G. W. LALLY.

POWER TRANSMISSION APPARATUS.

APPLICATION FILED MAY 9, 1912.

1,132,725.

Patented Mar. 23, 1915.

Fig. 1.

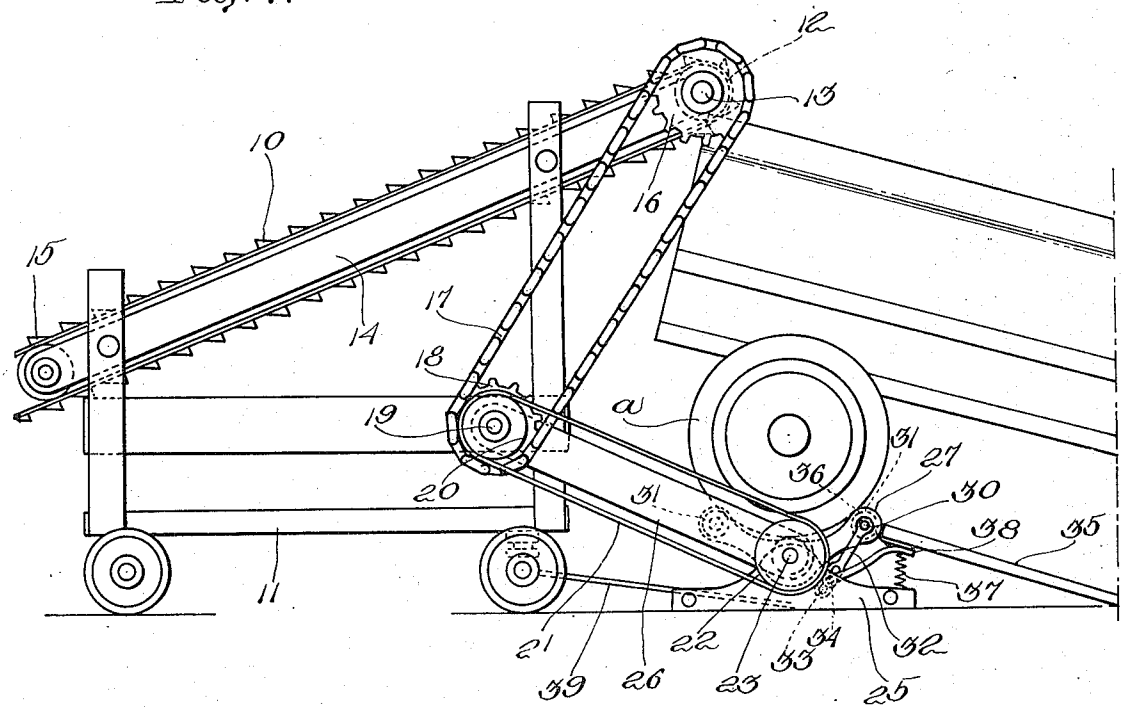
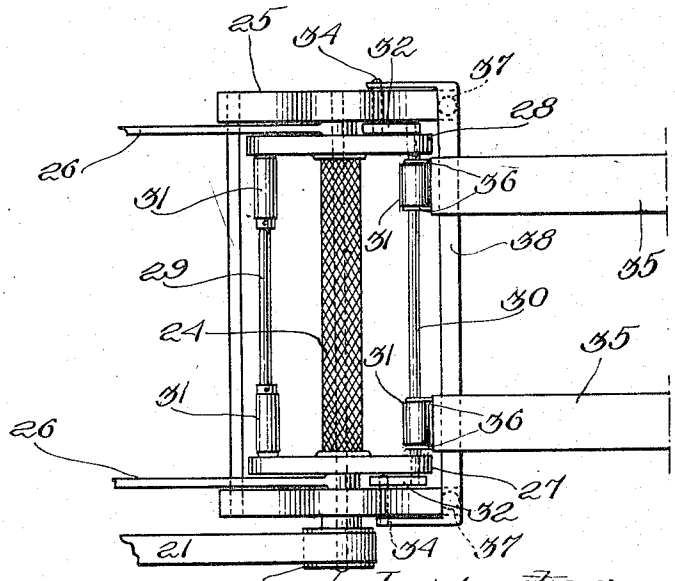


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE W. LALLY, OF BOSTON, MASSACHUSETTS.

POWER-TRANSMISSION APPARATUS.

1,132,725. Specification of Letters Patent. Patented Mar. 23, 1915.

Application filed May 9, 1912. Serial No. 696,137.

To all whom it may concern:

Be it known that I, GEORGE W. LALLY, a citizen of the United States, and resident of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Power-Transmission Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

My invention relates to loading mechanism for automatically filling the bodies of motor trucks and the like with granular, lumpy, or other material, and the novel features consist in improved means for transmitting power from the driving gear of the motor truck for operating the conveyer which delivers the material from the source of supply into the body to be loaded.

Further specific features have to do with improved means for positioning and supporting the wheels of the motor truck in position on a power transmitting drum or the like, where it remains in stable position during the loading operation.

The above, and other features of invention will be better understood from the following detailed description, taken in connection with the accompanying drawings, and will be thereafter pointed out in the appended claims.

Referring to the drawings, Figure 1 is a side elevation showing my improved loader with the rear portion of a motor truck in position to be loaded thereby; and Fig. 2 is a plan view of the yoke frame or cradle which supports the rear wheels of the motor truck.

