W. & J. F. MITCHELL.

CARRIER TRACK.

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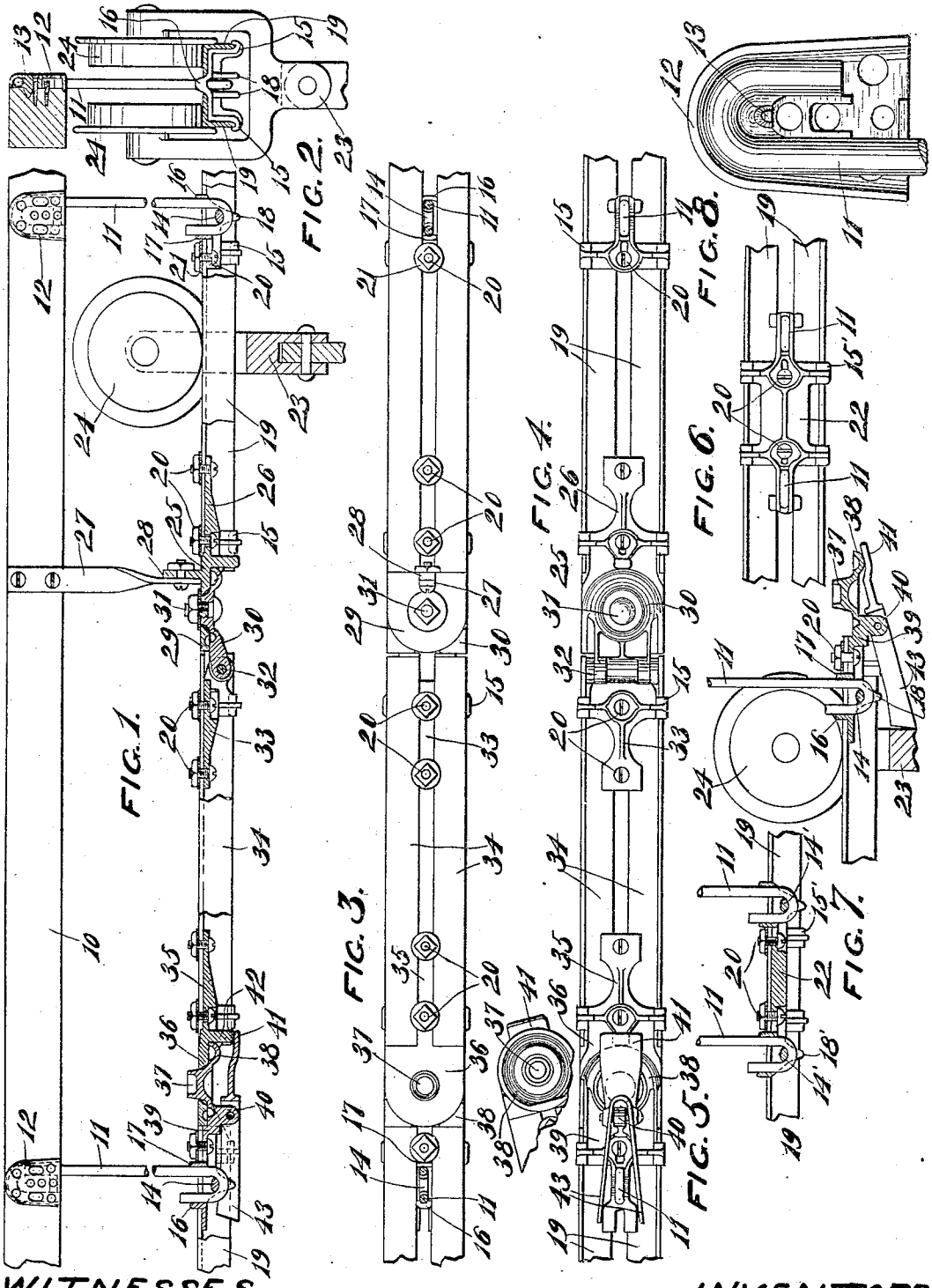

FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.

WITNESSES.

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CARRIER-TRACK.

No. 931,455. Specification of Letters Patent. Patented Aug. 17, 1909.

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To all whom it may concern:

Be it known that we, WILLIAM MITCHELL and JOHN F. MITCHELL, both residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Carrier-Tracks, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention has for its object to provide a track for elevated carriers and the like which will be simple in its construction and strong and efficient in use and which may be quickly and easily placed in position or changed from one position to another.

Another object of this invention is to provide a carrier track with a switch of novel construction which may be readily changed from one position to another to direct the path of travel of the carrier to any one of a number of branch lines of track.

