No. 858,813. PATENTED JULY 2, 1907.

J. F. LOOS.

COMPOST SPREADER.

APPLICATION FILED FEB. 23, 1907.

3 SHEETS—SHEET 1.

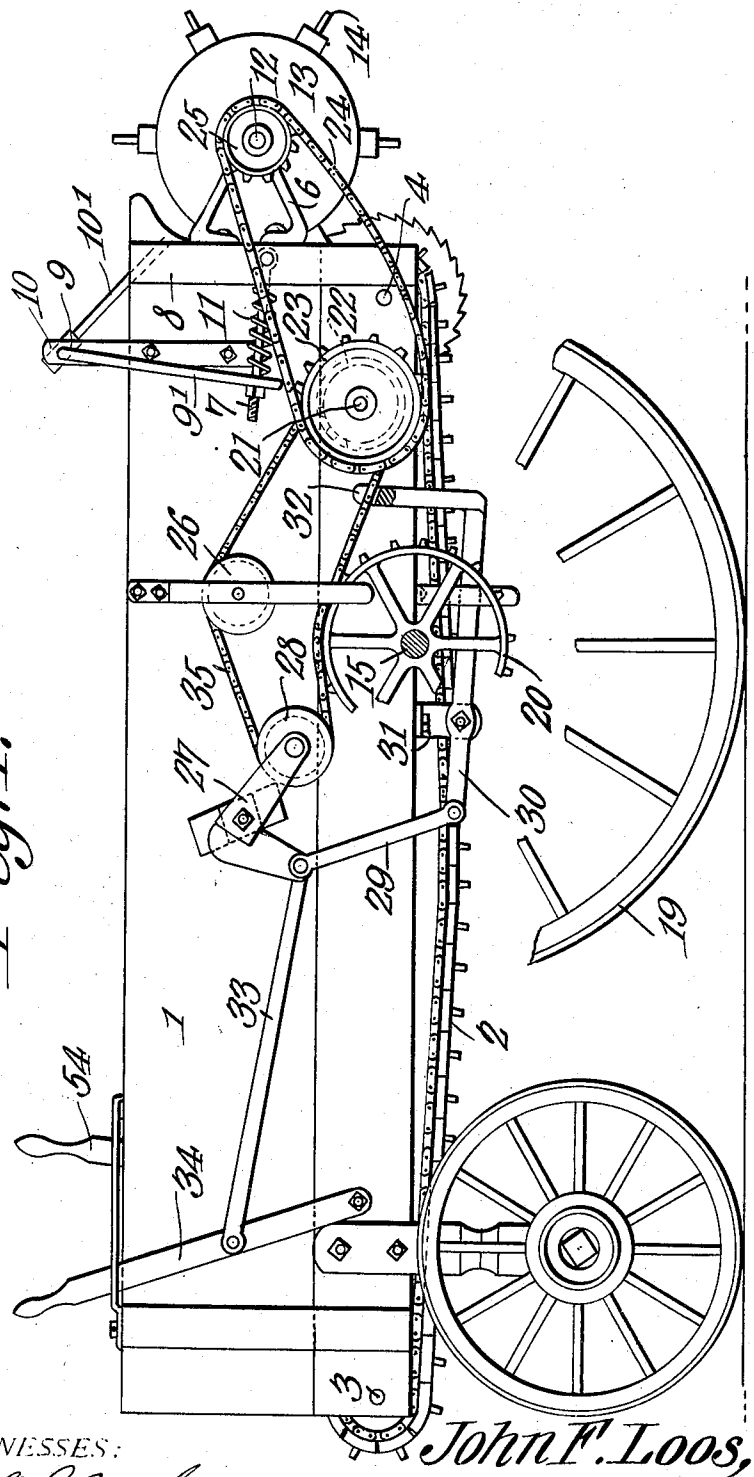


Fig. 1.

WITNESSES:

E. F. Stewart

C. Bradway.

John F. Loos, INVENTOR.

By C. A. Snow & Co.

