

June 13, 1950

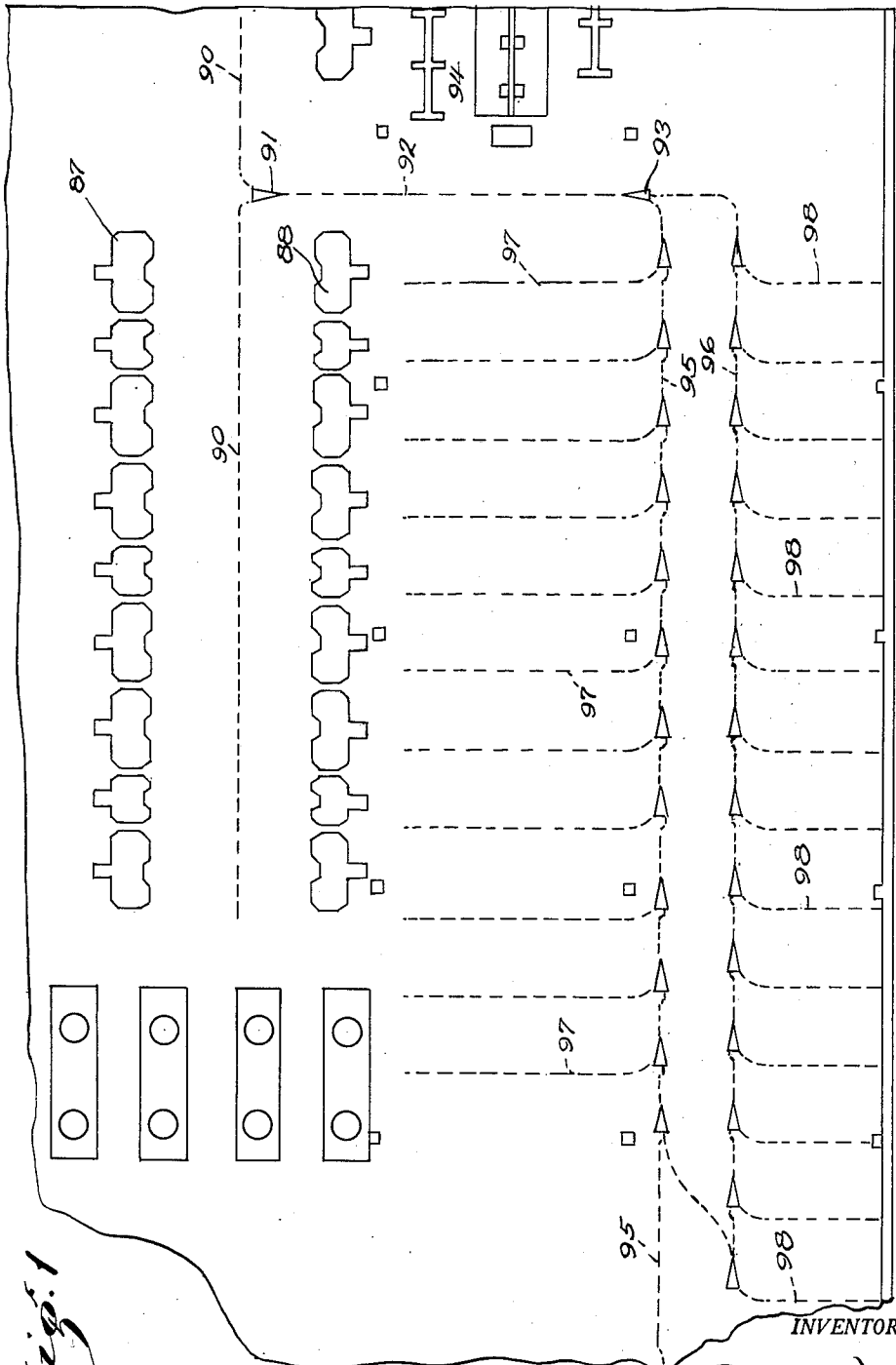
LE ROY L. WERNER

2,511,027

CONVEYER SWITCH

Filed June 16, 1944

7 Sheets-Sheet 1



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BY LeRoy L. Werner

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June 13, 1950

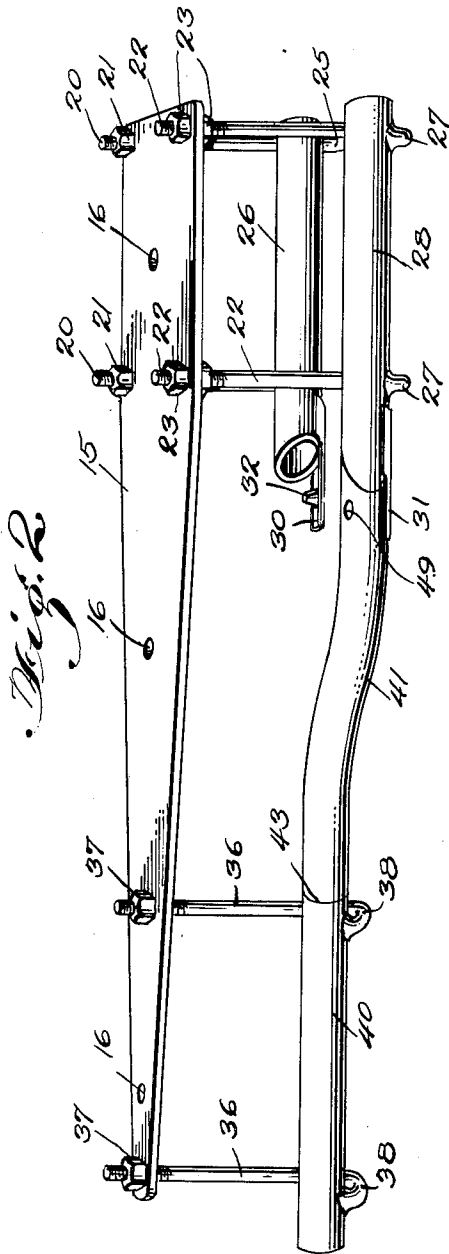
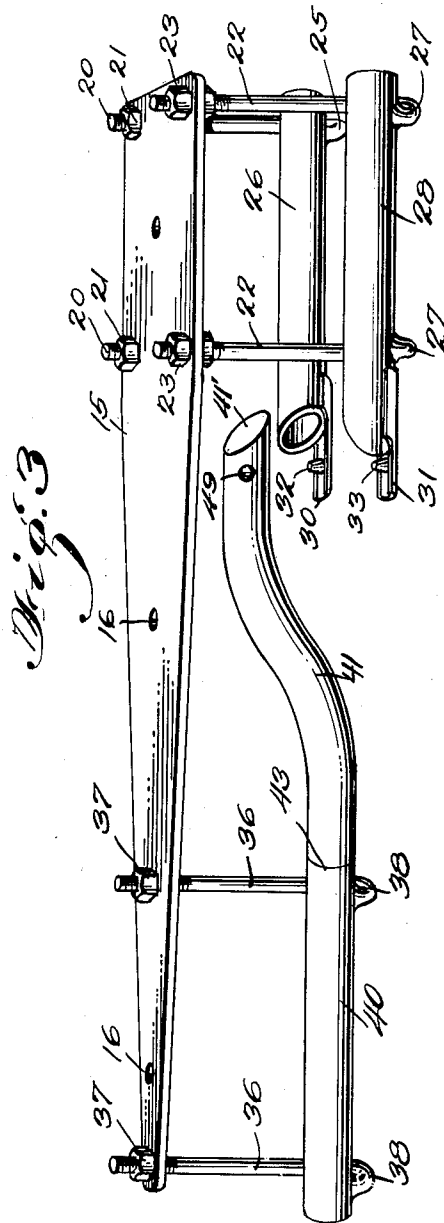
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CONVEYER SWITCH

