

L. A. MISKELL.
 SWITCH ATTACHMENT.
 APPLICATION FILED MAY 25, 1912.

1,055,780.

Patented Mar. 11, 1913.

Fig. 1.

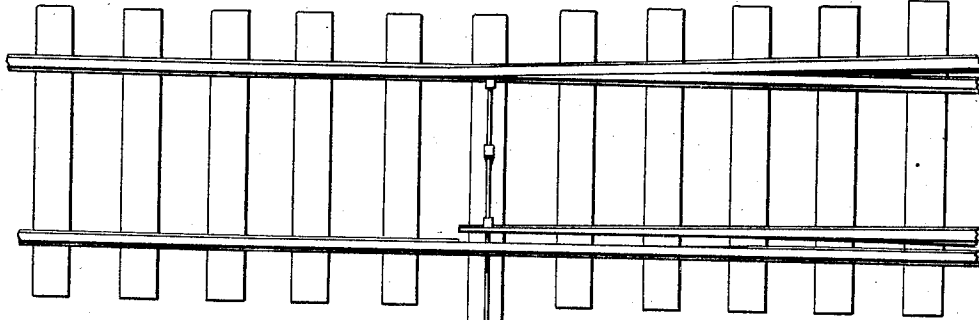


Fig. 2.

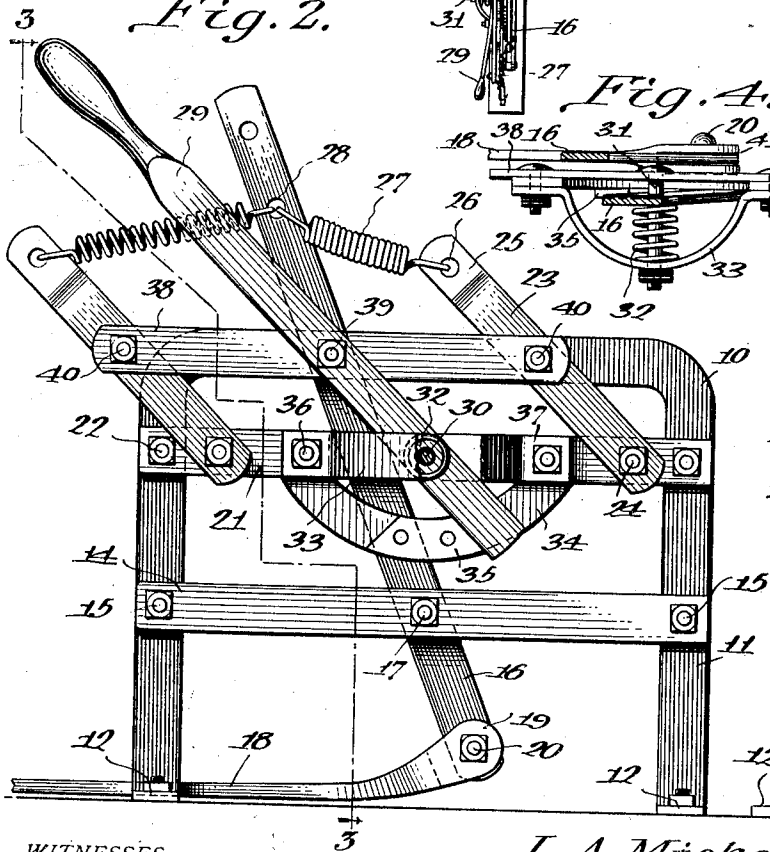
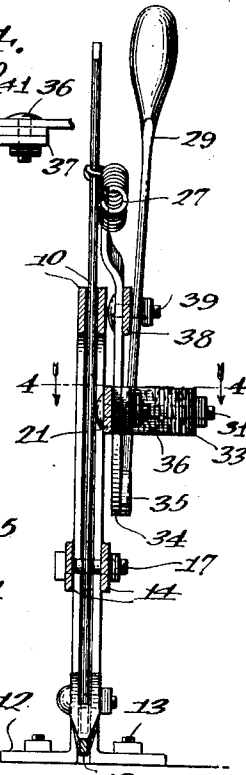


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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SWITCH ATTACHMENT.

