Aug. 6, 1940. E. J. DOBERSTEIN 2,210,655

CONVEYER

Filed Jan. 13, 1939 3 Sheets-Sheet 1

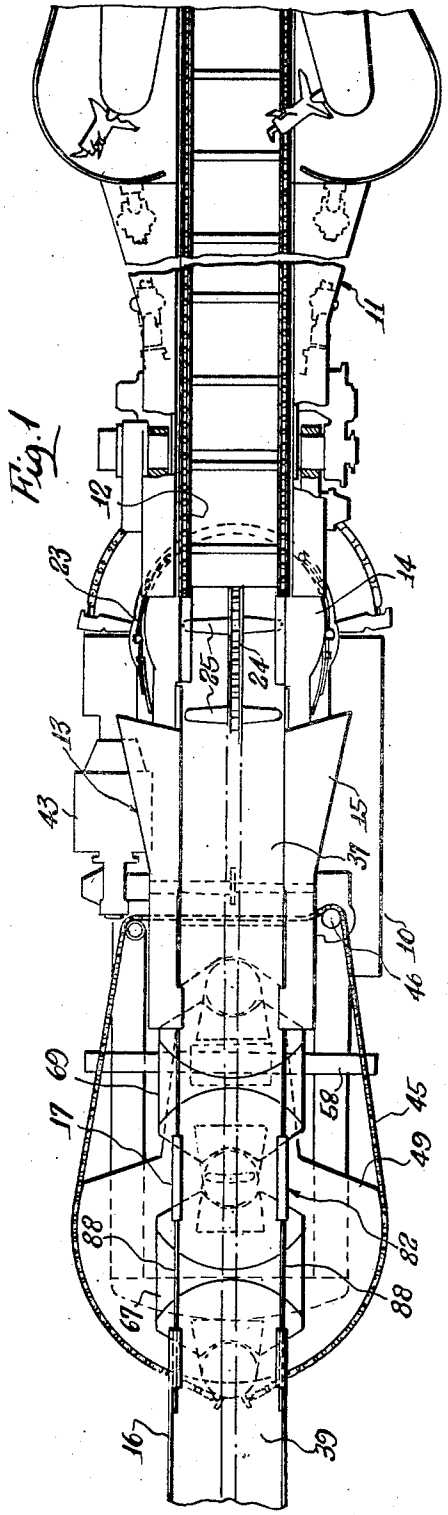


Fig. 1