A loading conveyer is shown at 10 of the endless belt type, mounted on a truck or cart 11 whereon it is carried by a driving drum 12 fast on a shaft 13 journaled in the upper end of inclined bars 14 carried by the cart, these bars having at their lower ends another drum 15 for supporting the lower portion of the conveyer belt. The conveyer 10 may be of any usual or desired type, being shown as provided with a series of ordinary lifting buckets. The shaft 13 has fast thereon at one end a sprocket wheel 16 engaged by a sprocket chain 17 which also engages a lower sprocket wheel 18 fast on a shaft 19 journaled on the cart, this shaft also having fixed thereto a driving pulley 20. The pulley 20 has driving impulse imparted thereto by a belt 21 passing around the same and around a pulley 22 fast on a shaft 23, which has fixed thereto a drum or roller 24 shown as roughened or corrugated upon which the rear wheels of the motor truck are adapted to rest. The shaft 24 is journaled in a base block or frame 25, and this is held in definite spaced relation to the cart 11, so that the distance between the shafts 19 and 23 remains constant by means of bars 26 fitting and swinging on said shafts at the ends thereof; this construction insuring a proper driving relation between the pulleys 20, 22 and the belt 21. The shaft 23 also has swingingly mounted adjacent its ends within the base frame 25, yoke members 27, 28 bent so as to extend upward at opposite sides of the shaft 23 and having their ends connected by rods or shafts 29, 30 with rollers 31 at their end portions. The shaft 30 has fitted thereto at one or both ends links 32 having elongated slots 33 at their lower ends within which stop pins or rods 34, secured to the base frame 25, are fitted. The purpose of these links is to permit the requisite yielding and self-adjustment of the yoke members with the shafts 29, 30, this tilting movement being limited by the length of the slots 33, so that not enough tilting to permit the motor truck wheels to escape inadvertently by the dropping down of the yoke is allowed.

As seen in Fig. 1, the yoke members 27, 28 normally hold the shafts 29, 30 with their rollers 31 in a generally horizontal position, with the rollers 29, 30 some little distance above the driving roller or drum 24, thus making a kind of cradle within which the motor truck wheels *a* fit in position substantially straight over and resting directly down upon the roller 24. As a means for permitting the motor truck to be backed upon the yoke support, so that its wheels rest in driving relation to the drum 24, I provide skids 35 to reach from the ground up to the adjacent side of the yoke frame, the upper ends of these skids being shown as provided with hooks 36 for engaging over the shaft 30. Suitable springs 37 are interposed between the base frame 25 and a bar 38 mounted on swinging arms and in position to engage the upper end of the skid 35 from beneath. The yoke frame or cradle, composed of the yoke members 27, 28 with their connecting rods 29, 30 and coöpera-

tive parts is thus adapted to be depressed at the side with which the skids 35 are engaged so that as the motor truck is backed on to said skids it will pass easily from the same over the rollers on the rod 30 and into position resting on the drum 24, the springs 37 being of a proper tension to yield for this purpose, and thereafter react to swing the yoke frame back to normal position wherein the rollers 31 and the oppositely disposed rods 29, 30 guide and center the truck wheels substantially straight over the drum 24, where they are in position for most effective coöperation therewith.

The cart or loader truck 11 may have a tongue 39 or other suitable means for moving and directing the same, the yoke frame base 25 and parts carried thereby being at this time either disconnected or swung up on the radius bars 26 to be supported by the cart out of the way.

The loading mechanism thus provided is especially valuable and advantageous in that it provides means for positioning the motor truck in loading position relative thereto conveniently and easily and without requiring any special care for the purpose. The power connections for operating the loading conveyer from the driving wheels of the motor truck is simple, direct and positive, so that there is a minimum of loss of motive power and the loading conveyer is in most convenient position for receiving the load, while the inclined position of the motor truck with its rear wheels elevated on to the yoke frame makes the disposition of the load as delivered into the elevated rear end of the body an easy one for filling all parts of the body as the material will, of course have a tendency to move toward the front of the body by gravity.

Various of the details of construction may be varied without departing from the spirit of the invention, and I therefore do not desire to be limited as to these or in any other details, except as set forth in the claims.

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

1. Power transmission mechanism of the kind described, adapted to receive driving impulse from a wheel of a motor vehicle, comprising a movable support, a rotatable member carried thereby arranged to support the vehicle wheel thereon, a cradle pivoted substantially concentric with the rotatable member, and having anti-friction means to engage the vehicle wheel and maintain it in vertical operating position on said member, and means to limit the movement of the cradle.

2. Power transmission mechanism of the kind described, adapted to receive driving impulse from a wheel of a motor vehicle, comprising a movable support, a rotatable member carried thereby arranged to support the vehicle wheel thereon, and a cradle pivoted substantially concentric with the rotatable member, and having anti-friction means to engage the vehicle wheel at a plurality of points and maintain it in vertical operating position on said member.

3. An apparatus of the kind described, comprising a driving roller mounted for supporting truck wheels, a yoke frame carrying guide rollers normally elevated above said driving roller at either side thereof, said yoke frame having spring means acting thereon to hold it in normal position, said spring means being yieldable to permit the yoke frame to swing downward at one side for the movement of the truck wheels to operative position, and skids arranged to guide the truck wheels to operative position within said yoke frame.

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

GEORGE W. LALLY.

Witnesses:
CLYDE L. ROGERS,
R. G. HERSEY.