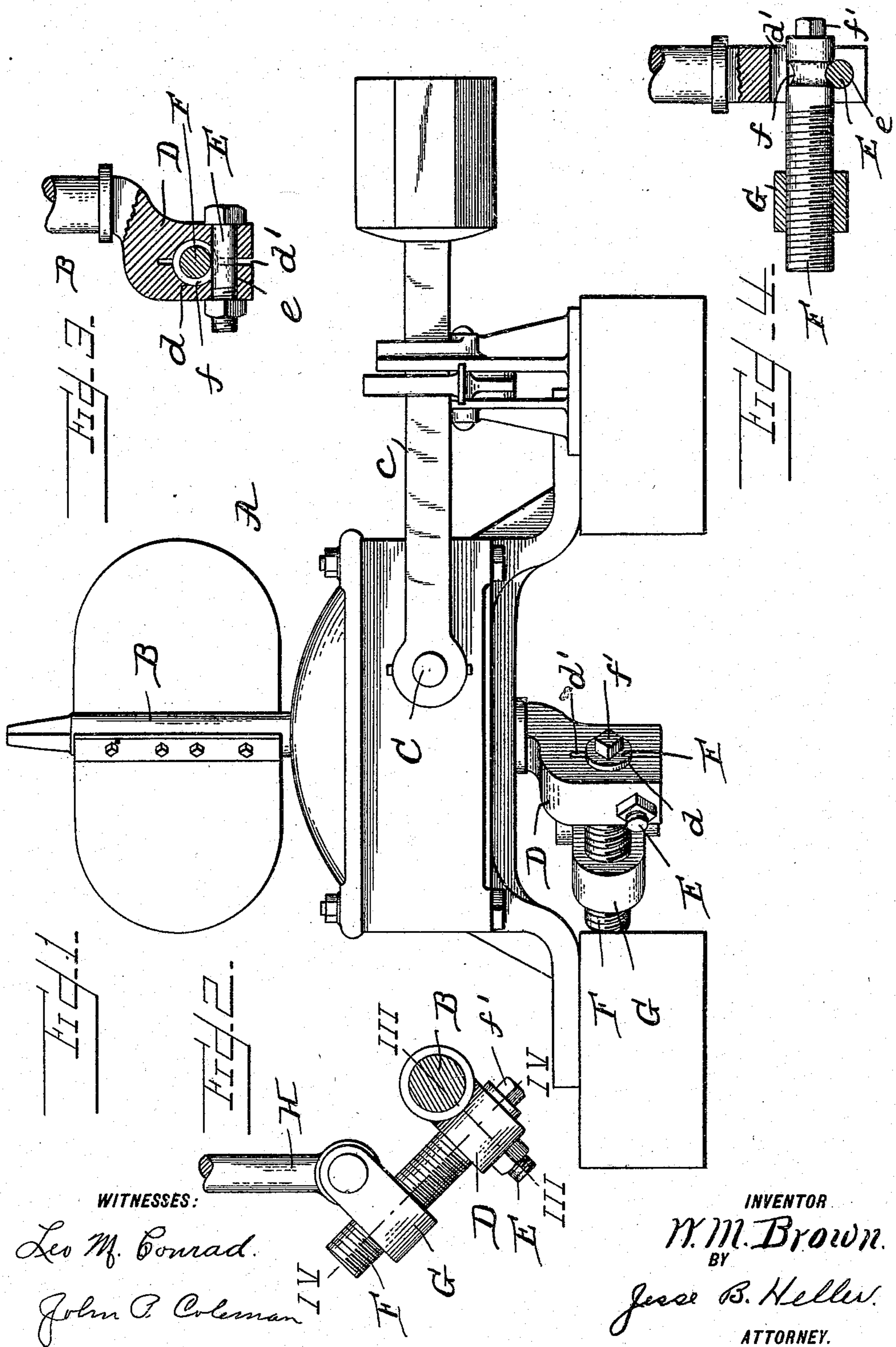


SWITCH STAND.

APPLICATION FILED SEPT. 25, 1908.

930,645.

Patented Aug. 10, 1909.



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UNITED STATES PATENT OFFICE.

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SWITCH-STAND.

No. 930,645.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed September 25, 1908. Serial No. 454,702.

