

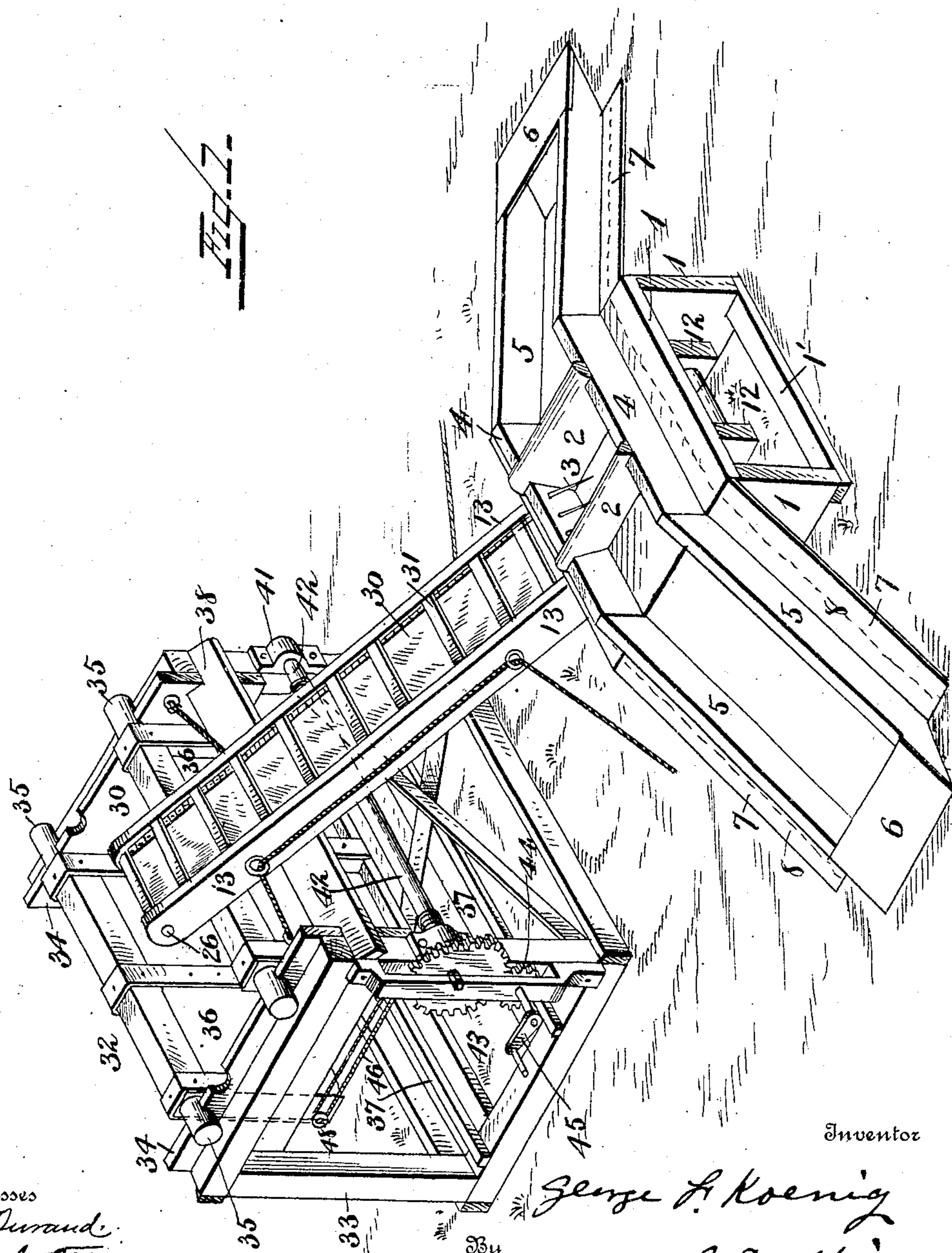
No. 786,501.

PATENTED APR. 4, 1905.

G. F. KOENIG.
MACHINE FOR LOADING MANURE.

APPLICATION FILED JUNE 11, 1904.

