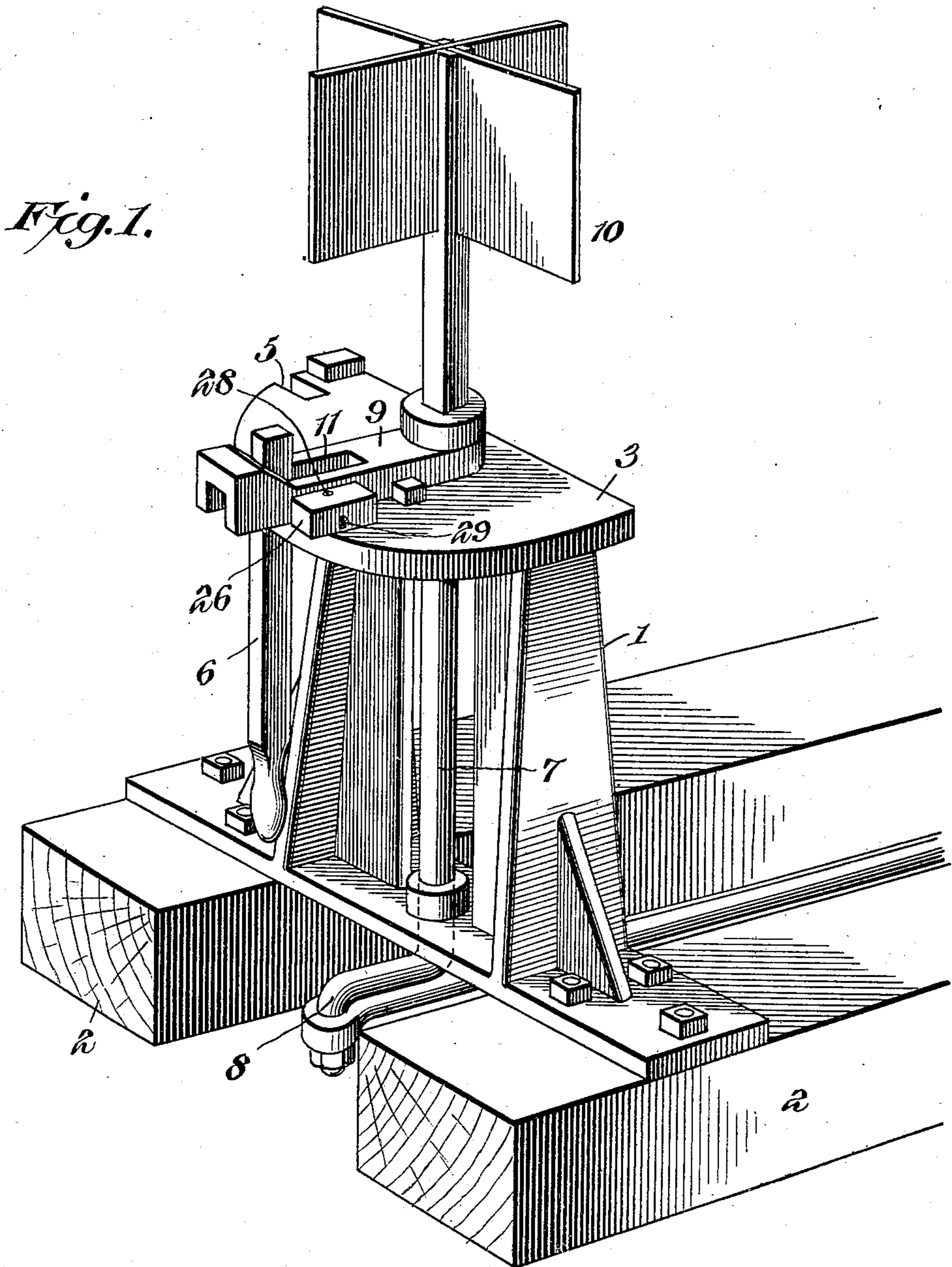


C. FOWLER.
SWITCH STAND LOCK.
APPLICATION FILED MAR. 17, 1908.

903,696.

Patented Nov. 10, 1908.

