

J. C. FITZGERALD.
OVERHEAD SWITCH.
APPLICATION FILED JAN. 13, 1910.

961,433.

Patented June 14, 1910.

Fig. 1.

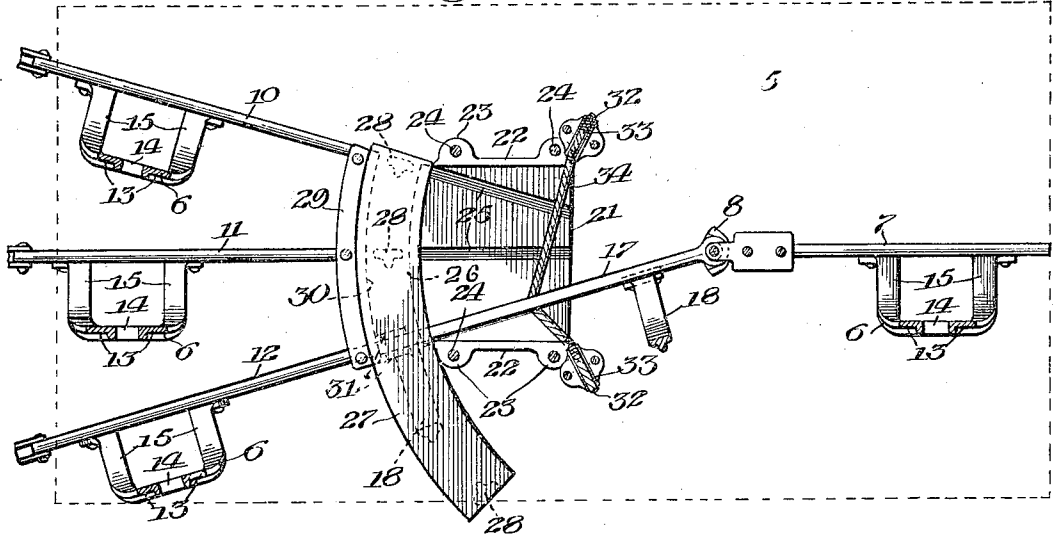


Fig. 2.

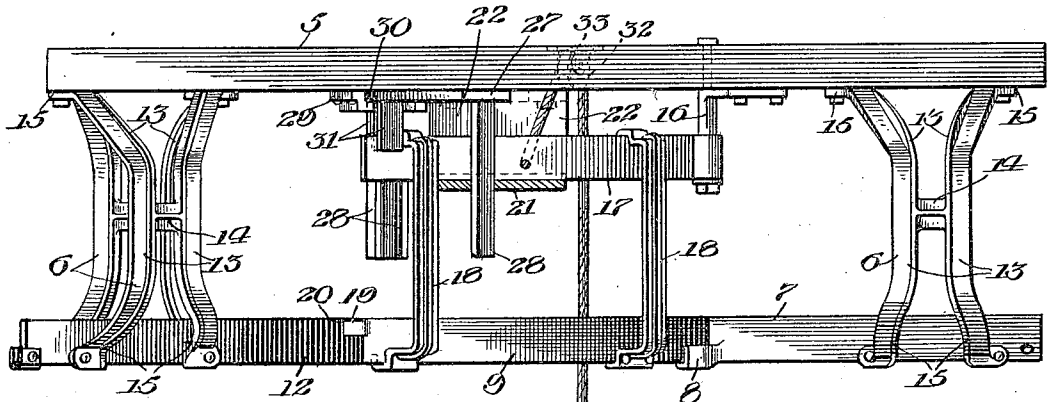
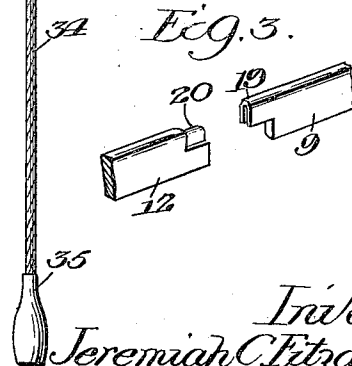


Fig. 3.



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UNITED STATES PATENT OFFICE.

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OVERHEAD SWITCH.

961,433.

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To all whom it may concern:

Be it known that I, JEREMIAH C. FITZGERALD, a citizen of the United States, residing at De Kalb, in the county of Dekalb and State of Illinois, have invented certain new and useful Improvements in Overhead Switches, of which the following is a specification.