3 SHEETS—SHEET 1.



Witnesses
J. L. Durand
C. E. Troth

Inventor
George F. Koenig
John S. Duffie
Attorney

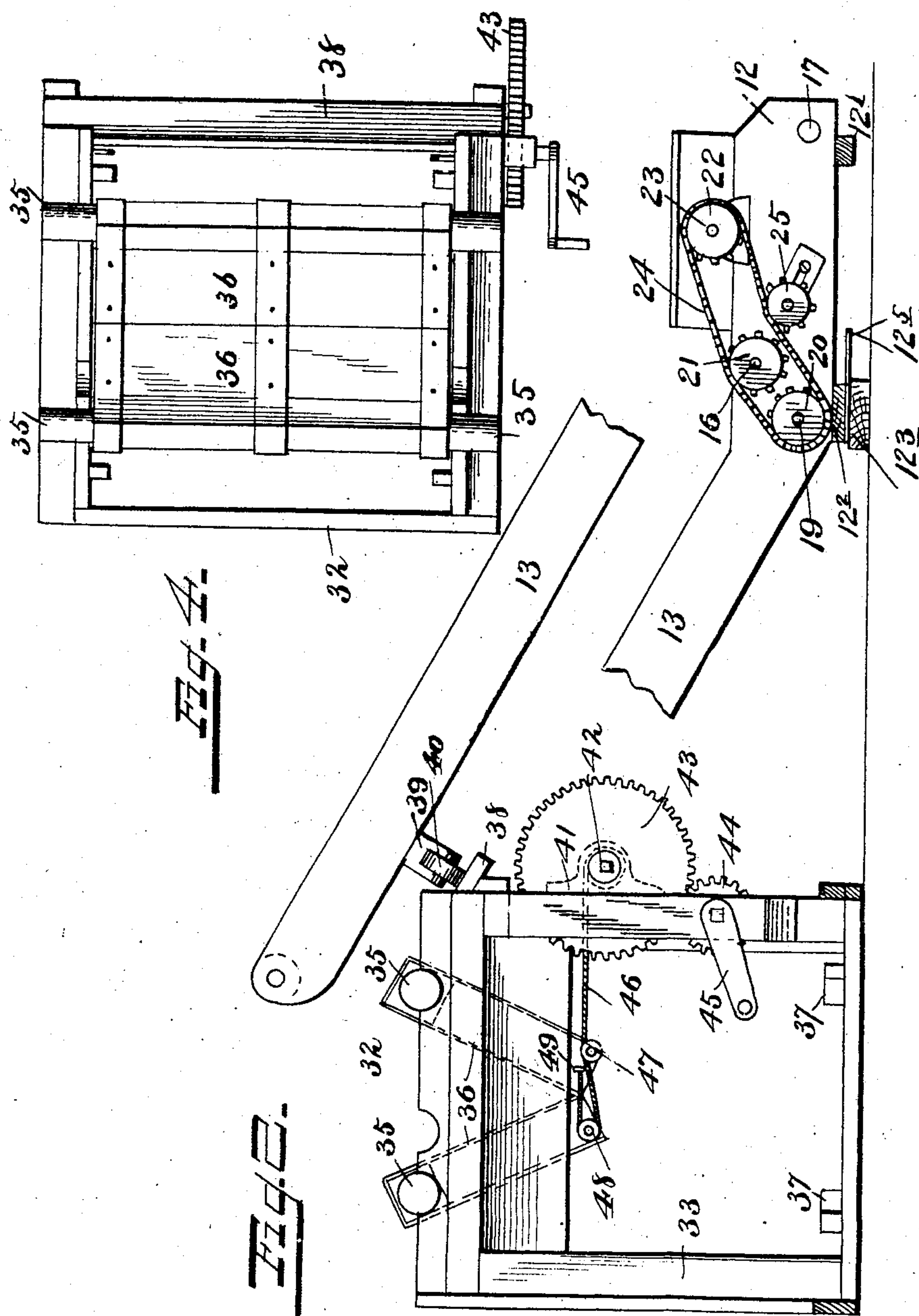
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Witnesses
F. L. Orvand
Belle S. Trott.