Filed June 16, 1944

7 Sheets-Sheet 2



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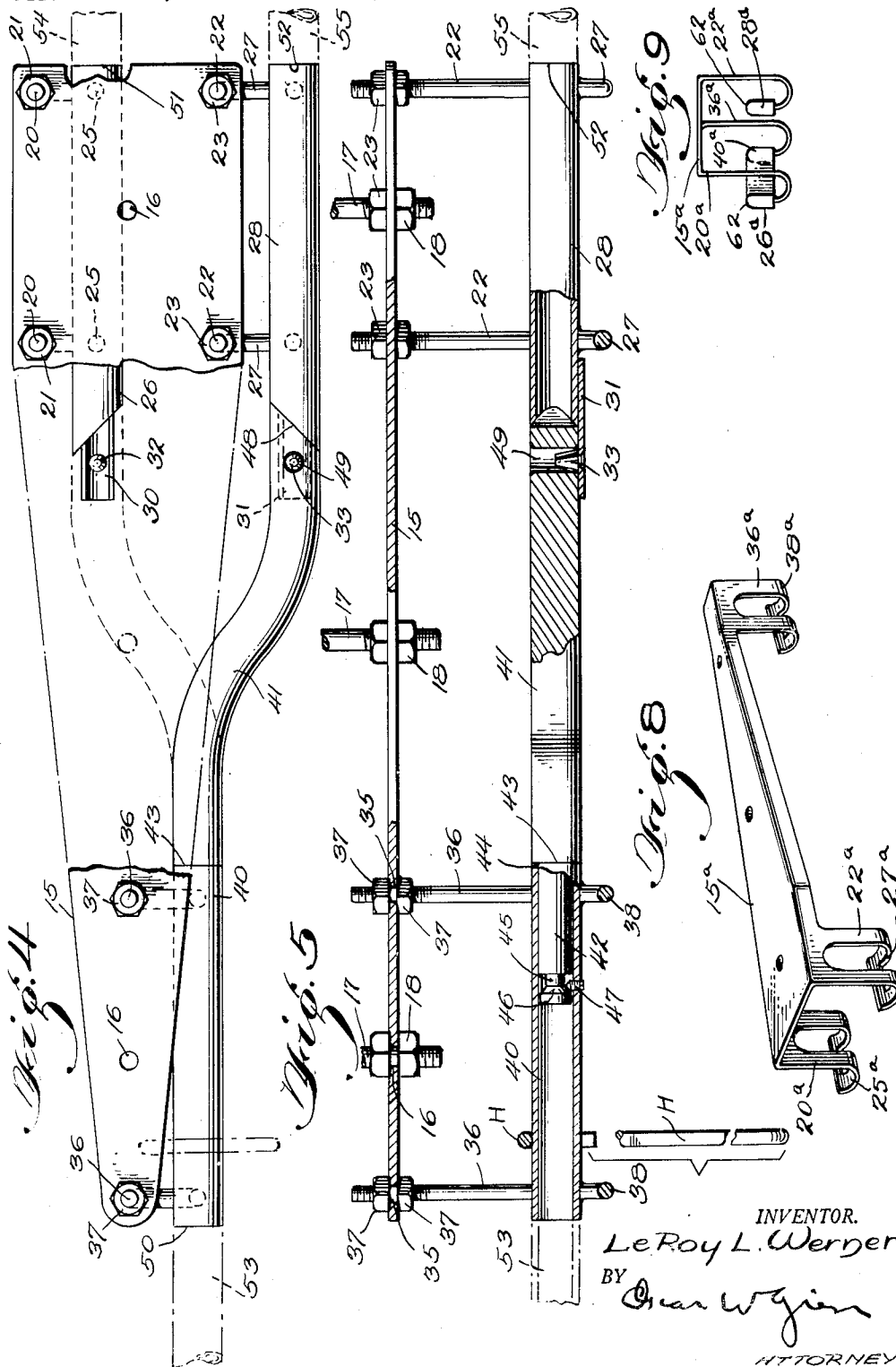
LE ROY L. WERNER

2,511,027

CONVEYER SWITCH

Filed June 16, 1944

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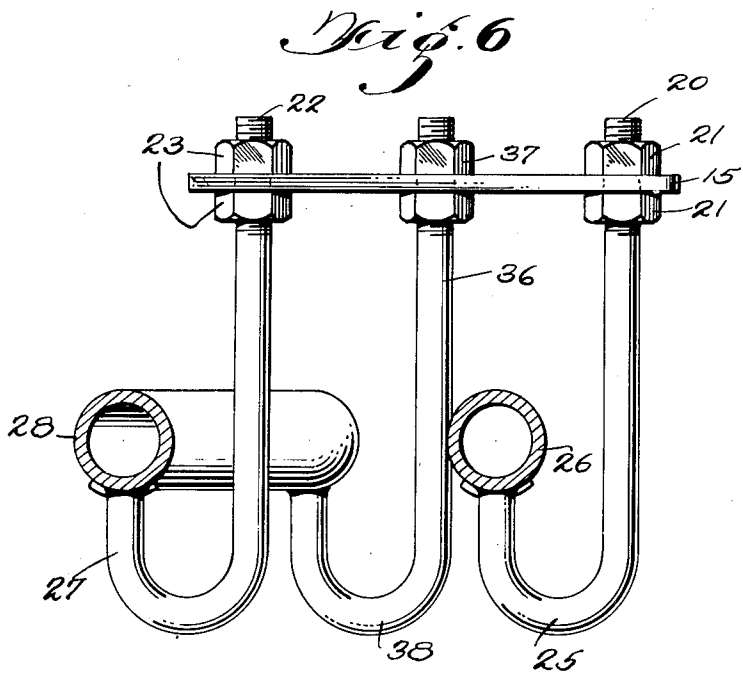
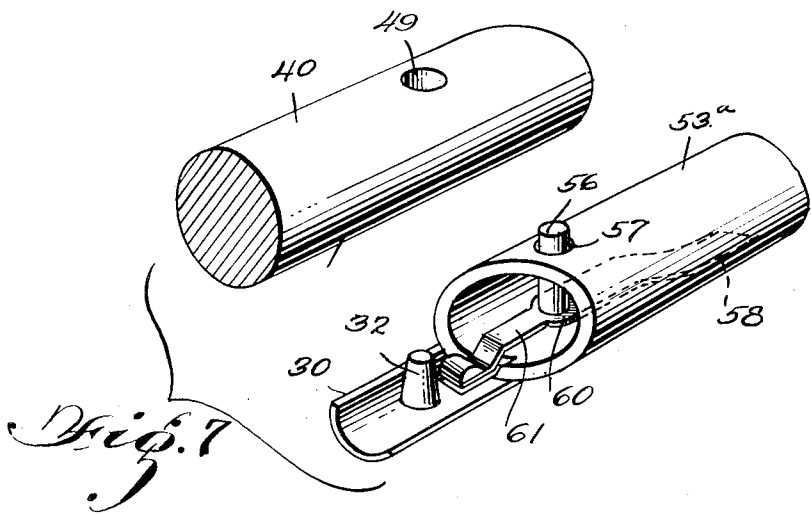
June 13, 1950

