

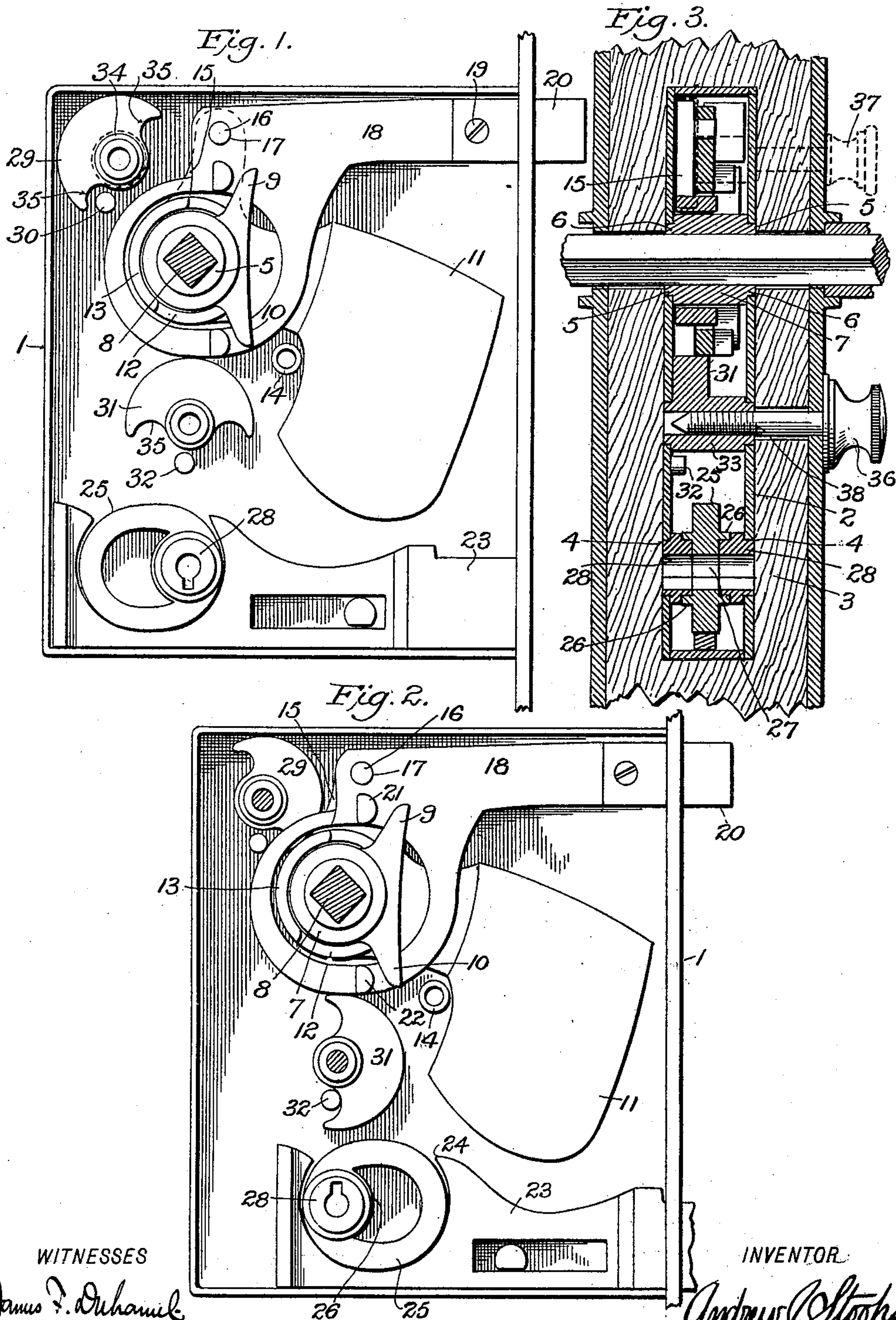
No. 620,376.

Patented Feb. 28, 1899.

A. J. STOOPS.
LOCK.

(Application filed May 17, 1898.)

(No Model.)



WITNESSES

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LOCK.

SPECIFICATION forming part of Letters Patent No. 620,376, dated February 28, 1899.

Application filed May 17, 1898. Serial No. 680,906. (No model.)

To all whom it may concern:

Be it known that I, ANDREW JACKSON STOOPS, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented certain new and useful Improvements in Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to an improved door lock and latch, the object being to simplify and perfect the construction of articles of this class and provide a cheap, effective, and durable device; and the invention therefore consists, essentially, in the construction, arrangement, and combination of parts, substantially as will be hereinafter described and claimed.

In the annexed drawings, illustrating my invention, Figure 1 is a view of a door latch and lock constructed in accordance with my invention, the cover-plate being removed to expose the interior mechanism to view. Fig. 2 is a similar view showing certain of the parts in a different relative position. Fig. 3 is a vertical sectional view of the entire device applied in operative position to a door. Like figures of reference denote like parts in all the views of the drawings.

1 designates a lock-casing of any convenient size and shape having the usual openings for the passage of the latch and bolt, said casing having also the cover-plate 2, which is provided with such openings or holes as may be necessary. In the example of the invention delineated in the drawings the casing 1 is shown as seated in a recess in the door 3.

In the oppositely-located holes 5 5 of the lock-casing are situated the reduced cylindrical ends 6 6 of a rotatable hub or sleeve 7, through which hub passes the squared knob-spindle 8, to the opposite ends of which the door-knobs are to be attached in the ordinary way. This hub 7 is formed with two integral lugs or projections 9 10, one of which, as 9, extends upwardly, while the other, as 10, projects downwardly. (See Figs. 1 and 2.) The precise location, shape, and size, &c., of the lugs 9 and 10 may vary, as desired.