2 SHEETS—SHEET 1.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

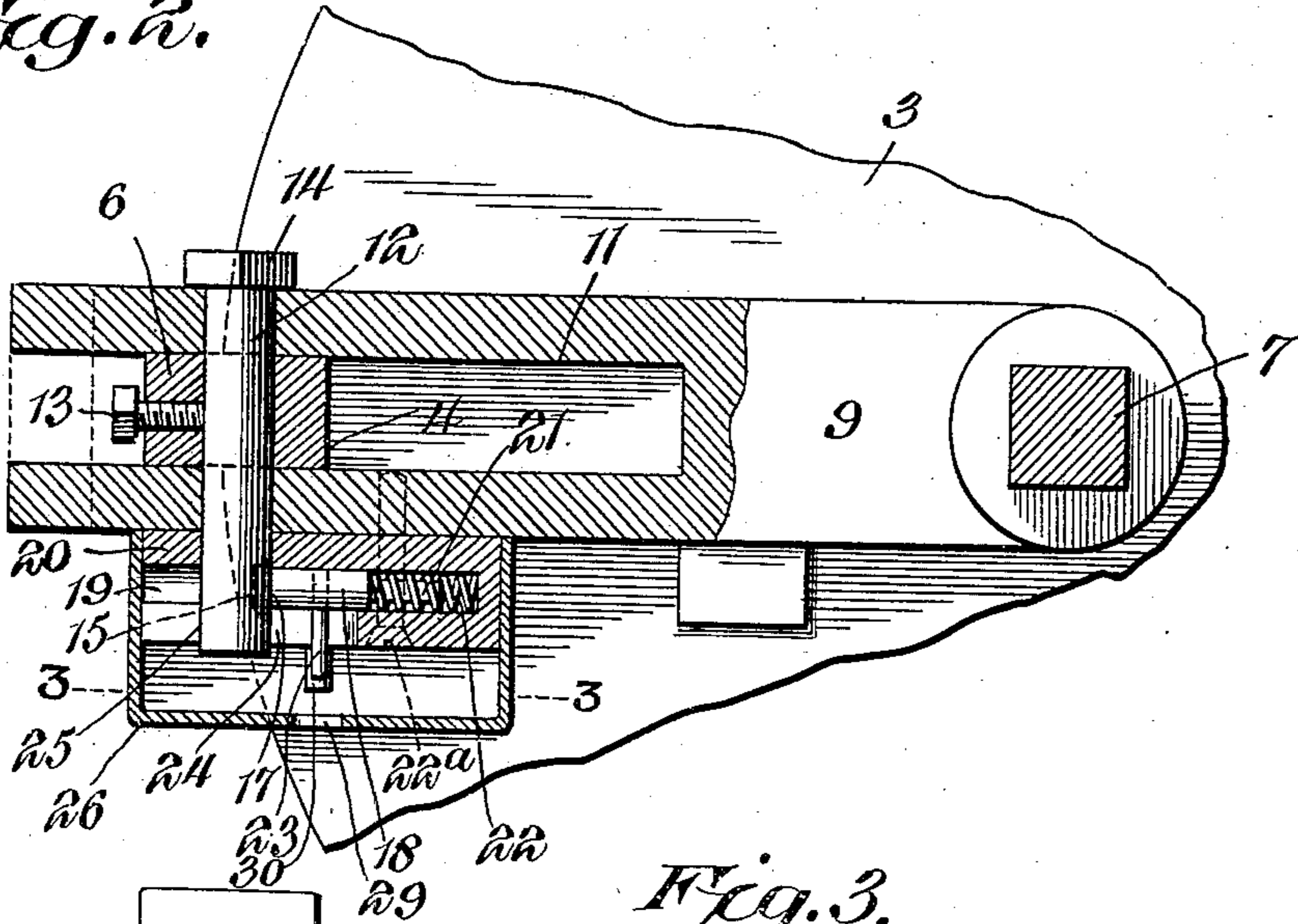


Fig. 3.