LE ROY L. WERNER
CONVEYER SWITCH

2,511,027

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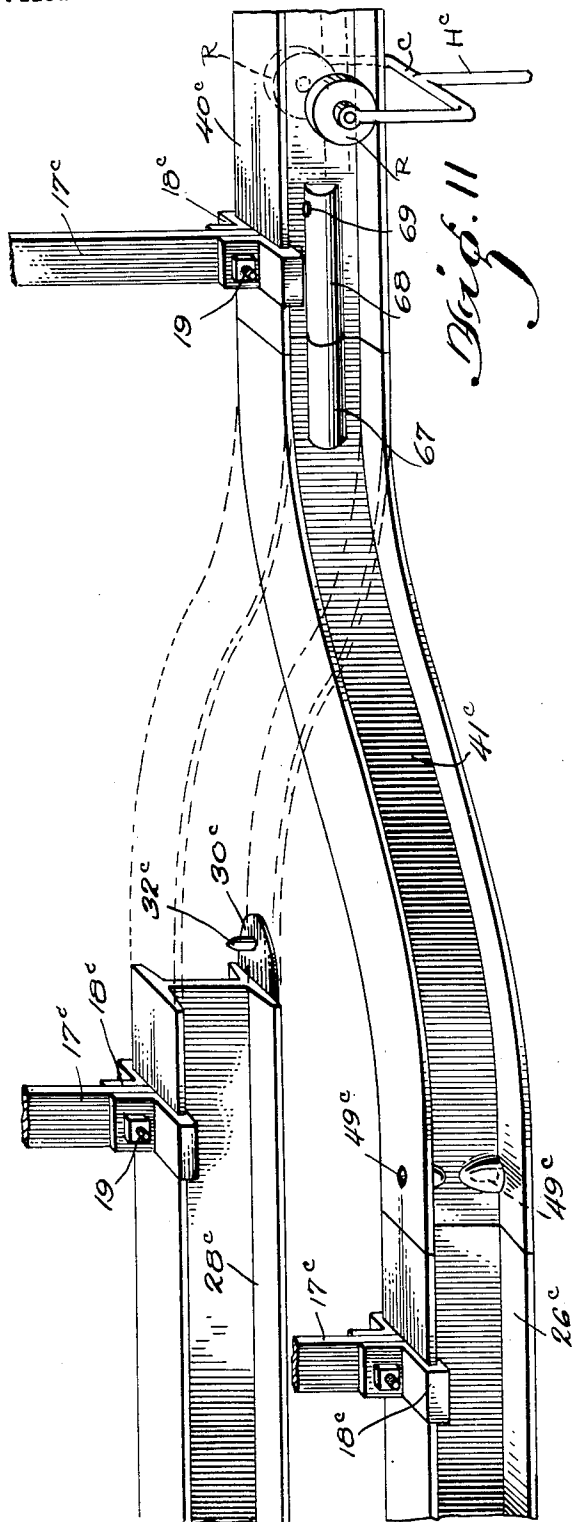
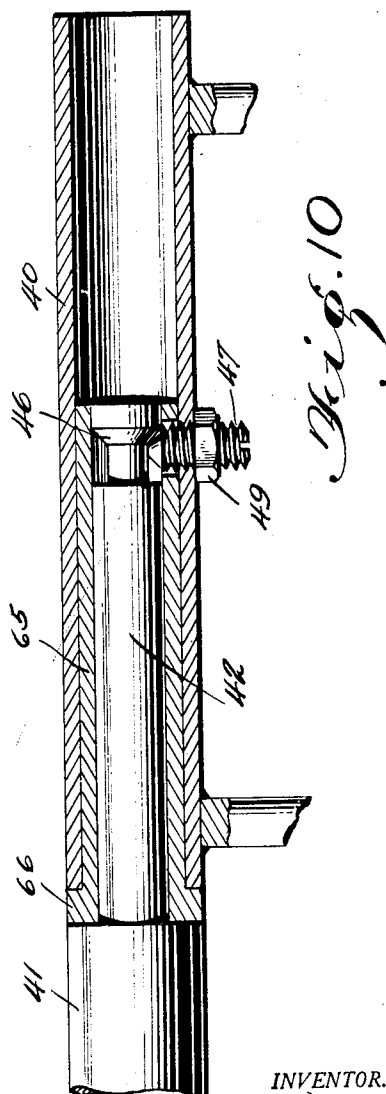
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CONVEYER SWITCH

