

No. 731,775.

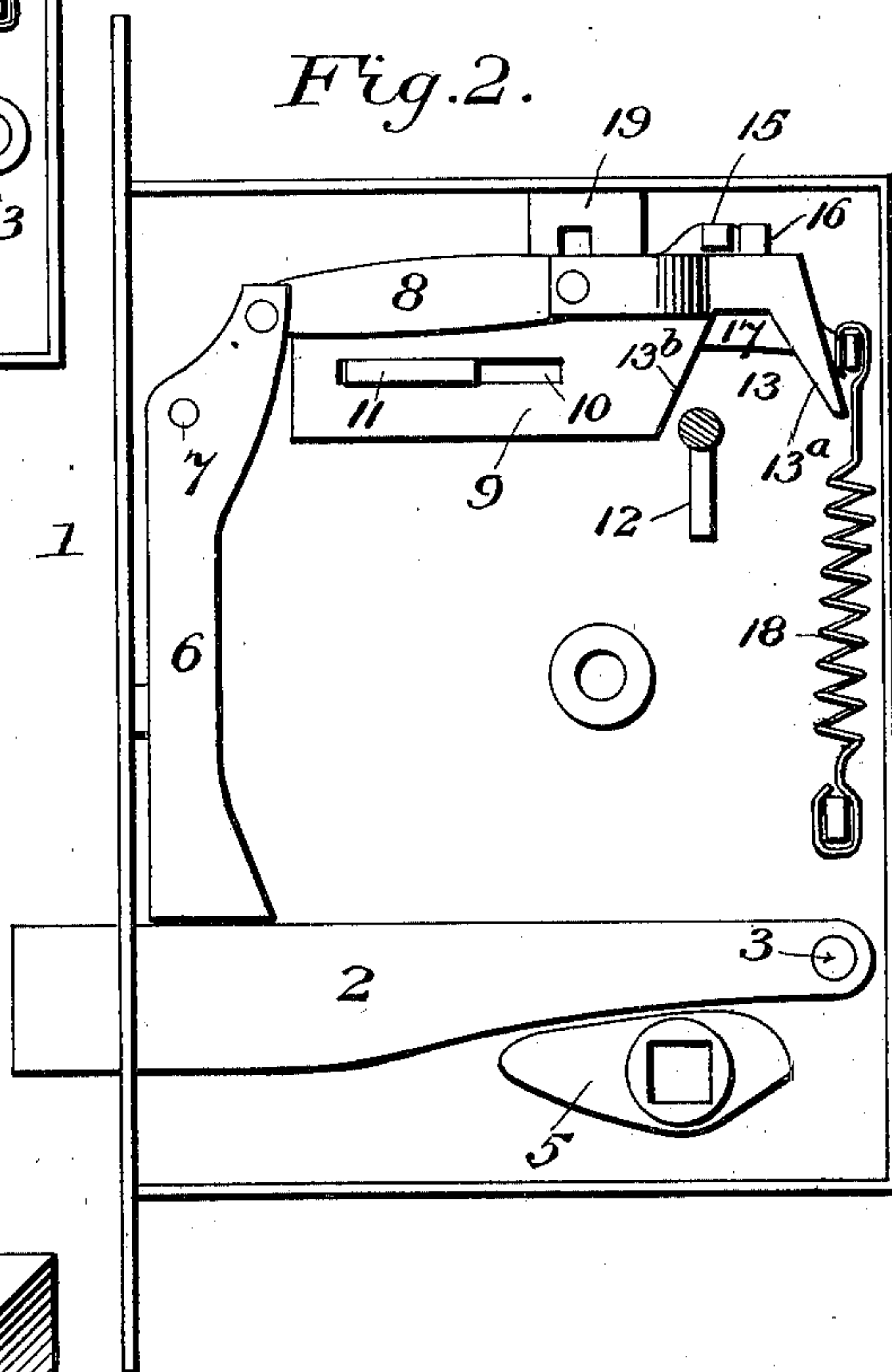