11 denotes a weight which is integral with

an arm that is fashioned with a sleeve 12, which surrounds the hub 7 and is rotatable or oscillatory thereon, as shown. Thus the hub, being revoluble within the sleeve 12, is arranged so that its arms 9 and 10 lie upon and ride over a portion of the periphery of the sleeve 12, said sleeve having a portion thereof thicker than the balance to provide the arc-shaped segment 13, whose ends are far enough apart to afford play for the oscillatory movements of the arms 9 and 10. The stop 14 limits the downward movement of the weight 11.

Integral with the weighted sleeve 12 is an upwardly-projecting arm 15, having a lateral pin 16, engaging a perforation 17 in the latch-plate 18, so that in this way the weighted sleeve 12 is pivotally connected with the said latch-plate 18. This plate 18 is pivoted at 19 to the latch 20; also, it is shaped with an elongated oval slot which embraces the weighted sleeve 12 and the hub 7, as shown. This latch-plate is adapted to reciprocate, carrying with it the latch 20. The lugs 21 and 22 on plate 18 and projecting laterally therefrom are adapted to be acted upon by the arms 9 and 10, respectively, for the purpose of retracting the latch by a rotation of the knob-spindle in one direction or in the other, as the case may be. Thus it will be seen that the door-knobs may be turned in either direction at will. When turned one way, the arm 9 will strike lug 21 and the latch 20 will be retracted into the casing 1, the weight 11 being at the same time lifted, so that when the knob is released by the hand said weight 11 will automatically drop and cause the latch to be again projected. When turned the other way, the arm 10 will strike lug 22 and the same result of retracting latch 20 will occur. The latch 20, as I have said, is pivoted to the latch-plate 18 at 19. By removing the screw 19 the latch may be reversed in position, and thus the lock can be made either right or left hand. A convenient mode of connecting the latch 20 to the plate 18 is that shown in the drawings, where the latch has a slot receiving the end of plate 18, the parts being held together by the screw 19; but various other ways of connecting them may be devised and adopted, if desired.

23 indicates the bolt. It is formed with a

curved recess 24, in which works a cam 25, provided at the opposite sides with circular flanges 26 26, forming circular recesses, and with a central keyhole 27. Engaging the circular recesses within flanges 26 26 are rotatable skives or blocks 28 28, which work in circular holes 4 4 in the casing and which have corresponding central key openings or holes. When it is desired to insert the key, the skive 28 on that side from which the key is to be inserted must be turned so that its keyhole will be in coincidence with the keyhole in the cam 25. After the key has been inserted by turning the same the cam will be correspondingly turned, shooting or retracting the bolt, as the case may be.

29 and 31 designate small semicircular cams or plates that are formed integral with pins or spindles 34 and 33, respectively, said spindles having reduced ends that engage with and work in circular holes in the casing and its cover, as shown. These plates 29 and 31 are provided on each side of the center with small curved recesses 35, and plate 29 has adjacent thereto a stop-pin 30, while adjacent to plate 31 is a stop-pin 32, against which pins the plates abut as they rotate in one direction or the other. The plate 29 is arranged for service in conjunction with the latch 20, and the plate 31 for service in conjunction with the bolt 23. When the plate 29 is in the position shown in Fig. 1, the latch can be operated freely; but when it is so rotated as to bring the other recess 35 thereof into engagement with the pin 30, as in Fig. 2, then the plate or cam 29 will provide a lock or obstruction to the movement of the latch 20. Similarly, when the plate 31 is in the position shown in Fig. 1 the key is at liberty to freely operate the bolt 23; but when the plate has been shifted into the position it occupies in Fig. 2 then the bolt cannot be moved, since the plate 31 firmly locks it. The pins or spindles 33 and 34 are hollow and internally screw-threaded to receive pointed screws, as 38, having the external thumb-operated heads 37 and 36, which are on the inside of the door and by means of which the cams or plates 29 and 31 are readily moved as desired.

I reserve the liberty of making such changes in the details of the invention as may be found necessary in actual practice.

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

1. In a door-latch, the combination with the rotatable hub having a projecting arm, of a weighted sleeve hung rotatably upon the hub, and the lug-provided latch-carrying plate pivotally connected to an arm of said weighted sleeve and having an elongated slot embracing the same, substantially as described.

2. In a door-latch, the combination with the rotatable hub having oppositely-projecting arms, the weighted sleeve hung upon the hub, the latch-carrying plate pivoted to an arm projecting upwardly from said sleeve and formed with lateral lugs arranged to be acted upon by the hub-arms, and the reversible latch pivoted to its plate, substantially as described.

3. In a door-latch, the combination with the rotatable hub having oppositely-projecting arms, the weighted sleeve hung rotatably upon said hub, the latch-plate pivoted to an upwardly-projecting arm of said sleeve and having lateral lugs adapted to be acted upon by the hub-arms, and a rotatable plate for locking the parts, substantially as described.

4. In a device of the character described, the combination with the reciprocating bolt, a curved recess formed in the same, an oval cam working in said recess and adapted when revolved to project or retract the bolt, a semicircular cam located above the bolt-operating cam and formed with recesses on each side of the same, and a pin adapted to engage said recesses when the cam is turned, so as to either lock the bolt-operating cam or hold the locking-cam free of the same, substantially as described.

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

ANDREW JACKSON STOOPS.

Witnesses:

THOS. A. SNOW,
T. J. HOWARD.