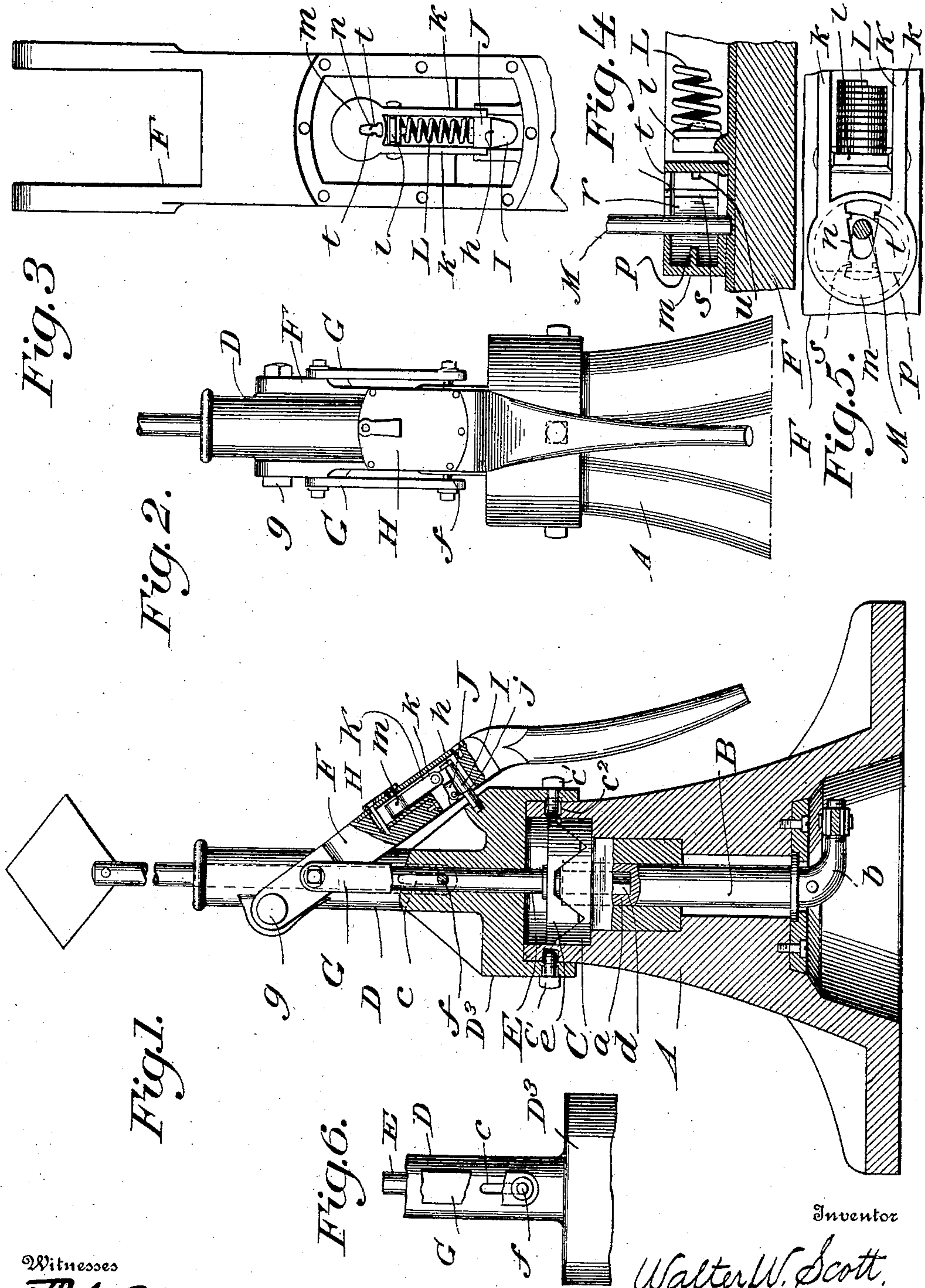


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PATENTED APR. 7, 1908.

W. W. SCOTT.
SWITCH STAND.

APPLICATION FILED JAN. 18, 1908.



Witnesses

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WALTER W. SCOTT, OF FORT EDWARD, NEW YORK.

SWITCH-STAND.

No. 883,980.

Specification of Letters Patent.

Patented April 7, 1908.

Application filed January 18, 1908. Serial No. 411,512.

To all whom it may concern:

Be it known that I, WALTER W. SCOTT, citizen of the United States, residing at Fort Edward, in the county of Washington and State of New York, have invented new and useful Improvements in Switch-Stands, of which the following is a specification.

My invention pertains to switch stands, and more particularly to locks for detachably fixing the operating levers or handles of such stands in a certain position; and it consists in the peculiar and advantageous construction hereinafter described and specifically claimed.

In the drawings accompanying and forming part of this specification: Figure 1 is a view, partly in elevation and partly in vertical section, of a switch stand equipped with my novel lock. Fig. 2 is an elevation of the upper portion of the stand, taken at a right angle to Fig. 1. Fig. 3 is an enlarged, detail elevation of the operating handle with the cover plate of the lock casing removed. Fig. 4 is an enlarged, detail longitudinal section taken through the lock. Fig. 5 is an enlarged, fragmentary view of the lock with the spring for impelling the latch-bolt, retracted. Fig. 6 is a detail elevation of the rotary cap on the stand, showing the slot in said cap.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is a switch stand.

