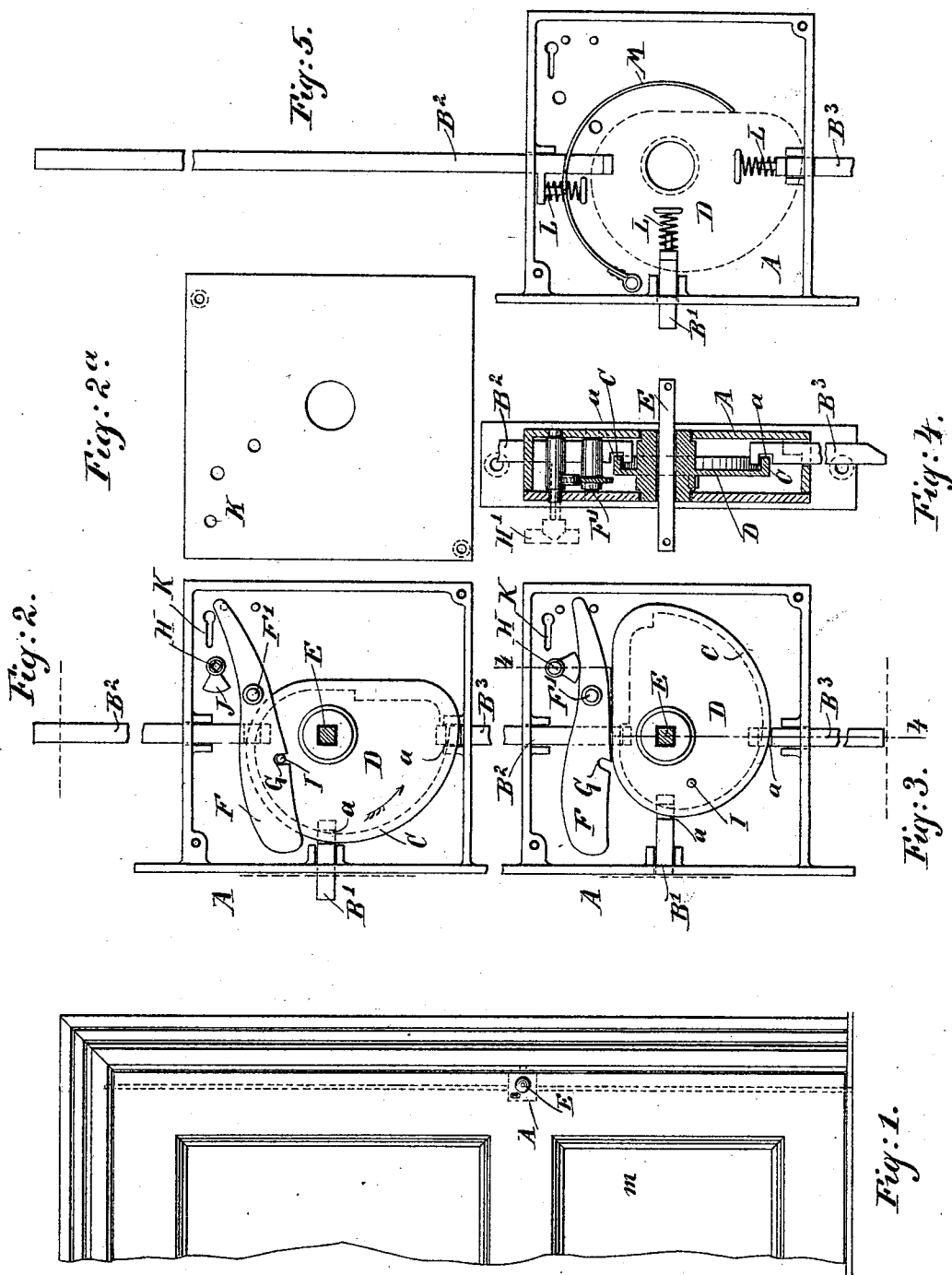


(No Model)

W. H. HOFFMANN.
LOCK.

No. 582,741.

Patented May 18, 1897.



Witnesses
D. Petri-Palmed.
Ed. J. Haegels

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UNITED STATES PATENT OFFICE.

WILLIAM H. HOFFMANN, OF NEW YORK, N. Y.

LOCK.

SPECIFICATION forming part of Letters Patent No. 582,741, dated May 18, 1897.

Application filed April 15, 1896. Serial No. 587,653. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HOFFMANN, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Door-Locks, of which the following is a specification.

