

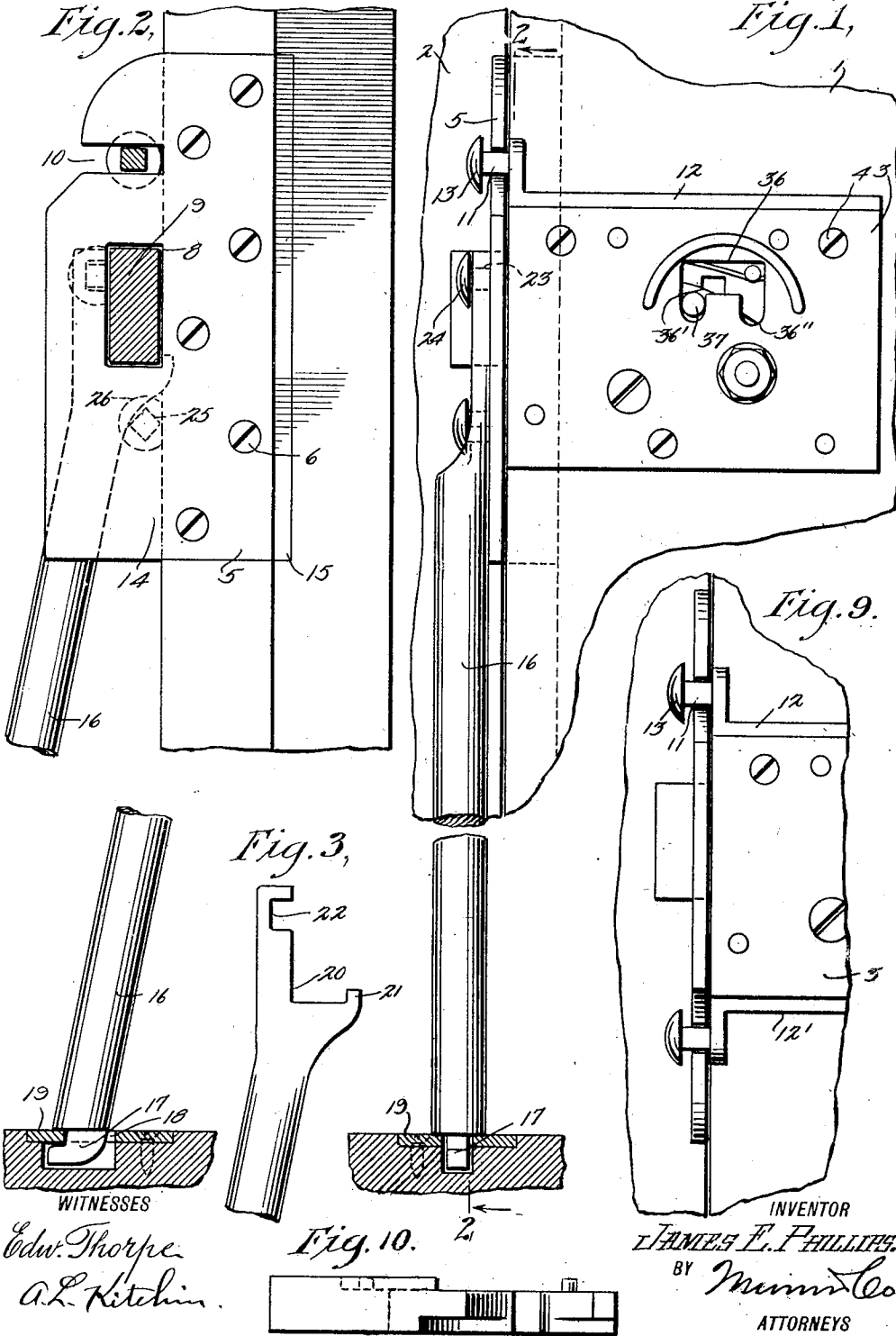
J. E. PHILLIPS.
LOCK.

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1,371,111.

Patented Mar. 8, 1921.

2 SHEETS—SHEET 1.



UNITED STATES PATENT OFFICE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES E. PHILLIPS, 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 useful Lock, of which the following is a full, clear, and exact description.

This invention relates to locks, and particularly to what may be termed a burglar-proof lock, and has for an object to provide a construction which may be applied to any kind of a door, or in fact any kind of a device, and at the same time present a construction which will resist opening and being tampered with.

Another object of the invention is to provide a lock which is especially designed to successfully resist the action of a prying instrument, as for instance a jimmy, the lock including not only a bolt which may be projected and retracted at will, but a brace co-acting with the bolt for resisting the prying implement.

A further object of the invention is to provide a lock of a simple strong construction using a retractile bolt and one or more auxiliary catches which will resist any spreading of the door and jamb.

