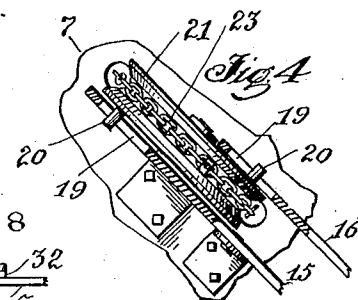
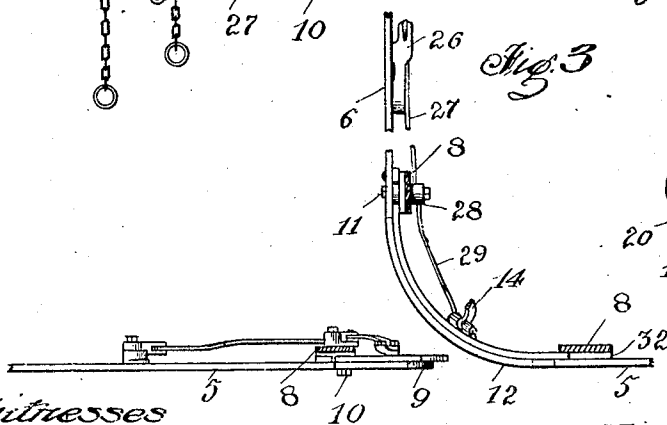
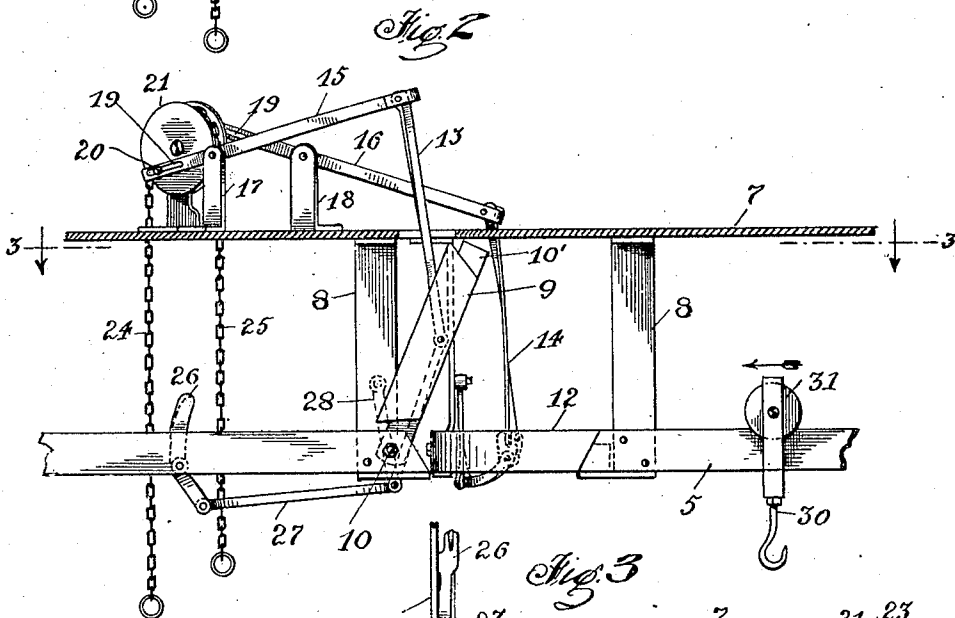
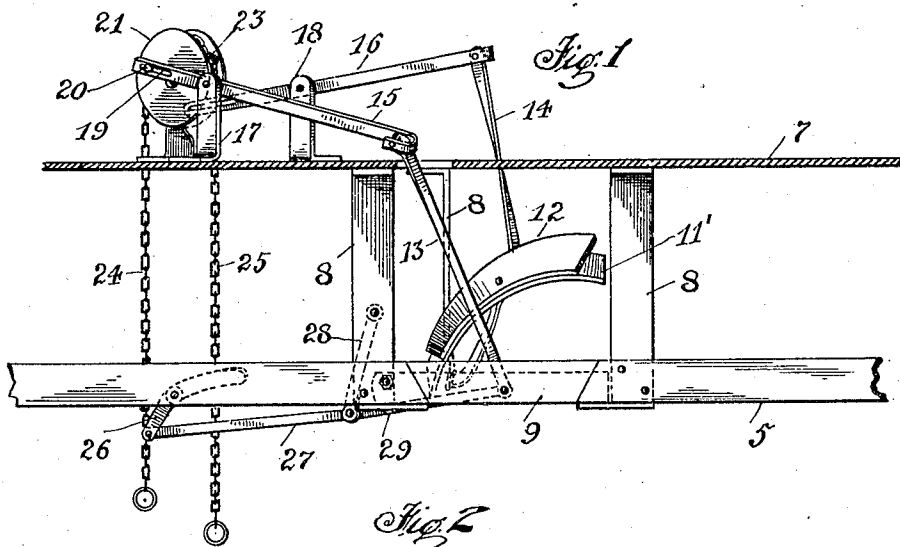