B is a vertical shaft journaled in the lower portion of the stand and having a socket *a*, of angular form in cross-section, in its upper end, and the usual arm *b* at its lower end, designed to be connected with a switch (not shown).

C is a clutch member suitably fixed in the upper portion of the stand; D, a vertical sleeve; and D³, a rotary cap formed integral with the sleeve D and having a vertical bore in alinement with the bore of the sleeve and also having a vertical, diametrical slot *c* intersecting the said bore. The said rotary cap D³ is held on the stand A by bolts *c'* carried by the cap and let into a circumferential groove *c''* in the stand, Fig. 1.

E is a vertically movable, rotary shaft disposed in the alined bores of the sleeve D and cap D³ and having a lower portion *d*, of angular form in cross-section, disposed in the socket *a* of shaft B and also having a clutch member *e*, opposed to the fixed member C, and a diametrical pin *f* disposed and movable vertically in the slot *c* of cap D³ so as to cause

the cap and shaft to turn together and enable the latter to move up and down independent of the former; F is an operating lever or handle, pivoted at *g* to swing vertically on the sleeve D; and G G are links connecting the lever F and the pin *f* of shaft E and serving to transmit movement from said lever to said shaft.

It will be evident from the foregoing that when the lever F is raised, the shaft E will also be raised to disengage the clutch member *e* from the member C; and it will also be evident that when said lever F is moved horizontally, the sleeve D, cap D³, shaft E and shaft B will move with the lever.

When the lever F is moved downward to the position shown in Fig. 1, the clutch member *e* is reengaged with the complementary clutch member C to hold the shaft B against turning on its axis; and my novel lock has for its office to retain the lever F in said position.

My novel lock is incased in the lever F under a removable plate H having a key-hole and a cover therefor, and is designed to cooperate with a keeper I extending laterally and upwardly from the cap D³ and having a head *h* at its outer end. The lock is made up of a latch J, pivoted at *j* in the lever F in position to spring under the head of the keeper I, a reciprocatory bolt K also arranged in lever F and having side bars *k* pivotally connected to the latch J, and a coiled spring L arranged longitudinally between the side bars of the bolt and interposed between the latch J and a fixed abutment *l* disposed in rear of the latch. In addition to the side bars *k*, the bolt K is provided with a chambered head *m*, a key-hole *n* in the face of said head, arranged to register with the key-hole in the cover plate H, and a web *p* located within the chambered head at a point remote from the spring L.

The key M which I prefer to employ for controlling my novel lock is provided in the opposite sides of its bit *r* with grooves *s*, designed to match projections *t* at opposite sides of the key-hole *n*, and is also provided in the outer end of said bit with a notch *u* to match the web *p* in the chambered head *m*.

It will be gathered from the foregoing that when the key is passed through the key-holes in the cover plate H and chambered head *m*, and turned about its axis, the bolt K and latch J will be retracted, against the action of the spring L, to disengage the latch from the keeper I, whereupon the lever F may be

raised and used to turn the shaft B about its axis. It will also be seen that when the lever F is moved back to the vertical plane illustrated and is then lowered, the latch J will automatically engage the head of keeper I and thereby lock the lever in the position shown.

The keeper I is carried by and moves around with the rotary cap B³, and from this it follows that the lever F may be locked against upward movement while the switch is in different positions.

The construction herein illustrated and described constitutes the best embodiment of my invention of which I am cognizant, but it is obvious that in the future practice of the invention such changes or modifications may be made as fairly fall within the scope of my invention as defined in the claims appended.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. The combination of a switch stand, a rotary element mounted thereon, a vertically-movable shaft arranged in the stand and adapted to be connected with a switch, a keeper carried by and projecting from the said rotary element, a vertically-swinging, operating lever fulcrumed on the rotary element and connected with the shaft and arranged when depressed to receive the said keeper, a pivoted latch arranged in the lever in position to engage the keeper when the latter is received in the lever, a reciprocatory bolt also arranged in the lever and connected to the latch and having a portion arranged to be engaged and moved by a key, and a spring arranged to press the latch and bolt forward.

2. The combination of a switch stand, a rotary element mounted thereon, a vertically-movable shaft arranged in the stand and adapted to be connected with a switch, a keeper carried by and projecting from the said rotary element, a vertically-swinging,

operating lever fulcrumed on the rotary element and connected with the shaft and arranged when depressed to receive the said keeper, a pivoted latch arranged in the lever in position to engage the keeper when the latter is received in the lever, a reciprocatory bolt also arranged in the lever and having side bars connected to the latch and also having a chambered head adapted to receive a key, and a portion in said head for the engagement of the key, and a coiled spring arranged between the side bars of the bolt and interposed between the latch and an abutment in the lever.

3. The combination of a switch stand, a rotary element mounted thereon, a vertically-movable shaft arranged in the stand and adapted to be connected with a switch, a keeper carried by and projecting from the rotary element, a vertically-swinging operating lever fulcrumed on the rotary element and connected with the shaft and having a chamber to receive the said keeper and also having a cover plate for the chamber, in which plate is a key-hole, a pivoted latch arranged in the lever-chamber in position to engage the keeper when the latter is received in the lever, a reciprocatory bolt also arranged in the lever-chamber and having side bars connected to the latch and also having a chambered head provided with a key-hole and an interior web for the engagement of a key bit, and a coiled spring arranged between the side bars of the bolt and interposed between the same and a fixed abutment in the lever-chamber.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WALTER W. SCOTT.

Witnesses:

COURTLAND T. ROBINSON,
J. H. CHEESMAN.