Inventor
George H. Kaenig
By John S. Duffie
Attorney

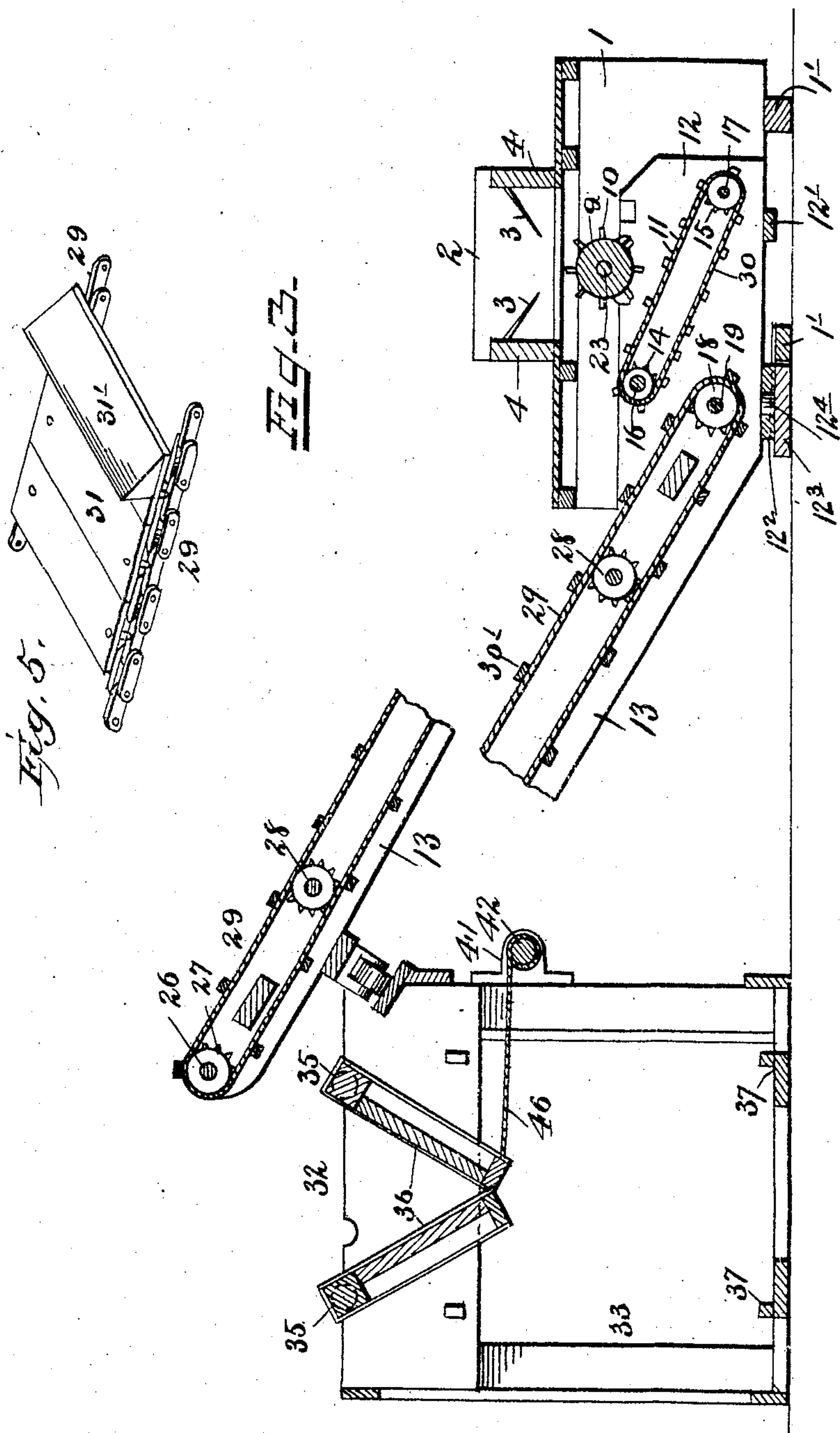
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3 SHEETS—SHEET 3.



Witnesses
J. L. Olmstead
Belle C. Trott.

Inventor
George F. Koenig
By James Dwyer
Attorney

UNITED STATES PATENT OFFICE.

