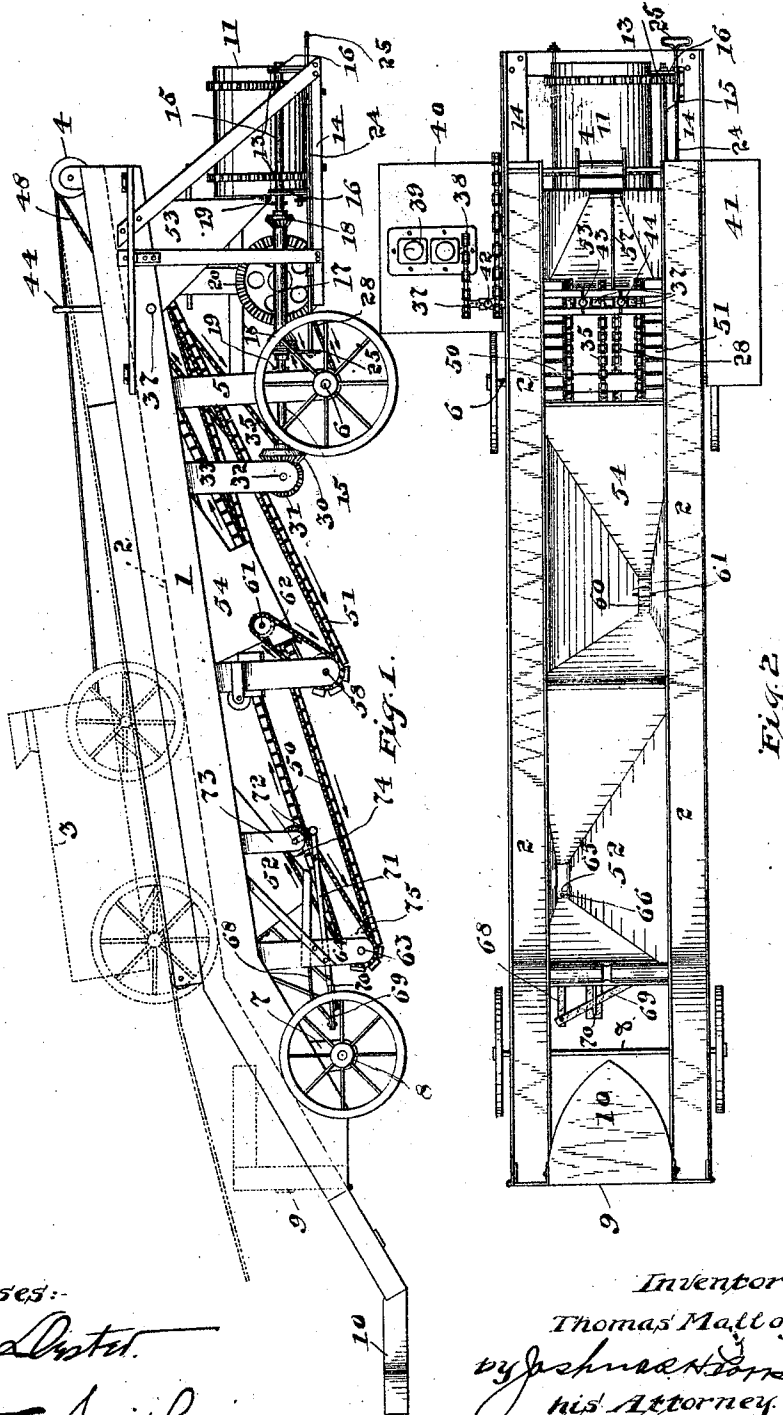


T. MALLOY.
LOADING MACHINE.
APPLICATION FILED MAY 21, 1909.

979,778.

Patented Dec. 27, 1910.



Witnesses:

G. J. Alsted
W. C. Smith

Inventor:

Thomas Malloy
by [signature]
his Attorney.

UNITED STATES PATENT OFFICE.

THOMAS MALLOY, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-THIRD TO JOHN J. GILMAN, OF CHICAGO, ILLINOIS.

LOADING-MACHINE.

979,778.

Specification of Letters Patent. Patented Dec. 27, 1910.

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To all whom it may concern:

Be it known that I, THOMAS MALLOY, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Loading-Machines, of which the following is a specification.

My invention relates to improvements in loading machines adapted for use in conjunction with concrete machines, the object of the invention being to provide a machine of this character that shall be strong and durable in its construction and efficient in its operation.

A further object of my invention is to provide a machine having an inclined track mounted thereon whereby cars containing gravel or sand may be drawn to a position above the hoppers and dumped therein.

Other objects will appear hereinafter.

With these objects in view my invention consists in the novel construction and arrangement of parts which will be hereinafter fully set forth and particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawing forming a part of this specification and in which,

Figure 1 is a side elevation of my improved concrete machine in its preferred form, and Fig. 2 is a top plan thereof.

Referring now to the drawings, 1 designates the frame or body of the machine and 2 the inclined track incorporated therewith up which cars or wagons 3 may be drawn by means of the windlass 4. Riveted to the frame 1 are vertical standards 5, in the lower ends of which the front wheel axle 6 is journaled; and in similar standards 7 the rear wheel axle 8 is journaled. The rear portion 9 of the inclined track 2 is hinged to the main portion thereof and is adapted to fold into the position as shown in dotted lines in Fig. 1 when not in use, the pointed hinged portion 10 serving as a guide to direct the car wheels so that they will properly engage the track when being drawn thereon.