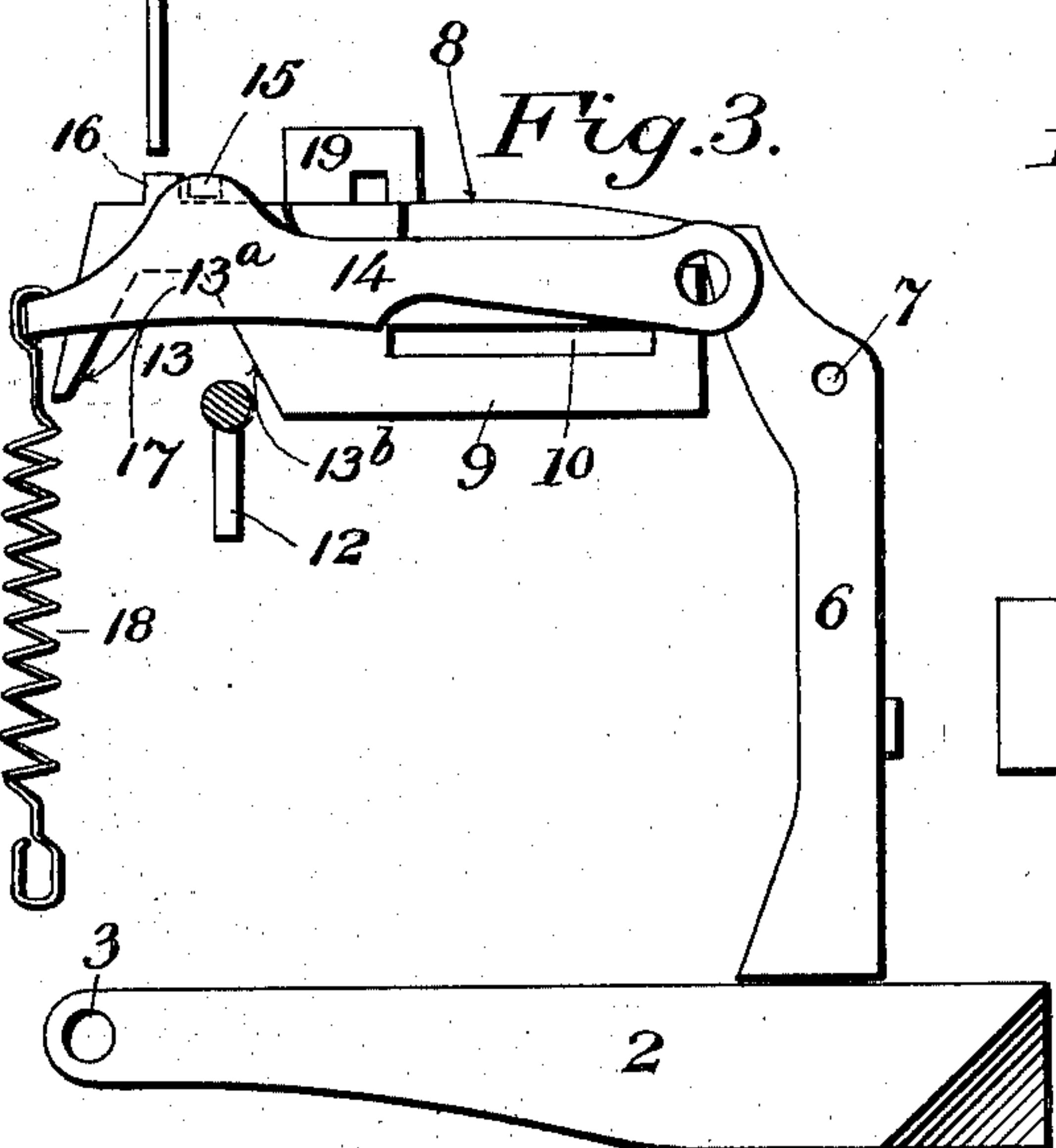
