

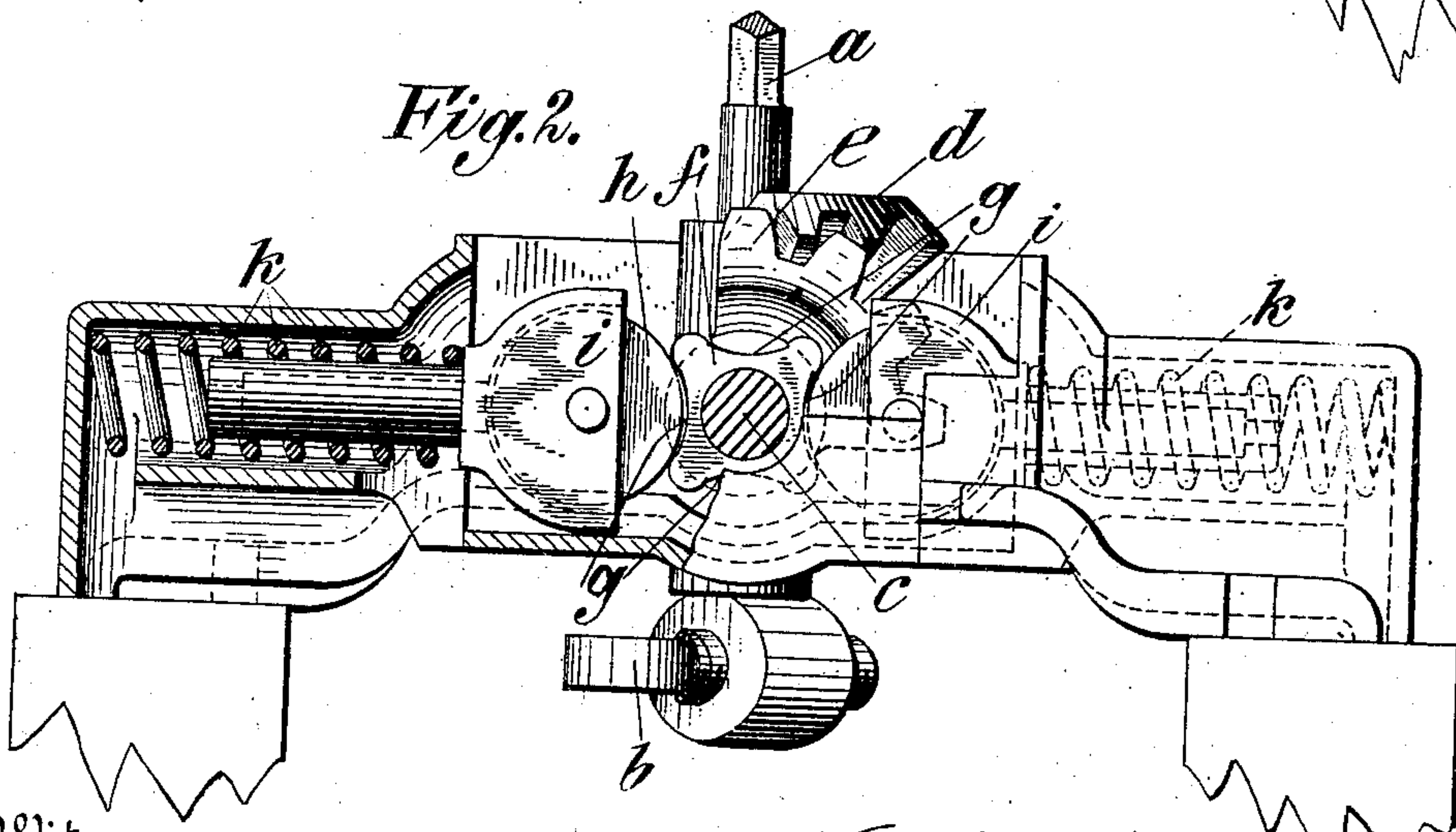