The rotary mixing cylinder 11 of ordinary construction is supported on rollers and on pinions 13 which mesh with gear rings thereon and are adapted to rotate the same, said rollers being rotatably mounted on the

horizontal frame 14 suspended from the frame 1, and the pinions 13 being secured to the driving shaft 15 which is journaled in the bearings 16 provided on said frame. On the driving shaft 15 a sleeve 17 is rotatably and slidably mounted, and on this sleeve the bevel pinions 18 are formed. Each end of the sleeve 17 is bifurcated to engage pins 19 secured in the driving shaft 15, the length of said sleeve being less than the distance between said pins. When the sleeve 17 is in the intermediate or neutral position between the pins 19 there is no engagement of the pinions 18 with any gear, but when said sleeve is moved along on the shaft 15 so that a bifurcated end of said sleeve engages a pin then the bevel pinion at the other end thereof is adapted to engage a driven bevel gear 20 formed on a shaft which is journaled in members secured to the frame 14. In order to slide the sleeve on the shaft 15 a rod 24 having a handle 25 is slidably mounted on the frame 14, and an arm 25' secured to said rod is provided with a bifurcated end adapted to engage a circumferential groove in the sleeve 17. A sprocket provided on the shaft 21 is connected by means of the chain belt 28 to a sprocket on the axle 6. It will now be readily seen that the machine will run in either direction according as to which bevel pinion is in mesh with the gear 20.

A driven bevel gear 30 is formed on the shaft 15 which meshes with and is driven by the bevel gear 31 provided on the shaft 32, the latter being journaled in the hangers 33. A driven sprocket is provided on the shaft 32, and the chain belt 35 traveling on the driving sprocket 36 on the main driving shaft 37 is adapted to drive the sprocket 34. It is clear that the rotary mixing cylinder revolves continuously when the main driving shaft 37 is being driven by the chain 38 which is connected to the gasoline engine 39 provided on the platform 40, the latter projecting from one side of the machine. The hinged platform 41 is provided on the other side of the machine on which the operator may stand for operating the clutch levers 43 and 44. The clutch levers 43 and 44 are adapted to throw the sprockets of the chain conveyers 50 and 51 respectively into or out of operative engagement with the shaft 37 as may be desired by the operator.

The conveyer 50 is adapted to carry gravel from the gravel hopper 52 to the proportional hopper 53, and the conveyer 51 to carry sand from the sand hopper 54 to said proportional hopper having a partition 57. The operator standing on the platform 41 may empty the bags of cement into the proportional hopper as required. By watching the graduations 55 and 56, the operator is enabled to tell when the proper amounts of sand and gravel are in their respective sides of the hopper and thus govern the proportions of the same in the mixture.

The shaft 58 is mounted in hangers 59 depending from the body 1, the conveyer 51, traveling over sprockets provided on said shaft, being adapted to receive sand as it escapes through the bottom of the hopper 54. To regulate the flow of sand on to the conveyer from the hopper 54 a feed regulating wheel 60 is provided adjacent the opening of said hopper, the same being secured to a shaft 61 journaled in and projecting from the hopper. A sprocket 62 is secured to the shaft 61 and is connected by means of a chain to a driving sprocket provided on the shaft 58, the exact position of which sprocket on the latter shaft not being shown.

The shaft 63 is mounted in hangers 64 depending from the body 1, the conveyer 50 traveling over sprockets provided on said shaft being adapted to receive gravel as it escapes through the bottom of the gravel hopper 52. To prevent clogging of the opening in the bottom of the gravel hopper the following means are provided: A reciprocating shutter 65 is mounted to slide across the opening of the hopper, and on said shutter a vertically disposed pin 66 is formed which acts as a shaker when reciprocating to loosen the gravel. The shutter 65 reciprocates in the rectangular guide tube 67 formed integral with the hopper 52, and to said shutter a bar 68 is riveted. This bar is pivoted to a lever 69 which is fulcrumed on the stationary plate 70 and which is oscillated by means of a connecting rod 71 connected thereto and to the crank shaft 72, the latter being journaled in a hanger 73 depending from the body 1. A sprocket 74 is provided on the crank shaft, and it receives its motion from a chain adapted to

travel over the sprocket 75 secured to the shaft 63.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the claims.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a machine of the class described; a wheeled frame; an inclined car track on said frame, each of the members of said track terminating at its lower end in a hinged section adapted to contact with the ground; means for drawing cars onto said track; one or more receiving hoppers located under said track; and means on said hinged sections for directing car wheels onto said track, substantially as described.

2. In a machine of the class described; a wheeled frame; an inclined car track on said frame; means for drawing cars onto said track; one or more receiving hoppers located under said track; and a pointed wheel guide pivoted between the lower ends of said tracks and adapted when in operative position to lie upon the ground and direct car wheels onto said tracks, substantially as described.

3. In a machine of the class described; a wheeled frame; an inclined car track on said frame comprising a pair of parallel members, a hinged section at the lower end of each of said track members adapted to contact with the ground; means for drawing cars onto said track; one or more receiving hoppers located under said track; and a pointed wheel guide connected to and pivoted between the ends of said hinged sections of said tracks and adapted to lie upon the ground and direct car wheels onto said tracks, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS MALLOY.

Witnesses:

JOSHUA R. H. POTTS,
HELEN F. LILLIS.