Another object of this invention is to provide the switch terminals of one or more branch lines of carrier tracks with means for automatically stopping the movements of the carrier in event of the switch being out of connection therewith and thereby prevent the carrier from passing off of said terminal and falling to the ground, said stopping means being adapted to be automatically thrown out of its obstructing position when the switch member is connected with the branch line.

With the above and other objects in view the invention consists in the carrier track herein claimed, its parts and combinations of parts, and all equivalents.

Referring to the accompanying drawings, in which like characters of reference indicate the same parts in the different views; Figure 1 is a side elevation with parts in section of a carrier track constructed in accordance with this invention; Fig. 2 is a sectional elevation thereof; Fig. 3 is a plan view thereof showing a pair of branch tracks; Fig. 4 is a bottom view thereof; Figs. 5 and 6 are sectional and bottom views of a track coupling forming a part of the invention; Fig. 7 is a sectional detail view of a branch track switch terminal with its automatic stopping means in position to block the movement of the carrier; and, Fig. 8 is a detail view of the cleat for the track hanger.

In these drawings 10 indicates the frame from which the carrier track is to be suspended and which may be of any desirable construction and is preferably of wood. Hanger hooks 11 are mounted on the frame 10 by having their upper hook shaped ends fitting within U-shaped cleats 12 which have a projecting pin or spur 13 entering the frame 10 and around which the hook passes in a channel of the cleat. The lower hooked end of the hanger 11 passes around a cross bar 14 of a rail chair 15 with its shank and its end confined between bearing lugs 16 and 17 and its bent end confined between downwardly extending bars 18. The track chairs 15 form pairs of angular shoulders with depending hooked ends to engage and fit within a pair of angle iron rails 19 which are thereby spaced apart with the bearing lugs 16 and 17 fitting between them. The rails are clamped in position by means of bolts 20 passing through openings in the rail chairs and through the slot between the rails with washers 21 bearing upon the top of the inner edges of both rails, as shown in Fig. 3. At the rail joints a double rail chair 22 is employed, as shown in Figs. 5 and 6, which consist of two of the single chairs formed together to engage the ends of the meeting rails, and the parts thereof are given corresponding reference numerals to the parts of the single chair 15 except that they are primed.

A carrier 23 is adapted to travel on the track, and so much thereof as shown in the drawings comprises the usual yoked upper end with arms extending around each side of the track and with flanged rollers 24 thereon riding on the angle iron rails 19, as clearly shown in Fig. 2, the space between the rollers causing them to clear the hanger hooks 11 in the usual manner.

Where a switch is desired to transfer the carrier from the main track to any one of a number of branch tracks, a movable switch member is employed. An end chair 25, which is somewhat similar to the single chair 15 above described, except that it has an extension 26 for a second bolt 20, is clamped by means of these bolts to the ends of the rails 19, and instead of the hooked hanger 11 a stronger and more rigid support is provided by means of a twisted metal strap 27 fastened to the frame 10 and bolted to an upstanding ear 28 on the extension 26. The end of the chair 25 forms a circular bearing plate 29 to receive a corresponding circular bearing plate 30 which is connected thereto

by a pivot bolt 31 and is free to swing thereon from side to side. The bearing plate 30 is hinged at 32 to a switch chair 33 so that the switch member 34 formed thereon by means of sections of angle iron rails similar to the main portion of the track is capable of swinging from one branch track terminal to another by a movement in a horizontal direction and also by a movement on the hinge connection. The switch rail chair 33 does not differ materially from the end chair 25 at the rail clamping portion thereof. The end chair 35 for the switch member 34 is similar to the chair 33 except that it has a circular coupling plate 36 on its end with a central opening to engage an upstanding projection 37 on a circular coupling plate 38 of an end chair 39 at the terminal of the branch track. Otherwise the end chair 39 is similar to the single rail chair 15 before described, though it has a downwardly extending lug 40 to which is pivoted a carrier stop 41 which extends beyond the circular plate 38 to a position where it will be engaged by a downwardly extending lug 42 on the bottom of the end chair 35 of the switch member so as to be swung thereby, the normal tendency of the carrier trip 41 being to swing to a position where it will bear on the under side of the plate 38 by reason of the excessive weight of its pair of rearwardly extending arms 43. When said arms 43 are raised by the trip 41 being engaged by the projection 42 of the switch member, as shown in Fig. 1, they will not interfere with the passage of the carrier 23, but when the switch member is disconnected from this branch line terminal, as shown in Fig. 7, the trip lever 41 is free to swing to a position where the arms 43 stand in the path of the yoked portion of the carrier and prevent the carrier passing thereby, as it would then pass off of the branch line terminal and fall to the ground. The switch member 34 may swing in a vertical plane on its hinge connection 32 to connect and disconnect it from the projection 37 of any branch line terminal and may be swung in a horizontal plane upon the pivot bolt 31 to enable it to connect with any one of a number of branch line terminals radiating from the switch pivot.

