

No. 701,312.

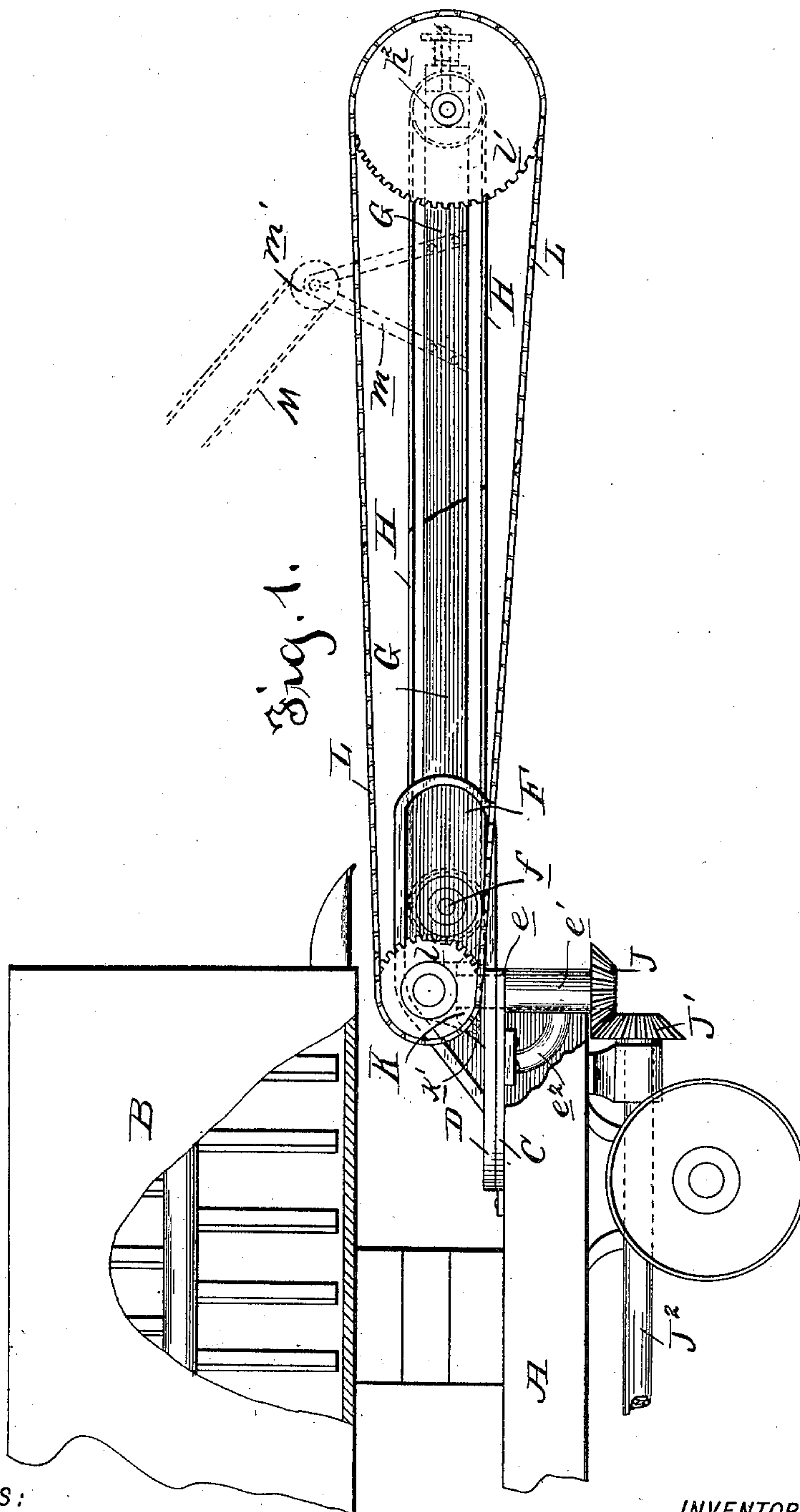
Patented June 3, 1902.