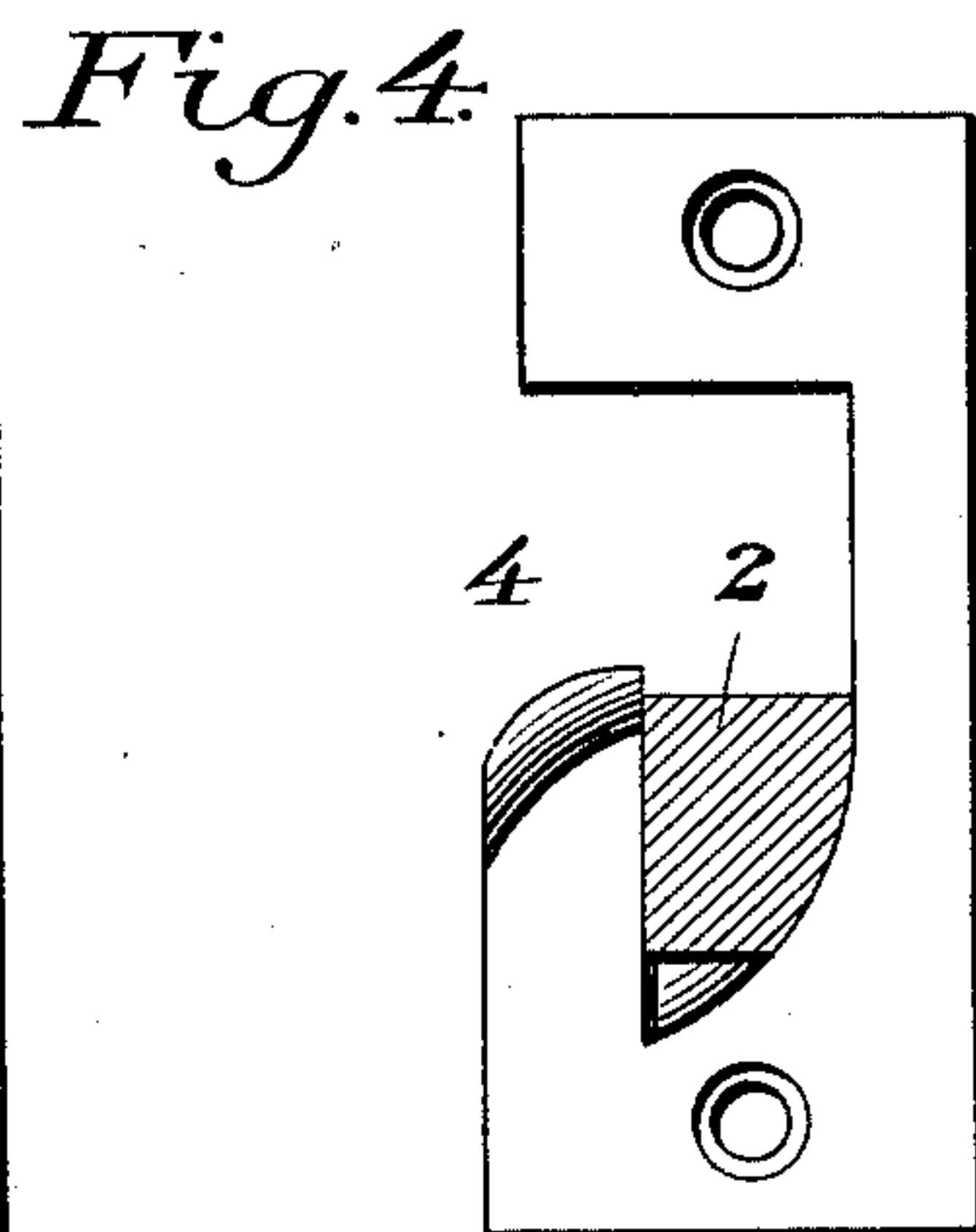