This invention relates to a new and improved door-lock which is so constructed that it can readily be locked or unlocked from the outside or inside and may be provided with one or more individual bolts, the entire device being simple in construction, strong, and durable.

One or more bolts are mounted to slide on a door and are engaged by a cam-piece adapted to be turned by means of a knob and locked in place by a tumbler which can be disengaged therefrom by means of a suitable key, all as will be fully described and set forth herein-after and finally pointed out in the claim.

In the accompanying drawings, forming a part of this specification and in which like letters of reference indicate like parts in all the views, Figure 1 is an elevation of part of a door provided with my improved lock. Fig. 2 is an elevation of the lock mechanism, the outer covering-plate being removed. Fig. 2^a is a face view of said cover-plate. Fig. 3 is a view similar to Fig. 2, showing the parts in another position. Fig. 4 is a vertical transverse sectional view on the line 4 4 of Fig. 3. Fig. 5 is an elevation of the lock mechanism, showing a modified construction.

The lock-casing A is to be mortised into a door *m* in the usual way, and in the top, bottom, and inner edge wall of the same the three bolts B¹ B² B³ are guided, the bolt B¹ extending to the swinging edge, the bolt B² to the top edge, and the bolt B³ to the bottom edge of the door, the bolts being suitably guided on the door to slide lengthwise. Each bolt is provided at its inner end with a notch or transverse groove *a* for receiving the cam-ridge C, formed on a cam-piece D, located within the casing A and secured on a spindle E, mounted to turn in the casing and extending transversely through the door and casing and projecting from both faces of the door.

A tumbler F is pivoted at F' in such a man-

ner that its own gravity keeps it in lowered position, as shown in Fig. 2. The tumbler F has a notch G in its bottom edge, into which a pin I passes when the tumbler is in lowered position and the cam-piece D in vertical position, whereby the cam-piece is locked in place. A short spindle H, mounted to turn in the casing and projecting from the inner face of the door, where it is provided with a knob H', is provided with an arm J, which can act on the tumbler F to the right of the pivot F' to raise the left-hand end of the tumbler. The casing is also provided with a key-hole K, through which a key can be inserted from the outer side of the door, so that when said key is turned its bit also depresses the right-hand end of the tumbler and raises the left-hand end, Fig. 2, and releases the cam-piece D.

In the modification shown in Fig. 5 each bolt B¹, B², and B³ is pressed outward by a spring L, and the cam-piece D is pressed into vertical or normal position—that is, to hold the door closed—by a spring M acting on said cam-piece.

The operation is as follows: Fig. 2 shows the bolts thrown and in the position they have when the door is locked. The cam-piece D is locked in place by the tumbler F and pin I. To unlock the door from the outside, the key is inserted and turned so as to depress one end of the tumbler F and raise the opposite end, as shown in Fig. 3, and by means of suitable knobs the cam-piece D is turned in the direction of the arrow shown in Fig. 2, whereby the several bolts are withdrawn by the action of the cam-ridge C on the edges of the notches *a* and are held in these positions until they are thrown again. In case the door is to be unlocked from the inside the tumbler F is raised by turning the short spindle H. To bolt the door, the cam-piece D is turned in the inverse direction of the arrow—that is, from the position shown in Fig. 3 to the position shown in Fig. 2—and the cam-piece is then locked in place automatically by the tumbler F.

In the construction shown in Fig. 5 the bolts are so arranged as to be thrown automatically when the door is closed.

The outer ends of the bolts are beveled, and when the door is closed can be pressed

inward by the keepers until they arrive at the holes in the keeper, when their springs throw them outward and the spring M throws the cam-piece D into normal or initial position.

5 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

10 The combination with a door and a lock-casing on the same, of a series of bolts, mounted on the door to move in the direction of their length only, each bolt being composed of a single and continuous piece extending from the interior of the casing to the rims of the door and being guided by the casing and
15 on the door, a rotative cam-piece mounted to turn in said casing and engaging the inner end of each bolt, a pivoted tumbler within the casing for engaging and locking the cam-

piece, a short spindle mounted in the casing, a handle-knob on the outer end of said spindle an arm on the inner end of the spindle for acting on the tumbler to disengage the same from the cam-piece, said casing having a key-hole above the tumbler, for the insertion of a key, for disengaging the tumbler from the cam-piece, from the outer side of the door, substantially as herein shown and described.

25 In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 8th day of April, 1896.

WILLIAM H. HOFFMANN.

Witnesses:

OSCAR F. GUNZ,
D. PETRI-PALMEDO.