C. T. DRAKE.  
CONVEYER FOR MIXING MACHINES OR THE LIKE.

(Application filed June 7, 1901.)

(No Model.)

2 Sheets—Sheet I.



WITNESSES:

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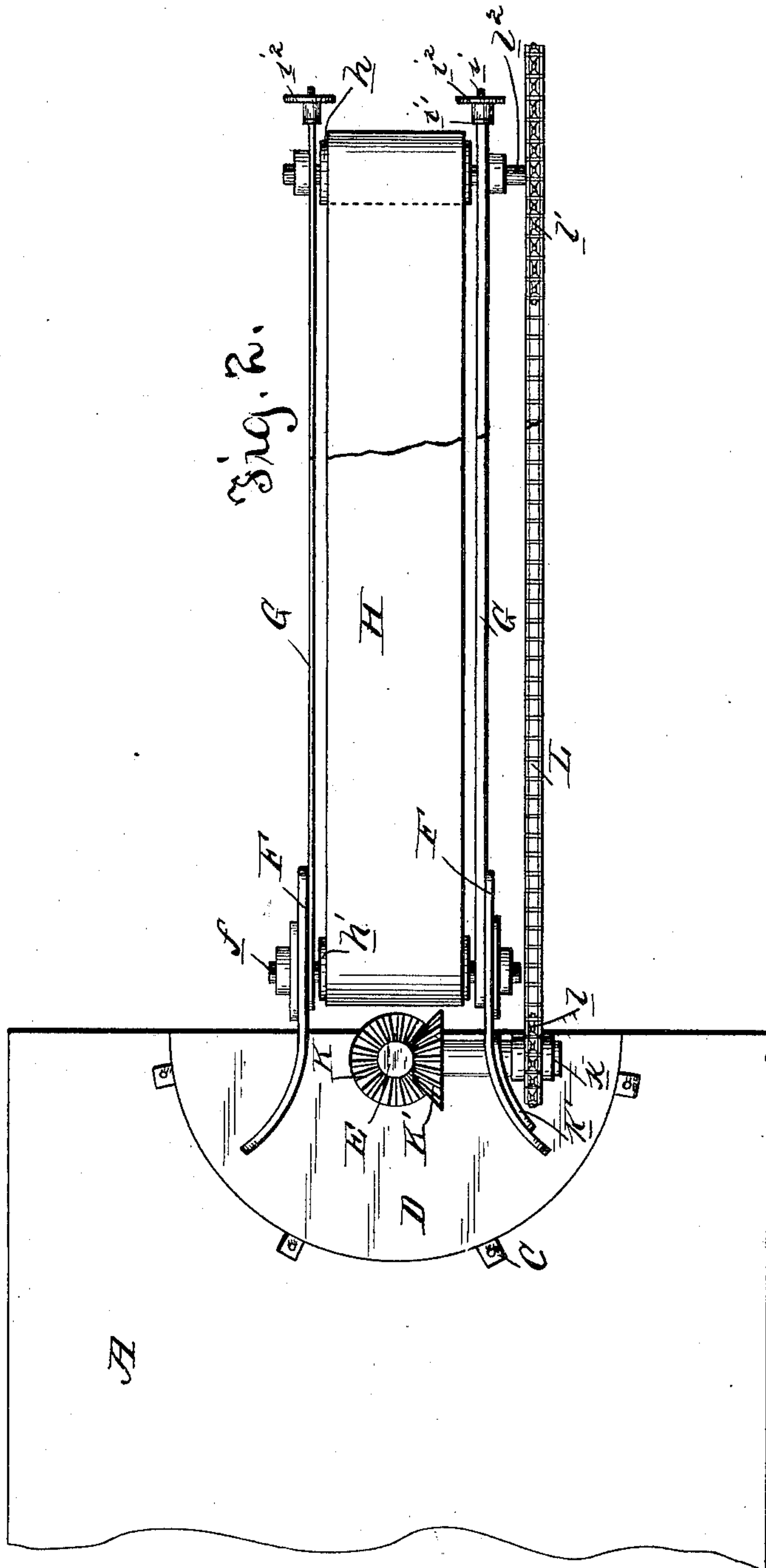
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(No Model.)