My present invention relates to improvements in switches for elevated or overhead tracks such as are used for wheeled carriers or cars employed for conveying grain, silage, hay, litter, ore, coal, and other material from one point to another, and while it is more especially applicable to a portable overhead switch of such construction and arrangement of the parts thereof, that they may be assembled in their operative positions and the switches carried in stock, to the end that each can be shipped as a unit and bodily secured in the proper position to an elevated support so as to connect the main track section to the branch track sections of an overhead or elevated track, yet it can be used in connection with a permanently erected or stationary switch for the above-named type of tracks, and it consists in certain peculiarities of the construction, novel arrangement and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide an overhead switch of the above-named general character, which shall be extremely simple in construction, easily manipulated, readily mounted for operation, strong and durable.

A further object is to provide an overhead switch of such construction that the switch member will unite the main track section with the branch track sections in such a way that a smooth track surface will be provided for the travel of the car or carrier, as well as in such a manner that the switch member may be locked in its operative position.

Another object of the invention is to provide means whereby the carrier will be prevented running off any one of the branch track sections when it is open or not in connection with the switch section of the track, the said means being such that the operation of moving the switch section or mem-

ber from one branch track section to another will place a stop in the path of the carrier when on an open branch track.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains, to make and use the same, I will now proceed to describe it, referring to the accompanying drawings in which:—

Figure 1, is a plan sectional view showing the support for the parts of the switch by dotted lines. Fig. 2, is a view in side elevation of a complete switch showing the parts in the positions illustrated in Fig. 1, and illustrating the device as a portable switch. And Fig. 3, is a fragmental view of a portion of the hinged or switch member and a part of one of the branch track sections illustrating engaging means therefor.

Like numerals of reference, refer to corresponding parts throughout the different views of the drawing.

The reference numeral 5, designates a support which may be made of any suitable size, form and material, but preferably of an ordinary plank or board of a convenient portable size, and rectangular in shape as shown. To the lower surface of the support and near one end thereof, is suspended by means of a twin or double hanger 6, an independent track section 7, which is adapted to aline with or to have its outer end suitably connected to the main track rail (not shown) when the device is used as a portable switch, but when the parts of the switch are mounted on a stationary or permanently erected support, the section 7, may be a portion of the main track rail. The inner end of the independent or main track section 7, is provided at its lower portion with a flared, channeled extension 8, on which one end of the switch member 9, will rest when the same is in its normal position. Secured to the lower surface of the support 5, by means of double hangers 6, and near that end of the support opposite that on which the independent or main track section 7, is mounted, are a plurality of branch track sections 10, 11, and 12, which converge at their inner ends as shown in Fig. 1, of the drawing, and terminate a sufficient distance from the inner end of the track section 7, to

permit of the switch member 9, being interposed therebetween.

Each of the hangers 6, which support the various track sections, is composed of two upright members 13, which are united together at about their middle by means of a cross-piece 14, and have their upper and lower portions turned or bent outwardly and horizontally disposed as at 15, the lower horizontal portions being secured to corresponding sides of the track sections, and the upper horizontal portions to the support at points directly above the track sections, thus forming off-set hangers, which will be entirely out of the way of the carrier as it travels on the track sections, for it will be understood that the depending portion of the carrier which supports the receptacle for the material to be transferred will be located on that side of the track section opposite the lower horizontal portions of the hangers. Secured to the support directly above the inner end of the independent or main track section 7, is a depending bracket 16, on which is mounted for vertical and pivotal or rotary movement, one end of a bar 17, which has suspended therefrom by means of one or more hangers 18, the switch member 9, which is of sufficient length to reach from the inner end of the track section 7, to the inner ends of the branch track sections. That end of the switch member 9, adjacent to the branch track sections, is provided with an extension 19, which is channeled on its lower surface to overlap or engage the recessed portion 20, with which each of the inner ends of the branch track sections is provided. By thus providing the ends of the branch track sections, each with a recess 20, and by furnishing the switch member 9, with a channeled or overhanging portion 19, to fit in said recesses, and to engage the lower surface of each recess, it is apparent that when the switch member is alined with any one of the branch track sections, a substantially smooth joint or connection will be provided, and that by reason of the weight of the switch member and the bar 17, which carries the same, the switch member will be firmly held in its engaged position with the desired track section. While in this position, that end of the switch member 9, adjacent to the section 7, will rest in the flared, channeled extension 8, so that its upper surface will be flush with the upper surface of the track section 7, and that their meeting ends will abut, thus forming a close joint and substantially smooth surface for the carrier to travel on.