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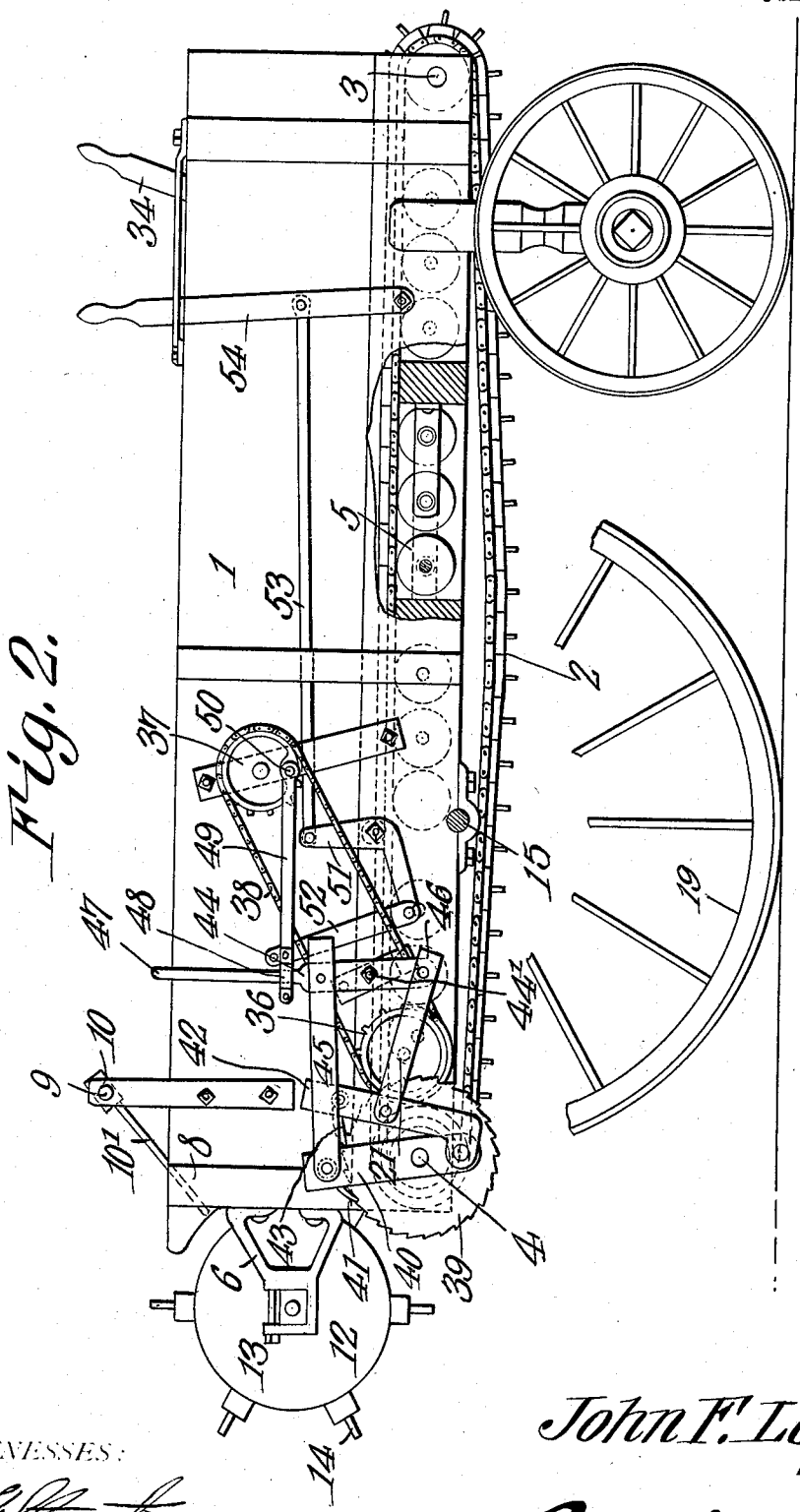
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3 SHEETS—SHEET 2.

