

May 20, 1930.

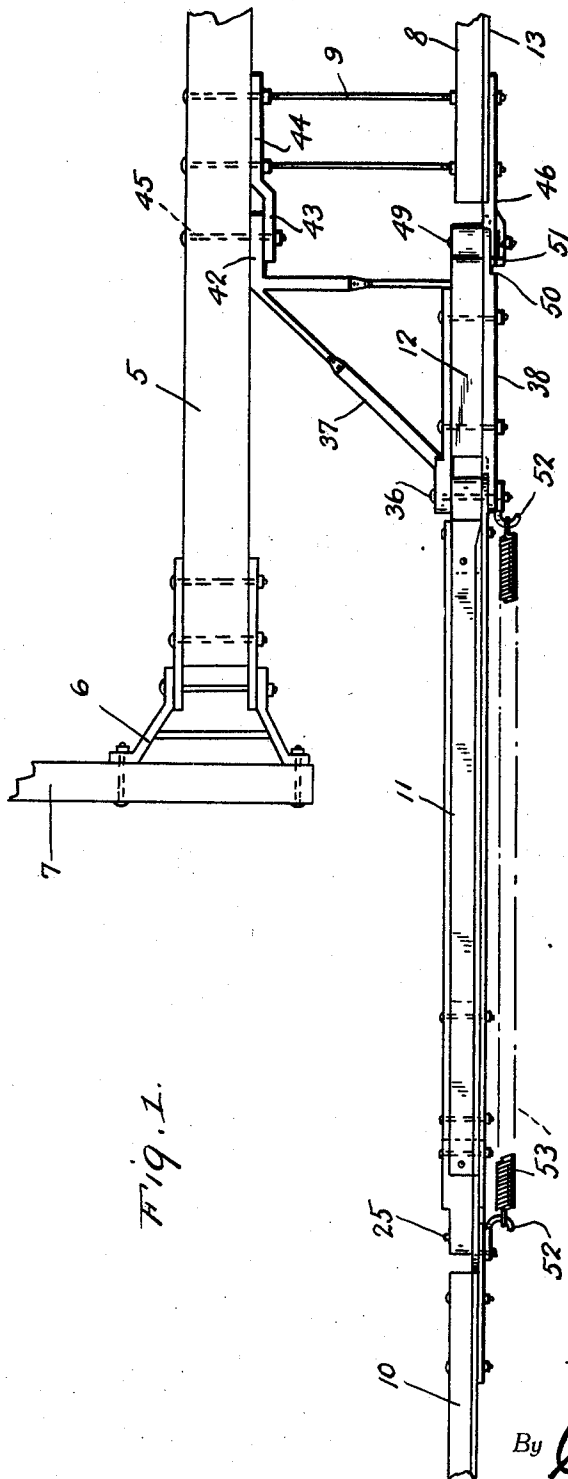
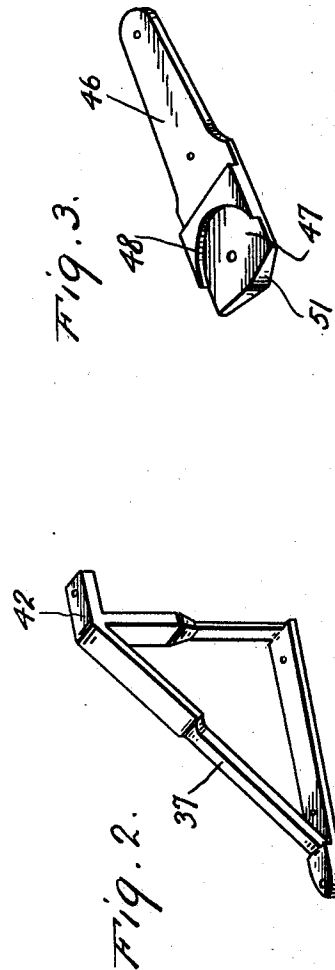
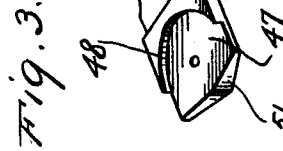
R. H. THOMPSON