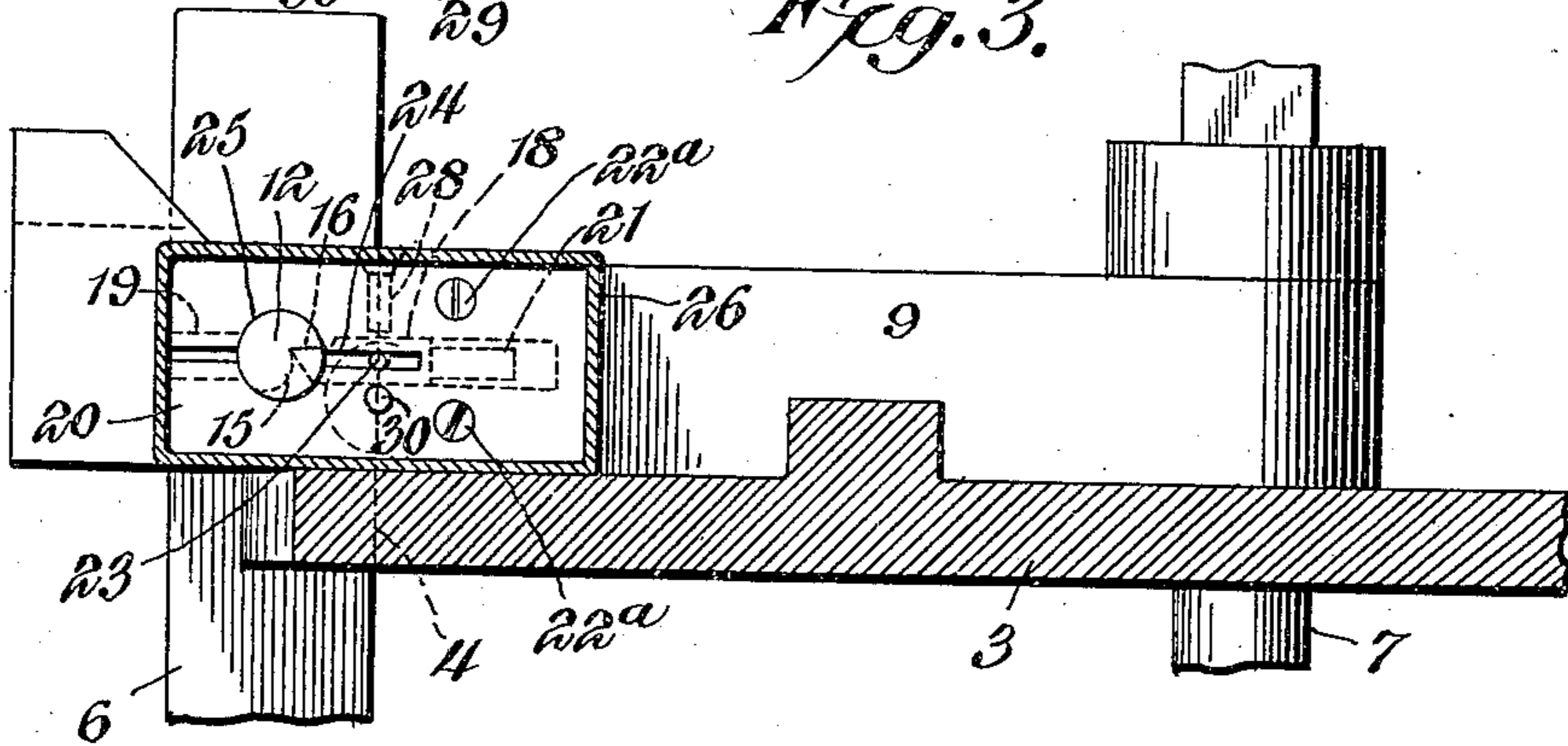


Fig. 4.