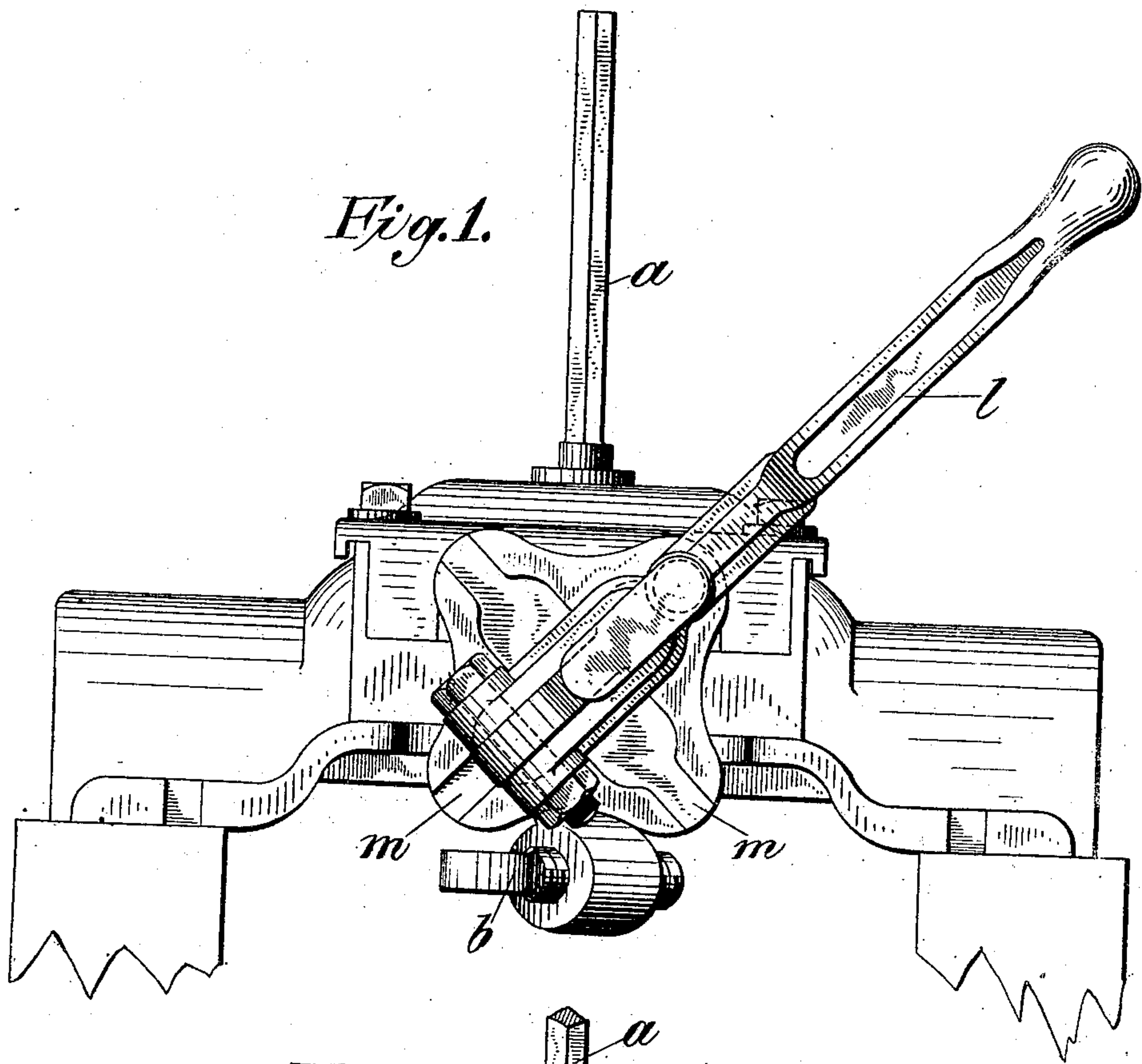
No. 854,767.