1,759,378

OVERHEAD CONVEYER

Filed May 24, 1929

4 Sheets--Sheet 1



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4 Sheets-Sheet 2

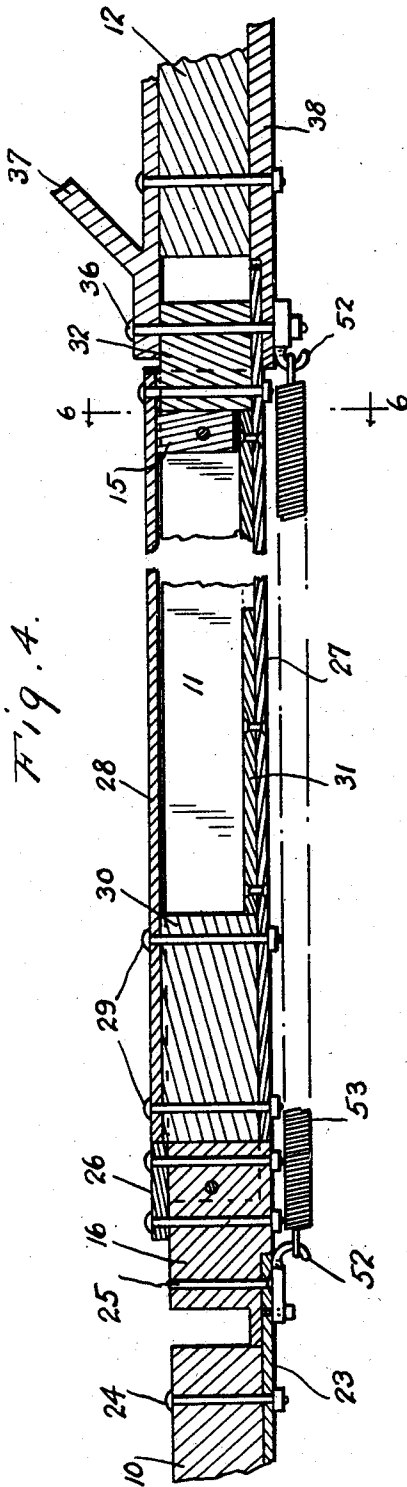
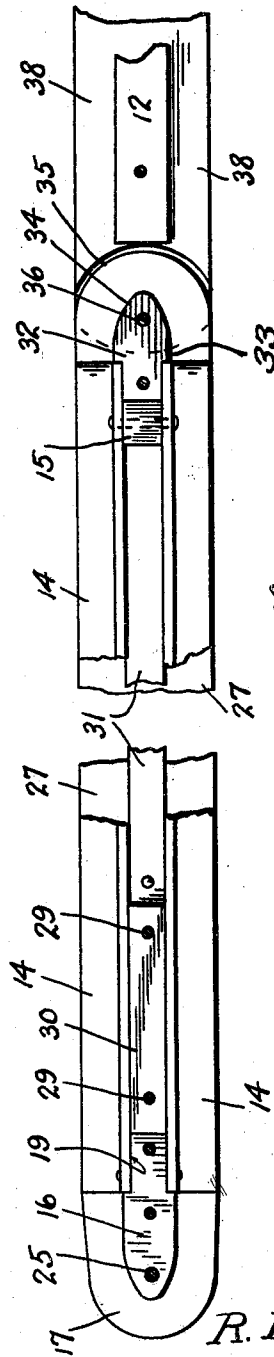
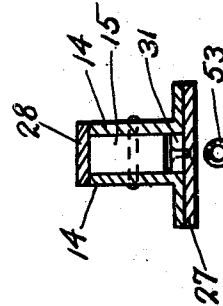


Fig. 5.