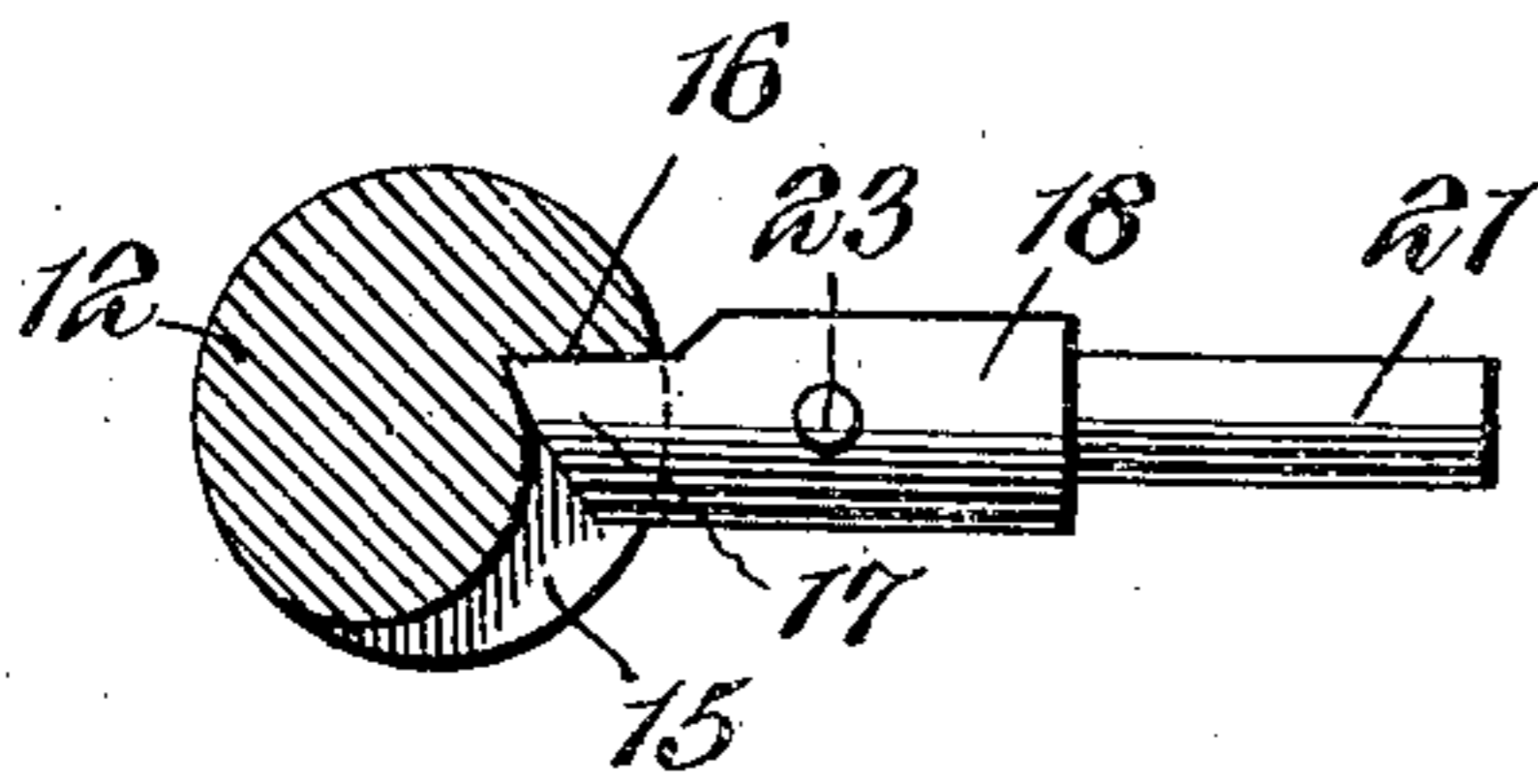
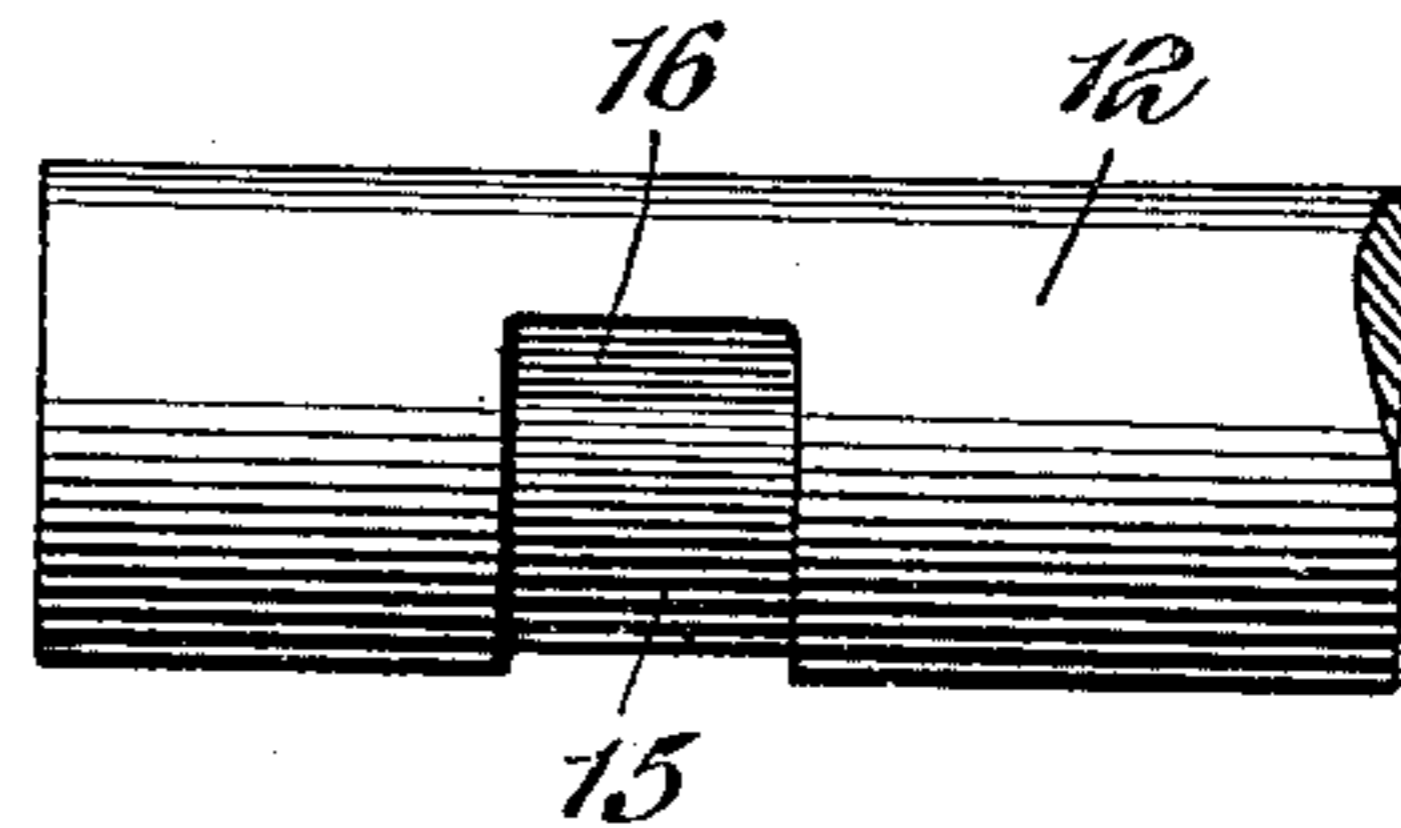