F. W. SNOW & W. C. KIDD.
SWITCH STAND.

APPLICATION FILED FEB. 23, 1907.

PATENTED MAY 28, 1907.

2 SHEETS—SHEET 1.



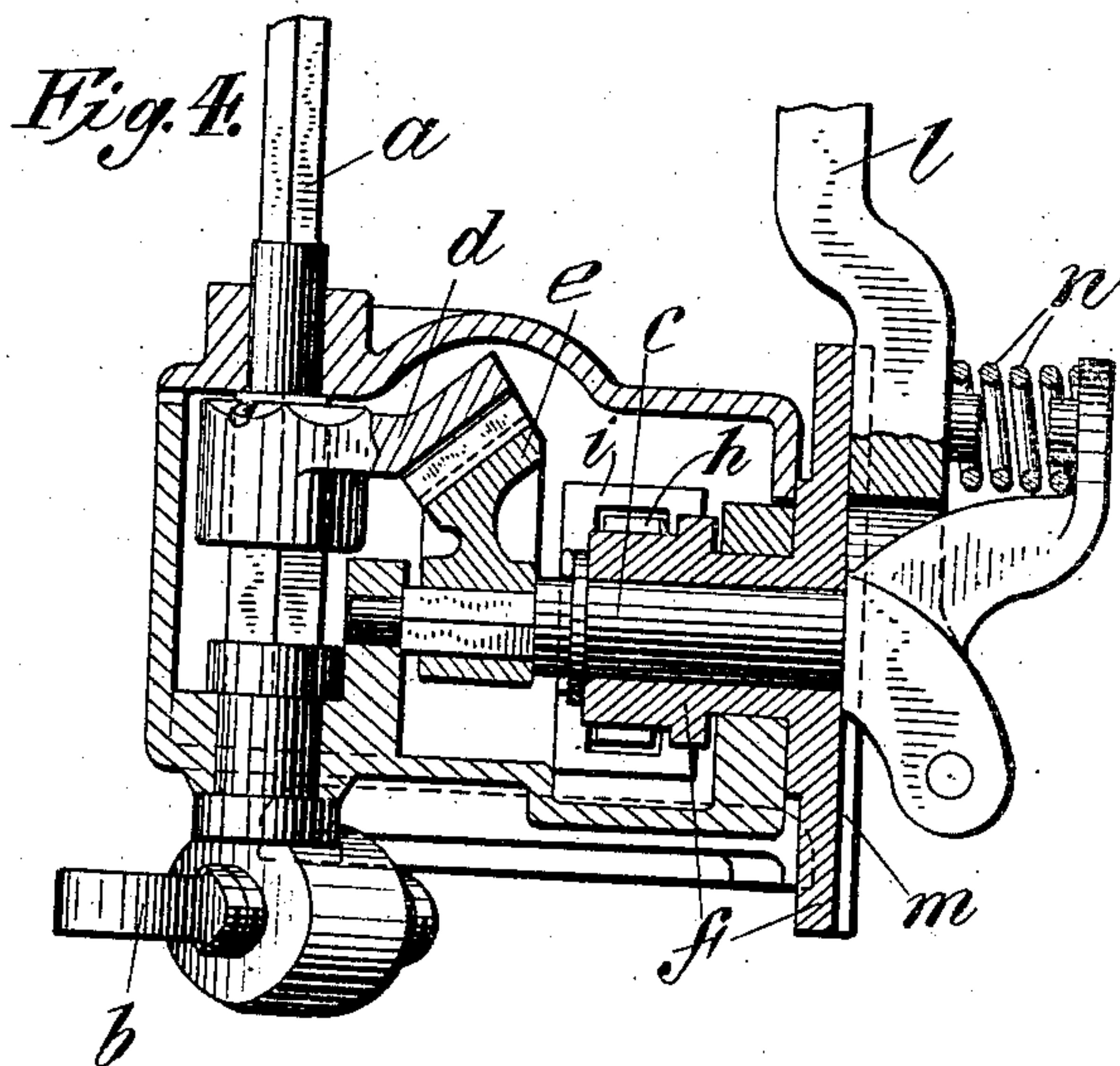
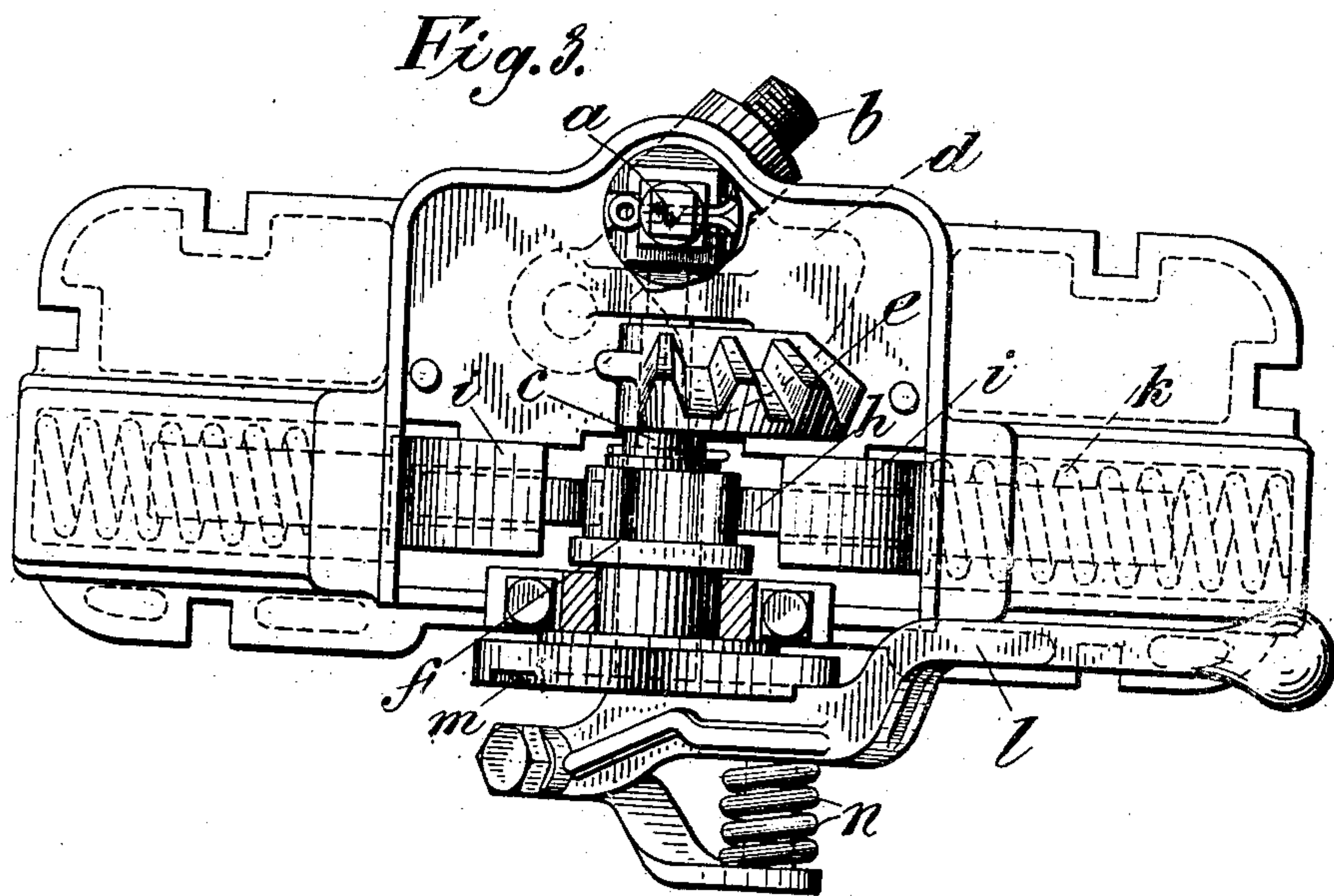
Witnesses:
Lucius E. Varney
Geo. H. Marx.