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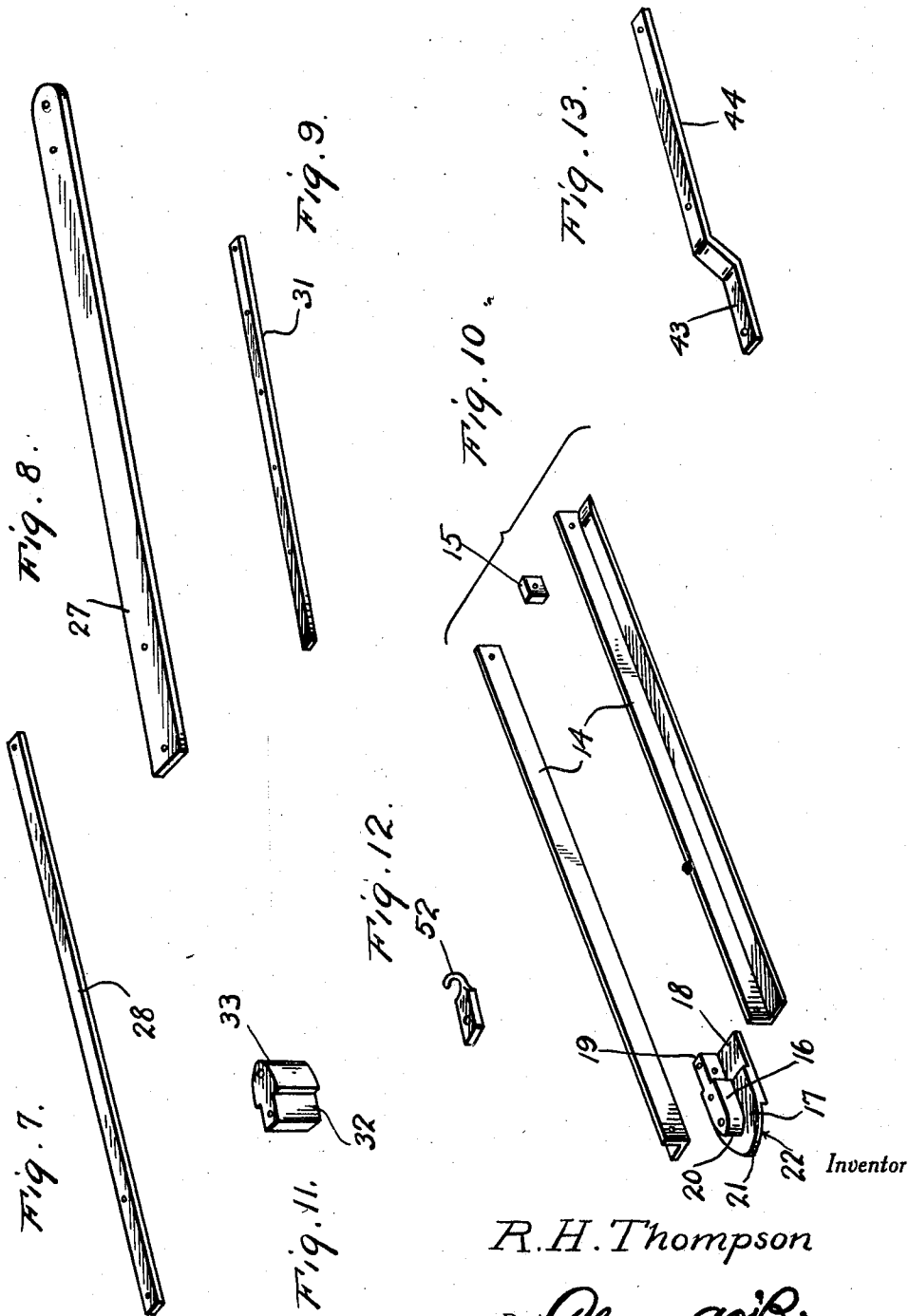
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1,759,378