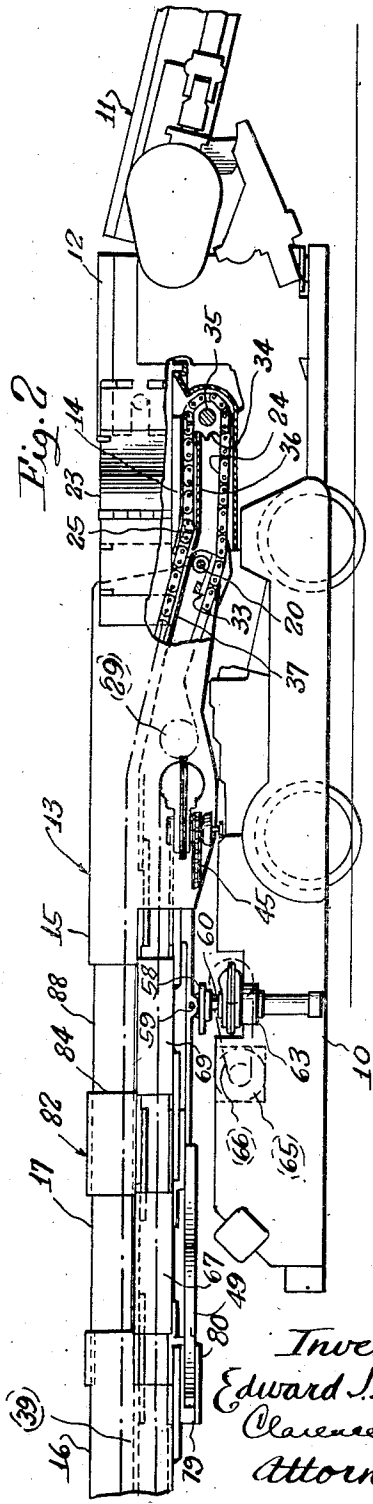


Fig. 2

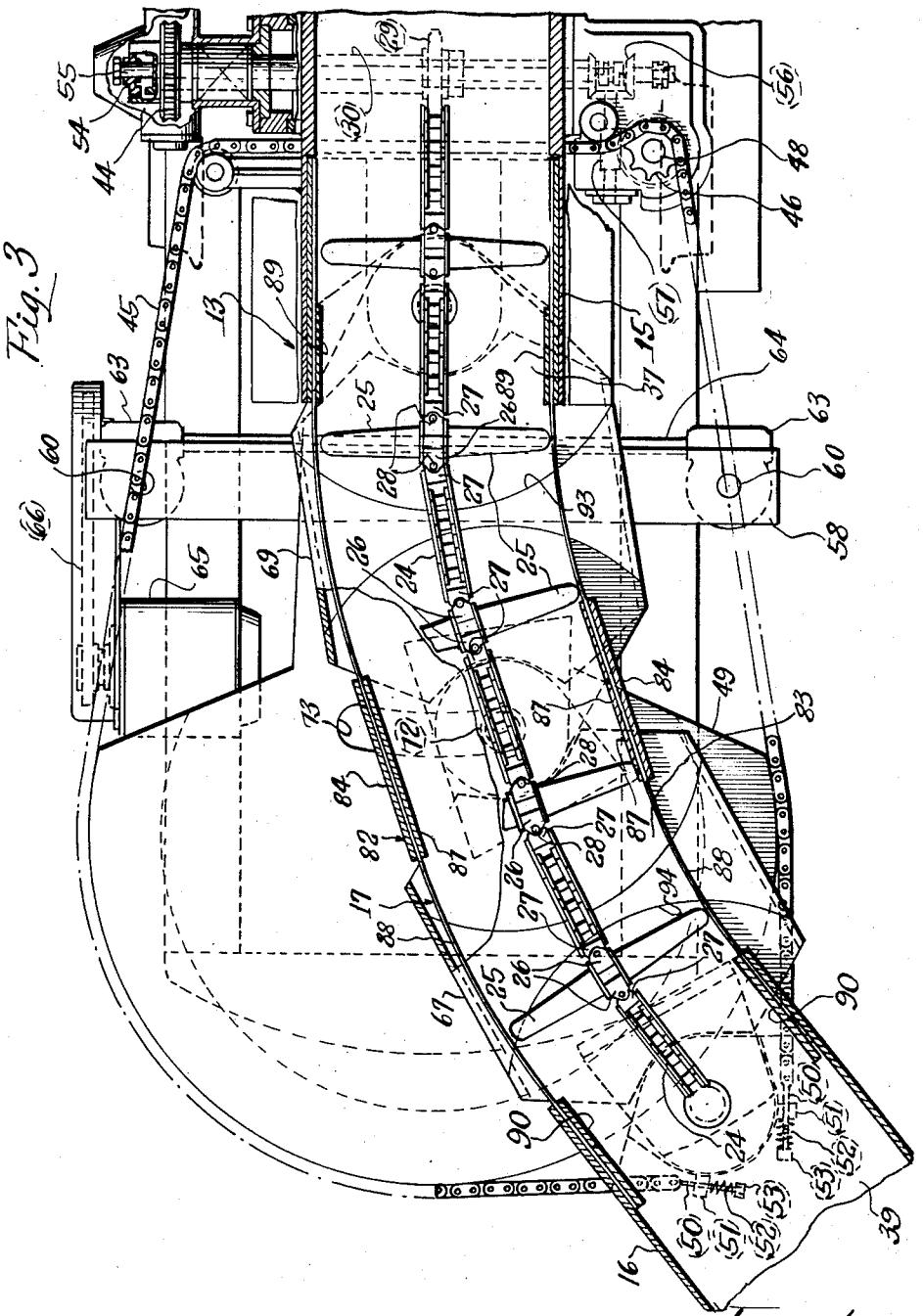
Inventor
Edward J. Doberstein
Clarence F. Poole
Attorney

