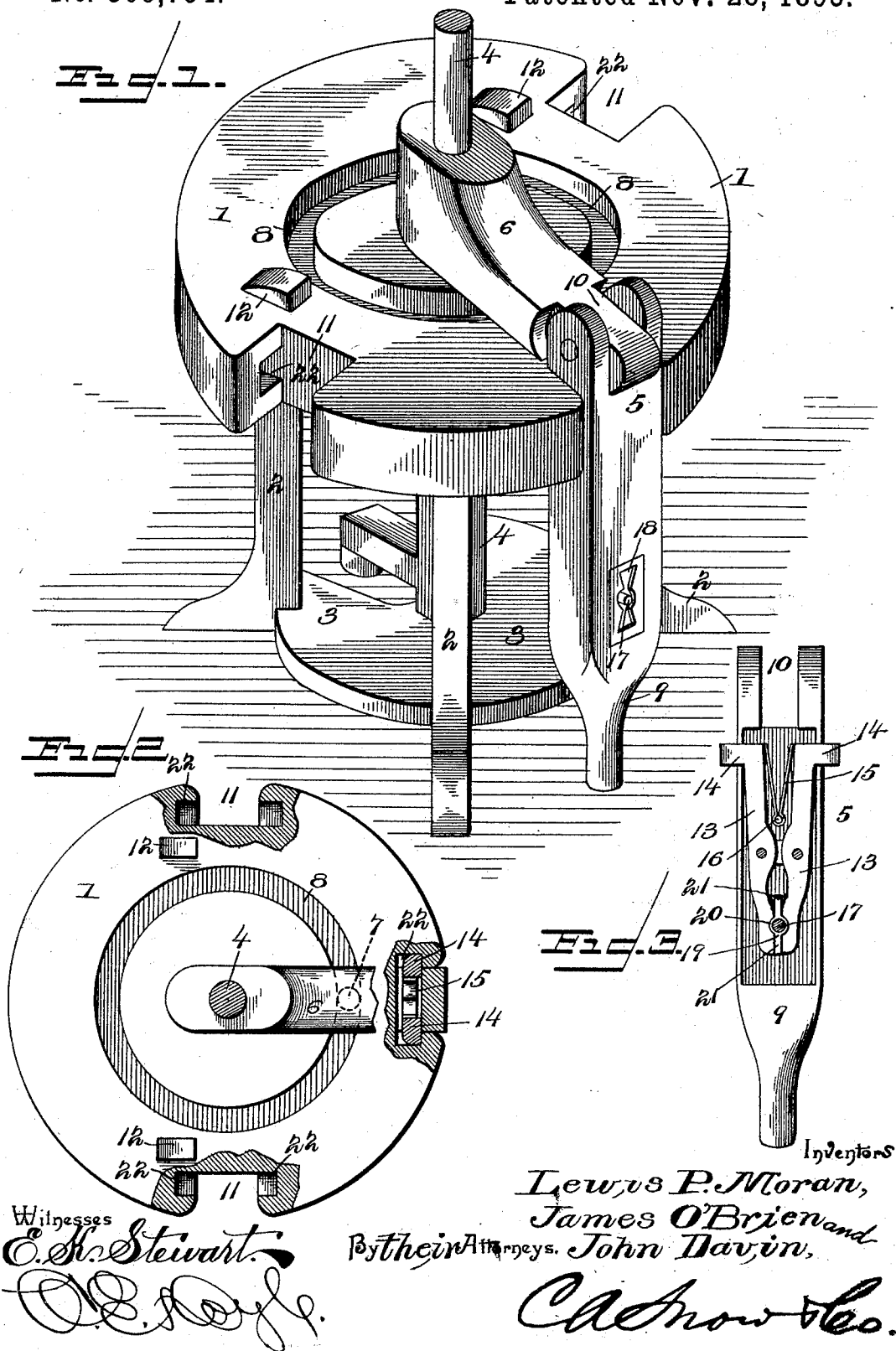


(No Model.)

L. P. MORAN, J. O'BRIEN & J. DAVIN.
SWITCH STAND AND LOCK.

No. 509,754.

Patented Nov. 28, 1893.



Witnesses
E. H. Stewart.
O. B. Dwyer.

By their Attorneys, John Davin.

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UNITED STATES PATENT OFFICE.

LEWIS P. MORAN, JAMES O'BRIEN, AND JOHN DAVIN, OF MONTGOMERY,
WEST VIRGINIA.

SWITCH STAND AND LOCK.

SPECIFICATION forming part of Letters Patent No. 509,754, dated November 28, 1893.

Application filed September 5, 1893. Serial No. 484,855. (No model.)