OVERHEAD CONVEYER

Filed May 24, 1929

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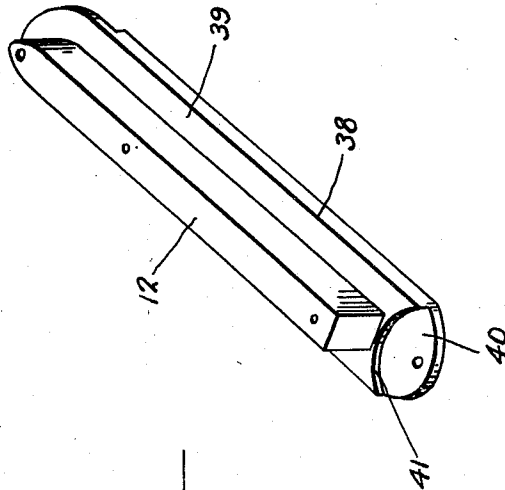
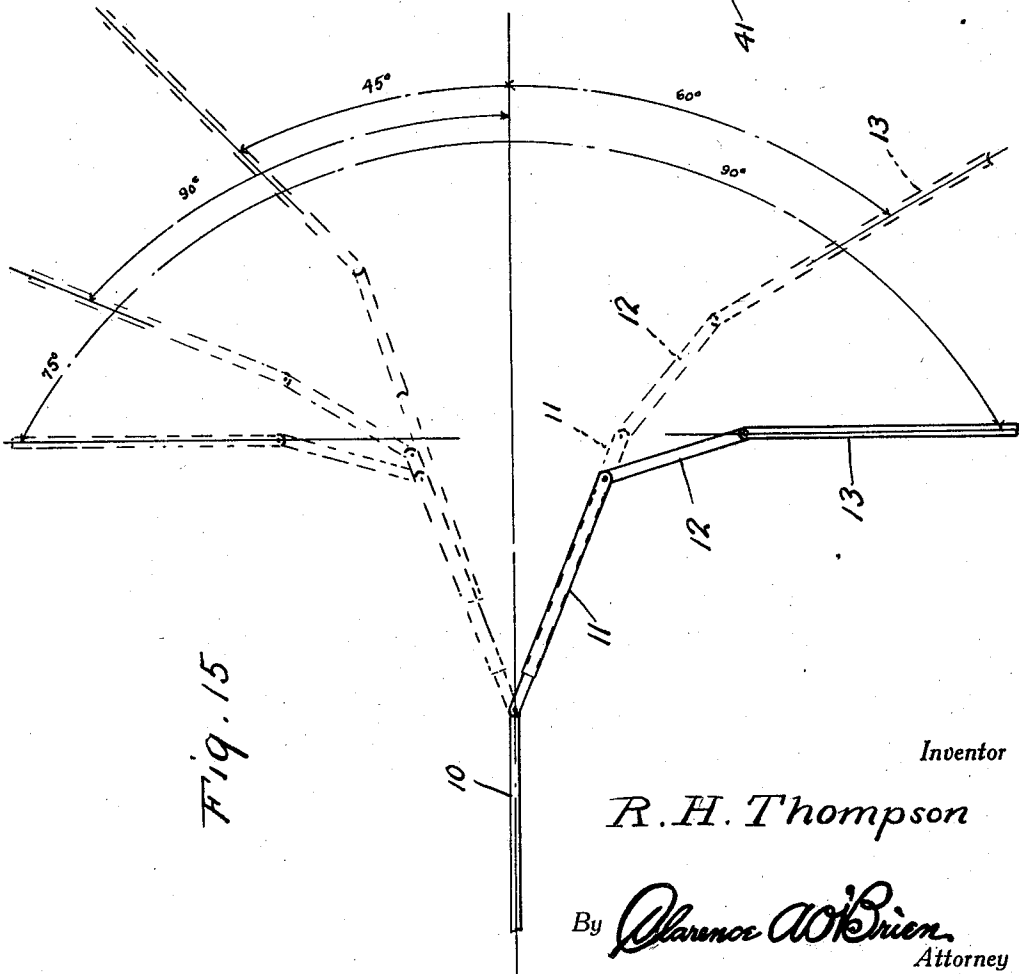
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Filed May 24, 1929

4 Sheets-Sheet 4

Fig. 14.