In the accompanying drawings:

Figure 1 is a rear elevation of the lock and brace embodying the invention, the same being shown applied to a door and jamb.

Fig. 2 is a sectional view through Fig. 1 on line 2—2.

Fig. 3 is a fragmentary edge view of the upper part of the bracing bar shown in Fig. 1.

Fig. 4 is a view of the lock similar to that shown in Fig. 1, but with the front plate removed and part of the keeper shown in section.

Fig. 5 is a sectional view through Fig. 4 approximately on line 5—5.

Fig. 6 is a transverse sectional view through Fig. 4 approximately on line 6—6.

Fig. 7 is a view similar to Fig. 4 except the parts are shown in retracted position.

Fig. 8 is a view similar to Fig. 7, but showing the roll back finishing the unlocking operation.

Fig. 9 is a fragmentary view similar to

Fig. 1, but showing a pair of locking catches embodying certain features of the invention.

Fig. 10 is an edge view of the bolt shown in Fig. 4.

Referring to the accompanying drawings by numerals 1 indicates a door of any desired kind and 2 a door jamb, door 1 carrying a lock 3 which is secured in place in any desired manner, as for instance by screws 4. The jamb 2 carries a keeper 5 held in place by any suitable means, as for instance screws 6, said keeper being provided with an opening 8 for accommodating a bolt 9 and an opening 10 for accommodating the shank 11 of the catch 12, screwed or otherwise rigidly secured to the lock 3. The shank 11 is provided with a head 13 which overlaps the keeper 5 and positively prevents any appreciable spreading of the door and jamb. The keeper 5 is substantially L-shaped and arranged so that the body 14 acts as an ordinary keeper while an upstanding flange 15 is presented which will resist the entrance of a prying tool, as for instance a jimmy.

Associated with the lock 3 and keeper 5 and coacting with the bolt 8 is a bracing bar 16, which at the lower end is provided with a hook 17 adapted to extend through an opening 18 in the floor plate 19 as shown in the lower part of Fig. 2. The upper part of the bar 16 is formed as shown in Fig. 3, namely, with a notched out portion 20 accommodating the bolt 8, said notched out portion being inclosed partially by the projection 21 which fits in back of the bolt. A notch 22 is provided at the upper part of the bar 16 merging into the notch 20 and designed to accommodate a pin 23 rigidly secured to the keeper 5, said pin being formed with a head 24. A second pin 25 having a head 26 is provided on the keeper 5 below the bolt 8 overlapping the bar 16 a short distance beneath the projection 21. This arrangement of headed pins overlapping the upper end of bar 16 positively locks the bar against displacement, or against any removal except in the proper manner.

The lock 3 is formed with a casing 27 which may be cast, or made in any desired manner. A plurality of guiding projections or blocks 28, 29 and 30 are provided for

guiding the bolt 8 in its back and forth movement. The posts 29 and 30 and the enlargements 31 and 32 all carry upstanding projections or pins 33 which center the covering plate 34 when placed in position on casing 27. This covering plate is provided with an arc-shaped fender or guard 35 arranged immediately above a substantially inverted U-shaped opening 36 (Fig. 1) said opening accommodating the pin or knob 37 adapted to be worked from the interior of the door for actuating the locking mechanism. The bolt 8 is provided with a depression or cutout portion 38 for accommodating what may be termed a locking tumbler 39 which is pivotally mounted at 40 and is normally held depressed by spring 41. The locking tumbler 39 is provided with notches 42 and 43 which accommodates at different times the stop 44 extending upwardly from the bottom of casing 27, said stop, if desired, being integral with said casing, positioned to positively prevent any reciprocation of the bolt 8 when the locking pawl is interlocked therewith. When the parts are in the position shown in Fig. 7 the bolt is positively locked in a retracted position and when in the position shown in Fig. 4 the bolt is positively locked in a projected position. The locking pawl 39 is provided with a bent over end 45 which is adapted to be engaged by the lever or roll back 46 rigidly secured to the shaft 47. Shaft 47 fits into a bearing member 48 (Fig. 5) which is rotatably mounted in the covering plate 34 so that there may be a free turning action of the shaft and yet the shaft held in proper position. The outer or free end of the shaft is retained by bolts 49 which also act as locking means for holding barrel 50 in place. The shaft 47 is pinned or otherwise rigidly secured to the rotatable tumbler carrying tube 51 so as to rotate therewith when a proper key is used for raising the tumblers. The lock or locking mechanism 52 may be, if desired, of the cylinder type, a special type, or in fact any desired type which has a rotatable member and tumblers for locking the rotatable member against movement when the key is removed. This rotatable member, as just stated, is rigidly secured to the shaft 47 so that when the key is inserted and the rotatable member is actuated the shaft 47 will be rotated and the roll back 46 will be operated properly for either moving the lock to the position shown in Fig. 4 or to the position shown in Fig. 7. It will be noted from Fig. 5 that the bolt 8 is cut away at 53 for preventing a free movement of the roll back 46 so that it will first engage the projection 45 on the locking tumbler 39 and force said projection into the notch 54 in bolt 8, and then shift the bolt either to an open or closed position as the case may be. It will, of course, be understood that the bolt

