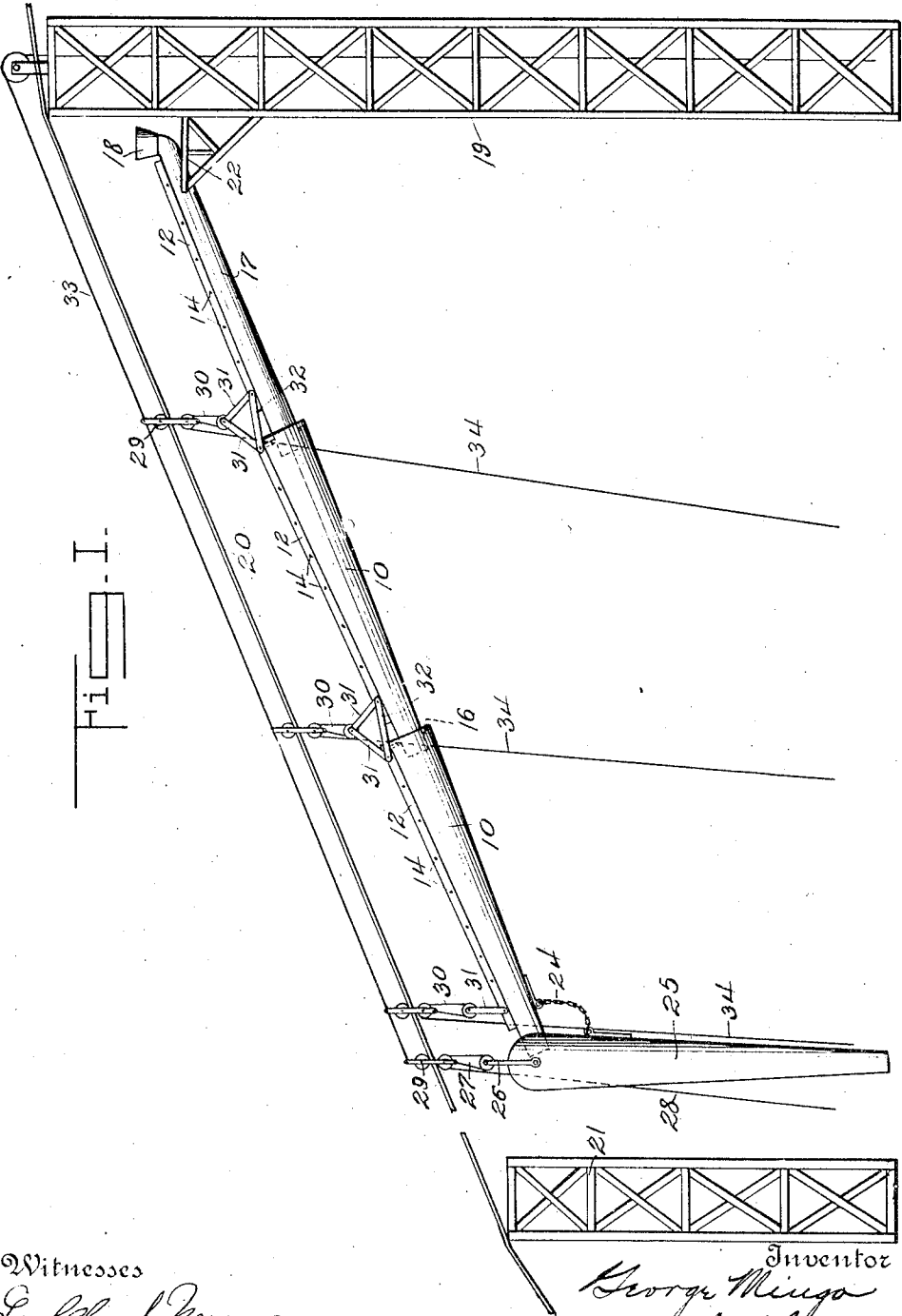


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CONCRETE CONVEYER AND DISTRIBUTER.
APPLICATION FILED AUG. 3, 1910.

991,450.

Patented May 2, 1911.

2 SHEETS-SHEET 1.



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Fig. 2.

