, the operating member can be actuated to raise and lower the member 31 slidably, that is, into and out of engagement with the inner end of the locking bolt. 30

It will be understood that when the bifurcated end 32 of the movable member 31 engages the inner end of the lock bolt, as is shown, that is, the recesses 30, the lock bolt cannot be withdrawn, and will be held in 35 position against the tension of the spring. When it is desired to open the lock, the proper key is inserted in the mechanism 41, and the operating member 42 is rotated to slide the member 31 downward, and out of 40 engagement with the end of the lock bolt. As the member 31 moves away from the lock bolt, the spring 26 projects the lock bolt sufficiently to permit it to be withdrawn by means of the fingers. The lock bolt is removed entirely from the hasp, and the latter can then be inoperatively disposed so 45 that the doors can be opened.

In Fig. 6 is shown a modified form of the invention, in which the hasp 48 is bent at 50 right angles so that it can fit into a corner formed by a door 49 and the frame 50 thereof. With this form of the device the locking bolt 18 and the keeper bolt 22 are of course also arranged at right angles, as 55 shown.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:

1. In combination, a hasp adapted to be 60 mounted upon one side of a door, a remov-

able bolt engaging said hasp to secure the same in place, and adapted to extend through the door, key-controllable mechanism, and a movable member separate from said key-controllable mechanism and adapted to be positioned at the side of the door remote from said hasp, said member having means for securing said bolt in position, said key-controllable mechanism serving for the operation of said member. 70 75

2. The combination, with a door having an opening therethrough, of a hasp mounted at one side of said door and having an opening adapted to register with said opening of said door, a removable bolt mounted in said openings to secure said hasp in place, a movable member at the other side of said door and having means for engaging said bolt at the inner end thereof to secure said bolt in position, and means operable from the hasp 80 85 side of said door, to move said last-mentioned member into and out of engagement with said bolt.

3. The combination, with a door having an opening therethrough, of a hasp mounted at one side of said door, and having an opening adapted to register with said opening of said door, a sleeve in said opening of said door and having a guide groove, a removable bolt mounted in said openings, and having a 90 95 rib adapted to engage said groove, said bolt serving to secure said hasp in place, a movable member at the other side of said door and having means for engaging said bolt at the inner end thereof, to secure the same in 100 position, and key-controllable mechanism operable from the hasp side of said door, to move said last-mentioned member into and out of engagement with said bolt.

4. The combination, with a door having 105 an opening therethrough, of a hasp mounted at one side of said door, and having an opening adapted to register with said opening of said door, a sleeve in said opening of said door and having a guide groove, a removable bolt mounted in said openings, and having a 110 rib adapted to engage said groove, said bolt serving to secure said hasp in place, a movable member at the other side of said door and having means for engaging said bolt at 115 the inner end thereof, to secure the same in position, key-controllable mechanism operable from the hasp side of said door, to move said last-mentioned member into and out of engagement with said bolt, and a spring in 120 said sleeve and engaging at the end of said rib to project said bolt.

5. The combination, with a door having an opening therethrough, of a hasp mounted at one side of said door and having an opening adapted to register with said opening of said door, said opening of said door having therein a sleeve provided with an enlargement at the inner end, a back plate mounted upon said door at the inside thereof, and 125 130

having an opening at said enlargement of said sleeve, said sleeve having a guide groove, a bolt mounted in said openings and having a guide rib engaging said groove, 5 said ball serving to secure said hasp in position, and at the inner end having recesses, a member guided to slide upon said back plate and having a bifurcated end formed to engage said bolt in said recesses, to hold said 10 bolt in place, a spring within said enlargement of said sleeve, and having an end engaging said rib whereby it tends normally to project said bolt, an operating member having a finger adapted to engage said slide, and key-controllable mechanism having an 15 operative connection with said operating member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM MEIER.

Witnesses:

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PHILIP D. ROLLHAUS.