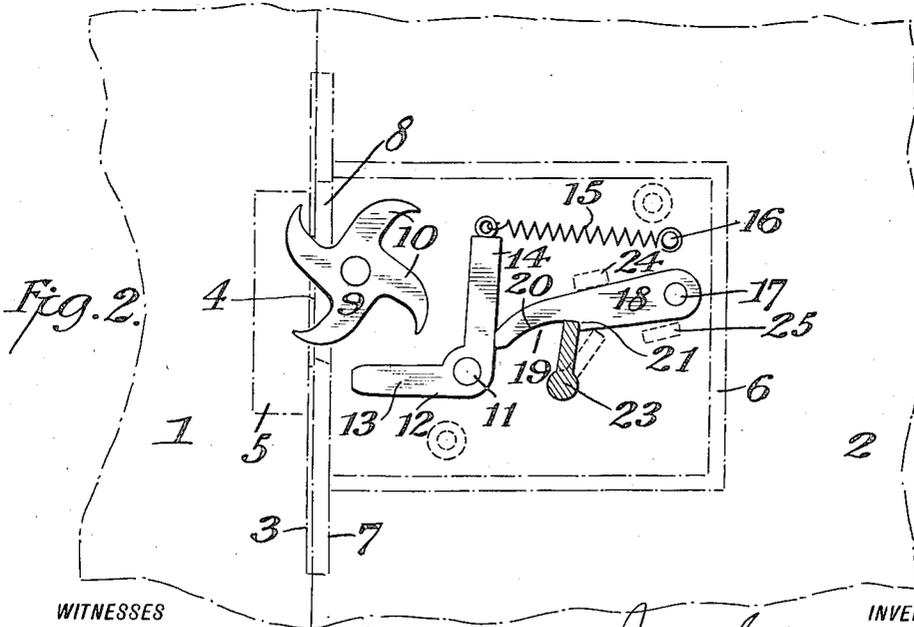
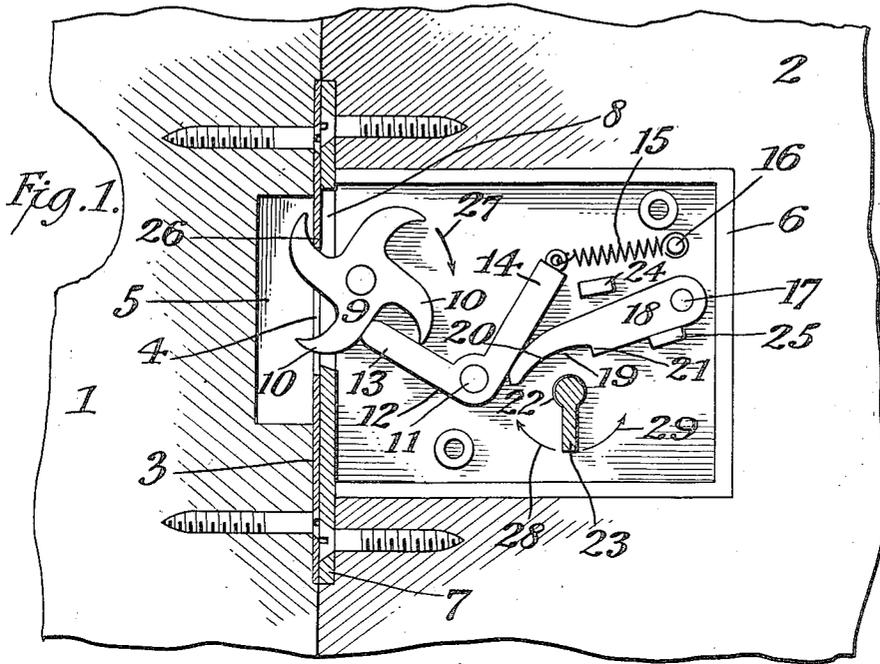


J. SCHMITTBERGER.
 SLIDING DOOR LOCK.
 APPLICATION FILED APR. 24, 1912.

1,036,348.

Patented Aug. 20, 1912.



WITNESSES
A. R. Appleman
S. Andrews.

INVENTOR,
Joseph Schmittberger.
 BY
Edgar Tate & Co.
 ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH SCHMITTBERGER, OF WEEHAWKEN HEIGHTS, NEW JERSEY.

SLIDING-DOOR LOCK.

1,036,348.

Specification of Letters Patent. Patented Aug. 20, 1912.