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UNITED STATES PATENT OFFICE

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OVERHEAD CONVEYER

Application filed May 24, 1929. Serial No. 365,764.

The present invention relates to overhead conveyers of a type adapted particularly for use upon barns, warehouses, and the like for transporting material into and out of the building.

One of the important objects of the present invention is to provide a track for the conveyer embodying a pair of pivoted sections by means of which the outer end of the track may be swung horizontally into any desired position within an arc of 180 degrees.

A still further important object of the invention is to provide a track of this character by means of which the outer end thereof may be moved into a desired position without interfering with the movement of the bucket along said track.

An additional object is to provide a device of this character of a simple and practical construction, which is strong and durable, efficient and reliable in performance, which may be manufactured and installed in operative position at a relatively low cost and which is otherwise well adapted to the purposes for which the same is intended.

Other objects and advantages reside in the special construction, combination and arrangement of the various elements forming the invention as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a fragmentary side elevational view showing the pivoted section of the track and illustrating the manner of suspending the same from an overhead pivoted frame,

Figure 2 is a perspective view of the bracket for suspending the track from the frame,

Figure 3 is a similar view of the coupler plate connecting the outer pivoted section with the outer end of the track,

Figure 4 is a longitudinal sectional view through the inner pivoted section of the track,

Figure 5 is a top plan view thereof with the cap strip removed,

Figure 6 is a transverse sectional view taken substantially along a line 6—6 of Figure 4,

Figure 7 is a perspective view of the cap plate,

Figure 8 is a similar view of the base plate for the inner pivoted track sections,

Figure 9 is a similar view of the guide rib for the side rails of the inner pivoted track section,

Figure 10 is a group perspective view of the side rails and blocks connecting the opposite ends thereof,

Figure 11 is a perspective view of the coupler head connecting the pair of pivoted sections,

Figure 12 is a similar view of one of the hooks for attaching the spring carried by the telescoping sections of the track,

Figure 13 is a similar view of the offset attaching plate forming a pivotal support for the upper end of the track supporting bracket.

Figure 14 is a perspective view of the outer pivoted section of the track and

Figure 15 is a diagrammatic view illustrating the various positions within which the outer end of the track may be swung.

Referring now to the drawings in detail, for the purpose of illustration I have disclosed a preferred embodiment of the invention which comprises a crane 5 pivotally supported at one end to a bracket 6 attached to the outer side of a building structure 7, such as a barn, warehouse or the like, said crane being positioned immediately above the doorway or window in the wall of the building through which material is transported into or out of the building.

The crane is supported for horizontal swinging movement in an arc of 180 degrees so that the crane may be extended directly outwardly from the opening in the wall of the building or may be moved to either side into a position at right angles from said first named position or into any intermediate position.

A track section 8 is suspended from the outer end of the crane by means of hangers 9, said outer track section being fixedly secured to the crane for movement therewith. The track section 8 is connected to a track 10 positioned inwardly of the building by means

of a pair of pivoted track sections designated generally at 11 and 12 respectively.

Each of said track sections are disposed in a horizontal plane, as clearly illustrated in Figure 1 of the drawings and the tracks preferably are constructed with their lower edges formed into flanges 13 over which the wheels of a bucket, (not shown) of a conventional construction may move in a suspended position beneath the track whereby to transport the material inwardly and outwardly of the barn.

The telescoping rail section 11 is constructed of a pair of angle members 14 disposed in spaced parallel relation and connected at one end by a spacing block 15 and connected at their opposite ends by a coupling head 16. The coupling head 16 protrudes outwardly from the ends of the members 14 and is formed at its sides and its outer end with a flange 17, said flange at the opposite sides of the coupler head and adjacent its inner end being stepped, as shown at 18 in order that the flanges of the portions 14 may seat thereon so that the upper surfaces of the flanges will be disposed in a horizontal plane with the top surface of flange 17.

