

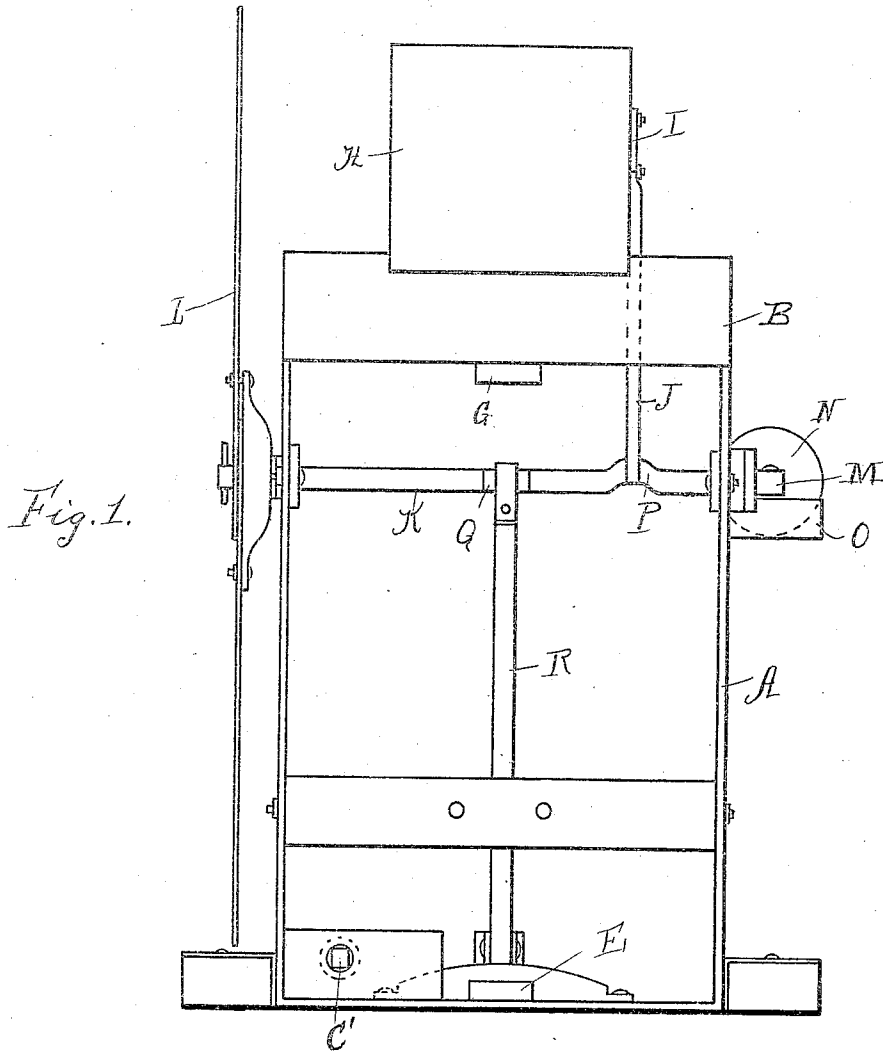
G. RAITER.
SWITCH STAND.

APPLICATION FILED APR. 28, 1909.

941,813.

Patented Nov. 30, 1909.

3 SHEETS—SHEET 1.



WITNESSES

S. M. Gallagher.
H. W. Burton

INVENTOR

Charles Raiter

BY

W. P. Williamson

ATTORNEY

C. RAITER.
 SWITCH STAND.
 APPLICATION FILED APR. 28, 1909.

941,813.

Patented Nov. 30, 1909.
 3 SHEETS—SHEET 2.