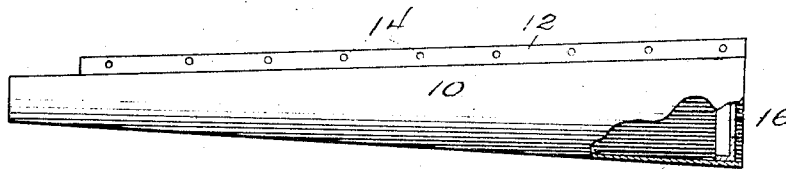


Fig. 3.

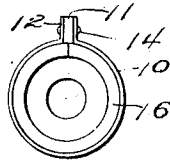


Fig. 4.

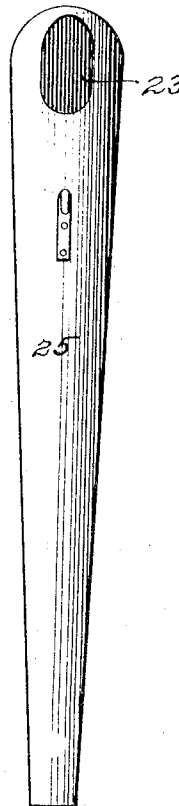


Fig. 5.

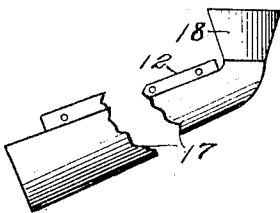
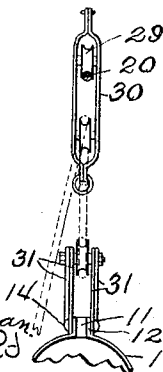


Fig. 6.



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UNITED STATES PATENT OFFICE.

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CONCRETE CONVEYER AND DISTRIBUTER.

991,450.

Specification of Letters Patent.

Patented May 2, 1911.

Application filed August 3, 1910. Serial No. 575,217.

To all whom it may concern:

Be it known that I, GEORGE MINGO, a citizen of the United States of America, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Concrete Conveyers and Distributers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to certain new and useful improvements in concrete conveyers and distributers, and has for its main object the provision of means for conveying concrete such as is used in the erection of buildings, from a receiving point and delivering same at any desired point along the wall of the building being erected.

Briefly described, the invention comprises a conveyer or chute formed of a plurality of sections flexibly joined together and through which the concrete is carried to a discharge chute or spout, which latter is so disposed with respect to the conveyer sections as to be moved to position to effect the discharge of the concrete at any desired point. Means is provided for suspending the conveyer and for raising and lowering same as may be desired. Means is also provided for insuring against an overload being placed into the conveyer, and for preventing any back-flow of the concrete as it passes through the conveyer, as well as for preventing any clogging of the conveyer during operation.

The invention consists in the novel construction, combination and arrangement of parts as will be hereinafter more specifically described and then particularly claimed, and in describing the invention in detail, reference will be had to the accompanying drawings forming a part of this application, and wherein like numerals of reference will be employed for designating like parts throughout the different views of the drawings, in which:—

Figure 1, is a view in elevation, largely diagrammatic, showing a conveyer and distributor constructed in accordance with my invention, Fig. 2, is a detail side elevation of one of the sections of the chute, partially in section, Fig. 3, is an end view of one of the chute sections, Fig. 4, is a detached detail view in side elevation of the spout or distributor section, Fig. 5, is a detail view in side elevation, partly broken

away, of the receiving section of the conveyer, and Fig. 6, is a view in elevation of one of the pulley-blocks, showing the connection with the chute-section, the latter being broken away.

The conveyer comprises a plurality of sections 10, of the form shown in Figs. 1 and 2, each being formed by bending longitudinally, a sheet of metal so as to form a tapering tubular section, a portion of the metal along the free edges of the strip being brought parallel, and a strip 11, as of wood or iron placed therebetween and the parallel edges 12 then riveted or bolted together as at 14. The parallel portions of the edges of the metal strip or sheet are cut away at the smaller end of the section as at 15, (Fig. 2) so that the said smaller end of one section will telescope with the larger end of the adjoining section, and enters the latter to a point beyond a stiffening ring 16 located interiorly of the sections at the larger ends thereof. This ring 16 may be conveniently formed of angle iron, and besides stiffening and reinforcing the section at the larger end, keeps the end of the entering section in place, and prevents the concrete from slushing back and coming out at the joint.