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To all whom it may concern:

Be it known that I, JOSEPH SCHMITTBERGER, a citizen of the United States, and residing at Weehawken Heights, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Sliding-Door Locks, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to door locks, and particularly to locks designed for use in connection with sliding doors, and the object thereof is to provide an improved lock of this class which is simple in construction and operation and which operates automatically to lock the door in the operation of closing the door; and with this and other objects in view the invention consists in a lock of the class specified, constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification of which the accompanying drawing forms a part, in which the separate parts of my invention are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a sectional view of a part of a door frame and a part of a door and showing my improved lock and the method of its automatic action in the operation of closing the door, and Fig. 2 a diagrammatic view showing the parts of the lock in a different position.

In the drawing forming part of this specification I have shown at 1 a part of a door frame and at 2 a part of a sliding door, and secured to the face of the door frame is a strike plate 3 having a vertical slot or opening 4 inwardly of which is a chamber 5 formed in said frame.

In the practice of my invention I provide a suitable lock casing 6 having a face plate 7 provided with a vertical slot or opening 8, and inwardly of which is mounted a rotatable spur wheel 9 provided with a plurality of teeth 10 four of which are shown and which are preferably hook-shaped in form and operate through the slots 4 and 8.

Pivoted at 11 rearwardly of and below the spur wheel 9 is an L-shaped lock lever 12 one arm 13 of which operates in connection with the spur wheel 9, and the other arm 14 of which extends upwardly and backwardly

and connected with the end thereof is a spiral spring 15 which is secured in the upper back part of the casing 6, as shown at 16.

Pivoted below the spring 15 and in the inner end portion of the casing 6, as shown at 17 is a dog 18 which ranges forwardly and is adapted to bear on the back of the arm 14 of the lever 12, and the front end portion of the dog 18 is provided, in the bottom edge thereof, with a longitudinal recess 19 the wall of which is curved, as shown at 20 and at the rear end of which is a shoulder 21.

In practice the casing 6, which may be of any desired form or construction, and which only serves as a support for the movable parts of the lock is countersunk in the door, in the usual manner, and said casing is provided with a key hole 22 which also passes through the door and through which a key 23 may be passed, and in the operation of the lock, as hereinafter described, the movement of the dog 18 is limited by stops 24 and 25 placed thereover and thereunder, as shown.

With this construction, when the door is closed one of the teeth 10 of the wheel 9 strikes the top wall of the slot 4 in the plate 3 and said wheel is rotated in the direction of the arrow 27, and the next successive tooth engages the plate 3, as shown at 26, and at the same time the lever 12 is thrown into the position shown in said figure by the spring 15, and the arm 13 abuts against the back of the next tooth of said wheel and said wheel is locked against rotation, and the door is also locked, as will be readily understood. In order to unlock the door the key 23 is inserted and may be turned in the direction of either of the arrows 28 or 29. In this operation the key strikes the free end of the dog 18 which is forced upwardly against the arm 14 of the lever 12, and the arm 13 of said lever is forced downwardly against the operation of the spring 15, and this will permit the wheel 9 to turn backwardly and the door may be opened, as will be readily understood, and the lever 12 may be locked in the open position, as shown in Fig. 2, by turning the key 23 into the position shown in said figure and leaving it there, and with the lever 12 and dog 18 in the position shown in Fig. 2, the door may be freely opened and closed, and

when it is desired to close the door and lock it the key is again turned into the position shown in Fig. 1.

My improved lock may be used wherever
5 devices of this class are required, in connection with sliding doors, gates, or other articles of this class, and changes in and modifications of the parts of the lock as herein shown and described, may be made, within
10 the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In a lock, a casing provided with a face plate having a vertical slot or opening therein, a spur wheel mounted inwardly of said slot or opening and having teeth which
20 operate therethrough, an L-shaped lock lever pivoted rearwardly of said spur wheel and one arm of which operates in connection with the teeth thereof, a spring connected with the other arm of said lever and adapted
25 ed to hold it in operative position, and a dog

pivoted rearwardly of said lever and adapted to operate in connection therewith, said dog being adapted to be operated by a key.

2. In a lock, a strike plate provided with a vertical slot and a lock casing having a
30 face plate provided with a corresponding slot, a spur wheel mounted in said casing rearwardly of the face thereof and the teeth of which operate through both of said slots, said spur wheel being mounted in a vertical
35 plane and being adapted to be rotated when the teeth thereof come in contact with the strike plate, devices whereby said spur wheel is tensionally held against rotation in the
40 opposite direction, and means whereby said devices may be thrown out of operation by the insertion and rotation of a key.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this
45 23rd day of April 1912.

JOSEPH SCHMITTBERGER.

Witnesses:

C. MULREANY,
S. ANDREWS.