No. 849,350.

PATENTED APR. 2, 1907.

F. KRAMER.
SWITCH FOR OVERHEAD TROLLEY TRACKS.
APPLICATION FILED OCT. 1, 1906.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK KRAMER, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-THIRD TO DANIEL McCONAGHY, OF LOS ANGELES, CALIFORNIA.

SWITCH FOR OVERHEAD-TROLLEY TRACKS.

No. 849,350.

Specification of Letters Patent.

Patented April 2, 1907.

Application filed October 1, 1906. Serial No. 336,942.

To all whom it may concern:

Be it known that I, FREDERICK KRAMER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in a Switch for Overhead-Trolley Tracks, of which the following is a specification.

This invention relates to a switch for elevated carrier systems such as are commonly employed in slaughtering-houses. In systems of this kind it is necessary to provide for numerous branch tracks, and at the junction of these latter with the main track there must be provided a switch of some kind so that the carrier may be sent over the main track or over the branch track at will.

My invention has to do with a switch of this character, and it is of the objects of this invention to provide a switch of improved construction in which the main track and switch-track have movable rail-sections arranged at the junction and are connected to operating mechanism in such a manner so that one of the movable rail-sections will be placed in position to close a gap in the track while the other is removed.

Another object of my invention is to provide automatic closing means, so that when one of the movable rail-sections is in an open position the trolley-wheel of the carrier operating on that track will operate mechanism to automatically throw the rail-section in engagement so as to close the gap in the track.

A further object of my invention is to provide a device that is simple and effective in operation and economical in construction.

I accomplish these objects by means of the device described herein and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved switch, showing the removable rail-section in the main track in its closed position. Fig. 2 is a view similar to Fig. 1, but showing the removable rail-section in the main track in an open position. Fig. 3 is a plan view taken on line 3 3 of Fig. 2. Fig. 4 is a detail plan of the grooved pulley and connecting mechanism.

Referring to the drawings, 5 indicates a main track, and 6 a branch track, both of which are secured to the ceiling 7 by means of downwardly-projecting hangers 8. Adjacent the point where the branch track joins

the main track is located a removable switch-bar 9, one end of which is pivoted, as at 10, to the main track 5. Pivotaly secured, as at 11, to the branch track 6 and adjacent the point where it joins the main track is a movable switch-bar 12, preferably segmental in form. Both of these switch-bars when in their operative position, as shown in Figs. 1 and 2, form a continuous track.

Pivotaly secured to each of the removable switch-bars 9 and 12 are connecting-links 13 and 14, which extend upwardly above the ceiling and which are pivotaly connected to operating-bars 15 and 16, which are pivotaly mounted in bearings 17 and 18, secured to the upper side of the ceiling 7. The other ends of bars 15 and 16 are provided with slots 19, which are adapted to engage operating-pins 20, secured to the sides near the periphery, and at points diametrically opposite each other, of a revolubly-mounted grooved pulley 21. Secured in the groove of pulley 21 with the free ends 24 and 25 projecting downwardly is a flexible operating-pull 23. When one of the switch-bars is in engagement with the track and it is desired to throw the other bar into engagement, a simple pull on one of the free ends of pull 23 completes the operation, pulling one out of engagement and forcing the other in.

Each of the switch-bars are provided with a device in combination with the manually-operated mechanism to automatically throw the switch-bars into their operative position when open, so as to permit of a free passage of the carrier when approaching the switch from its non-switching direction. As the devices are similar in construction and operate in precisely the same manner, I will only describe the one connected to the main track 5.

