

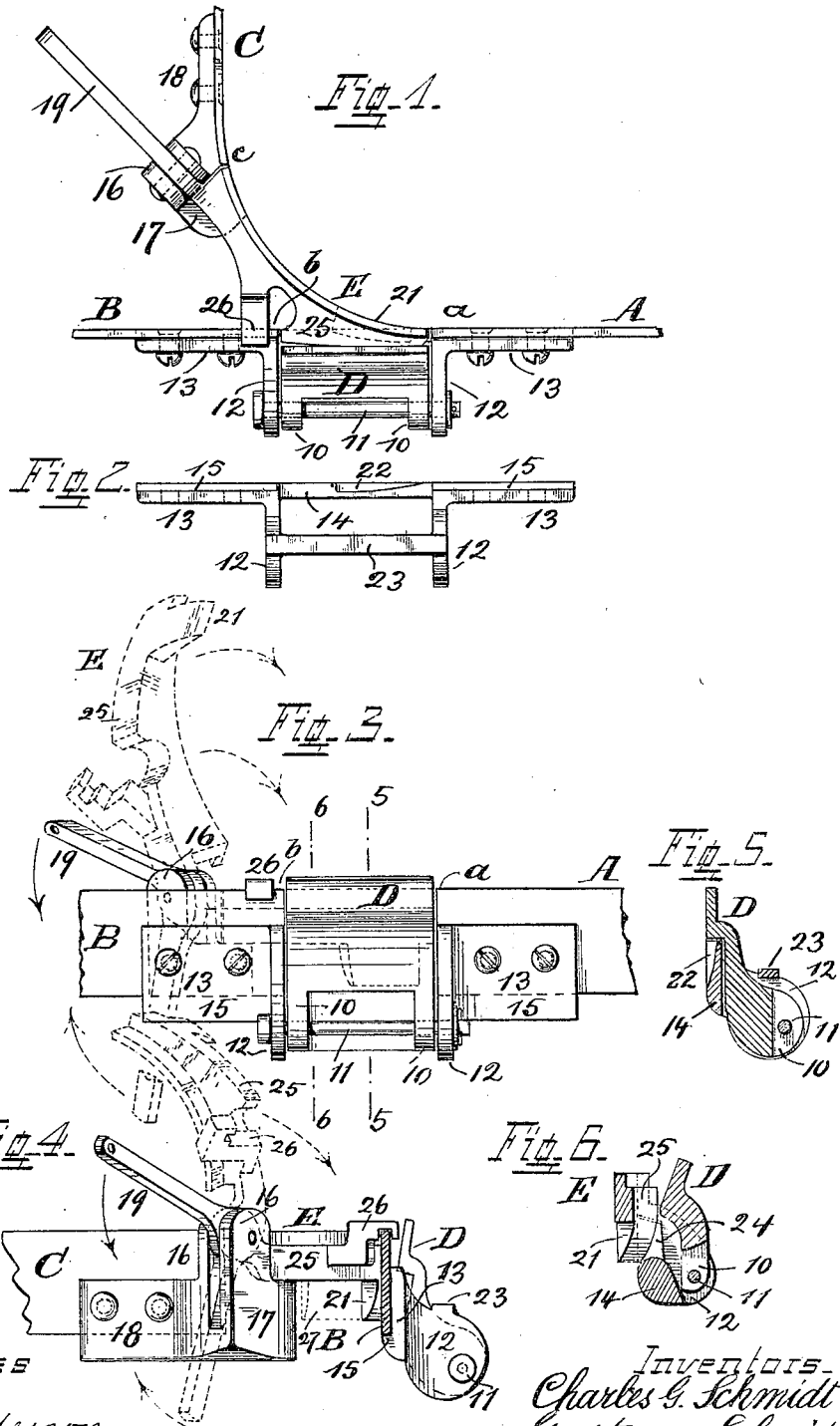
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OVERHEAD TROLLEY TRACK.