Fig. 2.



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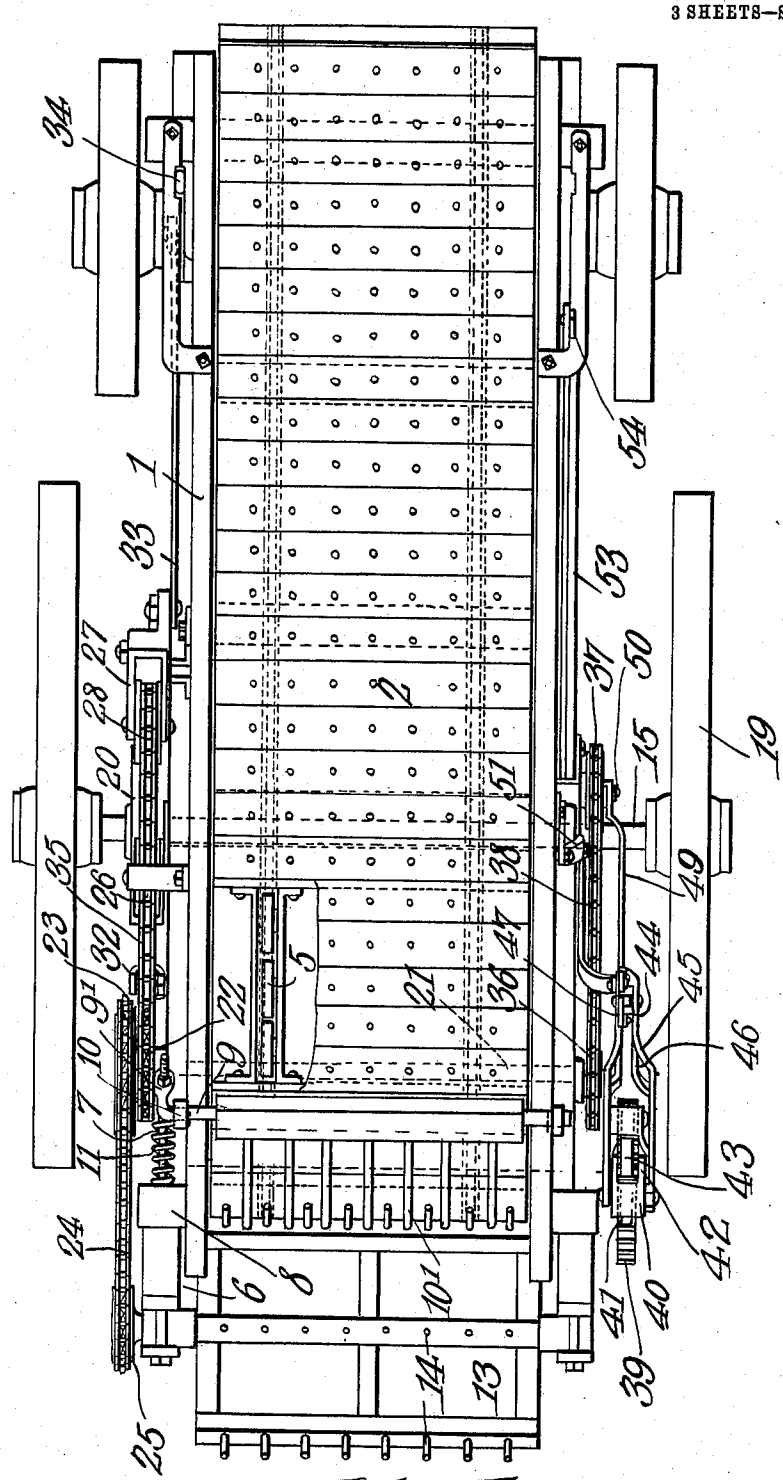
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3 SHEETS—SHEET 3.

Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN F. LOOS, OF NASHUA, IOWA.

COMPOST-SPREADER.

No. 858,813. Specification of Letters Patent. Patented July 2, 1907.