2 Sheets—Sheet 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

CHESTER T. DRAKE, OF CHICAGO, ILLINOIS.

## CONVEYER FOR MIXING-MACHINES OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 701,312, dated June 3, 1902.

Application filed June 7, 1901. Serial No. 63,528. (No model.)

*To all whom it may concern:*

Be it known that I, CHESTER T. DRAKE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Conveyers for Mixing-Machines or the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved driving means for conveyers of that type employed in connection with mixers and the like and adapted to be swung from side to side to carry and deliver at a desired point the material discharged from the mixer. In conveyers of this character heretofore known in the art uninterrupted movement is imparted thereto, irrespective of the position thereof laterally of the machine, through complicated mechanism only; and it is the primary object of this invention to provide a simple arrangement of gearing for directly operating a conveyer-belt at all times, said gearing being free to shift whenever the conveyer-belt is shifted, so that direct connection between the two is continually preserved.

With the above object in view the invention contemplates the employment of a turntable pivotally mounted upon a king-bolt and carrying belt-operating instrumentalities in communication with a pinion meshing with means on the king-bolt, power being transmitted from a proper source connected to the said bolt.

Improved details in the arrangement and construction of the several parts of the apparatus will be apparent from the detailed description hereinafter and the appended claims when taken in connection with the accompanying drawings, forming part hereof.

In said drawings like letters of reference refer to corresponding parts in both views.

Figure 1 is an elevation of the improved conveyer supported at one end of a mixer-vehicle, parts being broken away; and Fig. 2 is a plan view of the same.

Referring more specifically to the drawings, A designates a vehicle of any ordinary or desired construction, and B a mixer carried thereby. Upon the vehicle-frame, beneath

the mixer, is a metallic bearing plate or surface C, securely held in position, while adapted to ride on said plate is a turn-table D, the same being pivoted upon the king-bolt E. F represents oppositely-disposed brackets rigidly secured to said turn-table and extending outwardly therefrom, their extreme ends occupying parallel planes. Supported upon the axle *f* and passing through the brackets F are side bars G, in the outer ends of which is mounted a belt pulley or roller *h*. A corresponding roller *h'* is mounted upon the axle *f* referred to, and around these rollers a conveyer-belt H passes, the proper tension being at all times imparted thereto through the medium of the adjustable bearing-boxes *h*<sup>2</sup> for the outer roller *h* working in the ends of the side bars G, the adjustment being effected through the medium of screw-threaded stems *i*, passing through end plates *i'* and engaged by the nuts *i*<sup>2</sup>. The king-bolt is somewhat elongated and projects downwardly from the metallic bearing-surface of the vehicle, as at *e*, and passes through and is braced by the casting *e'*, having the lateral arm *e*<sup>2</sup> secured to said plate. The extreme end of the bolt carries a beveled pinion J, meshing with a corresponding pinion J' on the shaft J<sup>2</sup>, leading from any suitable source of power, which not being of the gist of this invention is not illustrated. The outer end of the king-bolt is provided with a beveled pinion K, the same in turn meshing with a like pinion K' at the end of the stub-axle *k*, passing through one of the flanges F and bearing-boxes *k'*.

*l* is a pinion fixed to the outer end of the stub-axle just referred to, and over this pinion a belt L passes and transmits motion to a relatively larger gear *l'*, supported at the extended end *l*<sup>2</sup> of the axle of the roller *h*.