Aug. 6, 1940. E. J. DOBERSTEIN 2,210,655

CONVEYER

Filed Jan. 13, 1939 3 Sheets-Sheet 2

Fig. 3



Inventor
Edward J. Doberstein
Clarence F. Poole
Attorney

Aug. 6, 1940. E. J. DOBERSTEIN 2,210,655

CONVEYER

Filed Jan. 13, 1939 3 Sheets-Sheet 3

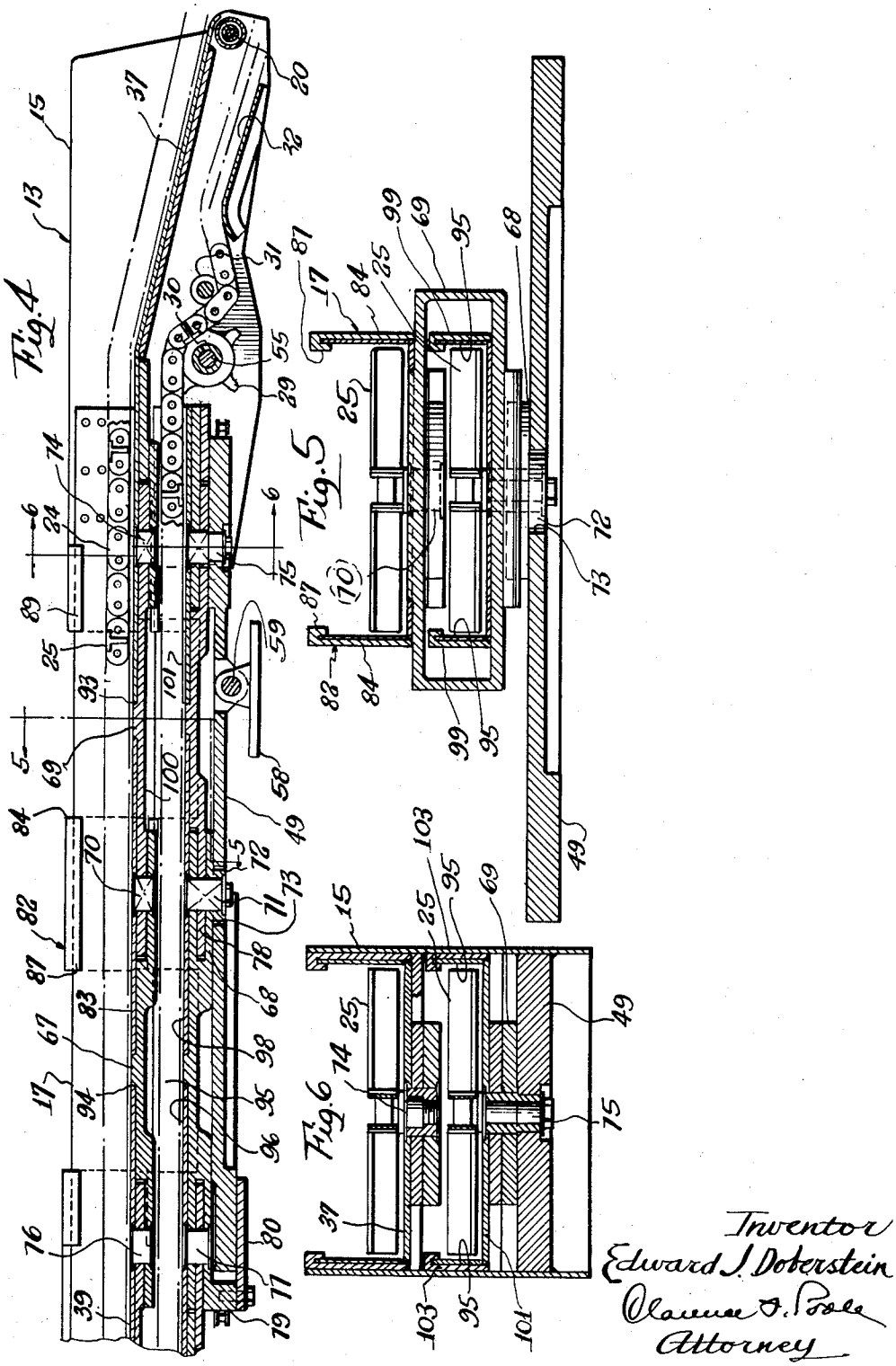


Fig. 4

Fig. 5

Fig. 6

Inventor
Edward J. Doberstein
Clarence O. Poole
Attorney

Patented Aug. 6, 1940 2,210,655

UNITED STATES PATENT OFFICE

2,210,655

CONVEYER

Edward J. Doberstein, Blue Island, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application January 13, 1939, Serial No. 250,779

14 Claims. (Cl. 198—100)

This invention relates to improvements in conveyers and more particularly to improvements in articulated conveyers of the center strand endless chain and flight type adapted for use with loading machines of the type operable in confined spaces such as coal mines.

The principal objects of my invention are to provide a new and improved articulated conveyer of a novel form and construction arranged to permit the continuous movement of material from one end of the conveyer to the other when the conveyer is in various positions of articulation, and including a novel and efficient articulated supporting and connecting means for connecting the trough sections together to permit one to swing with respect to the other, and supporting the swinging trough section for swinging movement and closing the gaps between the trough sections to provide a continuous trough throughout the length of the conveyer when one trough section is in various positions of adjustment with respect to the other.

Other objects of my invention will appear from time to time as the following specification proceeds and with reference to the accompanying drawings wherein:

Figure 1 is a fragmentary plan view of a loading machine having a conveyer constructed in accordance with my invention embodied therein;

Figure 2 is a view in side elevation of the machine shown in Figure 1, drawn to a slightly enlarged scale and with certain parts broken away and shown in longitudinal section to illustrate certain details of construction of the articulated conveyer;

Figure 3 is an enlarged fragmentary plan view of the rear portion of the machine shown in Figure 1, with certain parts broken away and shown in horizontal section in order to more clearly illustrate certain details of construction of the articulated conveyer;

Figure 4 is a longitudinal sectional view taken through the articulated conveyer and drawn to substantially the same scale as Figure 3;

Figure 5 is an enlarged sectional view taken substantially along line 5—5 of Figure 4; and

Figure 6 is an enlarged sectional view taken substantially along line 6—6 of Figure 4.