The sides of the head 16, at its inner end are also recessed as shown at 19 to accommodate the vertical sides of the members 14. The outer end of the coupler head 16 and its flange 17 are rounded as shown at 20 and 21 respectively and are adapted to fit against a complementary end of the inner track section 10 to permit the horizontal swinging movement of the coupler head.

The under side of the outer end of the flange 17 is recessed as shown at 22 to receive one end of a coupler plate 23 fixedly attached to the underside of the track section 10 by bolts 24 or the like so that the outer end of the flange portion of the coupler head will rest upon the protruding end of the coupler plate 23, as will be clearly understood from an inspection of Figure 4 of the drawings.

A pivot pin 25 extends vertically through the plate 23 and coupler head 16 to provide for the pivotal movement of the latter. A plate 26 is bolted upon the upper surface of the coupler head 16 with its edges overlying the upper edges of the members 14 to assist in securing said members and the coupler head in fixed position.

To the underside of the members 14 is positioned a base plate 27 and the upper edges of said members carry a cap plate 28 secured to the base plate by means of bolts 29 or the like. The bolts 29 are inserted through a block 30 positioned between the pair of rail members 14 for longitudinal sliding movement, one end of said block being disposed in a vertical plane with one end of the base and cap plate and adapted for abutting con-

tact against the inner end of the coupler head 16.

The base plate and cap plate are also adapted for longitudinal sliding movement with respect to the angle members 14 and a guide strip 31 is positioned between the members 14 and secured to the upper surface of the base plate to assist in maintaining the parts in longitudinal alinement during the sliding movement thereof.

The end of the telescoping section provided with the coupler head 16 is attached to the track 10 at a point inwardly of the opening in the wall of the building and the outer end of the telescoping member is disposed outwardly of the building and is provided with a coupling head 32 fixedly secured to the base plate 27 and cap plate 28 and with the inner end of said coupler head adapted for positioning between the outer ends of the spaced parallel members 14 for abutting the spacing block 15 when the parts are arranged in retracted position.

The side walls of the outer end of the head 32 are enlarged, as shown at 33 and terminate in a plane with the vertical sides of the spaced members 14, as more clearly illustrated in Figure 5 of the drawing.

The outer end of the head 32 is rounded as shown at 34 and terminates inwardly of the rounded flanged end 35 of the base plate 27.

A pivot pin 36 carried by a bracket 37 extends vertically through the outer end of the coupler head 32, said pin also protruding downwardly through the base plate 27 and an inwardly protruding end of a base plate 38 secured to the under side of the outer track section 12. The base plate 38 is of a width greater than the track section 12 so as to provide flanges 39 at each side of the track section.

The inner end of the base plate 38 is stepped as shown at 40 and with the riser of the stepped portion concaved as shown at 41 complementary to the curved outer end 35 of the base plate 27 and spaced slightly therefrom so as to allow limited horizontal swinging movement between the base plates 27 and 38.

The bracket 37 is fixedly secured to the upper surface of the track section 12. The upper end of said bracket is formed with a horizontal extension 42 disposed beneath the crane 5 and in overlapping relation with an offset end 43 formed on an attaching plate 44 secured to the under side of the crane by the hangers 9.

A pivot pin 45 extends through the crane and the overlapped ends 42 and 43 whereby to provide for the pivotal movement of the brackets 37 and the track section attached thereto.

The lower ends of the hangers 9 extend vertically through the outer track section 8 and also serve to provide attaching means for

a coupler plate 46 disposed beneath the outer track section with its inner end projecting inwardly beneath the base plate 38 of the track section 12. The projected end of the plate 46 is stepped as shown at 47 and with the riser of said stepped portion concaved as shown at 48 to accommodate the complementary curved outer end of the base plate 38.

A pivot pin 49 is also inserted vertically through the outer end of the track section 12 and the overlapped end of said plate to allow swinging movement.