Fred William Snow, & Inventors
William Charles Kidd,
By the Attorneys
Kidding & Kidd

No. 854,767.

PATENTED MAY 28, 1907.
F. W. SNOW & W. C. KIDD,
SWITCH STAND.
APPLICATION FILED FEB. 23, 1907.

2 SHEETS—SHEET 2.



Witnesses:
John S. Vanez
Geoffrey

Fred William Snow & William Charles Kidd, Inventors
By their Attorneys
Addington & Greeley

UNITED STATES PATENT OFFICE.

FRED WILLIAM SNOW, OF HILLBURN, AND WILLIAM CHARLES KIDD, OF SUFFERN, NEW YORK, ASSIGNORS TO STANDARD EQUIPMENT COMPANY, OF MAHWAH, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SWITCH-STAND.

No. 854,767.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed February 23, 1907. Serial No. 359,020.

To all whom it may concern:

Be it known that we, FRED WILLIAM SNOW, of Hillburn, in the county of Rockland and State of New York, and WILLIAM CHARLES KIDD, of Suffern, in said county and State, have invented certain new and useful Improvements in Switch-Stands, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

It is often desirable, in railroad construction, to place a switch stand between two tracks which are laid so closely together as to render it impossible, or at least dangerous, to employ a switch stand of ordinary construction for this purpose. It is obvious that a switch stand, to occupy such a position, must be relatively small and compact,—low enough and narrow enough to permit trains to pass by safely on either side. In the case of automatic switch stands, where it is necessary to provide means for manually throwing the switch independent of what may be referred to as the automatic means, it is customary to provide a high stand, which is unsuited to a location such as referred to.

It is the object of this invention to provide an automatic switch stand which shall be adapted to be employed in any location where compactness of structure is a desideratum. It will be understood however, that no limitations in respect to the use of the present stand are implied, but that the present invention may be made use of wherever an automatic switch stand is desired.

In the accompanying drawings, Figure 1 is a view in front elevation of a stand embodying the invention. Fig. 2 is a similar view, partly in section, broken away to show a portion of the interior of the stand. Fig. 3 is a plan view with the cover of the gear box removed, and, Fig. 4 is a sectional view through the main shaft of the stand, with the latter, as well as the target spindle in elevation.

The vertical target spindle *a* may be provided as usual upon its lower end with suitable means *b* for operative connection with the switch to be moved. The switch itself and the adjacent track are not illustrated, as the invention and its relation thereto will be readily understood without such illustration. The stand is located beside the track with its

longer dimension extending in the direction of the track or in other words, with its longer dimension parallel to the track. The target spindle is operatively connected with the main shaft *c* through miter gears *d* and *e* which are mounted upon squared portions of the target spindle and the main shaft respectively:

Upon the main shaft, which it will be noted is horizontal, is a sleeve *f* provided with four recesses *g* in its periphery. In connection with this sleeve and its recesses, rollers *h* mounted in frames *i* are provided and are held against the sleeve in opposite recesses by springs *k* suitably housed in the stand. This sleeve and the rollers and springs constitute resisting means which oppose any movement of the switch from either of its turned or resting positions. It will be understood that in automatic switches different forms of resisting means are employed and, while it is preferable in the present stand to employ the particular resisting means just described, the invention is not necessarily limited thereto.

The sleeve *f* is mounted freely upon the shaft *c* but is normally arranged so as to turn with said shaft whereby, when a passing train moves the switch by the engagement of the flanges upon the wheels of the cars with the switch tongue in the usual manner, the switch will be thrown or moved against the resistance or opposition of the resisting means. In the present case, this connection between the shaft *c* and the sleeve *f* is made through a handle *l* pivoted upon the shaft *c* and by means of which the switch can be thrown manually. This handle is mounted to swing in a vertical plane and engages the sleeve by being normally held in one of two recesses or grooves *m* in the end face of the sleeve by some such means as a spring *n*. Thus the yardman or trainman may, by pulling the handle free of its engaging recess in the sleeve *f*, disengage the shaft *c* from said sleeve *f*, thus enabling him to turn the shaft and move the switch from one position to another without opposition or interference from the resisting means.