In the drawings, the embodiment of my invention illustrated is herein shown as being incorporated in a loading machine of the type particularly adapted for use in gathering and loading coal into cars in mines. Said machine is constructed along lines somewhat similar to those illustrated in a prior application Serial No. 208,969, filed by Frank Cartlidge on May 20, 1938, now Patent No. 2,201,334, so will only herein be described in sufficient detail to make my present invention clearly understandable.

The loading machine includes generally a track mounted truck 10 having a gathering and loading element 11 projecting forwardly from the forward end thereof and mounted for horizontal and vertical swinging movement with respect thereto, to permit said gathering and loading element to gather material from either side of the track upon which the machine rests. Said gathering and loading element includes an inclined elevating conveyer 12 adapted to discharge material into a discharge conveyer 13 extending longitudinally of the machine.

The discharge conveyer 13, as herein shown, includes a relatively stationary forward receiving or hopper portion 14 mounted on the truck 10 beneath the discharge end of said elevating conveyer. A forward trough section 15 of said discharge conveyer is transversely pivoted to, and extends angularly upwardly and rearwardly of said receiving portion. Said forward trough section is pivotally connected to the rear end of said receiving portion on a transverse shaft 20, to permit vertical adjustment of the conveyer. A rear trough section 16 of said discharge conveyer is mounted for swinging movement with respect to said forward trough section in a substantially horizontal plane and has a receiving end spaced rearwardly from the discharge end of said forward trough section. Said forward and rear trough sections are connected together by means of an intermediate supporting and connecting flexible trough section 17.

The forward receiving or hopper portion 14, as herein shown, is provided with an extensible hopper 23 connected between the discharge end of the elevating conveyer 12 and said receiving portion of said discharge conveyer to guide material onto said receiving end as it is discharged from said elevating conveyer. Said extensible hopper is shown in Figures 1 and 2 and is of a construction similar to that shown in the aforementioned prior application of Frank Cartlidge so will not herein be shown or described in detail since it is no part of my present invention.

The material moving or conveying element of the discharge conveyer 13 is of the continuous center-strand flight type and includes an endless chain 24 movable along the central portion of said discharge conveyer and having laterally projecting flights 25, 25 connected thereto at suitable intervals. As herein shown, each of said

flights is mounted on a link 26 of said endless chain, which link is pivotally connected at its opposite ends to links 27, 27 of said endless chain by means of vertically disposed pins 28, 28. This arrangement permits swinging movement of the entire chain in a plane perpendicular to its plane of travel and permits said flights, engaging the side walls of the trough sections on their ends, to guide the chain from one trough section to the other when the conveyer is in various positions of articulation.

The endless chain 24 is trained over and driven from a drive sprocket 29 on a transverse hollow shaft 30. From thence it is trained under an idler 31 forwardly along a guide shoe 32 and under a guide shoe 33 spaced forwardly from said last mentioned guide shoe and disposed adjacent the shaft 20 (see Figures 2 and 4). From thence said endless chain extends to and around an idler sprocket 34 on a transverse shaft 35, journaled at the forward end of the forward receiving portion 14 of said discharge conveyer. From said idler sprocket said chain extends rearwardly along a bottom plate 36 of said receiving portion, along a bottom plate 37 of the rearwardly extending vertically adjustable forward trough section 15 of said discharge conveyer. From thence it extends along the intermediate flexible connecting trough section 17 and along a bottom plate 39 of the rear trough section 16, to and around a suitable idler at the rear end thereof (not shown) and forwardly from said idler, to and over the drive sprocket 29.

The transverse shaft 30 and drive sprocket 29 are driven from a motor 43, mounted on a side frame member of the forward trough section 15, by means of a worm and worm gear drive generally indicated by reference character 44 (see Figure 3).

The rear trough section 16 is swung from one side to the other of the truck by means driven from the motor 43 which includes a flexible chain 45 meshed with a drive sprocket 46 on a vertical shaft 48, journaled adjacent one side of the conveyer. Said chain extends from said sprocket beneath and across the conveyer to and around an idler 47 on the opposite side thereof from the sprocket 46. Said chain is trained rearwardly from said idler and drive sprocket around an arcuate outer periphery of a supporting frame 49, which forms a support for said intermediate trough section, and is connected at its ends with the forward end of the rear trough section 16 by connecting members 50, 50 secured to and extending from the ends of said chain. Said connecting members extend through lugs 51, 51 depending from the lower forward end of said rear trough section and are encircled by springs 52, 52 interposed between said lugs and nuts 53, 53 threaded on the ends of said connecting members.