The under side of the base plate 38, inwardly of its outer end is formed with a shoulder 50 extending at right angles to the longitudinal axis of said base plate and the adjacent end of the coupler plate 46 is beveled uniformly toward each side from its longitudinal center line, as shown at 51 so that the degree of pivotal movement between the track sections 8 and 12 will be limited by the striking of such beveled edges of the coupler plate against the shoulder 50.

The lower ends of each of the pivot pins 25 and 36, disposed at the opposite end of the telescoping track section 11 also serve for attaching hooks 52 to which are attached the ends of a coil spring 53 for normally retaining the telescoping parts of said track section in retracted position.

Inasmuch as the inner pivoted section is positioned for pivotal movement inwardly of the pivoted end of the crane it will be apparent that the crane will swing in an arc different from that of said track section and accordingly said track section is constructed of telescoping parts in order to compensate for this difference.

By reason of this novel construction of the conveyer it will be apparent that the outer end of the track may be swung into any desired position in an arc of 180 degrees and without causing any one section of the track to be disposed in a position at right angles to its adjacent section so as to prevent the free movement of the conveyer bucket along said track.

It is obvious that my invention is susceptible to various changes and modifications in construction without departing from the spirit of the invention or the scope of the appended claims, and I accordingly claim all such forms of the device to which I am entitled.

Having thus described my invention, what I claim as new is:

1. An overhead conveyer track comprising in combination, a pivotally supported crane adapted for horizontal swinging movement, a plurality of interconnected track sections, hangers carried by the crane providing suspension means for one of the track sections for movement with the crane, and a bracket fixedly secured to another of said track sec-

tions and pivotally suspended from said crane.

2. An overhead conveyer track comprising in combination, a pivotally supported crane adapted for horizontal swinging movement, a plurality of track sections pivotally connected to each other, hangers carried by the crane for suspending one of said track sections therefrom for movement therewith as a unit, a bracket fixedly secured to another of said track sections and pivotally suspended from said crane and cooperating means carried at the adjacent ends of certain of said track sections for limiting the pivotal movement thereof.

3. An overhead conveyer track comprising in combination, a pivoted crane adapted for horizontal swinging movement, a rigid track section, a plurality of movable track sections pivotally secured to each other, one of said movable track sections having one end pivotally secured to said rigid track inwardly of the pivoted end of said crane, hangers carried by said crane rigidly connecting the outermost track section to the crane, a bracket pivotally carried by the crane and fixedly secured to another of said track sections, one of said pivoted track sections including a telescoping section, and spring means yieldably retaining said telescoping section in retracted position.

4. An overhead conveyer track comprising in combination, a pivotally supported crane adapted for horizontal swinging movement, a track disposed beneath the crane, a rigidly supported track section terminating inwardly of the pivoted end of the crane and a plurality of pivotally connected track sections extending outwardly from the end of said rigidly supported track section, the innermost of said pivoted track sections being composed of telescoping sections, spring means yieldably retaining said telescoping sections in retracted position, a bracket pivotally suspended from said crane and fixedly secured to an intermediate pivoted track section, and hangers suspended from said crane for rigidly securing the outermost pivoted track section thereto.

5. An overhead conveyer track comprising in combination, a pivotally supported crane adapted for horizontal swinging movement, a track disposed beneath the crane, a rigidly supported track section terminating inwardly of the pivoted end of the crane and a plurality of pivotally connected track sections extending outwardly from the end of said rigidly supported secured track section, the innermost of said pivoted track sections being composed of telescoping sections, spring means yieldably retaining said telescoping sections in retracted position, a bracket pivotally suspended from said crane and fixedly secured to an intermediate pivoted track section, hangers carried by the crane for rig-

idly connecting the outermost pivoted track
section thereto, and cooperating means at
the adjacent ends of certain of said pivoted
track sections for limiting movement there-
of.

5 In testimony whereof I affix my signature.
ROSCOE H. THOMPSON.

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