7 Sheets-Sheet 5



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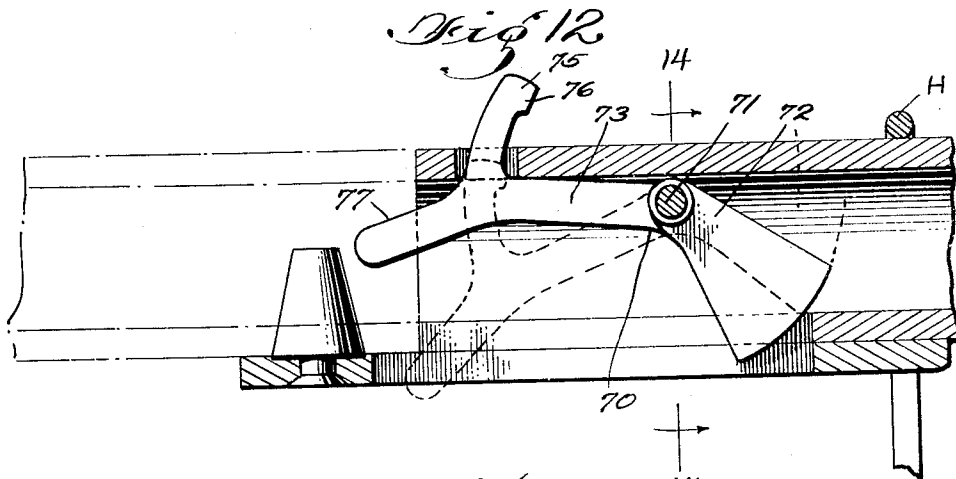
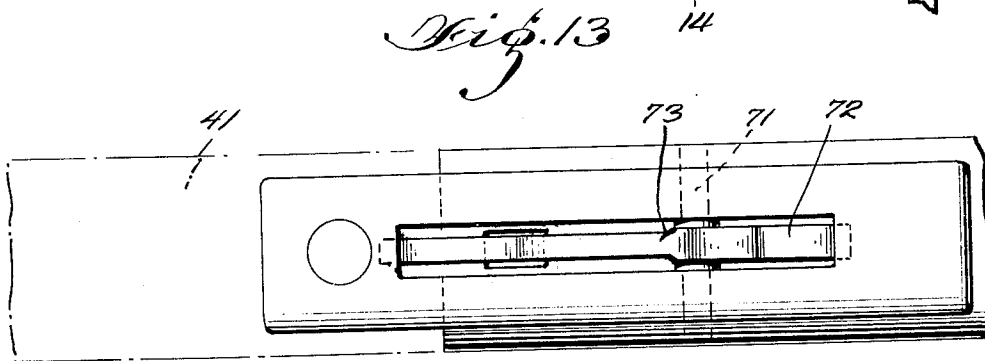
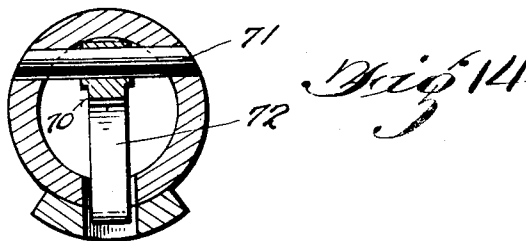
June 13, 1950

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CONVEYER SWITCH

2,511,027

Filed June 16, 1944

7 Sheets-Sheet 6



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CONVEYER SWITCH

2,511,027

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7 Sheets-Sheet 7

Fig. 15

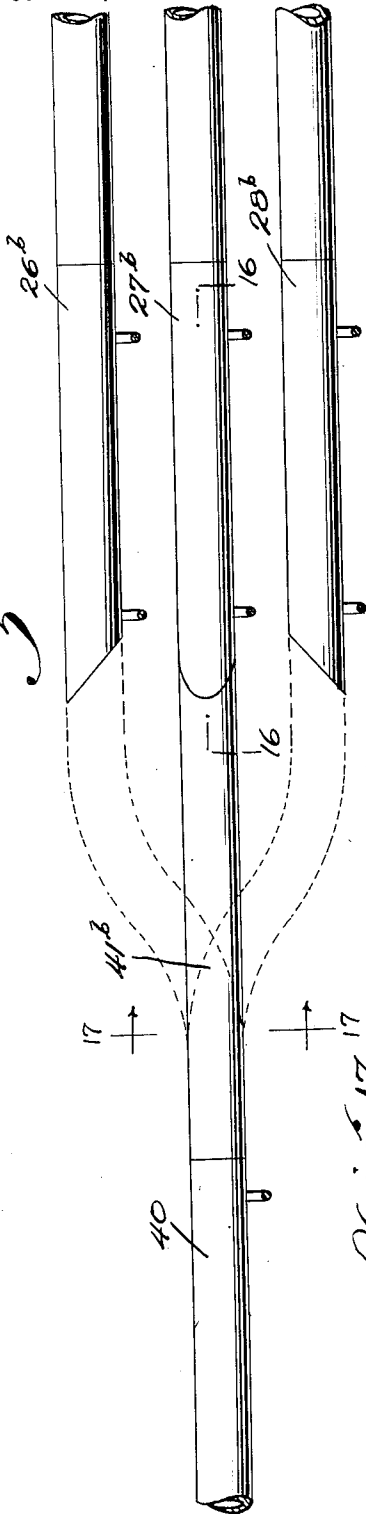


Fig. 16

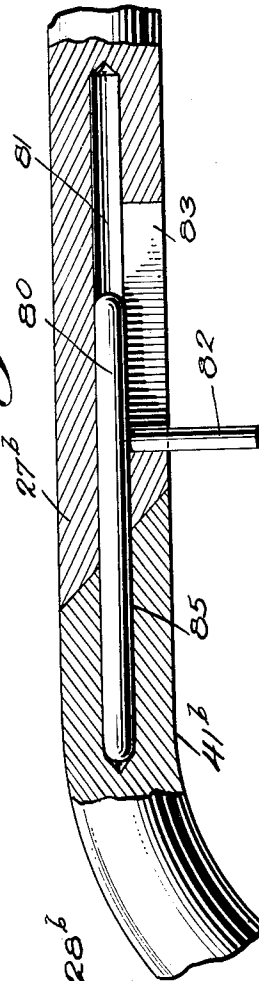
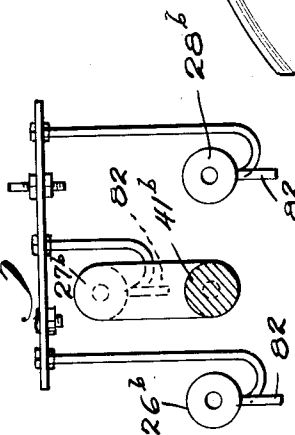


Fig. 17



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UNITED STATES PATENT OFFICE

2,511,027

CONVEYER SWITCH

Le Roy L. Werner, Washington, D. C.

Application June 16, 1944, Serial No. 540,740

16 Claims. (Cl. 104—101)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

1

The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to conveyer switches, and more particularly to an improved switch for use in a system for conveying garments through selected paths of travel in a cleaning plant to and from operational stations and to a loading platform or other destination.

In modern cleaning plants, washed garments are delivered in suitable containers to pressing machines. After each garment is pressed, a hanger is attached thereto, and then the garment and its hangers are suspended from a rail or runner of a rack or conveyer. When a sufficient number of garments have accumulated, the undamaged garments are conveyed to a loading platform where they are placed in suitable delivery vehicles or conveyances for delivery to their ultimate destination. The damaged or torn garments are first conveyed to a repair room or station where they are stored in racks awaiting the necessary repairs. After the garments have been repaired, they are then conveyed to the loading platform for delivery.

An object of this invention is to provide an improved switch for use in a garment conveyer system whereby garments suspended from conventional hangers may be conveniently and expeditiously switched from one path of travel along a rail or runner to a rail or runner located in a different path of travel.

Another object of this invention is to provide an improved switch for use in a garment conveyer in which a switching member is rotatably secured to a conveyer rail and operable to be accurately aligned with a selected one of a plurality of conveyer rails.

A further object of this invention is to provide an improved switch for use in a garment conveyer, the switch including a supporting member or plate adapted to be suspended at any convenient switching location in a conveyer system, and this plate supports a plurality of spaced conveyer rails or runners, and a switching member which is rotatably secured to one of the rails and which is movable to accurately align with a selected one of the spaced runners.