Application filed February 23, 1907. Serial No. 358,882.

To all whom it may concern:

Be it known that I, JOHN F. LOOS, a citizen of the United States, residing at Nashua, in the county of Chickasaw and State of Iowa, have invented a new and useful Compost-Spreader, of which the following is a specification.

This invention has relation to compost spreaders and it consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide a spreader in the form of a wagon body adapted to rest upon the running gear of a wagon, said body having in its bottom an endless conveyer which moves longitudinally and at its rear end a cylinder journaled for rotation. Means is provided for moving the conveyer and the cylinder which means is operated by the rotation of one of the wheels of the wagon through connecting means provided therefor. Means is also provided for permitting the conveyer to move intermittently and at two different rates of speed and means is provided for throwing the conveyer and cylinder out of gear simultaneously.

In the accompanying drawing:—Figure 1 is a view of the spreader with parts broken away. Fig. 2 is an elevation of the opposite side of the spreader with parts broken away, and Fig. 3 is a top plan view of the spreader.

The spreader comprises the body 1 which is provided in its bottom with the endless conveyer 2 which passes around the shaft 3 journaled at the forward end of the body 1 and the shaft 4 journaled at the rear end thereof. Said conveyer may be of any usual construction, such for instance, as sprocket chains carrying cross slats which in turn are provided with upstanding pins. The rollers 5 are journaled between the upper and lower sides of the said conveyer and support the upper sides thereof against the weight of the load. The brackets 6 are located at the rear end of the body 1. The shaft 9 is journaled in the uprights 10, which in turn are attached to the sides of the body 1. One end of said shaft extends down as at 9′ and is perforated and receives the rod 7. The coil spring 11 is interposed between the upright 8 and the depending end 9′ of the shaft 9 and is under tension to keep the said end away from the said upright. The shaft 9 is provided with a number of fingers 10′. The shaft 12 is journaled in the brackets 6 and the cylinder 13 is mounted upon the said shaft and is provided with the radially extending pins 14.

The axle 15 is journaled under the body 1 and extends transversely thereof. The axle 15 is provided with a sprocket wheel 20. The shaft 21 is also journaled at the bottom of the body 1 and extends transversely thereof. The sprocket wheel 22 is fixed to the shaft 21 in alinement with the sprocket wheel 20. The sprocket wheel 23 is also fixed to the shaft 21 and the sprocket chain 24 passes around the sprocket wheel 23 and the sprocket wheel 25, which latter is fixed to the shaft 12. The idle sprocket wheel 26 is journaled upon the side of the body 1 above the wheel 20. The rocker 27 is pivoted to the side of the body 1 and is provided at one end with the journaled idle sprocket wheel 28. The link 29 is pivoted to the opposite end of said rocker and the lever 30 is pivoted to the said link. The said lever is fulcrumed upon the depending lug 31 carried by the body 1. The working end of the said lever is provided with a notch or recess 32 which lies and operates between the sprocket-wheels 20 and 22 for the purpose hereinafter set forth. The rod 33 is pivoted to the rocker 27 and link 29 at the point where the last said parts are pivoted together. The forward end of the said rod is pivoted to the ratchet lever 34 which in turn is fulcrumed at or near the forward end of the body 1. The chain 35 passes around the sprocket wheel 22, idler 26, idler 28 and lies over the upper portion of the sprocket wheel 20 and also lies within the recess 32 provided at the working end of the lever 30.

The mechanism above described is for rotating the cylinder 13 and also for throwing the same out of gear. When the cylinder 13 is rotating the upper end of the lever 34 is disposed toward the front, consequnetly the lower end of the rocker 27 and the upper end of the link 29 will be disposed in a forward direction and at an angle to each other and the upper end of the said rocker 27 will be inclined downwardly and rearwardly. Consequently, the sprocket idler 28 will lower the lower portion of the chain 35 into engagement with the teeth of the sprocket wheel 20 at the upper side thereof. Thus, the said chain 35 will derive movement from the wheel 20 which in turn is actuated through shaft 15 and ground wheel 19 as the wagon is moved over the surface thereof. The movement of the chain 35 rotates the shaft 21 through the sprocket wheel 22. Consequently the sprocket wheel 23 also rotates, which through the chain 24 rotates the sprocket wheel 25 upon the shaft 12. Thus the cylinder 13 is rotated. At the same time that the lower end of the rocker 27 is moved forward as above described, the link 29 is moved longitudinally slightly which movement draws up the power end of the lever 30 and lowers the working end thereof so that the chain 35 may pass through the recess 32 without interference.