1,055,780.

Specification of Letters Patent.

Patented Mar. 11, 1913.

Application filed May 25, 1912. Serial No. 699,754.

To all whom it may concern:

Be it known that I, LEWIN A. MISKELL, citizen of the United States, residing at Nelsonville, in the county of Athens and State of Ohio, have invented certain new and useful Improvements in Switch Attachments, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to a switch stand and has for its object the production of a means whereby the switch points are held in a yieldable position so as to allow said points to give when the flange of a wheel passes between the main rail and said point.

Another object of this invention is the production of a switch stand adapted to hold the switch operating lever and the locking lever in a yieldable position upon the stand so as to allow the switch operating lever to give when undue pressure is brought to bear thereon.

With these and other objects in view this invention consists in certain novel combinations, constructions, and arrangement of parts as will be hereinafter fully described and claimed.

In the accompanying drawings:—Figure 1 is a plan view of the switch showing the stand attached thereto. Fig. 2 is a side elevation of the switch stand showing the yoke partly broken away. Fig. 3 is a section taken on line 3—3, of Fig. 2 in the direction of the arrow. Fig. 4 is a section taken on line 4—4, of Fig. 3 in the direction of the arrow.

This invention is particularly adapted to hold the switch points in a yieldable position and consists of two parallel frames 10 which are provided with legs 11 and angular feet 12. Bolts 13 pass through the angular foot 12 and are used to hold the frame 10 upon any suitable supporting means. These frames 10 are substantially U-shape and provided with the brace 14 intermediate the ends of the legs 11. This brace 14 is held upon the frame 10 by means of the bolts 15 and forms a supporting member for the switch operating lever 16. This switch operating lever 16 is pivotally mounted upon the brace 14 at 17 and carries on its lower end the switch-throw rod 18. This switch-throw rod 18 has an upwardly extending flat head 19, which is adapted to be pivotally mounted upon the lower end of the

switch operating lever 16 at 20. A link supporting brace 21 is positioned above the brace 14 and is fastened to the legs of the frame 10 by means of the bolts or rivets 22. Pivotally mounted upon this link supporting brace 21 are the upwardly extending links 23, said links being mounted near the outer ends of the brace 21 by means of the bolts 24. The upper ends of the upwardly extending links 23 are bent inwardly as shown at 25 and each is provided with an aperture 26, said aperture being adapted to engage one end of a coil spring 27, the other end of the coil spring 27 being adapted to engage the upper end of the switch operating lever 16 by being attached within the aperture 28.

The locking lever 29 is pivotally connected to the link supporting brace 21 at 30 by means of the bolt 31. A coil spring 32 is adapted to be placed upon the bolt 31 and bear against said locking lever, said spring being held in position by means of the yoke 33 which straddles the locking lever 29. A locking segment 34, which is provided with the locking cleat 35 is bolted to the link supporting brace 21 by means of the bolts 36, said bolts 36 also engaging the laterally extending feet 37 of the yoke 33. The link connector 38 is pivotally mounted upon the locking lever 29 by means of the bolt or pin 39 and engages the upwardly extending links 23 near its outer end and is pivotally secured thereto as shown at 40.