A specific object of this invention is to provide an improved switch for use in a garment conveyer system, the switch having a rotatable switch component which is movable to alignment with any selected one of a plurality of runner sections, and means for securing the movable

2

switching member in accurate alignment with the selected runner section.

A more specific object of this invention is to provide an improved switch for use in a garment conveyer system, the switch having a rotatable switching member which is movable to alignment with any selected one of a plurality of rails or runner sections, and means for securing the movable switching member in accurate alignment with the selected rail, and stop means for interrupting movement of garment hangers along a rail until the switching member is secured in alignment with the rail.

A further object of this invention is the provision of a conveyer system comprising a plurality of spaced rails arranged around a common axis, one end of said rails terminating in a common plane normal, i. e. at right angles, to that axis, in combination with a single rail terminating at a point longitudinally spaced from the ends of the aforementioned rails, said single rail being selectively connectable to each of the other rails by means of a conveyer switch rotatable about the axis of the single rail.

It is also an object of this invention to provide a generally improved conveyer switch whereby the device will be simple, durable, and inexpensive in construction, as well as convenient, practicable, serviceable and efficient in its use.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that various changes in form, proportion and minor details of the construction may be made within the scope of the claims without departing from the spirit or sacrificing any advantages of the invention.

For a complete disclosure of the invention, a detailed description thereof will now be given in connection with the drawings forming a part of the specification, wherein:

Fig. 1 is a diagrammatic plan view depicting the "lay-out" of a conventional cleaning plant having a garment conveying system in which a number of the improved switches are operably interposed.

Fig. 2 is a perspective view of the improved switch.

Fig. 3 is a similar view showing the switch components in a different operational position.

Fig. 4 is a plan view of the conveyer switch, parts being broken away.

Fig. 5 is a vertical longitudinal sectional view

taken through the improved switch, parts appearing in elevation.

Fig. 6 is an end elevation of the improved switch.

Fig. 7 is a composite perspective view depicting a modified form of the invention in which a stop member is provided.

Fig. 8 is a perspective view of a modified supporting component of the switch.

Fig. 9 is an end elevation depicting a further modified form of the invention.

Fig. 10 is a longitudinal sectional view depicting a form of swivel joints to be employed in this invention;

Fig. 11 is a perspective view depicting another modified form of the invention.

Fig. 12 is a longitudinal sectional view taken through a conveyer runner and depicting a modified hanger stop.

Fig. 13 is a plan view of the conveyer runner and stop.

Fig. 14 is a transverse sectional view taken on the line 14—14 of Figure 12.

Fig. 15 is a fragmental plan view of a modified form of the invention; and

Fig. 16 is a longitudinal sectional view taken on the line 16—16 of Figure 15.

Fig. 17 is a transverse sectional view taken on a line 17—17 of Figure 15.

Referring to the drawings, in which corresponding parts are indicated by similar reference characters, there is depicted in Figures 1 to 6 a form of the improved conveyer switch which includes a support or suspending plate or member 15 having spaced apertures 16 formed therein for the reception of threaded terminals of suspending rods 17. Each suspending rod is rigidly secured to the plate 15 by clamp nuts 18, or other suitable securing devices. The upper terminal of each suspending rod 17 is suitably secured to the ceiling or other supporting structure, not shown, in a cleaning establishment, so that the plate 15 is suspended at any preferred switching location in a garment conveyer system, as will be more fully explained hereinafter.

The upper threaded terminals of the hanger rods 20 are received within apertures formed in the hanger plate 15 adjacent one edge thereof, and each hanger rod 20 is clamped to the plate 15 by clamping nuts 21. The upper terminals of similar hanger rods 22 are received within apertures formed adjacent the opposite longitudinal edge of the plate 15, and these rods are clamped to the plate 15 by clamp nuts 23. The lower terminals of the hanger rods 20 are upturned to provide goose necks 25, and the rail or runner section 26 is welded or otherwise suitably secured to the upper terminals of the goose necks 25, so that the arcuate upper surface of the rail 26 remains uninterrupted to permit free movements of garment hangers therealong. The lower terminals of the hanger rods 22 are also upturned to provide goose necks 27 to which a rail or runner section 28 is suitably secured. In this arrangement, the rails 26 and 28 are disposed in spaced parallel relation in a common horizontal plane. The inner terminal of the rail 26 is angularly disposed, so that its edge is vertically and obliquely disposed. The inner terminal of the rail 28 is also angularly vertically and obliquely disposed.

A stop lug or finger 30 extends from the inner lower terminal of the rail 26, and a similar stop lug 31 extends from the inner lower terminal of the rail 28. The stop lug 30 has an upstanding centering pin or dowel 32, and the stop lug 31 has

a similar centering pin 33, for a purpose to be hereinafter explained.

The opposite terminal of hanger plate 15 is provided with longitudinally-aligned apertures 35 for the reception of the threaded upper terminals of hanger rods 36, and each hanger rod 36 is rigidly secured to the plate 15 by clamp nuts 37. The lower terminal of each hanger rod 36 is upturned, to provide goose neck 38, and the upper terminal of each goose neck is welded or otherwise rigidly secured to a rail or runner section 40. The rail 40 is preferably disposed in the same horizontal plane as the rails 26 and 28, but is spaced longitudinally from and its projected axis is located intermediate the inner terminals of the rails 26 and 28.

A switching member or bar 41 is provided, and this bar, whose pivotal axis coincides with the common axis around which the plural rails are arranged, has a reduced pivot or swivel stem 42 which is rotatably received within the inner terminal of the cylindrical rail 40. An annular shoulder 43 is defined between the inner terminal of the switching member 41 and the cylindrical pivot stem 42. The annular shoulder 43 is forced into engagement with the annular inner terminal of the cylindrical rail 40, and this terminal is disposed in a plane which is perpendicular to the axis of the rail 40, to permit the switching member 41 to rotate about the axis of the rail, for a purpose to be later set forth. An annular groove 45 is provided in the outer terminal of the swivel stem 42, and this groove is provided with a frusto-conical wall 46 which is engaged by the inner frusto-conical terminal of a set screw 47. When the inner terminal of the set screw 47 engages the frusto-conical wall 47, of the swivel stem 42, the stem is forced inwardly thereby drawing the annular shoulder 43 into operable engagement with the annular inner terminal 44 of the runner section 40. By this arrangement, the switching member 41 is mounted for free rotary movements about the axis of the rail 40.

The switching member 41 is laterally offset so that its forward terminal 41' is disposed at one side of the projected axis of the rail 40. The forward portion of the switching member 41 is preferably disposed in parallel relation to the spaced rails 26 and 28, and its forward terminal 41' is angularly disposed, as indicated, in an oblique edge complementary to and accurately interfitting with the angularly-disposed inner terminals of the rails 26 and 28.