GEORGE F. KOENIG, OF LESUEUR, MINNESOTA.

MACHINE FOR LOADING MANURE.

SPECIFICATION forming part of Letters Patent No. 786,501, dated April 4, 1905.

Application filed June 11, 1904. Serial No. 212,160.

To all whom it may concern:

Be it known that I, GEORGE F. KOENIG, a citizen of the United States, residing at Lesueur, in the county of Lesueur and State of Minnesota, have invented certain new and useful Improvements in Machines for Loading Manure on a Wagon or Manure-Spreader; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention is a machine for loading manure on a wagon or manure-spreader, and though it is primarily intended for that purpose it may be used for other similar purposes.

It consists of a receiving-hopper, track for conveying the manure to the hopper, elevator for carrying the manure to the dump, a dumping device having a wagon-track, and dumping-blades.

In the accompanying drawings, Figure 1 is a perspective of my invention. Fig. 2 is an end elevation of the dumping device and a side elevation of the elevator. Fig. 3 is a vertical section of the machine. Fig. 4 is a top view of the dumping device. Fig. 5 is a perspective view of a section of the carrying-apron.

My invention is described as follows:

The numeral 1 represents the hopper-frame, substantially rectangular, on which is mounted the hopper. 2 is the hopper, mounted on the top of said frame. 3 represents guide-pins which guide and direct the manure to a roller below, hereinafter described. On the top of the said hopper-frame are secured track-rails 4. The ends of the side walls of the hopper are let into these track-rails. These track-rails are sufficiently high to prevent the horses from stepping over them into the hopper. Extending downwardly from these track-rails 4 and on each side of the hopper and corresponding with said track-rails are other track-rails 5. The lower ends of these track-rails are sloped upwardly, and the upper edges of the rail are faced with planks or metal sheets, so that they may fit snugly to the

ground and make an easy starting-point for the scoops to start up the track. The scoops are made so that they may run up the tracks easily and not slide off and that they may dump the manure in the hopper and pass on down the other side, or the said scoops may be run up on little trucks constructed for that purpose. Each one of these trackways is provided with a floor 7, secured to the lower edges thereof. These floors, in connection with the hopper-frame, furnish trackways for the team, as indicated by the dotted lines 8.

Journaled in the parallel portion of the elevator-frame 13 immediately under the hopper is a feed-drum 9, which is provided around its periphery with projecting pins 10, and under said feed-drum are two sprocket-chains 11, one on each side on the inside of the horizontal portion 12 of the elevator-frame 13. These sprocket-chains 11 are carried by small sprocket-wheels 14 and 15, secured on axles 16 and 17. These axles are also journaled in the horizontal portion of the elevator-frame.

Journaled in the lower end of the inclined portion of the elevator-frame 13 are two sprocket-wheels 18, one against each of the inner faces of the inclined beams of said elevator-frame. These sprocket-wheels are secured on a shaft 19. One end of this shaft is square, and to this square end is secured the driving power of the machine, and to the other end of said shaft is secured a sprocket-wheel 20, and corresponding thereto and secured on the end of the shaft 16 is another sprocket-wheel 21. Corresponding to these two sprocket-wheels 22 and 21 is another sprocket-wheel 22, journaled on the shaft 23, which carries the feed-drum 9. (See Fig. 3.) Working around these three sprocket-wheels 20, 21, and 22 is a sprocket-chain or a perforated band 24. Working on a line with these sprocket-wheels just described is a band-tightener 25.

Journaled in the upper end of the side beams of the elevator-frame is a shaft 26, and on each end of said shaft and against the inner faces of said side beams are rigidly secured sprocket-wheels 27. Journaled to the inner faces of said side beams at intervals and on a line with

the sprocket-wheels 18 and 27 are sprocket-wheels 28. Working on the sprocket-wheels 18 and 27 are sprocket-chains 29. As the power revolves the shaft 19 it also rotates the sprocket-wheels 18 and 20. The sprocket-wheel 20 thereby moves the perforated belt 24, which in turn revolves the sprocket-wheels 21 23 and the sprocket-wheel of the band-tightener 25.

The rotation of the shaft 19 and the consequent rotation of the sprocket-wheels 18 moves the sprocket-chains 29, which passing around the sprocket-wheels 27 also move them.