By referring to Fig. 4 it will be seen that the upwardly extending head of the switch-throw rod 18 is made so as to form the arm 41 which is adapted to receive the switch operating lever 16. It will be seen that by drawing the locking lever 29 to one side of the lower end it will bear against one end of the cleat 35 and since the lever is pivoted at 30 and 39 it will throw the link connector to one side and hold the same in a lock position. Since this link connector is pivotally mounted to the upwardly extending links 23, it will be seen that these links will hold the operating lever in a yieldable position in the direction in which the locking lever is thrown, but should it be desired to throw the switch points, all that is necessary to do is to pull the switch operating lever in the opposite direction. It will be seen that as soon as the switch operating lever is released it will fly back to its original position.

tion and close the switch. If it is desired to have the switch points hold upon the other side all that is necessary to do is to press the locking lever inwardly, which will release the lower end of said lever from engagement with the cleat. By shifting the lever it will be seen that the connector link and upwardly extending links will be forced toward the other side and the lower end of said locking lever will rest behind the opposite shoulder of the cleat and in this manner lock the switch points on the opposite side of the track and the switch operating lever will be held in position by means of the other coil spring.

It will be seen that by bending the upper ends of the upwardly extending link in an inward direction, the coil spring fastened to the switch operating lever and to said upwardly extending links, will draw evenly upon the switch operating lever and does away with much of the lateral strain that would occur if the upwardly extending links were not bent. However, the upwardly extending links are not bent into line with the lever 20, but allow enough space for the lever to operate as shown in Fig. 3.

By referring to Fig. 3 it will be seen that the switch operating lever is pivotally mounted between the two frames 10 and in this manner an efficient means is provided whereby to guide said operating lever.

It will be obvious that since the switch throwing lever is yieldably connected to the locking lever, the switch throwing lever will be so held as to allow the switch points to give when undue pressure is brought to bear thereon, thereby greatly reducing the wear upon the switch points.

Having thus described the invention what is claimed as new, is:—

1. A switch stand of the class described comprising a pair of frames, a switch operating lever pivotally mounted between said frames, a locking lever pivotally mounted upon one of said frames and means yieldably connecting said switch operating lever with said locking lever for allowing said switch operating lever to swing when undue pressure is brought to bear thereon.

2. A switch stand of the class described comprising a pair of frames, a switch operating lever pivotally mounted between said frames, a locking lever pivotally mounted upon one of said frames, upwardly extending link members connected to said frame, a connecting link engaging said locking lever, yieldable means connecting said first mentioned links to said switch operating lever, means engaging said locking lever for holding the same in a set position and said switch operating lever adapted to yield in-

dependently of said locking lever when undue pressure is brought to bear thereon.

3. A switch stand of the class described comprising a pair of frames, a switch operating lever pivotally mounted between said frames, a locking lever pivotally mounted upon one of said frames, upwardly extending link members connected to said frame, a connecting link engaging said locking lever, coil springs connecting the upper ends of said first mentioned links to said switch operating lever, means engaging said locking lever for holding the same in a set position and said switch operating lever adapted to yield independently of said locking lever when undue pressure is brought to bear thereon, the upper ends of said upwardly extending link members being bent inwardly whereby any lateral strain between said upwardly extending link members and said switch operating lever is prevented when the springs are in place.

4. A switch stand of the class described, comprising a pair of frames, each frame comprising a pair of vertical legs having laterally extending feet, a brace member secured to said legs intermediate their ends, link supporting members connected to said legs, vertically extending legs connected to said link supporting members, a connecting link connecting said vertically extending links, a locking lever pivotally mounted upon said link supporting member and connected to said connecting link, a switch operating lever pivotally mounted upon said first mentioned members, supporting means connecting said vertically extending links with said switch operating lever for yieldably holding the same in a lock position and means engaging the lower end of said locking lever for holding said locking lever in a set position.

5. A switch stand of the class described, comprising a pair of frames, a switch operating lever pivotally mounted upon said frames, a locking lever pivotally mounted upon one of said frames, a segment carried by said frame, a yoke member carried by said frame provided with means for engaging said locking lever for holding said lever in a set position, supporting means carried by said yoke member and engaging said locking lever for holding the same in engagement with said segment, a switch operating lever and means yieldably connecting said operating lever with said locking lever.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

LEWIN A. MISKELL.

Witnesses:

JNO. W. MISKELL,
J. J. LANE.