In operation, the improved switch is interposed at any preferred location in a garment conveying system, so that the outer terminal 50 of the rail 40 accurately aligns with and it is welded or otherwise suitably secured to a rail or runner of a conventional garment conveyer system. The outer terminals 51 and 52 of the rails 26 and 28 are secured in accurate alignment to conventional rails or runners 54 and 55 of the conveyer system. The conventional rails 53 and 54 and 55 are suspended in the usual manner from any suitable supporting structure, not shown, so that they are located to conveniently and expeditiously convey garments to select destinations.

Assuming that a garment is supported on a hanger H, and the garment is to be conveyed along the rail 40 and then directed to the rail 28, the switching member 41 is turned about the axis of its stem 42 until the aperture 49 formed in its outer terminal engages the guide pin 33, and its outer terminal engages the stop member 31. This engagement causes the outer terminal of the

5

6

switching member 41 to accurately align with the inner terminal of the runner section 28. In this aligned relationship of the abutting terminals of the switching member 41 and the rail 28, the angular joint formed therebetween smoothly guides the suspended garment hanger H in its movement along the rails.

In this position of the switching components, the garment hangers H are guided along the rail 40, and then along the switching member 41, and finally along the rails 28 and 55 to their destination. When it is desired to guide the suspended garments to the rails 26 and 53, the switching member 41 is rotated about its pivotal axis until its outer terminal is guided to accurate alignment with the inner terminal of the rail 26 by the operable engagement of the guide pin 32 with the guide aperture 49 and also by the engagement of the outer terminal of the switching member with the stop 30. In this position of the switching member 41, the garments are guided along the runner section 40, switching member 41, and rails 26 and 53 to the path of travel to which the rail 53 leads.

It is to be understood, of course, that the hanger-suspended garments may be moved along the conveyor rails or runners in any direction, and frequently they move along the rails 26 and 28 before being guided to the rail 40.

In order to prevent garment hangers H that are supported on either of the rails 26 and 28 from being inadvertently moved from the inner terminal of one of these rails when the switching member 41 is not in an engagement therewith, a suitable stop device is provided. This stop device (Figure 7) includes a stop pin 56 which is mounted for axial movement in an aperture 57 formed in a rail or runner 53a, which is similar to the rail 53. The stop pin 56 is yieldably supported by a leaf-spring 60 which has its inner terminal welded or otherwise suitably secured to the inner wall of the runner section 53a, as indicated at 58. A finger 61 extends forwardly from the outer terminal spring 60 in the path of movement of the outer terminal of the switching member 41. When the switching member 41 is rotated about its axis towards engagement with the rail 53a, the switching member engages finger 61 and forces it downwardly, thereby moving the stop pin 56 inwardly so that the upper surface of the rail 53a is free of any projection. Now the garment hangers H may move freely along the united components, but when the switching member 41 is moved from engagement with the finger 61, the spring 60 resumes its normal position thereby moving the stop pin 56 outwardly. In the projected position of the stop pin 56, it lies in the path of movement of the garment hangers H, thereby preventing the hanger from being inadvertently pushed from the runner section 53a when the switching member 41 is not in interfitting engagement therewith.

In the form of the invention depicted in Figure 8, a supporting plate 15a is provided which has hangers 20a, 22a, and 36a formed integral therewith. These hangers are provided with goose necks 25a, 27a, and 38a which engage and support the rails or runner sections in the manner hereinbefore disclosed.

In the form of the invention disclosed in Figure 9, the supporting plate 15a, disclosed in Figure 8, is provided, and its hangers support rails or runner sections 23a, 28a, and 49a. These rails are in the form of bars which have their upper terminals rounded, as indicated at 62, so that the

garment hangers may be moved freely therealong.

In Figure 10 a slightly modified form of swivel joint is depicted, and in this arrangement there is provided a bushing or sleeve 65 which is snugly received within the inner terminal of the rail section 40. This sleeve is provided with an annular enlargement or collar 66 which engages the annular inner terminal of the runner section 40, and also engages the annular inner terminal of the switching member 41. The frusto-conical wall 46 of the swivel stem or extension 42 is engaged by the inner frusto-conical terminal of a set screw 47, and this set screw is locked against rotation by a jam nut 49. This arrangement is similar to the swivel joint hereinbefore disclosed, except the bushing 65 is provided to rotatably receive the swivel stem 42, and the set screw 47 is located against rotation by the jam nut 49.

In the form of the invention disclosed in Figure 11, the rail and switching components are H-shaped or I-shaped in cross section. In this form, rails or runner sections 40c, 26c, and 28c are provided, and these rails are supported by suspension straps or members 17c, which are secured to the upper flange of each rail section by clamp members 18c that are secured to the suspension members 17c by bolts 19, or other securing devices. A cylindrical member 67 is welded or otherwise secured to the inner terminal of the switching member 41c, and this cylindrical member has a swivel stem 42 extending axially therefrom. The stem 42 is rotatably received in a cylindrical socket 68 which is welded or otherwise secured to the runner section 40c, or it may be formed as an integral part thereof. The swivel stem 42 is secured against longitudinal or axial movement within the cylindrical socket 68 by a set screw 69 which engages the frusto-conical wall 46 of the annular groove 45. By this arrangement, the switching member 41c may be rotated about the axis of the swivel joint until the downward movement of the outer terminal of the switching member 41c is limited by its engagement with a stop lug 30c, in which position a guide pin 32c engages a recess 49c formed in the outer terminal of the switching member 41c, thereby securing the switching member 41c in accurate alignment with the rails 26c and 28c. The function and operation of this switch is similar to the switch disclosed in Figures 2 to 6, except that the lower flanges of these rails and switching member operably support rollers R carried by a clevis C which supports the garment hanger H^c as best seen in Figure 11.

In Figures 12 to 14, a modified stop latch is depicted, and this latch includes a gravity-actuated bellcrank 70 which is pivotally supported on a fulcrum pin 71 which extends transversely through a rail or runner section and is received within aligned apertures formed in the wall of this rail. The bellcrank 70 has a relatively heavy or thick weight arm 72 and a thinner arm 73. The arm 73 has a stop member 75 extending therefrom which is disposed concentrically about the fulcrum pin 71 and it has an overhanging projection 76 formed as its outer terminal. An actuating finger 77 extends outwardly from the outer terminal of the arm 73 in the path of travel of the outer terminal of the switch member 41. The weight arm 72 normally maintains a bellcrank in a position in which its stop member 75 projects beyond the upper surface of the rail section in the path of movement of a garment hanger H. When the switch member 41 is moved from engagement with the rail section the stop member 75 pro-

jects into the path of movement of the garment hangers H along the rail section, thereby preventing the garment hanger from being inadvertently moved from the end of the rail section. If the garment hangers H are forced outwardly against the stop 75, and this stop tends to move inwardly about its fulcrum pin 71, this inward movement is prevented by the overhanging projection 76 engaging the outermost hanger H. However, when the switch member 41 is moved to alignment with rail section, the outer terminal of the switch member 41 engages the finger 77 and moves it from the position indicated in full lines in Figure 12 to the dotted line position. In this dotted line position, the stop member 75 is located within the rail section, thereby leaving the outer surface of the rail section free of obstructions so that the garment hangers may be freely moved therealong. It is to be understood that the center of mass of the bellcrank is located at the inner or weight side of the fulcrum pin 71, so that the stop member 75 is normally projected beyond the upper surface of the rail section. By this arrangement, the garment hangers H may move freely along the rail section, and switching member when these components are in operable alignment, but when the switching member is moved from engagement with the rail section, the bellcrank 70 gravitates to a position in which its stop member 75 is interposed in the path of travel of the garment hangers along the rail section, thus providing an effective safety stop to prevent the garment hangers from being inadvertently moved from the end of the runner section.