Fig. 5.



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UNITED STATES PATENT OFFICE.

CHARLES FOWLER, OF ELDON, MISSOURI.

SWITCH-STAND LOCK.

No. 903,696.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed March 17, 1908. Serial No. 421,724.

To all whom it may concern:

Be it known that I, CHARLES FOWLER, a citizen of the United States, residing at Eldon, in the county of Miller and State of Missouri, have invented a new and useful Switch-Stand Lock, of which the following is a specification.

The invention relates to improvements in locks for switch stands.

10 The object of the present invention is to improve the construction of switch stand locks, and to provide a simple, inexpensive and efficient device, designed to eliminate the use of padlocks for securing switch levers of
15 switch stands, and capable of being readily applied to any ordinary switch stand at a cost less than the price of padlocks now in use.

A further object of the invention is to
20 provide a locking device of this character, capable, when a switch lever is partially thrown into a notch or recess of a switch stand, of securely locking the said lever and of effectually preventing the same from
25 jumping out of such notch or recess, when the wheels of a train pass over the switch points.

Another object of the invention is to provide a switch lock capable of reversal to
30 arrange it at either side of the switch lever and composed of but few readily replaceable parts not liable to get out of order.

Also the invention has for its object to provide a switch stand lock, adapted to be
35 unlocked with the keys now in use on railroads.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully
40 described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the
45 scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a perspective view of a switch stand, provided with a
50 lock, constructed in accordance with this invention. Fig. 2 is an enlarged horizontal sectional view. Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2. Fig. 4 is a detail sectional view of the pivot pin of the

switch lever and the locking bolt. Fig. 5 is
55 a detail view of one end of the pivot pin, illustrating the arrangement of the notch.

Like numerals of reference designate corresponding parts in all the figures of the
60 drawings.

1 designates a switch stand, mounted upon cross ties 2 and provided with a top or cap plate 3 having notches 4 and 5, adapted to be engaged by a switch lever 6 in the usual
65 manner. The switch stand is equipped with a vertical shaft 7, having a crank arm 8 at its lower end and provided with a horizontal arm 9 at its upper portion. The vertical shaft 7 carries a target 10, but the switch
70 lock is applicable to various kinds of switch stands and switch operating mechanism.