APPLICATION FILED MAY 11, 1905.



Witnesses

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UNITED STATES PATENT OFFICE.

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OVERHEAD TROLLEY-TRACK.

No. 816,255.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, CHARLES G. SCHMIDT, GUSTAV SCHMIDT, and JOSEPH F. PFLUM, citizens of the United States, residing at Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Overhead Trolley-Tracks; and we do declare the following to be a clear, full, and exact description thereof, attention being called to the accompanying drawings, with the reference characters marked thereon, which form also a part of this specification.

This invention relates to improvements in overhead trolley-tracks as used in slaughter and packing houses, warerooms, cold-storage houses, commercial and manufacturing establishments, &c., where they serve to support sides or quarters of beeves, packages of merchandise or manufactured articles, and upon which by means of trolley-wheels from which such articles are suspended they may also be conveniently moved from one place, building, or compartment to another for storage, distribution, loading or unloading, shipment, &c. Switches are provided to be used in connection with such tracks to assist in the manipulation of the trolley-wheels traveling thereon to direct them during their movements to permit various arrangements, distribution, shifting from one track to another, &c.

The invention consists of certain means which are adapted for use in such connection and which take the place of the present single-member switch now commonly used and which means are arranged and constructed in a certain novel manner which combines in a simple construction durability in wear and reliability in action and which means as an incidental feature are arranged to prevent accident—as, for instance, derailment due to an open switch when the same was expected to be closed.

In the following specification, and particularly pointed out in the claims, is found a full description of the invention, together with its operation and manipulation, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 shows in top view the features of our invention. Fig. 2 shows in a similar view one of the structural parts detached. Fig. 3 is an elevation or front view of Fig. 1.

Fig. 4 is a side elevation of Figs. 1 and 3 and shown as they appear when viewed from the left. Fig. 5 is a vertical cross-section on line 5 5 of Fig. 3 and with the parts shown as they appear in the dotted position in said figure. Fig. 6 in a similar view, the section being taken on line 6 6, shows these parts somewhat modified, the positions being as they appear in Fig. 3.

In the drawings, A, B, and C represent rails forming parts of two trolley-tracks and the opposite ends *a*, *b*, and *c* of which rails are separated by intervenient spaces or gaps. For each gap we provide a complementary piece of track in form of a short rail-section fitted to fill out such gaps. Each of these rail-sections is pivotally supported, so as to be capable to swing into its respective gap to close the same, so that when so swung in either track is made continuous for use.

D is the rail-section fitted to close the gap between rail ends *a* and *b*, and E is the rail-section to close the gap between rail ends *a* and *c*. In the first case a trolley would travel over the track-line A, D, and B or over the same line in reversed direction B, D, and A. In the other case the travel would be over the line A, E, and C or C, E, and A. The arrangement for changing from one line to another is such that it is necessary to manipulate only one of the rail-sections, which latter in turn affects also operatively the other section.

In the drawings, rails A and B are shown alined in a straight or direct line, which, however, need not necessarily be so—that is to say, this track-line may also be more or less curved. The third rail C is arranged in an angular relation with reference to the track-line formed by the two rails first mentioned.

Rail-section D is hung between rail ends *a* and *b*, it being provided for such purpose with pin-bearings 10 to receive a pivot-pin 11, the ends of which pin are supported in brackets 12 12, each provided with a flange 13, whereby they are attached to the rail ends, as shown. The position of the pivot-pin and the distribution of weight of this rail-section D is such that it has a normal tendency to fall into the gap it is fitted to close, so that in order to hold it in such closing position it is only necessary to provide a stop or support upon which it may come normally to a rest.