Secured to the lower surface of the support and transversally thereof, near the inner ends of the branch track sections, is a horizontally disposed hanger 21, which has at each of its sides an upwardly extended portion 22, provided with apertured lugs 23,

to rest against, and be secured by means of bolts 24, to the lower surface of the support so that the hanger 21, will be disposed horizontally with respect to the support and at some distance below the same, as is clearly shown in Fig. 2, of the drawing. The upper surface of the hanger 21, is provided with a number of recesses or grooves 25, to correspond in number and in alinement with the branch track sections. These recesses or grooves in the hanger 21, are for the reception and retention of the lower portion of the bar 17, which carries the switch member 9, and are employed to lock said bar in position when alined with any one of the branch track sections. The upwardly extended sides 22, of the hanger 21, are united at their ends adjacent to the branch track sections by means of a segmental ledge or portion 26, which is located a slight distance below the support 5, and is adapted to underlie one edge of a segmental bar or piece 27, which is provided at proper points on its lower surface with a series of depending arms 28, adapted to be disposed in the path of the carrier at the open ends of the branch track sections. A keeper 29, having a ledge 30, to underlie the other edge of the bar 27, is secured to the lower surface of the support 5, and transversally thereof just above and near the inner ends of the branch track sections. The bar 27, which carries the depending arms or stops 28, for the carrier is provided at about its middle with two downward extensions 31, located one on each side of the bar 17, which carries the switch member.

Journaled in a suitable opening 32, in the support 5, on each side of the bar 17, which carries the switch member, is a pulley 33, over which is passed a cable or rope 34, which is connected to the bar 17, near its middle. The rope or cable 34, may have at each of its ends a handle 35, to be grasped when it is desired to raise the bar 17, and the switch member 9, and to shift the position of the same.

The operation of the device is simple and as follows:—When the parts are in the positions shown in Fig. 1, the independent track section 7, will be connected to the branch track section 12, by means of the switch member 9, so that the carrier will have free and unobstructed passage on the rails 7, 9, and 12, but two of the stops or arms 28, on one side of the member 9, will be located near the open ends of the branch track sections 10, and 11, thus providing stops at said ends, so that if the carrier was located on either of the sections 10, or 11, it could not run off. By pulling downwardly on the ends of the rope 34, it is apparent that the bar 17, which carries the switch member 9, will be raised out of one of the grooves 25, of the bracket 21, and at

the same time the switch member 9, will be raised sufficiently to cause its extension 19, to be disengaged from the recess 20, of one of the branch track sections, when by pulling on one end only of the rope, the bar 17, as well as the switch member 9, will be swung laterally until the free end of the switch member 9, is brought into alinement with one of the branch track sections 10, or 11, at which time the bar 17, may be allowed to move downwardly until it rests in one of the grooves or recesses 25, of the bracket 21, at which time the extension 19, on one end of the switch member 9, will engage the recess 20, on the open end of one of the branch track sections. Thus it will be seen that not only the switch member 9, will be locked in position, but that the bar 17, which carries the switch member will also be locked in its alined position with one of the branch track sections.

In the foregoing operation, it is evident that as the bar 17, is movably located between the downward extensions 31, on the bar 27, it, the bar 17, as well as the switch member 9, may be raised and lowered independently of the stop carrying bar 27, but when one end only of the rope 34, is pulled on, the bar 17, will be turned to one side on its pivot, and as the extensions 31, engage said bar the stop carrying member or bar 27, will be moved transversally with respect to the branch track sections until the switch member 9, is alined with the desired one of said sections, when the stops or arms 28, and one of the hangers 18, will be placed in position at the open ends of the branch track sections to prevent the carrier running off of the same.

If only two branch track sections are used, for instance sections 11, and 12, it is apparent that only one of the arms or stops 28, will be necessary, for when the switch member 9, is connected to the branch track section 12, it is manifest that one of the arms or stops 28, will be located near the open end of the branch track section 11, and when the switch section is thrown from the branch track section 12, to the section 11, one of the hangers 18, will act as a stop for the open section 12, from which the switch section has been removed.

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

1. In an overhead switch, the combination with an elevated support, of a main track section and a plurality of branch track sections suitably supported on the support, and a switch member pivotally mounted for bodily vertical movement on the support and adapted to be swung laterally to aline with the different branch track sections.