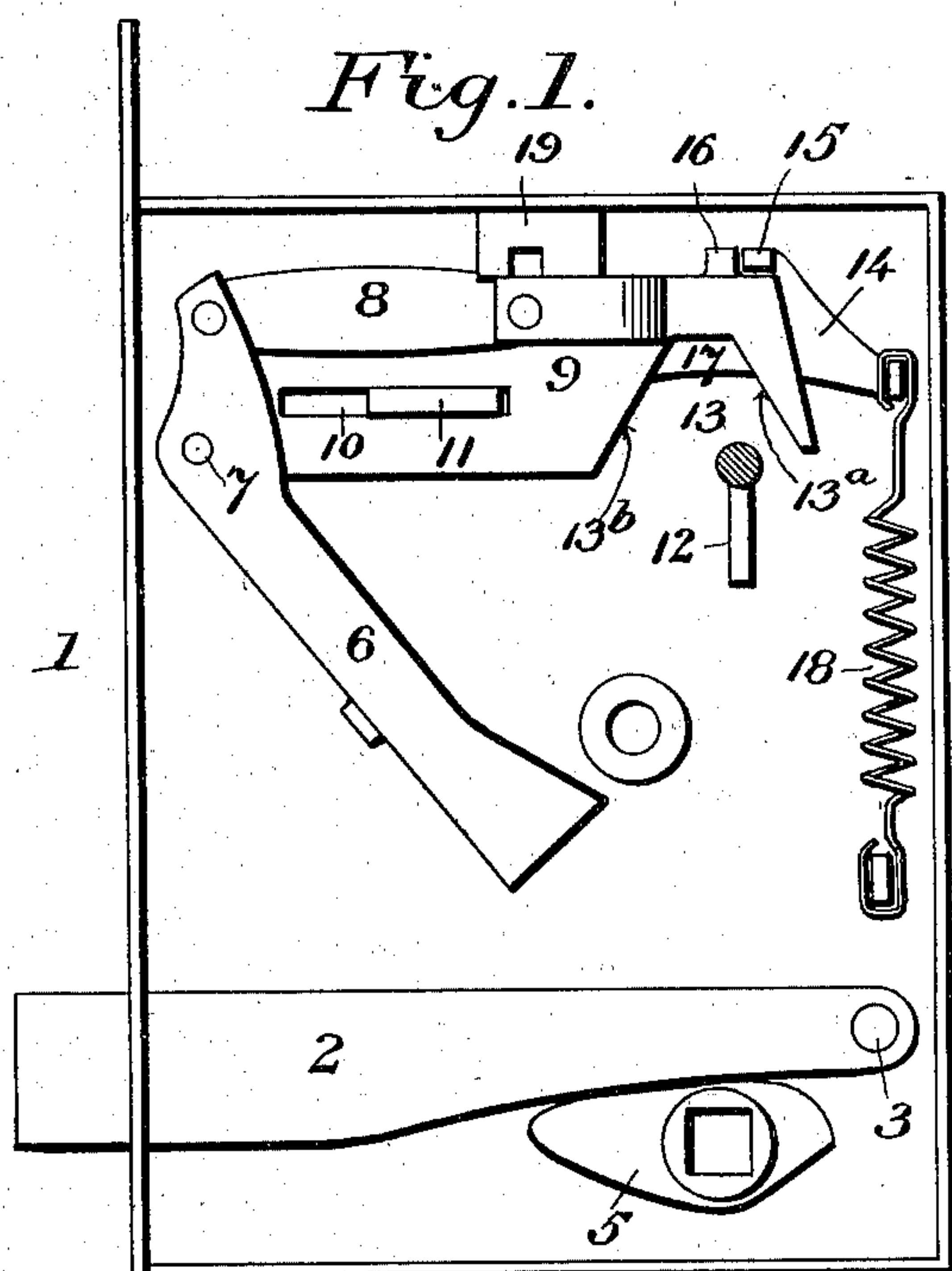
PATENTED JUNE 23, 1903.