Figures 15 to 17 depict a form of the invention in which a single conveyer line may be operably connected with three or more conveyer lines. In this form of the invention, a common switching member 41b is rotatably secured to a rail or runner section 40, and there are three rails or runner sections 26b, 27b, and 28b positioned in the path of movement of the outer offset terminal of the rotatable switching member 41b. Each of the rail sections 26b, 27b, and 28b have a bolt or aligning rod 80 slidably mounted in a recess 81 for axial movements along the rail section. The bolt 80 has a manipulating finger 82 extending radially therefrom and through an elongated recess 83, and the outer terminal of the bolt 80 is adapted to be received in an axial recess 85 formed in the outer terminal of the switch member 41b. By this arrangement, when the switching member 41b is moved to approximate alignment with the selected rail section, the bolt 80 is slid outwardly until it enters the recess 85, thereby holding the abutting terminals of the switching member and selected rail section in accurate alignment. When it is desired to move the switching member from engagement with the first selected rail section to another rail section, the manipulating finger 82 is pulled inwardly thereby moving the bolt 80 inwardly from engagement with the recess 85. Now the switching member 41b is free for movement to operable engagement with another selected rail section.

In the use of this form of the invention, the rail section 40 may be operably connected with any one of a plurality of rail sections, thus providing means for conveniently conveying garments from rail 40 through any selected one of a number of paths to any desired destination.

From the foregoing it is manifest that the improved switch may be operably interposed at any selected switching location in a conveyer system of the type usually employed in a cleaning

plant. In the arrangement depicted in Figure 1, a battery of garment presses is indicated at 87, and a parallel battery of presses is indicated at 88. A conveyer line 90 extends longitudinally between the two batteries of presses, and this line has a switch 91 interposed therein. The switch 91 is operably connected with a transversely extending conveyer line 92 which, in turn, is connected through a switch 93 with two parallel longitudinally-extending conveyer lines 95 and 96. The transverse line 92 passes a repair station 94, and the longitudinal conveyer lines 95 and 96 are operably connected with transversely extending conveyer lines 97 and 98. The lines 97 lead to the presses 88 and the lines 98 lead to similar presses, not shown. The line 95 may lead to a loading platform or other distributing station, not shown.

Assuming that washed garments are conveyed to the presses 88 in suitable containers, and that the garments are then pressed in the usual manner in the presses 88. After each garment is pressed, a hanger H is inserted therein and then it is hung on one of the conveyer lines 97 until a sufficient number have accumulated thereon. After a sufficient number of garments have accumulated on the selected line 97, the garments are moved along the conveyer system to any preferred destination. After the garments leave the presses, the defective garments are usually hung on one conveyer line 97, and undamaged garments are hung on another line 97. These defective garments may be conveyed to the repair station 94 along the supporting conveyer line 97, along the line 95, and along the line 92 to the repair station 94. The undamaged garments may be moved along their supporting conveyer section 97 to the conveyer line 95, and then along this line to the loading platform, not shown. In order to guide the garments to any required destination in the conveyer system, it is merely necessary to adjust the switching member of each switch to connect it with a selected rail so that a predetermined path of travel is established.

Having thus described the invention, I claim as my invention:

1. A conveyor switch including a plurality of spaced rails arranged about a common axis and terminating in a plane substantially normal to said axis, a single rail having a terminal located on said common axis, said terminal being in spaced relation to said plane, and a switch member having an offset outer terminal and its inner terminal rotatably secured to the single rail to form a continuation thereof, and rotatable to a position where its outer terminal aligns with the inner terminal of any one of the plurality of rails, the pivotal axis of said switch member coinciding with said common axis, whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner.

2. A conveyor switch including a plurality of spaced rails having their inner terminals disposed in spaced relation concentrically about a common axis in a plane normal to said axis, a single rail having its inner terminal spaced longitudinally relative to the terminals of the plurality of rails and having a portion so disposed that its longitudinal axis coincides with the said common axis, and a switch member rotatably secured to the single rail to form a continuation thereof and rotatable about the common axis to a position where its outer terminal aligns with the inner terminal of one of the plurality of rails whereby

the single rail, the switch member and the engaged rail form a continuous conveyor runner.

3. A conveyor switch including a plurality of spaced rails having their inner terminals disposed in spaced relation concentrically about a common axis, in a plane normal to said axis, a single rail having its inner terminal spaced longitudinally relative to the terminals of the plurality of rails and having a portion so disposed that its longitudinal axis coincides with the said common axis, a switch member rotatably secured to the single rail to form a continuation thereof and rotatable about the common axis to a position where its outer terminal aligns with the inner terminal of one of the plurality of rails whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner, and means for guiding the outer terminal of the switch member to interfitting alignment with the inner terminal of the said aligned rail.

4. A conveyor switch including a plurality of spaced rails having their inner terminals disposed in spaced relation concentrically about a common axis, in a plane normal to said axis, a single rail having its inner terminal spaced longitudinally relative to the terminals of the plurality of rails and having a portion so disposed that its longitudinal axis coincides with the said common axis, a switch member rotatably secured to the single rail to form a continuation thereof and rotatable about the common axis to a position where its outer terminal aligns with the inner terminal of one of the plurality of rails whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner, means for guiding the outer terminal of the switch member to interfitting alignment with the inner terminal of the said aligned rail, and means for maintaining the outer terminal of the switch member in accurate alignment with the inner terminal of the said aligned rail.

5. A conveyor switch including a plurality of spaced rails arranged about a common axis and terminating in a plane substantially normal to said axis, a single rail having a portion so disposed that its longitudinal axis coincides with the said common axis and terminating in spaced relation to said plane, and a switch member having an offset outer terminal and its inner terminal rotatably secured to the single rail to form a continuation thereof and rotatable about the longitudinal axis of the single rail to a position where its outer terminal aligns with the inner terminal of any one of the plurality of rails whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner.