From this much of the description the operation of the conveyer-belt may be described. Material discharged from the mixer being directed onto the conveyer-belt, operative communication is established between the source of power and the axle J<sup>2</sup>, which through its pinion and the pinions on the king-bolt will transmit motion to the stub-axle *k*, to the pinion thereon, and from thence through the chain and gear on the roller *h*, whereby said roller, and consequently the conveyer-belt passing thereover, will be op-



erated at any desired speed. It will be appreciated that whenever the conveyer is shifted laterally the turn-table will be correspondingly revolved, carrying with it the stub-axle *k*, whereupon the pinion *K'* will travel around in a circular direction upon its meshing pinion *K*, so that a direct operation of the belt is at all times maintained.

Upon one of said side bars is secured the upright *m*, at the upper end of which a pulley *m'* is mounted, so as to be engaged by an operating-rope *M*, designed to raise and lower the conveyer or hold the same adjacent the end of the vehicle when out of use; but the manner of operating this rope from the vehicle not constituting a part of the present invention need not be specifically pointed out.

Slight changes and alterations in the details of the conveyer above described may obviously be made without in the least departing from the nature and spirit of the invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a mixing apparatus of the character described, the combination with a vehicle, of a power-shaft extending longitudinally beneath said vehicle, a depending bearing secured to said vehicle within which said shaft is journaled, a horizontal plate mounted upon said vehicle beneath the discharge end of the mixer, a vertical bearing depending from said plate, a turn-table supported by said horizontal plate, a king-bolt journaled in said vertical bearing and passing through said horizontal plate and turn-table, meshing gears secured to the power-shaft and lower end of the king-bolt, a stub-shaft journaled upon said turn-table, meshing beveled gears secured to said stub-shaft and the upper end of the king-bolt, a frame pivotally supported by said turn-table, and a conveyer carried by said frame and driven by said stub-shaft, substantially as described.

2. In combination with a mixer or the like, a turn-table thereon, a king-bolt constituting the pivot of said turn-table, a conveyer connected to the turn-table, means for transmitting motion to the king-bolt, means for transmitting motion from the king-bolt to the conveyer and a supporting-casting for the lower portion of the king-bolt, comprising the tu-

bular portion *e'* and the lateral arm or brace *e''*, substantially as described.

3. In a mixing apparatus of the character described, the combination with a support, of a turn-table mounted thereon, a king-bolt pivotally securing said turn-table to said support, brackets secured to the upper surface of said turn-table, a conveyer-frame, a rotatable shaft extending through the lower end of said frame and through said brackets and constituting a pivotal connection between said frame and brackets, a roller beneath the discharge end of the mixer mounted on said shaft, a second roller journaled in the outer end of said conveyer-frame, a conveyer passing around said roller, connections between said king-bolt and a source of power for rotating the former, a stub-shaft rotatably mounted above said turn-table in one of said brackets, meshing gears secured to said king-bolt and said stub-shaft, and means interposed between said stub-shaft and said second roller for driving the conveyer, substantially as described.

4. In a mixing apparatus of the character described, the combination with a support, of a turn-table mounted thereon, a king-bolt pivotally securing said turn-table to said support, brackets secured to the upper surface of said turn-table, a conveyer-frame, a rotatable shaft extending through the lower end of said frame and through said brackets and constituting a pivotal connection between said frame and brackets, a roller beneath the discharge end of the mixer mounted on said shaft, a roller adjustably mounted in the outer end of said frame, an endless conveyer passing around said rollers, a power-shaft operatively connected to said king-bolt for rotating the latter, a stub-shaft rotatably mounted in one of said brackets, meshing gears secured to said king-bolt and stub-shaft, sprocket-wheels secured to said stub-shaft and the roller adjustably mounted in the conveyer-frame, and a sprocket-chain connecting said sprocket-wheels whereby the conveyer is driven, substantially as described.

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

CHESTER T. DRAKE.

Witnesses:

O. PETERSON,  
J. M. WEBER.