Coming now to the present invention, the switch lever 6 is pivoted to the arm 9 in a slot 11 thereof by means of a transverse pin 12, to which the switch arm is secured by a
75 set screw 13, or other suitable fastening means. The pivot pin, which is provided at one end with a head 14, has its other end extended beyond the arm 9 and provided with a notch 15, forming a shoulder 16,
80 adapted to be engaged by the outer end 17 of an automatically operable spring actuated locking bolt 18. The bolt 18, which is mounted in a bore or opening 19 of a rear
85 section 20 of a lock casing, has an inner reduced portion 21, forming a shoulder and receiving a coiled spring 22, which is interposed between the shoulder of the bolt and the inner end wall of the bore or opening of the section 20 of the lock casing. The outer
90 or engaging end of the bolt is beveled at the lower face to facilitate its automatic engagement with the pivot pin, and it has a horizontal upper face, which engages the shoulder 16 of the pivot pin, whereby the switch
95 lever is securely locked in engagement with one of the notches of the top of the switch stand. The bolt automatically springs into engagement with the pivot pin after the switch lever partially enters one of the
100 notches or recesses 4 and 5, so that it is not necessary for the switch lever to be swung downward to a vertical position in order to again properly lock. This will enable switch
105 stands to be handled more rapidly than heretofore, and there will be no liability of the switch lever accidentally jumping out of the notch or recess of the switch stand, when the

wheels of a train come in contact with the switch points.

The rear section 20 of the lock casing is secured by screws 22^a, or other suitable fastening devices to the side of the arm 9, and the bolt 18 is provided with a lateral projection or arm 23, consisting preferably of a pin and extending through and operating in a horizontal slot 24 in the front side of the rear section of the casing. The slot 24, which extends to the outer end of the section 20, is intersected by the transverse opening 25 for the extended end of the pivot pin 12, and should the spring actuated bolt or the lateral projection or arm thereof, or the spring become injured, the injured part may be readily removed and replaced by a new part by detaching the rear section of the casing. The lateral projection or arm 23 is adapted to slide downward through the passage-way afforded by the slot 24, when the rear section of the lock casing is detached. The lock is also provided with a removable front section 26, consisting of a substantially oblong shell fitting over the rear section of the casing and secured to the same by a screw 28, or other suitable fastening device. Instead, however, of securing the front section of the lock casing to the rear section thereof, by means of the separate screw 28, it may be connected with the same by the screws 22^a, which may be lengthened to pierce the front section or casing. As this is obvious, illustration thereof is deemed unnecessary. The front section 26, which is removable to permit the locking mechanism to be inspected, is provided with a key hole 29, arranged opposite a post 30 mounted on and projecting from the rear section of the casing. The post is adapted to fulcrum a key on the rear section of the casing, and the lateral projection or arm of the bolt is arranged in the path of and is adapted to be engaged by the bit of the key, whereby the bolt is moved inwardly out of engagement with the pivot pin against the action of the spring.

Owing to the quickness with which the present lock may be operated, a switch may be unlocked, operated and relocked in many instances without stopping a train, which is a great advantage when handling long heavy freight trains.

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

1. The combination with a switch lever, of a pivot therefor provided with a shoulder and fixed to and movable with the switch lever, and automatically operable locking means located beyond the lever and arranged

to engage the pivot for locking the switch lever against movement.

2. The combination with a switch lever, of a pivot therefor rigidly connected with the switch lever and movable with the same and having an extended portion, and a lock receiving the extended portion of the pivot and having automatically operable means for engaging the pivot to lock the switch lever against movement.

3. The combination with a switch lever, of a pivot therefor rigidly connected with the switch lever and movable with the same and provided with a recess receiving a shoulder, and a spring actuated bolt arranged to automatically engage the shoulder of the pivot to lock the switch lever against movement.

4. The combination with a switch lever, of a pivot therefor rigidly connected with the switch lever and provided with an extended end having a shoulder, and a lock including a casing receiving the extended end of the pivot, and a spring actuated bolt arranged to engage the shoulder of the pivot and provided with a lateral projection arranged to be engaged by the bit of a key.

5. The combination with a switch lever, of a pivot therefor rigidly connected with the switch lever and provided with an extended end having a shoulder, and a lock receiving the extended end of the pivot and including a section having a longitudinal bore and provided with a slot, a bolt arranged in the bore and having a lateral projection operating in the said slot, and a spring also arranged in the bore and engaging the bolt.

6. The combination with a switch lever, of a pivot therefor rigidly connected with the switch lever and provided with an extended end having a shoulder, a lock casing composed of a rear section having a bore, and a detachable front section consisting of a shell fitted over the rear section, a bolt mounted in the bore and arranged to engage the shoulder of the pivot and having means adapted to be engaged by a key for retracting the bolt, and a spring for actuating the bolt.

7. In combination with a switch lever having an extension at the pivotal point thereof rigid with and carried by the lever in its pivotal movement, and automatically operable locking means arranged to engage the extension to lock the switch lever against movement.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES FOWLER.

Witnesses:

JOHN BROKMEYER,
W. M. HARRISON.