The device consists, preferably, of a rocker-arm 26, which is pivoted in its middle to the main track 5. Pivotaly secured to the lower end of the rocker-arm 26 is a connecting-link 27, which extends toward the switch-bar 9, its other end being pivoted to a downwardly-depending arm 28, which is pivotaly secured to the hanger 8, and a connecting-link 29, one end of which is pivoted to arm 28, the other end being pivotaly connected to the switch-bar 9 at a point where the connecting-link 13 is pivoted to the switch-bar.

The ends of the switch-bars or movable sections have their ends cut on an angle, so

that when they are in their operative position their beveled or angular edges will contact with the beveled or angular edges in the tracks, which will act as a stop to limit their further downward movement and to hold them firmly in position while the carrier is passing over them. Secured to one side and projecting beyond the free ends of switch-bars 9 and 12 is a tongue or projection 10' and 11', which are adapted to enter the pocket or groove 32, formed by the flat face of hanger 8 and the side of the track, thereby forming a firm seat for the bar and providing against any lateral movement.

The operation of the parts is as follows: Assuming the switch-bar 9 to be in place on the main track 5 and the carrier 30 is running in the direction indicated by the arrow, and it is desired to shunt the carrier, with its load secured thereto, to another portion of the building, the operator pulls on rope 24, thereby rotating pulley 21, by which rotation pins 20 rock the pivoted bars 15 and 16, mounted in bearings 17 and 18, bar 15 pulling the switch-bar 9 into a raised position and bar 16 forcing the segmental bar 12 into place between the main and branch lines of the track. The carrier 30 can then proceed in the desired direction. If the carrier 30 should happen to be coming from the opposite direction on the main line and the switch-bar 9 should happen to be in its open position, trolley-wheel 31 would contact with the rocker-arm 26 and force it downwardly in passing over it, thereby depressing the switch-bar 9 into its closed position, and at the same time operating bar 16, connected to the pulley 21, so as to pull switch-bar 12 out of engagement with track 5, thus affording a straight unbroken track, the automatic operation of the segmental switch-bar 12, located in the branch track, being exactly the same as for the operation of the switch-bar 9.

It will be noted from the foregoing description that I have produced an overhead switch that can be operated either manually or automatically.

It will also be further noted that I have produced a switch that is economical in construction, and having few parts it is rendered less liable to get out of order.

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

1. An overhead switch, comprising a main track and a switch-track, said tracks being attached to the ceiling by means of hangers, said switch-track joining said first-named track at an angle thereto; removable sections pivotally secured in said tracks adja-

cent their point of junction; a grooved pulley revolubly mounted in bearings secured to the ceiling; engaging pins secured to the opposite sides of said pulley near its periphery and at points diametrically opposite each other; a pair of operating-arms pivotally mounted in bearings secured to the ceiling, having slots in their ends adapted to engage the pins secured to the pulley; connecting-links secured to the outer end of said last-named arms, their other ends being pivotally secured to the removable sections; and operating means secured to the pulley whereby the removable sections are pulled one into and the other out of engagement with the tracks simultaneously.

2. An overhead switch, comprising a main track and a switch-track, said tracks being attached to the ceiling by means of hangers, said switch-track joining the first-named track at an angle thereto; removable sections pivotally secured to said track adjacent their point of junction; a grooved pulley revolubly mounted in bearings secured to the ceiling; engaging pins secured to the side of said pulley near its periphery and at points diametrically opposite each other; a pair of operating-arms pivotally mounted in bearings secured to the ceiling having slots in their ends adapted to engage the pins secured to the pulley; connecting-links secured to the outer end of said last-named arm; their other ends being pivotally secured to the removable sections; operating-pulls secured to said pulley; removable-section-operating tongues pivotally secured to said main track and switch-track, said tongues projecting upwardly in the path of the carrier when either of said removable sections are in their open position, the lower ends of said tongues projecting downwardly below the main switch-track; movable arms pivotally secured to the hangers adjacent the pivotal point of the removable sections; connecting-links pivotally secured to the lower arms of the operating-tongue, their other ends pivotally engaging the downwardly-projecting arms secured to the hanger; and connecting-links pivotally secured to the outer end of the downwardly-projecting arms secured to the hangers, their other ends pivotally engaging the removable sections at points where the first-named connecting-links engage the sections.

In witness that I claim the foregoing I have hereunto subscribed my name this 19th day of September, 1906.

FREDERICK KRAMER.

Witnesses:

EDMUND A. STRAUSE,
M. A. JONES.