2. In an overhead switch, the combination with a portable support adapted to be se-

cured in an elevated position, of a main track section and a plurality of branch track sections suitably supported on the support, and a switch member pivotally suspended from the support for bodily vertical movement and adapted to be swung laterally to aline with the different branch track sections.

3. In an overhead switch, the combination with an elevated support, of a main track section and a plurality of branch track sections suitably supported on said support, each of said branch track sections having a recess in the upper portion of its end adjacent to the main track section, and a switch member pivotally mounted on the support and having on the upper portion of one of its ends a channeled extension to fit in and engage the recessed parts of the track sections, said switch member adapted to be bodily raised and swung laterally to aline with the different branch track sections.

4. In an overhead switch, the combination with an elevated support, of a main track section having integral therewith at one of its ends a channeled extension flared at its free end, and a plurality of branch track sections suitably supported on the support, and a switch member mounted on the support for pivotal and bodily vertical movement and adapted to rest at one of its ends in the channeled extension of the main track section and to have its other end swung laterally to aline with the different branch track sections.

5. In an overhead switch, the combination with a portable support adapted to be secured in an elevated position, of a main track section having integral therewith at one of its ends a channeled extension flared at its free end and a plurality of branch track sections suitably supported on the support, and a switch member mounted on the support for pivotal and bodily vertical movement and adapted to rest at one of its ends in the channeled extension of the main track section and to have its other end swung laterally to aline with the different branch track sections.

6. In an overhead switch, the combination with a portable support adapted to be, secured in an elevated position, of a main track section having at one of its ends a channeled extension and a plurality of branch track sections suitably supported on the support, each of said branch track sections having a recess in the upper portion of its end adjacent to the main track section, and a switch member mounted on the support for pivotal and bodily vertical movement and having at one of its ends a channeled extension to rest in an engaged recess of the branch track sections and adapted to rest at its other end in the channeled extension of the main track section and to

have its channeled end swung laterally to align with the different branch track sections.

7. In an overhead switch, the combination with an elevated support, of a main track section and a plurality of branch track sections suitably supported on said support, a switch member pivotally and movably suspended from the support for bodily vertical movement and adapted to connect at its ends with the main track section and with the branch track sections one at a time, and means to raise and shift the position of one end of the switch member from one of the branch track sections to another.

8. In an overhead switch, the combination with a portable support adapted to be secured in an elevated position, of a main track section and a plurality of branch track sections suitably supported on said support, a switch member pivotally and movably suspended from the support for bodily vertical movement and adapted to connect at its ends with the main track section and with the branch track sections one at a time, and means to raise and shift the position of one end of the switch member from one branch track section to another.

9. In an overhead switch, the combination with an elevated support, of a main track section and a plurality of branch track sections suspended from said support, a switch member pivotally and movably suspended from said support for bodily vertical movement and adapted to connect at its ends with the main track section and with the branch track sections one at a time, a bar transversally and movably mounted on the lower surface of the support, one or more depending arms on said bar, means to connect said bar with the switch member, and means to raise and shift the position of one end of the switch member from one of the branch track sections to another.

10. In an overhead switch, the combina-

tion with an elevated support, of a main track section and a plurality of branch track sections suspended from said support, a bracket secured to said support above the inner end of the main track section and having a depending pivot, a switch-member carrying-bar mounted on said pivot for pivotal and vertical movement, a switch member suspended from said bar and adapted to connect at its ends with the main track section and with the branch track sections one at a time, a bar transversally and movably mounted on the lower surface of the support, one or more depending arms on said bar, means to connect said bar with the switch-member carrying-bar, and means to raise and shift the position of one end of the switch member from one of the branch track sections to another.

11. In an overhead switch, the combination with a support, of a main track section and a plurality of branch track sections suspended from said support, a pendent bracket secured to the support above the inner portion of the main track section, a switch-member-carrying-bar mounted on said bracket for pivotal and vertical movement, a switch member suspended from said bar and adapted to connect at its ends with the main track section and with the branch track sections one at a time, a bracket having in its upper surface a plurality of grooves or recesses and horizontally supported beneath said bar, a stop-carrying-bar transversally and movably mounted on the lower surface of the support, one or more depending arms on said bar, means to connect said bar with the switch-member-carrying-bar, and means to shift the position of the switch member from one of the branch track sections to another.

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