This we provide in form of a bridge 14, upon which the under side of the track portion of this rail-section D drops, the arrangement and position of these parts being such that when so resting upon this bridge and, as shown in Fig. 5, this rail-section is properly aligned between rail ends *a* and *b* to form the continuous track-line A, D, and B, or B, D, and A. By preference this bridge 14, flanges 13, and brackets 12 form one continuous casting, as best shown in Fig. 2, to facilitate connection and attachment of the parts and to obtain, more particularly, alinement of the rail ends. This alinement is further aided by extending flanges 13 downwardly below the rails and by providing them thereat with shoulders 15, against and upon which the lower edges of rails A and B are fitted.

Rail-section E is arranged and supported in a manner that it may either close or open the gap between rail ends *a* and *c*, forming in the first case a continuous track-line A E C or C, E, and A. For such purpose this section is pivotally attached to or between posts 16, which rise from a bracket 17, attached to rail end *c* by means of a flange 18, the details of connection being similar to those of flanges 13. It is provided with a lever-arm 19 for actuation to assume either one of its positions, and which actuation may be brought about by any suitable means provided so as to act on the free end of lever-arm 19 by corresponding manipulation. This manipulation may be a rod, chain, or rope. The open position is shown in dotted lines in Figs. 3 and 4, in which position it readily remains by reason of the distribution of the weight which overhangs the pivot rearwardly. Its closed position is shown in Figs. 1, 3, 4, and 6, into which it is thrown by appropriate manipulation of the end of lever-arm 19. During the latter part of this movement section E displaces rail-section D by acting sideways and downwardly against the upper edge of the same by means of a cam 21, projecting from its under edge, and thereafter it assumes in part the previous position of the rail-section so displaced. In this closed position (best shown in Fig. 1) this rail-section E bridges the gap between rail ends *a* and *c* and is supported at one end by its pivot and also by resting partly upon its bracket 17 and at its other end by resting upon bridge 14, occupying the previous position of displaced rail-section D. The continuous track A E C or C E A (shown in Fig. 1) is now formed. If necessary, bridge 14 may be cut out, as shown at 22, to clear cam 21. To close the other track A B again to render it continuous for use, it is only necessary to raise section E, as shown in dotted lines in Figs. 3 and 4, after which section D drops automatically back into its normal position upon bridge 14 and in which it closes the gap between rail ends *a* and *b*. The displacement of rail-section D by section E

beyond a point from which it could not automatically return in this manner is of course primarily prevented by the action of cam 21, which is correspondingly limited. Positive stops may, however, be added—as, for instance, by a bar 23 (shown in Figs. 2, 4, and 5) or by bridge 14, in conjunction with the formation accordingly of the pin-bearings 10, as shown in the modified construction illustrated in Fig. 6.

Derailment of trolleys by reason of an open gap is always prevented. The gap between rail ends *a* and *b* is never open, because when not filled out by rail-section E it will always be closed by section D, which immediately drops in as soon as section E moves out. A trolley approaching on rail C finds section E either down and closing gap *c a* or up in its raised position, as shown in dotted lines, for instance, in Fig. 3. In this latter case the trolley throws this rail-section as soon as it encounters it, and thus closes the gap for itself.

Minor changes in details of construction may be readily made without interfering with or changing the general plan of our invention. Bridge 14 could be omitted, nor would it have to be continuous as to its function for supporting rail-section D, and the latter might be supported merely at its ends on lugs 24, projecting for such purpose into the gap between rail ends *a* and *b* and as shown in Fig. 6. These lugs would also support rail-section E, this latter being laterally extended below its rail-face in either case, as shown at 25. The upper surface of these lugs might be beveled, as shown, so that with the under side of the complementary surface of section E shaped in a similar manner a certain locking engagement ensues, which counteracts any tendency of one part to spread away from the other in a manner which would disturb the alinement. As another means for the same purpose a locking-tie 26 may be provided, projecting from section E and notched on its under side, which notch is fitted to receive the upper edge of rail B, so that when said section is down this tie drops over rail B and engages the same, thereby preventing lateral displacement. Rail-section E may also be manipulated without the use of arm 19 by lifting and dropping the same from above by means of a pull-rope directly attached to it. Suitable supports in form of the usual stationary hangers are provided, but not shown, and serve to sustain the track-rails. By preference there should be such a hanger as close as possible to each rail end. It is clear that for the purpose of attaching our rail-section-supporting parts such hangers would be the equivalent of the rail ends.