The drive sprocket 46 and vertical shaft 48 are driven from the motor 43 through a transverse shaft 55 extending through the hollow transverse shaft 30 and driven from the worm and worm gear drive 44 by means of a jaw clutch 54. Said transverse shaft is operatively connected with said vertical shaft by means of reverse bevel gearing generally indicated by reference character 56, and a worm and worm gear drive generally indicated by reference character 57. The jaw clutch 54 and the means for shifting it and the means for shifting the clutch means for connecting either of the bevel gears of the reverse bevel gearing 56 with the transverse shaft 55, for reversely driving the worm and worm gear 57 without reversal of said shaft, will not herein be described in detail since they are no part of my present invention and are of an ordinary construction well known to those skilled in the art.

The support frame 49, as herein shown, is secured to and projects rearwardly from the rear end of the forward trough section 14 and is pivotally supported on a transversely extending adjusting member 58 by means of a transverse shaft 59 (see Figure 4). Said adjusting member is mounted on the upper ends of a pair of parallel spaced adjusting screws 60, 60 which are threaded within the hubs of suitable gears (not shown), which may be worm gears, and which are journaled in housing and support members 63, 63 mounted on opposite sides of the truck 10. A transverse shaft 64 is journaled at its ends in said housing and support members and is driven from a motor 65, mounted on one side of the truck 10, through a chain and sprocket drive 66 (see Figure 3). Said transverse shaft serves to drive the gears through which said adjusting screws are threaded, to elevate or lower the adjusting member 58, and pivot the discharge end of the discharge conveyer 13 about the axis of the transverse shaft 20 to adjust the discharge end of said conveyer to cars of varying heights.

Referring now in particular to the intermediate flexible connecting trough section 17 and the novel means for supporting the rear trough section for swinging movement with respect to the front trough section and closing the gap between said trough sections to permit the continuous movement of loose material from one trough section to the other, a pair of interconnected support members 67 and 69 are herein shown as being provided, although it will be readily apparent that if it is desired to increase the length of the flexible part of the conveyer, more of said support members may be provided.

The support members 67 and 69 are each of a similar construction and, as herein shown, are of a box-like formation open at their ends, to lend rigidity thereto and to enclose and form a guide for the ends of the flights of the conveyer chain on its return path. Opposite ends of each of said support members are beveled and recede from the longitudinal center thereof towards the transverse center of said members to provide clearance to permit swinging movement of one of said support members with respect to the other, and with respect to said trough sections. The adjacent ends of said support members are shown in Figure 4 as interleaving each other, and are pivotally connected together by vertically spaced coaxial vertical shafts 70 and 71. The lower side of the support member 67 has a forward end 68 which is of a bifurcated formation and which engages a rearwardly projecting end 78 of the forward support member 69, between the furcations thereof. Said bifurcated forward end is provided with a depending boss 72 surrounding the lower end of the vertical shaft 71 and extending within an arcuate slot 73 formed in the top surface of the support frame 49, for guiding said support members for pivotal movement along the frame 49 about their axis of connection to the forward trough section 15, and to stop pivotal movement of the forward support member 69 about its axis of connection to said forward trough section and to permit further pivotal movement of the rear support member 67 and rear trough section 16 about the axis of

pivotal connection of said support members together and about the axis of pivotal connection of said rear trough section to said rear support member.

The upper and lower forward ends of the forward support member 69 interleave the rear end of the frame for the forward trough section 15 of the discharge conveyer 13 and are pivotally connected thereto by means of a pair of vertically spaced coaxial vertical shafts 74 and 75. The shaft 75 is mounted at its lower end in the support frame 49 to form a fixed pivotal support for said forward support member (see Figure 6). In a like manner, the upper and lower rear ends of the rear support member 67 interleave the forward end of the frame for the rear trough section 16 and are pivotally connected thereto by means of a pair of vertically spaced coaxial vertical shafts 76 and 77 (see Figure 4).

The rear support member 67 is provided with a depending rear end 79 which, as herein shown, has an inwardly extending plate 80 secured to its lower end, which slidably engages the underside of the supporting frame 49 and serves as a means to retain the boss 72 in the arcuate slot 73.

It may be seen from the foregoing that the rear trough section 16 is mounted on the supporting frame 49 for slidable movement thereacross about the axes of the horizontally spaced vertical shafts 74, 70 and 76 by means of the support members 67 and 69; that swinging movement of said forward support member is limited by the arcuate slot 73 which permits further swinging movement of said rear trough section; and that swinging movement of said rear trough section about said spaced vertical shafts is effected by means of the flexible chain 45, driven from the motor 43.