LA FOREST W. HALL.

LOCKING LATCH.

APPLICATION FILED JUNE 21, 1902.

NO MODEL.



WITNESSES

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LA FOREST W. HALL, OF EAST BOSTON, MASSACHUSETTS.

LOCKING-LATCH.

SPECIFICATION forming part of Letters Patent No. 731,775, dated June 23, 1903.

Application filed June 21, 1902. Serial No. 112,634. (No model.)

To all whom it may concern:

Be it known that I, LA FOREST W. HALL, a citizen of the United States, residing at East Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Locking-Latches, of which the following is a specification.

My invention relates to that class of locking-latches in which a single pivoted gravitating bolt serves the double function of latch and locking-bolt, being especially directed to the mechanism for locking the bolt, and has for its objects to combine in such mechanism simplicity of construction, facility of operation, and efficiency in the performance of its functions.

To these ends the invention comprises, in combination with a pivoted gravitating bolt, a vertically-disposed finger pivoted above the same, a sliding member adapted to swing said finger into and out of engagement with the bolt, and operative connections between the sliding member and finger.

The invention also comprises the details of construction and combination of parts hereinafter described.

In the accompanying drawings, Figure 1 is a side elevation of a lock, having the side of the casing removed to expose to view the internal mechanism embodying my invention, the finger being disengaged from the bolt. Fig. 2 is a similar view showing the finger engaging and locking the bolt. Fig. 3 is a similar view of the parts removed from the casing and viewed from the opposite side. Fig. 4 is a sectional elevation of the bolt and its keeper.

Referring to the drawings, 1 indicates the casing of the lock, adapted, as usual, to inclose the mechanism of the device and to be inserted into a mortised socket in the door.

2 is a gravitating bolt pivoted, as at 3, and adapted to swing on its pivot for engagement or disengagement with the keeper 4.

5 is a cam member lying beneath the bolt and adapted to be operated by the usual knob-spindle (not shown) to raise the bolt for disengagement with the keeper, the engagement of the bolt with the keeper being due to gravity.

6 is a finger vertically disposed above the bolt and pivoted, as at 7, near its upper end and adapted to swing on its pivot into and out of

engagement with the bolt for locking or releasing the same.

8 is a link pivoted at one end to the upper end of the finger and at its opposite end to the horizontally-sliding member 9, which is provided with an elongated slot 10 in engagement with a similarly-shaped lug 11, formed integral with the casing, which serves to hold the member 9 securely in place, but admit of its sliding freely under the action of key 12, which on being turned in the lock engages with the inclined faces or cam-surfaces 13^a and 13^b, formed by recessing the member 9, as at 13.

14 is a horizontal bar or lever pivoted to the casing back of the sliding member and provided with a lug 15, which engages with a lug 16 on the sliding member 9 to lock the latter in either of its two positions. The arm 14 extends within the path of the key 12, as at 17, so that when the latter is turned in the lock it will lift the arm, disengaging lugs 15 and 16, and permit the key in its further movement to operate the sliding member.

18 is a spring which exerts a constant downward pull upon the arm and maintains the lugs normally in engagement.

19 is a lug carried by the sliding member and bearing against the wall of the casing, thus steadying and guiding the member in its movements.

In the operation of locking the bolt, supposing the parts to occupy the positions shown in Fig. 1, the key is turned to the left and first engages and raises the arm 14, freeing lug 15 from lug 16. As the key continues to turn it contacts with the outer cam-surface 13^a and moves the sliding member to the right, which in turn, through the medium of link 8, exerts a pull on the upper end of finger 6, which rocks the same on its pivot and throws its lower end into engagement with and locks the bolt 2, as shown in Fig. 2. To unlock the bolt, the key is turned to the right and first raises the arm 14, then contacts with cam-surface 13^b, and forces the slide to the left, which rocks the finger 6 on its pivot and throws its lower end out of engagement with the bolt.

Having thus described my invention, what I claim is—

1. In a lock, the combination with a piv-

2
oted bolt, of a depending finger disposed
above the bolt and pivoted at its upper ex-
tremity, a longitudinally - sliding member
having a link movably attached to the upper
5 end of the finger, the said member being
formed with a slot having oppositely-disposed
cam edges for engagement by a key, and
means for locking the sliding member to hold
the same in either one of two positions.

10 2. In a lock, the combination with a longi-
tudinally-extending gravitating bolt, a verti-
cally-disposed finger above the bolt and piv-
oted at its upper extremity, a slotted sliding
member having a link pivoted thereto and

also to the upper end of the finger, the mem- 15
ber being provided with a slot in the lower
rear extremity thereof formed in opposite
cam-faces for engagement with a key, means
for holding the sliding member in either one
of its two extreme positions, and a lock-cas- 20
ing having a projecting device extending
through the slot in the said member.

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

LA FOREST W. HALL.

Witnesses:

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FRED FARRAND.