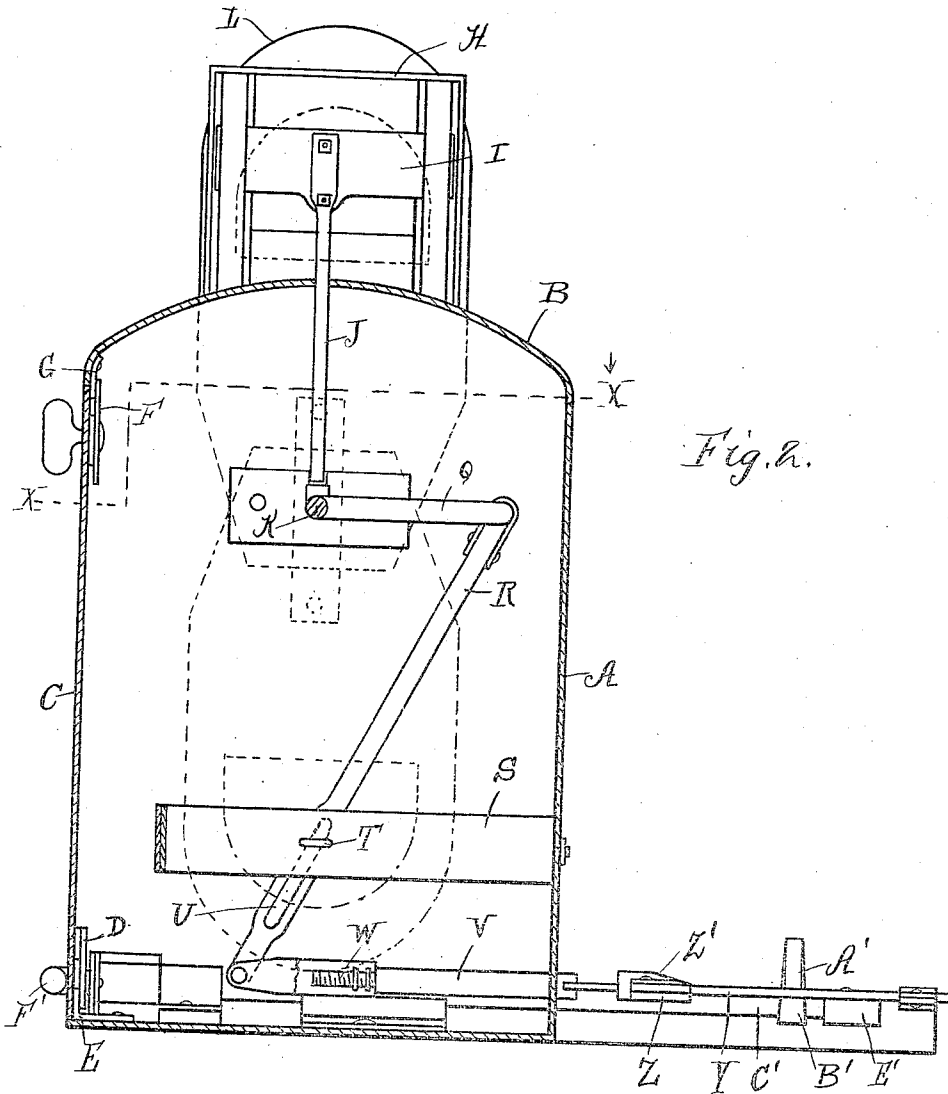


Fig. 2.

WITNESSES

S. M. Gallagher,
 H. C. Burton

INVENTOR
 Charles Raiter
 BY

W. P. Williams ATTORNEY

SWITCH STAND.

941,813.

3 SHEETS—SHEET 3.

S. M. Gallagher.
H. H. Burton

INVENTOR

INVENTOR
Charles Raiter
BY

BY

W. P. Williams ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES RAITER, OF BRECKENRIDGE, MINNESOTA.

SWITCH-STAND.

941,813.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed April 23, 1909. Serial No. 492,707.

To all whom it may concern:

Be it known that I, CHARLES RAITER, a citizen of the United States, residing at Breckenridge, in the county of Wilkin and State of Minnesota, have invented a certain new and useful Improvement in Switch-Stands, of which the following is a specification.

My invention relates to a new and useful improvement in switch stands, and has for its object to provide an exceedingly simple and effective device of this character in which means are provided whereby the switch may be automatically thrown by a train and automatically locked after it has been thrown.

Another object of my invention is to provide a switch stand which will be simple in construction and not easily thrown out of order or affected by the usage to which the same is subjected. Nearly all so called automatic switch stands are only automatic to a certain degree, and in their operation springs are generally used which are easily broken and whose strength under constant tension readily gives out. These are the disadvantages which I have overcome with my improved stand.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letters to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation of my improvement, the door being removed. Fig. 2, a longitudinal sectional view thereof, and Fig. 3, a section at the line $x-x$ of Fig. 2 looking down.

In carrying out my invention as here embodied, A represents a casing, the top of which is curved, as indicated by B, and this casing has a door C, the lower portion of which is provided with a catch D adapted to engage the boss E secured to the bottom of the casing A, and the upper portion of the door C is provided with a turn button F engaging the boss G secured to the upper portion of the casing A.

On top of the casing A is mounted the

lamp holder H, having openings therein which face up and down the track, and over one of these openings is slidably attached the blind I, which is connected by the rod J to the target spindle K, said target spindle passing through two sides of the casing A and having attached on one end the targets L, which may be constructed in the ordinary manner, that is, having a different colored glass in each one, so that when one of them is in front of the opening in the lamp box H, it will show either a danger or clear signal. On the opposite end of the target spindle K is attached the weight arm M, having secured to its outer end the weight N so that after the weight has been turned over past its center it will move downward by force of gravity until the weight arm M rests upon the stop O secured on one side of the casing A, and when the weight arm is resting upon the stop O one light of the target will be in front of the opening in the lamp holder H.