Referring now to the novel means for closing the gap between the trough sections 15 and 16 and guiding the chain 24 and flights 25, 25 from one trough section to the other, an intermediate connecting member 82, including a bottom plate 83 and parallel spaced upright sides 84, 84, is herein shown as being pivotally mounted at its center on the support members 67 and 69 on the upper end of the vertical shaft 70. The bottom plate 83 is recessed within the support members 67 and 69 so that its top is on a level with the top of said support members, to provide an uninterrupted surface along which loose material may be moved, and the forward and rear ends of said bottom plate are of an arcuate formation, engaging corresponding arcuately formed shouldered portions of the support members 67 and 69, forming arcuate bearing surfaces between said support members and said intermediate connecting member.

The spaced vertical sides 84, 84 of intermediate connecting member 82 are provided with inwardly and downwardly extending upper ends 87, 87 which form channeled guides, open at the bottom. Said channeled guides are adapted to have flexible side walls 88, 88 guided for slidable movement therein and extending beyond opposite ends of said connecting member and having connection with said forward and rear trough sections. Said flexible side walls extend through channeled guides 89, 89 formed at the top of the rear end of side walls of the forward trough section 14, and may be secured to said trough section in a suitable manner such as riveting. Said side walls are slidably guided at their rear ends in channeled guides 90, 90 formed at the top of the side walls for the forward end of the rear trough section 16. Said flexible side walls thus form continuous closed flexible side walls between said trough sections and form a continuous trough when said rear trough section is in various positions of adjustment with respect to said front trough section.

The rear end of the bottom plate 37 is recessed within and overlaps the forward end of the forward support member 69 a substantial distance and is of an arcuate formation engaging a corresponding arcuate shouldered portion 93 of said forward support member. In a like manner, the forward end of the bottom plate 39 is recessed within and overlaps the rear end of the support member 69 a substantial distance, and is of an arcuate formation and engages a corresponding arcuate shouldered portion 94 of the rear support member 67. The adjacent ends of the bottom plates 37 and 39 and opposite ends of the bottom 83 of the intermediate connecting section 82 thus have arcuate bearing engagement with the support members 67 and 69, and the top sides thereof are on a level with the top of said support members to form a continuous uninterrupted bottom for the conveyer from the stationary trough section 15 to the swinging trough section 16, to permit the flights 25, 25 to freely convey material from the forward to rear end of the conveyer when the discharge end thereof is in various positions of adjustment with respect to said forward end, said flights engaging the sides of the flexible members 88, 88 to guide the chain 24 in an arcuate path from one of said trough sections to the other.

The return path of the endless conveyer chain 24, beneath the plates 36, 37 and 39, is similar to its conveying path and said chain is guided on the outer ends of its flights by flexible side walls 95, 95 mounted within the box-like support members 67 and 69 (see Figures 4, 5 and 6) and having engagement with said forward and rear trough sections. A plate 96 extending forwardly from the frame of the rear trough section 16 and having an arcuately formed forward end, overlaps and is recessed in the lower side of the rear support member 67 so that its top surface is on a level with the top surface of said lower side. An intermediate connecting member 98, similar to the intermediate connecting member 82 and having parallel spaced upstanding sides 99, 99, is pivotally mounted on the upper end of the vertical shaft 71. Said connecting member is recessed within the top of the lower sides of the rear support members 67 and 69 so that its top surface is on a level with the top surface of said lower sides of said support members, and has arcuately formed forward and rear ends which engage corresponding arcuately formed shouldered portions of said support members. A forward plate 101, extending rearwardly from the frame for the forward trough section 15 and having an arcuately formed rear face, is likewise provided. Said plate is recessed within the upper surface of a bottom portion 100 of the forward support member 69 and is provided with a pair of parallel spaced vertical sides 103, 103 through which the flexible side walls 95, 95 are guided and to which side walls said flexible side walls may be secured. The rear plate 96 is likewise provided with a similar pair of parallel spaced sides (not shown), which form slidable guides for the flexible side walls 95, 95.

It may be seen from the foregoing, that the support members 67 and 69, pivotally connected together and pivotally connected to the ends of the trough sections 15 and 16 at their extreme

ends, form a swinging support for the rear trough section 16 on the support frame 49 to permit a relatively large range of swinging movement of said rear trough section about the spaced axes of the shafts 74, 70 and 76; that the bottoms of said front and rear trough sections overlap said support members and are recessed therein, and together with said intermediate connecting section form an unbroken bottom for the conveyer when its rear end is in various positions of adjustment with respect to its forward end; and that the side walls of said intermediate connecting section, together with the flexible side walls guided therein, connecting the side walls of said forward and rear conveyer trough sections together, form a continuous unbroken trough from one end of one trough section to the opposite end of the other when said swinging trough section is in various positions of adjustment with respect to said other trough section.