6. A conveyor switch including a plurality of spaced rails arranged about a common axis and terminating in a plane at right angles thereto, a single rail having a portion so disposed that its longitudinal axis coincides with the said common axis and terminating in spaced relation to said plane, and a switch member having an offset outer terminal and its inner terminal rotatably secured to the single rail to form a continuation thereof and rotatable about the longitudinal axis of the single rail to a position where its outer terminal aligns with the inner terminal of any one of the plurality of rails whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner, and means for guiding the outer terminal of the switch member to interfitting alignment with the inner terminal of the engaged rail.

7. A conveyor switch including a plurality of spaced rails arranged about a common axis and terminating in a plane normal to said common axis, a single rail having a portion so disposed that its longitudinal axis coincides with the said common axis and terminating in spaced relation to said plane, and a switch member having an offset outer terminal and its inner terminal rotatably secured to the single rail to form a continuation thereof and rotatable about the longitudinal axis of the single rail to a position where its outer terminal aligns with the inner terminal of any one of the plurality of rails whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner, means for guiding the outer terminal of the switch member to interfitting alignment with the inner terminal of the said aligned rail, and means for maintaining the outer terminal of the switch member in accurate alignment with the inner terminal of the said aligned rail.

8. A conveyor switch including a plurality of spaced rails arranged about a common axis and terminating in a plane substantially normal to said axis, each of said rails having an oblique edge at its terminal, a single rail having a terminal located on said common axis, said terminal being in spaced relation to said plane, and a switch member having an offset outer terminal forming an oblique edge complementary to said first-named edges, and the inner terminal of said switch member rotatably secured to the single rail to form a continuation thereof, and rotatable to a position where its outer terminal aligns with the inner terminal of any one of the plurality of rails, the pivotal axis of said switch member coinciding with said common axis, whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner.

9. A conveyor switch including a plurality of spaced rails arranged about a common axis and terminating in a plane at right angles thereto, each of said rails having an oblique edge at its terminal, a single rail having a terminal located on said common axis, said terminal being in spaced relation to said plane, a switch member having an offset outer terminal forming an oblique edge complementary to said first-named edges, and the inner terminal of said switch member rotatably secured to the single rail to form a continuation thereof, and rotatable to a position where its outer terminal aligns with the inner terminal of any one of the plurality of rails, the pivotal axis of said switch member coinciding with said common axis, whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner, and means for guiding the outer terminal of the switch member to interfitting alignment with the inner terminal of the engaged rail.

10. A conveyor switch including a plurality of spaced rails arranged about a common axis and terminating in a plane normal to said common axis, a single rail having a terminal located on said common axis, said terminal being longitudinally spaced relative to the said plane, and a switch member rotatably secured to the single rail to form a continuation thereof and rotatable about the longitudinal axis of the single rail to a position where its outer terminal aligns with the inner terminal of one of the plurality of rails, the pivotal of said switch member coinciding with said common axis, whereby the single rail, the switch member and the said aligned rail forms a continuous conveyor runner, a projection extend-

ing from each rail of the plurality of rails in the path of movement of the other terminal of the switch member to engage the switch member and hold it in accurate alignment with the engaged rail.

11. A conveyor switch including a plurality of spaced rails arranged about a common axis and terminating in a plane normal to said common axis a single rail having a terminal located on said common axis, said terminal being longitudinally spaced relative to the said plane, a switch member rotatably secured to the single rail to form a continuation thereof and adapted to rotate to and from alignment with a selected one of the plurality of rails, the pivotal axis of said switch member coinciding with said common axis, the rails and switch member being constructed and arranged to support garment hangers for movement over said rails and switch member, and a stop member carried by each rail of the plurality of rails and movable relative to the rail, each stop member normally projecting into the path of travel of a hanger along the rail and adapted to be engaged by the switch member in its rotary movement to alignment with the selected rail to move the stop member from the said path of travel of the hanger.

12. A conveyor switch including a supporting plate, a plurality of suspension means dependent therefrom, a plurality of spaced rails arranged about a common axis supported by certain of the suspension means, a single rail supported by certain of the suspension means, said single rail having a terminal located on said common axis, said terminal being longitudinally spaced relative to the said rails, and a switch member having an offset outer terminal and its inner terminal rotatably secured to the single rail to form a continuation thereof and rotatable about the longitudinal axis of the single rail to a position where its outer terminal aligns with the inner terminal of any one of the plurality of rails, the pivotal axis of said switch member coinciding with said common axis, whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner.

13. A conveyor switch including a supporting plate, a plurality of suspension means dependent therefrom, a plurality of spaced rails arranged about a common axis supported by certain of the suspension means, the terminal of each of said rails forming an oblique edge, a single rail supported by certain of the suspension means, said single rail having a terminal located on said common axis, said last-named terminal being longitudinally spaced relative to the said rails, and a switch member having an offset outer terminal forming an oblique edge complementary to said first-named edges, and the inner terminal of said switch member being rotatably secured to the single rail to form a continuation

thereof and rotatable to a position where its outer terminal aligns with the inner terminal of any one of the plurality of rails, the pivotal axis of said switch member coinciding with said common axis, whereby the single rail, the switch member and the said aligned rail form a continuous conveyor runner.

14. A conveyor switch including a plurality of spaced rails arranged about a common axis and terminating in a common plane normal to the length of said rails, a single rail having a terminal located on said common axis, said terminal being longitudinally spaced relative to the said plane, a cylindrical bushing supported by the single rail, a switch member, an extension carried by the switch member and rotatably received within the bushing, the pivotal axis of said switch member coinciding with said common axis, and means for securing the extension against longitudinal movement relative to the single rail whereby the switch member may rotate about the axis of the bushing to engagement with any one of the plurality of spaced rails.

15. A conveyor switch according to claim 11, wherein said stop member comprises an axially movable pin and a leaf spring mounted on said last-named rail and supporting said pin, said pin normally protruding through an aperture in said last-named rail, and a terminal portion of said leaf spring projecting into the path of rotation of said switch member, whereby upon rotation of said switch member into alignment with said last-named rail, said leaf spring is depressed and said pin is retracted out of the path of travel of said hanger.

16. A conveyor switch according a claim 11, wherein said stop member comprises a bell crank lever pivoted about an intermediate point to said last-named rail and having a heavy first arm and a light second arm extending in a direction opposite said first arm, said second arm having a first finger normally projecting through an aperture in the top surface of said last-named rail in the path of travel of said hanger, and a second finger projecting into the path of rotation of said switch member, whereby upon rotation of said switch member into alignment with said last-named rail, said second finger is depressed and said first finger is retracted out of the path of travel of said hanger.

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Certificate of Correction

Patent No. 2,511,027

June 13, 1950

LE ROY L. WERNER

It is hereby certified that errors appear in the printed specification of the above numbered patent requiring correction as follows:

Column 10, line 72, after the word "pivotal" insert *axis*; column 12, line 36, for "a claim" read *to claim*;

and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 5th day of September, A. D. 1950.

[SEAL]

THOMAS F. MURPHY,
Assistant Commissioner of Patents.