In the target spindle K is formed an off set P at which point the rod J is attached to the target spindle, so that as said spindle is revolved it will cause the blind I to slide either up or down. Q is a larger off set also formed in the target spindle K, and to this off set is movably secured the lever R which is loosely pivoted to the frame B by means of the pin T which passes through the arm S and the slot U formed in the lever R. To the lower end of said lever is attached a link V having an adjusting device W therein so that it may be adjusted to take up the lost motion between the lever R and the switch point. This link V passes through the casing A and has attached to its outer end a connector Y which is fastened to the switch point and this connector has attached thereto a locking plate Z, which has an angular portion Z' and is provided with an opening Z² with which the point A' of the locking lever B' is adapted to engage when the switch is thrown in one direction. This locking lever is adjustably attached to the rod C' by the screw D', said rod C' being journaled in the bracket E' and passing through the casing A and the door C, and having attached to its end a handle F' so that the point of the locking lever B' may be readily removed from engagement with the locking plate Z.

The operation of the device is as follows:—When it is desired to throw the

switch the weight arm M is taken hold of and turned over, at which time the lever R will be so moved as to move the link V and the connector Y outward, at the same time the target L will be turned around until the light of the lower target passes in front of the opening in the lamp holder. While this movement is taking place the angular portion C' of the locking plate Z passes beneath the point A' of the locking lever B' causing said point A' to ride upon the locking plate Z until it drops into the opening Z², at which time the switching mechanism will be locked. Now if it is desired to throw the switch back again the handle F' is moved upward partially revolving the rod C' which will lift the point A' of the locking lever B' from the hole Z² in the locking plate Z, at which time the weight arm M may be thrown over, and while in this last named position, or the position as shown in the drawings, a train may automatically throw the switch as the flanges of the wheels of said train will pass between the switch point and the main rails exerting a sufficient amount of pressure on the switch point to move it over a slight distance, and when the train has passed the weight M will draw the parts back until the switch point rests against the rails.

Of course I do not wish to be limited to the exact details of construction here shown as these may be varied within the limits of the appended claims without departing from the spirit of my invention, as for instance a gear could be attached to the target spindle which would mesh with a gear mounted on a vertical shaft for operating the targets on a high pole.

Having thus fully described my invention, what I claim as new and useful, is—

1. In a switch stand, a casing, a door, a lamp holder mounted on the top of the casing having two openings therein, a target spindle having off sets mounted in the casing, targets secured to one end of said spindle, a weight arm secured to the opposite end of said spindle, a weight mounted on the end of said weight arm, a lever loosely pivoted within the casing, one end of which is attached to one of the off sets in the spindle, a link connected to the opposite end of said lever, said link passing through the casing, a connector secured to the outer end of said link and the switch point, and means for locking the mechanism in one of its positions.

2. In a switch stand, a casing, a door, a lamp holder mounted on the top of the casing having two openings therein, a target spindle having off sets mounted in the casing, targets secured to one end of said spindle, a weight arm secured to the opposite end of said spindle, a weight mounted on

the end of said weight arm, a lever loosely pivoted within the casing, one end of which is attached to one of the off sets in the spindle, a link connected to the opposite end of said lever, said link passing through the casing, a connector secured to the outer end of said link and the switch point, a locking plate having an angular face and provided with an opening secured to the connector, a locking lever, and means for operating said locking lever.

3. In a switch stand, a casing, a door, a lamp holder mounted on the top of the casing having two openings therein, a target spindle having off sets mounted in the casing, targets secured to one end of said spindle, a weight arm secured to the opposite end of said spindle, a weight mounted on the end of said weight arm, a lever loosely pivoted within the casing, one end of which is attached to one of the off sets in the spindle, a link connected to the opposite end of said lever, said link passing through the casing, a connector secured to the outer end of said link and the switch point, a locking plate having an angular face and provided with an opening secured to the connector, a locking lever, a rod passing through the casing and the door thereof to which the locking lever is adjustably secured, and a handle for partially revolving said rod.

4. In a switch stand, a casing, a door, a lamp holder mounted on the top of the casing having two openings therein, a target spindle having off sets mounted in the casing, targets secured to one end of said spindle, a weight arm secured to the opposite end of said spindle, a weight mounted on the end of said weight arm, a lever loosely pivoted within the casing, one end of which is attached to one of the off sets in the spindle, a link connected to the opposite end of said lever, said link passing through the casing, a connector secured to the outer end of said link and the switch point, a locking plate having an angular face and provided with an opening secured to the connector, a locking lever, a rod passing through the casing and the door thereof, to which the locking lever is adjustably secured, a handle for partially revolving said rod, a blind slidably secured over one of the openings of the lamp holder, and a rod, one end of which is attached to said blind, the opposite end to one of the off sets in the target spindle.

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

CHARLES RAITER.

Witnesses:

LEWIS E. JONES,
D. J. JONES.