While I have herein shown and described one form in which my invention may be embodied, it will be understood that the construction thereof and the arrangement of the various parts may be altered without departing from the spirit and scope thereof. Furthermore, I do not wish to be construed as limiting myself to the specific embodiment illustrated, excepting as it may be limited in the appended claims.

I claim as my invention:

1. In an articulated conveyer, a pair of spaced apart trough sections, means having pivotal connection with one of said trough sections and serving as a pivotal mounting for said other trough section to permit swinging movement of said other trough section in a substantially horizontal plane about a plurality of parallel axes including a plurality of support members pivotally connected together, and an intermediate member overlapping adjacent ends of said support members and pivotally connected with said support members at their point of connection together, to bridge the gap and form a continuous bottom for the conveyer between said support members.

2. In an articulated conveyer, a pair of spaced apart trough sections, means having pivotal connection with one of said trough sections and serving as a pivotal mounting for said other trough section to permit swinging movement of said other trough section in a substantially horzontal plane about a pluralty of spaced parallel axes including a pair of support members pivotally connected together, and an intermediate member having pivotal connection with said support members at their point of connection together and forming a bottom between said members, said intermediate member having a pair of spaced apart flexible side walls guided therein and connecting said trough sections together.

3. In an articulated conveyer, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections, means having connection with one of said trough sections and forming a support means for said other trough section for mounting said trough section for swinging movement in a horizontal plane about a plurality of parallel spaced axes including a pair of support members pivotally connected together at adjacent ends, one of said support members having pivotal connection with and being overlapped by one of said trough sections and the other of said support members having pivotal connection with and being overlapped by said other trough section, and an intermediate member forming a bottom for the conveyer and bridging the gap between said members to permit the continuous flow of material from one of said trough sections to the other.

4. In an articulated conveyer, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections, means having connection with one of said trough sections and forming a support means for said other trough section for mounting said trough section for swinging movement in a substantially horizontal plane including a pair of support members pivotally connected together at adjacent ends, one of said support members having pivotal connection with and being overlapped by one of said trough sections and the other of said support members having pivotal connection with and being overlapped by said other trough section, an intermediate member forming a bottom for the conveyer and bridging the gap between said members, and a pair of spaced apart flexible side walls guided by said intermediate member and connecting said trough sections together to permit the flow of loose material from one trough section to the other.

5. In an articulated conveyer, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections, means having connection with one of said trough sections and forming a support means for said other trough section for mounting said trough section for swinging movement in a horizontal plane including a pair of support members pivotally connected together at adjacent ends, one of said support members having pivotal connection with and being overlapped by one of said trough sections and the other of said support members having pivotal connection with and being overlapped by said other trough section, and an intermediate member overlapping said support members and having pivotal connection with said support members at their point of pivotal connection together.

6. In an articulated conveyer, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections, means having connection with one of said trough sections and forming a support means for said other trough section for mounting said trough section for swinging movement in a horizontal plane including a pair of support members pivotally connected together at adjacent ends, one of said support members having pivotal connection with and being overlapped by one of said trough sections and the other of said support members forming a pivotal support for and being overlapped by said other trough section, an intermediate member overlapping said support members and having pivotal connection with said support members at their point of pivotal connection together, and a pair of spaced apart flexible side walls having connection with said intermediate member and being connected between said trough sections to close the gap between said trough sections and permit the continuous flow of material from one trough section to the other.

7. In an articulated conveyer, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections, means having connection with one of said trough sections and forming a support means for said other trough section for mounting said trough section for swinging movement in a substantially horizontal plane including a pair of support members pivotally connected together at adjacent ends, one of said support members having pivotal connection with and being overlapped by one of said trough sections and the other of said support members having pivotal connection with and be-

ing overlapped by said other trough section, an intermediate member overlapping said support members and being pivotally connected thereto at their point of pivotal connection together, a pair of spaced apart flexible side walls connected between said intermediate member and said trough sections to close the gap between said trough sections and permit the continuous flow of material from one trough section to the other, said trough sections having adjacent end surfaces of an arcuate formation engageable with corresponding shouldered surfaces on said support members, and said intermediate member having arcuate formed end surfaces engageable with corresponding shouldered surfaces on said support members to form a level bottom from one conveyer trough section to the other when said conveyer is in various positions of articulation.