To all whom it may concern:

Be it known that we, LEWIS P. MORAN, JAMES O'BRIEN, and JOHN DAVIN, citizens of the United States, residing at Montgomery, in the county of Fayette and State of West Virginia, have invented a new and useful Switch Stand and Lock, of which the following is a specification.

Our invention relates to an improved switch - stand and locking device for the switch-operating shaft, the object in view being to provide an apparatus capable of locking automatically when the switch operating lever is released by the operator, the locking device being releasable only by the use of a key provided for that purpose.

Further objects and advantages of our invention will appear in the following description and novel features thereof will be particularly pointed out in the appended claims.

In the drawings: Figure 1 is a perspective view of a switch-stand and lever-locking mechanism embodying our invention. Fig. 2 is a plan view partly in section of the same. Fig. 3 is a detail view of the lever and the locking device carried thereby.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the table of the switch stand which is supported by the standards 2 connected at their lower ends by a circular disk 3, said table and disk being provided with vertically registering bearings in which is mounted the usual switch-actuating shaft 4.

5 represents the operating lever having an inner arm 6 which is fixed to the upper end of the switch-actuating shaft and bears at its lower side upon the surface of the table. This inner member of the operating lever is provided upon its under side with a depending stud 7 which fits and operates in a circular guide channel 8, formed in the surface of the table, to prevent lateral vibration of the shaft and prevent the jamming of said shaft in its bearing.

The outer member or handle 9 of the operating lever is pivotally connected to the outer extremity of the inner member by a hinge joint 10, and the table is provided at inter-

vals, corresponding with different adjustments of the switch, with peripheral notches 11 which are adapted to receive the outer member or handle of the lever, when the latter is released in alignment therewith, as shown in Fig. 1. The surface of the table is further provided with stops 12 to limit the movement of the lever, and two of the receiving notches are arranged at these terminals of the motion of the lever to receive the handle at such points.

The locking mechanism, which is carried by the pivotal portion or handle of the lever, comprises twin bolts 13 which are pivoted at intermediate points and are provided with terminal laterally extending noses 14 which are normally held in their extended positions, projecting beyond the side edges of the handle, by an interposed leaf spring 15 which is held in place by the stud 16. The rear ends of the intermediately pivoted bolts are arranged upon opposite sides of, and are adapted to bear against, a guide pin 17 which is arranged at the center of a key slot 18 in the handle. The key 19 which is shown in connection with Fig. 3 of the drawings is provided with a barrel 20 to receive the guide pin, and duplicate diametrically disposed wings or wards 21 which when the key is applied to the guide-pin, fit between the rear ends of the bolts, whereby when the key is turned said rear ends of the bolts are separated and the front ends or noses thereof are correspondingly retracted. Sockets 22 are arranged at opposite sides of each of the notches 11 in the tables to receive the oppositely disposed noses of the bolts, said noses being beveled or rounded and the side edges of the notches 11 being chamfered to facilitate the automatic engagement of the bolts with the sockets.

In operation, the key is inserted into the key-slot of the lever and turned to release the bolts from engagement with the sockets, after which the handle may be elevated to a horizontal position or inclined above a horizontal position as may be desired, to serve as a means of turning the switch-actuating shaft until the switch reaches the desired adjustment and the handle is aligned with one of the

notches in the table when said handle is released and allowed to drop into the notch, in which it is locked automatically.

5 Various changes in the form, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of our invention.

10 Having thus described our invention, we claim—

15 1. The combination of a table provided with peripheral spaced notches and a concentric guide channel, a switch-actuating shaft mounted in a bearing at the center of the table, an operating lever having an inner portion or member which is fixed to the switch-actuating shaft and is provided with a depending guide stud to operate in said channel and an outer pivotal member or handle which is connected to the outer extremity of the inner member and is adapted to engage the said peripheral slots of the table, and an automatic locking mechanism to secure said outer member or handle in the notch with which it is engaged, substantially as specified.

25 2. The combination with a table, provided with peripheral spaced notches and a switch actuating shaft concentric with said table, of

an operating lever having an inner member fixed to the said shaft and an outer member 30 or handle which is pivotally connected to the inner member and is adapted to engage the peripheral notches of the table, and a locking mechanism comprising twin intermediately pivoted bolts, provided with lateral terminal 35 noses to engage sockets in the sides of the notches, an interposed actuating spring, and a guide pin located between the rear ends of the bolts and having a key which is adapted to be fitted upon the said guide pin and is provided with duplicate opposite wards or wings, 40 the lateral noses and the side edges of the notches in the table being beveled or rounded and chamfered, respectively, to facilitate the automatic engagement of the parts, substantially as specified. 45

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

LEWIS P. MORAN.
JAMES O'BRIEN.
JOHN DAVIN.

Witnesses:

TOMPKINS SHREWSBURY,
S. P. JOHNSON.