The construction of the hanger hooks with their cleats 12 permits the track to be quickly placed in position and as quickly removed and changed to another position, thereby enabling the carrier to travel wherever it is desired without a material loss of time.

It is obvious that an angular bend or turn may be made in a track by fitting the end projection 37 of one track section within the end plate 29 of another track section, that is by dispensing with the switch member 34 of the switch and placing the two connections therefor in connection with each other.

The parts all being made easily removable may be connected and disconnected any number of times without injuring them in the least, so that the track may be shifted from place to place and arranged and re-arranged to suit the convenience of the user.

What we claim as our invention is:

1. In a carrier track, a pair of angle iron rails arranged parallel to each other with their upper flanges extending toward each other in an approximately horizontal plane, rail chairs provided with opposite shoulders to fit within the angle iron rails and having hooked lower ends to engage the lower edges of the rails, bolts passing through the rail chairs and engaging the inner edges of the rails, and track suspending means engaging the rail chairs.

2. In a carrier track, a pair of angle iron rails arranged parallel to each other with their upper flanges extending toward each other in an approximately horizontal plane, rail chairs provided with opposite shoulders to fit within the angle iron rails and space them apart and having hooked lower ends to engage the lower edges of the rails, bolts passing through the rail chairs and engaging the inner edges of the rails, a cross bar formed on each rail chair between depending ears and having bearing lugs to the front and the rear thereof extending through the space between the rails, and a hooked track hanger passing through the space between the rails and engaging the cross bar with its shank and end bearing against the bearing lugs.

3. In a carrier track, a track member, a hanger therefor provided with a hooked upper end, and a cleat adapted to be secured to a support and having a spur to enter the support, and a U-shaped channel passing around the spur to receive the hook shaped end of the hanger.

4. In a carrier track, a main track, one or more branch tracks spaced therefrom, a switch member having a double pivotal connection with the main track on a horizontal as well as a vertical axis, a coupling member on the end of the switch member and a coupling member on the end of the branch track to receive the coupling of the switch member.

5. In a carrier track, a main track, one or more branch tracks spaced therefrom, a switch member having a double pivotal connection with the main track on a horizontal as well as a vertical axis, a coupling on the end of the switch member provided with an opening, and a coupling on the end of each of the branch tracks provided with an upstanding projection to receive the opening of the coupling on the switch member.

6. In a carrier track, a main track, one or more branch tracks spaced therefrom, a switch member having a double pivotal connection with the main track on a horizontal as well as a vertical axis, a coupling on the

end of the switch member provided with an opening, a coupling on the end of each of the branch tracks provided with an upstanding projection to receive the opening of the coupling on the switch member, a carrier stop pivotally mounted on the end of each of the branch tracks, and a projection on the switch member adapted to engage the carrier stop of a branch track when the switch member is connected therewith to move said carrier stop out of its effective position.

7. A carrier track, comprising a pair of parallel angle iron rails with their upper flanges extending toward each other in approximately a horizontal plane, rail chairs forming opposite shoulders fitting within the angle iron rails and spacing them apart with hooks at their lower ends for engaging the lower edges of the rails, bolts passing through the rail chairs and engaging the inner edges of the rails, a cross bar on each rail chair between depending ears and having bearing lugs in the front and rear thereof, a track hanger with hooked ends, the lower end thereof engaging the cross bar between the ears and bearing against the bearing lugs, a cleat adapted to be secured to a support and having a spur to enter the support and a channel around the spur to contain the hooked upper end of the track hanger, a rail chair on the end of the track having a plate projecting therefrom, a switch member, a pivot plate hinged to the switch member on a horizontal axis and pivotally connected to the plate of the end chair of the track on a vertical axis, a coupling plate on the end of the switch member with an opening therein and a depending lug, a pair of branch tracks each having a coupling plate with an upstanding projection to receive the opening of the coupling plate of the switch member, and a carrier stop pivotally connected to each of the coupling plates of the branch tracks and extending in a position to be engaged by the lug of the coupling plate of the switch member and swung out of effective position thereby when the switch member is coupled with the branch track.

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

WILLIAM MITCHELL.
JOHN F. MITCHELL.

Witnesses:
ALFRED A. OKRST,
HENRY V. MEYROSE.