8. In an articulated conveyer, a pair of spaced apart aligned trough sections, one of which is supported for swinging movement with respect to the other, an endless conveyer for moving material along said trough sections, and a connection between said trough sections forming a continuous trough to permit the uninterrupted flow of material from one end of one of said trough sections to the opposite end of the other trough section and mounting said movable trough section for swinging movement in a horizontal plane about a plurality of spaced apart parallel axes including a pair of support members pivotally connected together at adjacent ends and having pivotal connection at their extreme ends with said trough sections, a support frame for said support members permitting pivotal and slidable movement of said support members along said frame, an intermediate member overlapping adjacent ends of said support members to bridge the gaps therebetween and having pivotal connection with said members at their point of connection together, said intermediate member, together with said support members, forming a continuous conveyer bottom between said trough sections.

9. In an articulated conveyer, a pair of spaced apart aligned trough sections, one of which is supported for swinging movement with respect to the other, an endless conveyor for moving material along said trough sections, and a connection between said trough sections forming a continuous conveyer to permit the flow of material between said trough sections and supporting said movable trough section for swinging movement in a horizontal plane about a plurality of parallel spaced axes including a pair of support members pivotally connected together and having pivotal connection at their extreme ends with said trough sections, a support frame upon which said support members are adapted to rest, permitting pivotal and slidable movement of said support members along said frame, an intermediate member having pivotal connection with said support members at their point of connection together, said intermediate member, together with said support members, forming a continuous conveyer bottom between said members, and a pair of spaced apart flexible side walls having connection with said intermediate member and said forward and rear trough sections for connecting the side walls of said trough sections together.

10. In an articulated conveyer, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections from one end of one trough section to the opposite end of the other, a supporting frame, and means mounted on said frame for slidable movement therealong for connecting said trough sections together and supporting one for swinging movement with respect to the other including a plurality of support members pivotally connected together and having pivotal connection with adjacent ends of said trough sections, and a guiding connection between said support frame and support members for limiting pivotal movement of one of said support members and permitting further pivotal movement of the other.

11. In an articulated conveyer, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections from one of one trough section to the opposite end of the other, a supporting frame, and means mounted on said frame for slidable movement therealong for connecting said trough sections together and supporting one for swinging movement with respect to the other about a plurality of spaced apart axes including a plurality of support members pivotally connected together and having pivotal connection with adjacent ends of said trough sections, a connection between said support members and said supporting frame for limiting pivotal movement of one of said support members and permitting further pivotal movement of the other, an intermediate member having pivotal connection with said support members at their point of connection together and forming a bottom to bridge the gap between said members, and flexible side walls guided for movement along said intermediate member and having connection with the sides of said trough sections.

12. In an articulated conveyor, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections from one end of one trough section to the opposite end of the other, a supporting frame, and means mounted on said frame for slidable movement therealong for connecting said trough sections together and supporting one for swinging movement with respect to the other including a pair of support members overlapping at opposite ends by said trough sections and pivotally connected together at adjacent ends and having guiding engagement with said frame at their point of connection together, and an intermediate member overlapping said support memers and having pivotal connection thereto at their point of connection together so as to form a bottom for said conveyer and bridge the gap between said support members.

13. In an articulated conveyer, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections from one end of one trough section to the opposite end of the other, a supporting frame, and means mounted on said frame for slidable movement therealong for connecting said trough sections together and supporting one for swinging movement with respect to the other including a pair of support members overlapping at opposite ends by said trough sections and pivotally connected together at adjacent ends and having guiding engagement with said frame at their point of connection together, an intermediate member overlapping said members and having pivotal connection thereto at their point of connection together so as to form a bottom for said conveyer and bridge the gap between said members, and a pair of flexible side walls connected between said intermediate member and said conveyer trough sections.

14. In an articulated conveyer, a pair of spaced apart trough sections, an endless conveyer movable along said trough sections from one end of

one trough section to the opposite end of the other, a supporting frame, and means mounted on said frame for slidable movement therealong for connecting said trough sections together and supporting one for swinging movement with respect to the other including a pair of support members overlapped at opposite ends by said trough sections and pivotally connected together at adjacent ends and having guiding engagement with said frame at their point of connection together, an intermediate member overlapping said members and having pivotal connection thereto at their point of connection together so as to form a bottom for said conveyer and bridge the gap between said members, and a pair of flexible side walls connected between said intermediate member and said conveyer trough sections, adjacent ends of said trough sections being of an arcuate formation and abutting arcuate shouldered surfaces of said support members, and the ends of said intermediate member being of an arcuate formation and abutting arcuate shouldered surfaces of said support members to form an uninterrupted bottom from one trough section to the other.

EDWARD J. DOBERSTEIN.

CERTIFICATE OF CORRECTION.

Patent No. 2,210,655. August 6, 1940.

EDWARD J. DOBERSTEIN.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 5, second column, line 14, claim 11, for "one of" read --one end of--; lines 44 and 62, claims 12 and 13 respectively, for the word "overlapping" read --overlapped--; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 24th day of September, A. D. 1940.

(Seal)

Henry Van Arsdale,
Acting Commissioner of Patents.