The parts necessary for this device may be independently manufactured and shipped complete and ready for attachment to the ends of the track-rails. Such attachment

may be made without difficulty, the design of the parts being such as to indicate position of parts and points of attachment, whereby at the same time alinement of the rail ends is attained and no cutting out of rails or notching of rail ends is required. Cam 21 may be extended to form a flange 27, as shown in dotted lines in Fig. 4, or such flange may be otherwise provided to give to section E a larger vertical extension to close correspondingly more of the gap. Flange 18 of bracket 17 serves also to stiffen the free rail end *c* and holds it to its shape.

Having described our invention, we claim

as new—

1. Means in overhead trolley-tracks, for changing travel from one of two tracks onto the other track, there being a gap provided in each track-rail to accommodate these means which consist of rail-sections fitted to close each gap, each pivotally supported so as to be capable of moving in or out of its gap, the arrangement and position of the parts and supports being such that one section swings in a plane substantially at right angles to the other and that while so moving, one rail-section is operatively affected by manipulation of the other rail-section and means to obtain such manipulation.

2. In means for changing in overhead trolley-tracks, travel from one track-line to another, the combination of a track-line consisting of rails A, B, arranged with a gap between their opposite ends, another track-line consisting of a rail C arranged at an angle to the track-line first mentioned, but terminating so as to also leave a gap between it and the latter track-line, a rail-section movably supported between the ends of rails A, B, and in a manner to either open or close the gap between these ends, another rail-section hinged to the end of rail C and supported so as to have a pivotal movement, a lever-arm forming a lengthwise extension of this latter rail-section beyond its pivot and means to swing this lever-arm to raise or lower its connected rail-section.

3. In means for changing in overhead trolley-tracks, travel from one track-line to another, the combination of a track-line consisting of rails A, B, arranged with a gap between their opposite ends, another track-line consisting of a rail C arranged at an angle to the track-line first mentioned, but terminating so as to also leave a gap between its end and the latter track-line, rail-sections fitted to aline with the rail ends and to close the gaps between them, supporting means attached to each of the three rail ends to which the rail-sections are pivotally attached and upon which they rest when in alined positions and means for manipulation.

4. In means for changing in overhead trolley-tracks, travel from one track-line to another, the combination of a track-line con-

sisting of rails A, B, arranged with a gap between their opposite ends, another track-line consisting of a rail C arranged at an angle to the track-line first mentioned, but terminating so as to also leave a gap between it and the latter track-line, a rail-section fitted between the ends of rails A and B, means attached to each of these rail ends whereby and between which this rail-section is pivotally supported so as to be capable to swing either into alinement with these rail ends or outside of the track-line, a second rail-section fitted to close the gap at the end of rail C and pivotally attached to such end and means for manipulation.

5. In means for changing in overhead trolley-tracks, travel from one track-line to another, the combination of a track-line consisting of rails A, B, arranged with a gap between their opposite ends, another track-line consisting of rail C arranged at an angle to the track-line first mentioned, but terminating so as to also leave a gap between it and the latter track-line, a rail-section movably fitted between the ends of rails A and B to either open or close the gap thereat, a second rail-section fitted to close the gap at the end of rail C, a flanged bracket attached to this end to which this second rail-section is pivotally connected at one of its ends and means for manipulating it to swing its other end to or from the opposite rail end.