To all whom it may concern:

Be it known that I, WILLIAM M. BROWN, of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a new and useful Improvement in Switch-Stands, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

10 This invention relates to a new and useful improvement in switch stands, the object of which is to provide an adjustable crank for a switch stand, which can be securely clamped in its adjusted position.

15 Another object of my invention is to provide a crank which can be lengthened or shortened, without disconnecting any of the various connections.

With these, and other objects in view, my invention consists of a crank arm which is screw-threaded to receive a nut, to which is pivotally connected the one end of the switch rod link, the other end thereof being connected to the switch rod. The rear end of the crank arm passes through an orifice in the lower end of the target shaft, and is also provided with a semicircular groove around the periphery thereof. The wall of the orifice which extends through the lower end of the target shaft is slotted. And passing through the end of the target shaft, but at right angles to the crank arm, is a clamping bolt, a portion of which lies in the semi-circular groove in the crank arm. This clamping bolt prevents longitudinal movement of the crank arm by engagement with the semi-circular groove, and rotary movement by clamping the lower end of the target shaft.

40 These and other objects of my invention will be more fully described in the annexed specification, illustrated in the accompanying drawings, and pointed out in the appended claims.

45 In the drawings:—Figure 1, is a front view of a switch stand with my improved adjustable crank attached; Fig. 2, is a detail sectional plan view through the target shaft, showing the connections of the crank arm; Figs. 3 and 4, are respectively sectional views on the lines III—III and IV—IV, of Fig. 2.

55 A, is the switch stand, and is provided with the usual target shaft B, which is connected in any well known manner to the

right angle shaft C, to which is connected the switch lever *c*.

The lower end of the target shaft B, is provided with the offset head D, having the circular orifices *d* and *e*, passing through the same at right angles to each other, but on different planes. The end of this head is slotted on a line with the orifice *d*, to a point beyond said orifice, as at *d'*. Passing through the orifice *d*, is the crank arm F. This end thereof, is provided with a semi-circular groove *f*, while the extreme end is provided with a wrench seat *f'*. Projecting through the orifice *e*, and lying in the semi-circular groove *f*, of the crank arm, is the clamping bolt E. When this bolt is drawn tight, the ends of the head D, are clamped around the end of the crank arm, which will prevent the rotary motion of the crank arm; and the engagement of the bolt E, with the semicircular groove *f*, will prevent the longitudinal movement thereof.

G, is a nut which engages the screw threaded portion of the crank arm F; and pivotally connected to this nut, is one end of the switch rod link H. The other end of this link is connected to the usual switch rod.

When it is desired to shorten, or lengthen the throw of the switch rod, the clamping bolt E is released, a wrench is applied to the wrench seat *f'*, and a crank arm F, is rotated to secure the proper adjustment. The bolt is then tightened, to lock the crank arm in its adjusted position.

It can readily be seen, that I have supplied a simple, efficient, and compact means, whereby the length of the throw of the switch can be adjusted without disconnecting any of the various members. I have also provided means, whereby the crank arm, is rigidly held in engagement with the end of the target shaft.

I do not desire to limit myself to the exact details of construction, as the same can be modified, without departing from the spirit and scope of my invention.

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

1. A switch stand having a vertical shaft, a crank arm clamped in the lower end thereof, a screw threaded nut on the crank arm, and means to connect the nut with the switch rod.

2. A switch stand, having a vertical shaft,

a crank arm clamped in the lower end thereof by means of a bolt which locks the crank arm, a screw threaded nut on the crank arm, and means to connect the nut with the switch rod.

3. A switch stand having a vertical shaft, a crank arm projecting from the lower end thereof, a circumferential groove on the crank arm, a bolt passing through the lower end of the shaft, and lying in the groove in the crank arm, and connections between the crank arm and the switch rod.

4. A switch stand, having a vertical shaft,

a crank arm projecting from the lower end thereof, a circumferential groove on the crank arm, a bolt passing through the lower end of the shaft, and lying in the groove in the crank arm, a screw threaded nut on the crank arm, and connections between the crank arm and the switch rod.

In testimony whereof, I have affixed my signature in presence of two witnesses.

WILLIAM MILTON BROWN.

Witnesses:

LEO M. CONRAD,
H. W. SMITH.