The handle *l* is at all times, as will be obvious, in a plane parallel to the track or tracks when the stand is in position. Thus the handle does not occupy such a position as

would interfere with the passing of trains when the stand is set up between closely adjacent tracks. Moreover, the present invention provides a compact and convenient stand not alone for use between tracks under the conditions referred to but also for use in any location.

I claim as my invention:

1. In a switch stand, the combination of means to connect a switch thereto, means to resist the moving of the switch, and a hand lever adapted to swing parallel with the adjacent rails and so related to the resisting means as to be capable of moving the switch without interference from the resisting means.
2. In a switch stand, the combination with means to connect a switch thereto, means to resist the moving of the switch, and a hand lever to move the switch permanently supported in a substantially vertical plane and adapted to be connected with and disconnected from the resisting means.
3. In a switch stand, the combination of a horizontal shaft, a resisting sleeve thereon, and a hand lever on said shaft adapted to move in a vertical plane and to be connected with and disconnected from said sleeve.
4. In a switch stand, the combination with means to connect a switch thereto, means to resist the moving of the switch including a member normally adapted to turn as the switch moves and rollers held yieldingly against said member on opposite sides thereof, and means to move the switch independently of said member.
5. In a switch stand, the combination of a shaft, means to connect the shaft with a switch, a member free to turn on said shaft, means on opposite sides of said member to resist its turning, and means to turn said shaft normally connecting said shaft and member so that said shaft and member shall turn together but separable from said member whereby the shaft may be turned and said member held stationary by the resisting means.
6. In a switch stand, the combination of a shaft, means to connect the shaft with a switch, a member free to turn upon said shaft, spring pressed rollers on opposite sides of said member to resist its turning, and means to turn said shaft normally connecting said shaft and member so that said shaft and member shall turn together but separable from said member whereby the shaft may be turned while said member is held stationary by the rollers.
7. In a switch stand, the combination of a shaft, means to connect the shaft to a switch, a sleeve free to turn upon said shaft and having four recesses, a spring pressed roller on each side of said shaft engaging a recess, and means to turn said shaft without turning the sleeve.

8. In a switch stand, the combination of a shaft, means to connect the shaft with a switch, means to rotate the shaft, and means to resist its rotation, said last two means being normally in engagement but being separable from each other, whereby the switch is normally held by the resisting means in its turned position but may be freely moved by hand when desired.

9. In a switch stand, the combination of a shaft, means to connect the shaft with a switch, means to rotate the shaft, a sleeve on the shaft, and resisting means engaging the sleeve, the sleeve and rotating means being normally in engagement whereby the sleeve is made to rotate with the shaft but being separable from each other so that the switch may be moved by hand when desired.

10. In a switch stand, the combination of a shaft, means to connect the shaft with a switch, a handle pivoted to the shaft, a sleeve around the shaft, and means to resist the rotation of the sleeve, the handle normally engaging the sleeve but separable therefrom.

11. In a switch stand, the combination of a shaft, means to connect the shaft with a switch, a handle pivoted to the shaft, a sleeve around the shaft having four recesses in its periphery and two grooves in its end face, and means engaging the recesses to resist the rotation of the sleeve, the handle normally engaging in one of the grooves.

12. In a switch stand, the combination of a shaft, means to connect the shaft with a switch, a handle pivoted to the shaft, a sleeve around the shaft having four recesses in its periphery and two grooves in its end face, and spring pressed rollers on opposite sides of the sleeve engaging in opposite recesses therein to resist the rotation of the sleeve, the handle normally engaging in one of the grooves.

13. In a switch stand, the combination of means to connect a switch thereto, means to resist the moving of the switch, and manually operated means adapted to move in a plane substantially parallel to the track to move the switch without interference from the resisting means.

14. In a switch stand, the combination with means to connect a switch thereto, automatically operated means to resist the moving of the switch, and manually operated means adapted to move in the plane substantially parallel to the track to move the switch without interference from the automatically operated means.

This specification signed and witnessed this 20th day of February, A. D. 1907.

FRED WILLIAM SNOW.

WILLIAM CHARLES KIDD.

Signed in the presence of—

ETHAL M. TATE,

LILLIAN A. FAY.