8 at notch 54 is sufficiently thick for engaging the roll back 46 as it moves in either direction. It will be noted from Fig. 1 that in addition to member 44 acting as a positive lock for preventing shifting of the bolt 8 the knob or pin 37 when arranged in either of the depressions 36' or 36'' will also act as a lock for preventing shifting of the bolt. From the interior face of the door the locking bolt may be easily shifted by grasping the pin 37 and shifting the same from one notch 36' to the next notch 36'', or in the other direction. To shift the bolt 8 from the outside of the door it will be necessary to insert a key and rotate the same to the desired extent.

In Fig. 9 will be seen a slightly modified form of the invention in which instead of having a single locking catch 12 two catches are provided, namely catch 12 and a similar catch 12' along the lower edge of the lock 3. Catch 12' is constructed identical with catch 12 and merely adds an additional reinforcement for preventing the separation of the keeper from the lock in case a prying instrument is being used. It will be noted that the lock 3 may be used separately, with one or both of the catches 12 or 12' and if desired with the locking bar 16.

In applying the lock the plate 19 is arranged as shown in Figs. 1 and 2 and then the keeper 5 together with lock 3 mounted as shown in Figs. 1 and 2 and held in place by screws or other desired means. In order to mount the barrel 50 in proper place a round hole 55 is bored of the proper size to receive this barrel, after which a slot 56 is formed so as to receive the web 57 of the barrel 50. It will be noted that the barrel 50 and associate parts are held in position only by the nuts 49, but are prevented from rotation by the radiating web 57 fitting into the slot or notch 56.

What I claim is:

1. A burglar-proof locking mechanism comprising a keeper adapted to be mounted on a door casing, said keeper being substantially L-shaped, a lock adapted to be mounted on a door associated with the keeper, said lock being provided with a bolt adapted to be projected through the keeper, a diagonally positioned bracing bar formed with a notch for receiving that part of the bolt extending through the keeper, and means for preventing the bar from being disengaged from the keeper while the bolt is projected.

2. A lock mechanism comprising a locking member provided with a bolt, a keeper having a projection overlapping the lock, an opening for receiving said bolt, a plurality of pins having heads thereon carried by said keeper and positioned adjacent the bolt when projected through the keeper, a bracing bar having a notch accommodating said

bolt, said bracing bar projecting beneath the heads of said pins so as to be held in place thereby when said bolt is projected.

3. A lock of the character described comprising a casing, a keeper formed with a bolt opening and a notch adjacent the bolt opening, a catch rigidly secured to the casing, a pin projecting from said catch adapted to project through said notch when in a locked position, said pin being formed with a head thereon, a sliding bolt arranged in said casing, and means for projecting the same from the casing through the opening in the keeper.
4. A lock of the character described comprising a casing, a bolt slidably positioned in the casing, a stop fixed within said casing, a tumbler pivotally connected with said bolt and having a pair of notches for accommodating said stop at different times, a spring for causing said tumbler to normally move toward said stop, an independent bolt-operating mechanism provided with a roll back positioned to move said tumbler away from said stop and then shift said bolt, and a manually operated pin extending from said tumbler through said casing whereby the bolt may be released and shifted manually, said pin extending through the casing in one direction, and an independent bolt operating lock mechanism operated from the opposite side.
5. A lock of the character described comprising a locking mechanism provided with a sliding bolt, a keeper for receiving said bolt, a bracing bar formed with a notch for

receiving that part of the bolt extending through the keeper and means for preventing the bar from being disengaged from the keeper while the bolt is projected.

6. A burglar-proof locking mechanism comprising a keeper adapted to be mounted on a door casing, a lock adapted to be mounted on the door associated with said keeper, said lock being provided with a bolt adapted to be projected through the keeper, a bracing bar formed with a notch for receiving part of the bolt extending through the keeper, and means for preventing said door from being disengaged from the keeper while the bolt is projected.

7. A locking mechanism comprising a lock casing formed with an inverted U-shaped opening on one face and with an arc-shaped canopy over said opening, a bolt slidably mounted in said casing, said bolt being formed with a notch, a roll-back engaging the bolt in the notch for moving the bolt back and forth, a stud projecting from said casing, a tumbler connected to the bolt and formed with a pair of notches adapted to engage said stud at different times for locking said bolt in an open or closed position, said roll back being adapted to move the tumbler out of engagement with said stud before engaging the bolt, and a pin projecting from said tumbler through said U-shaped opening whereby the tumbler may be manually moved out of engagement with said stud and the bolt reciprocated.

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