6. In means for changing in overhead trolley-tracks, travel from one track-line to another, the combination of a track-line consisting of rails A, B, arranged with a gap between their opposite ends, another track-line consisting of a rail C arranged at an angle to the track-line first mentioned, but terminating so as to also leave a gap between it and the latter track-line, a rail-section fitted between the ends of rails A and B, brackets at these rail ends between which this rail-section is pivotally supported, its arrangement of position and distribution of weight being such that it has a tendency to normally drop into an alining position with the adjacent rail ends, supports upon which it rests while in such alined position, a second rail-section movably fitted to close the gap at the end of rail C and means for its manipulation, said means operating that when moving this second rail-section into position, this latter simultaneously displaces the first rail-section and leaves the same in a position from which it is free to drop back into rail alinement, whenever the displacing rail-section leaves its position.

7. In means for changing in overhead trolley-tracks, travel from one track-line to another, the combination of a track-line consisting of rails A, B, arranged with a gap between their opposite ends, another track-line consisting of a rail C arranged at an angle to the track-line first mentioned, but terminat-

ing so as to also leave a gap between it and the latter track-line, a rail-section movably fitted between the ends of rails A and B to either open or close the gap thereat, a second
 5 rail-section fitted to close the gap at the end of rail C, and pivotally supported at such rail end and in a manner to swing in a vertical plane to or from the opposite rail end, to open or close its complementary gap and
 10 means to manipulate it for such purpose.

8. In means for changing in overhead trolley-tracks, travel from one track-line to another, the combination of a track-line consisting of rails A, B, arranged with a gap between their opposite ends, another track-line
 15 consisting of a rail C arranged at an angle to the track-line first mentioned, but terminating so as to also leave a gap between it and the latter track-line, a rail-section movably
 20 fitted between the ends of rails A and B and supported in a manner to normally aline with them, supporting means upon which this rail-section rests while in such normal position, a second rail-section fitted to close the gap at
 25 the end of rail C and pivotally attached to such rail end so as to be capable of being swung into alinement with one of the other rail ends, contacting during such movement with the first rail-section so as to displace the
 30 same from its support which it occupies thereafter and means to manipulate this rail-section.

9. In means for changing in overhead trolley-tracks, travel from one track-line to another, the combination of a track-line consisting of rails A, B, arranged with a gap between their opposite ends, another track-line
 35 consisting of a rail C arranged at an angle to the track-line first mentioned, but terminating so as to also leave a gap between it and the latter track-line, rail-sections fitted to each gap and pivotally supported for movement to either close or open the same, the position and arrangement of the supporting
 40 means and connections being such that one section swings in a plane at right angles to the other one and one section when assuming alined position contacts with the other section to displace the same and means for ma-
 50 nipulation.

10. In means for changing in overhead trolley-tracks, travel from one track-line to another, the combination of a track-line consisting of rails A, B, arranged with a gap between their opposite ends, another track-line
 55 consisting of a rail C arranged at an angle to the track-line first mentioned, but terminating so as to also leave a gap between it and the latter track-line, a rail-section movably fitted between the ends of rails A and B and
 60 adapted to aline with them, another rail-section movably supported between the ends of rails C and A and adapted to aline with them, means to swing this section in a plane at right angles to the other section and a projection
 65 on the former section adapted to contact with the latter section to displace the same when swinging into position.

11. In means for changing in overhead trolley-tracks, travel from one track-line to
 70 another, the combination of a track-line consisting of rails A, B, arranged with a gap between their opposite ends, another track-line consisting of a rail C arranged at an angle to the track-line first mentioned, but terminating
 75 so as to also leave a gap between it and the latter track-line, a rail-section movably fitted between the ends of rails A and B to either open or close the gap thereat, a second rail-section fitted to close the gap at the end
 80 of rail C and pivotally supported with reference to such rail end and in a manner to swing in a vertical plane, to open or close its complementary gap, means to manipulate it for such purpose, and a notched tie-lock
 85 adapted to drop over and engage a rail of the adjacent track to prevent lateral displacement.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

CHARLES G. SCHMIDT
 GUSTAV SCHMIDT.
 JOSEPH F. PFLUM.

Witnesses:

C. SPENGEL,
 C. MEYER.