The receiving section 17 of the conveyer is made in a manner similar to the sections 10, but this receiving section has its discharge end of slightly greater diameter than the inlet or throat of the receiving end. At the receiving end of this section 17 is a hopper 18, which may be fast to the section, or set in the receiving end thereof.

In building, as is well known, it is the general practice to erect a tower adjacent the wall to be erected, up which the material for building the wall is suitably elevated. My invention is designed to be used in connection with such a tower which is shown diagrammatically at 19 in Fig. 1, and from which is stretched a cable 20 constituting a track, the other end of which may be to earth or to a shorter tower 21 so that the track extends at an incline as shown. As illustrated in Fig. 1, the receiving section 17 is shown as supported at its receiving end from a platform 22 of the tower. I do not however limit myself to such means of support, as the receiving end of the section 17 may be provided with a block and cable for supporting same as well as lowering it at will, or supported at any convenient point throughout the height of the tower.

The lower or outermost section 10, discharges into the discharge spout or distributor which, like the sections 10 is a hollow tubular member having a smaller discharge end than receiving end. The receiving or larger end is substantially dome-shaped, being closed except for an opening 23 made therein, and which extends into the dome-shaped end and into the body of the member as best seen in Fig. 4, and which opening receives the discharge end of the outermost section 10, the opening 23 being of sufficient size to permit of a wide range of swinging movement being imparted to the spout or distributor so as to effect the discharge of the material at any desired point. In order to prevent separation of the discharge spout or distributor and the outermost section 10, the same is connected with the outermost section 10, as by a chain 24, which holds the members connected, and does not interfere with the free movement of the distributor 25. Carried by the dome-shaped upper end of the distributor is a bail 26 to which a pulley block is connected, which carries the controlling-line 28, the pulley block having a traveler 29 riding on the track 20. The conveyer sections are also supported by pulley blocks 30, each of which has a traveler 29 to engage the track 20, the several pulley blocks being linked to the sections as by links 31, means as links 32 being also employed for flexibly connecting the sections 10 and for connecting the section 17 to the uppermost section 10. The conveyer is held at a fixed point on the track as by a line 33 suitably connected to the several pulley blocks or their travelers and fastened at any desired point. From each of the pulley blocks 30 extends a controlling line 34, by means of which several lines, the conveyer may be raised or lowered at will.

When the concrete is dumped into the receiving section from the elevating tower, it is conveyed by the conveyer sections to the distributor, which latter may be manipulated so as to effect a discharge of the concrete at any desired point of the wall being erected. Since the inlet or throat to the receiving section is smaller than the discharge end of this section, it is impossible to clog the conveyer by excessive feeding of the material thereto. By reason of the sections of the conveyer being flexibly connected together, they may rock or vibrate as the concrete passes therethrough which effectually tends to keep the concrete in motion and also pre-

vents clogging of same in the conveyer. Obviously, should there be any clogging due to the concrete hardening in the conveyer, or for any other cause, the entire system may be lowered by simply slackening the lines 34, and by removal of bolt which fastens links 31, 32 to the sections, the sections may be separated, and each one inspected or cleaned as may be needed.

Obviously, those skilled in the art adopting the system may make various changes in the details of construction without departing from the general spirit of the invention.

Having fully described my invention, what I claim is:

1. A concrete conveyer and distributor, comprising in combination with a track, and pulley blocks traveling on and supported by said track, a plurality of hollow tapering conveyer sections having their discharge of less area than the inlet ends and telescoping, a receiving section telescoping the uppermost conveyer section and having a discharge end of greater area than its receiving end, flexible connections between said sections and the pulley blocks, and a distributor supported from said track and into which the discharge end of the lowermost conveyer section extends, said distributor being free to swing on the discharge end of said lowermost conveyer section.

2. A conveyer and distributor for concrete, comprising in combination with a suitably supported inclined track, and pulley blocks supported from said track and adapted to travel thereon, of a plurality of flexibly connected conveyer sections telescoping one into the other and each having a discharge end of less area than the receiving end, a receiving section telescoping the uppermost conveyer section, links connecting the conveyer sections together, flexible connections between the sections and said pulley blocks, and a distributor supported from said track independently of the said sections and into which the lowermost section extends, said distributor free to swing on its support independently of the sections, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

GEORGE MINGO.

Witnesses:

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CHAS. TUBIAS.