The sprocket-chains 11 and 29 have secured to them carrying-aprons 30 and 30', respectively consisting of slats 31 and flanges or buckets 31'.

The upper end of the elevator-frame 13 rests against the dumping device 32. This dumping device consists of a rectangular framework 33. Each end of the frame is lined its entire width and running down for some portion of its height with linings 34. Hinged in these linings 34 are bearing-beams 35. Extending from these bearing-beams and hanging downwardly are dumping-blades 36, properly braced and strengthened. Secured on the bottom of said dumping device 32 is a wagon-track 37.

The lower sides of the hopper-frame 1 are secured together by braces 1', and the lower edges of the horizontal part of the elevator are held together by braces 12' and 12". The forward brace 12" rests on a foundation cross-beam 12³, which is pivoted to the said cross-beam 12² by a pin 12⁴, and the foundation cross-beam 12³ is secured to the cross-brace 1' by straps 12⁵.

On one side of the dumping-frame is secured a track 38, and extending from the lower face of the elevator-frame is a bearing 39, in which is journaled a roller 40. This roller runs upon the said track 38, the purpose of which may be well understood without explanation. Under the said track 38, secured in bearings 41, is a winding-shaft 42. On one end of this winding-shaft is secured a cog-wheel 43, which meshes with a smaller cog-wheel 44, hinged to said dumping-frame and operated by a crank-arm 45. Secured to each end of the winding-shaft 42 is a cord 46, which passes over pulleys 47, in the ends and near the lower edge of one of the dumping-blades and around pulleys 48, in the ends and near the lower edge of the other dumping-blade, thence back, and secured to a staple 49, in the end of the first-mentioned dumping-blade, and consequently when the crank-arm 45 is turned to the right the dumping-blades are permitted to open and drop their manure into the wagon below, but when turned to the left the blades are closed at the lower edges and hold the manure until it is ready to be deposited. Thus the oper-

ation of collecting the manure and depositing it in the dumping device may be going on while the wagon is out distributing the same.

The operation of the device may be briefly described as follows: The manure is collected by the scoops, carried up the track, dumped into the hopper, thence thrown by the feed-drum on the carrier 30, attached to the sprocket-chains 11, thence to the elevator-carrier and dumped into the dumping device, and then it is dumped from the dumping device into the wagon of the manure-distributor.

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

1. In a machine for loading manure on wagons, the combination of a hopper-frame 1, substantially rectangular; a hopper secured on the top of said hopper-frame, provided with guide-pins 3; track-rails 4, secured on the top of said hopper-frame; track-rails 5, corresponding with said rails 4, and reaching to the ground on either side of the hopper-frame; floor 7, secured to the lower edges of said track-rails 5; an elevator-frame having a horizontal part 12, resting in said hopper-frame, and an inclined part 13, resting against the dumping device 32; a feeding device, consisting of a drum 9, sprocket-chains 11, and carrying-apron 30, working on sprocket-wheels 14 and 15 of said elevator; sprocket-wheels 18, 27, and 28, sprocket-chains 29, and carrying-apron 30', working in the inclined part of said elevator, and adapted to dump material carried by said carrying-apron, substantially as shown and described and for the purposes set forth.

2. In a machine for loading manure on a wagon, the combination of a rectangular frame having its end walls lined for part of the way down with lining material 34; bearing-beams 35, hinged in the upper edge of said linings; dumping-plates 36, secured to the said bearing-beams; a winding-shaft 42, journaled on one side of said frame; a cog-wheel 43, secured on one end of said shaft; a smaller cog-wheel 44, journaled to said frame and meshing with said cog-wheel 43; cords 46, secured to said winding-shaft, passing thence over a pulley 47, secured to the lower edge of one of the dumping-blades, thence over pulley 48, secured to the other dumping-blade, thence back and secured to the first-mentioned dumping-blade, said dumping device provided with a wagon-track 37, and a roller-track 38, substantially as shown and described and for the purposes set forth.

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

GEORGE F. KOENIG.

Witnesses:

JOHN A. ANDEREGG,
ORA J. PARKER.