When the free end of the lever 34 is moved to the rear the operation above described is reversed and the idle sprocket wheel 28 is elevated and the working end of the lever 30 is also elevated and the chain 35 is lifted out of engagement with the teeth of the sprocket wheel 20. Consequently the said sprocket wheel continues to rotate but the shaft 21 and its connections cease to rotate or move and remain relatively stationary.

The sprocket wheel 36 is fixed to the opposite end of the shaft 21 from the sprocket wheel 22. The sprocket wheel 37 is journaled to the side of the body 1 in alinement with the sprocket wheel 36. The sprocket chain 38 passes around the wheels 36 and 37. The ratchet wheel 39 is fixed to the shaft 4, upon the same side of the body 1 as the wheels 36 and 37. The lever 40 is fulcrumed upon the shaft 4 and is provided at its upper end with a pawl 41 for engagement with the ratchets of the wheel 40. The lower end of the lever 42 is pivoted to the lower end of the lever 40 and the upper end of said lever 42 is provided with a pawl 43, also for engagement with the ratchets of the wheel 39. The lever 44 is fulcrumed to the side of the body 1 at 44′ and the link 45 connects the lever 44 upon one side of the fulcrum point thereof with the upper portion of the lever 40 while the link 46 connects the lever 44 upon the opposite side of the fulcrum thereof with the upper portion of the lever 42. The upper end of the lever 44 is provided with an extension 47 which passes through a loop or eye 48 provided in the pitman 49. The opposite end of said pitman is journaled upon a wrist pin 50 located upon the side of the wheel 37. The rocker 51 is pivoted upon the side of the body 1 and the link 52 connects one end of the said rocker with the pitman 49 and the rod 53 connects the opposite end of said rocker 51 with the ratchet lever 54 which is journaled at or near the forward end of the body 1.

As the shaft 21 rotates as above described the wheel 36 rotates and the chain 38 is moved longitudinally. The said chain 38 rotates the wheel 37 which reciprocates the pitman 49 and oscillates the lever 44 upon its fulcrum. Said lever 44 moves the links 45 and 46 simultaneously in opposite directions which movement works the upper ends of the levers 40 and 42 simultaneously in opposite directions, consequently, when the pawl 41 is in engagement with the ratchets of the wheel 39 and actuating the same the pawl 43 is not and vice versa. Thus the shaft 44 through the ratchet wheel 39 is rotated intermittently and the conveyer 2 moves longitudinally correspondingly. Means for regulating the extent of such movement is provided which means embraces the parts 51, 52, 53 and 54 cooperating with the pitman 49. By the manipulation of the lever 54 the rod 53 is moved longitudinally which turns the rocker 51 upon its pivot and moves the link 52 longitudinally which raises or lowers the eye 48 of the pitman 49. Thus the extent of the movement of the lever 44 is regulated according to the distance from the fulcrum thereof that the eye 48 engages the extension 47 thereof and the links 45 and 46 move correspondingly as do also the levers 40 and 42 and thus through the ratchet wheel 39 and shaft 4 the conveyer 2 is moved intermittently at a greater or less degree.

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

1. A compost spreader comprising a body, a conveyer mounted for movement therein, a driven axle mounted for rotation upon the body, a sprocket wheel mounted upon said axle, means for operating the conveyer, a sprocket chain engaging said means and lying over the sprocket wheel upon the driven axle and means for engaging said chain at opposite sides of the sprocket wheel for lifting the said chain out of engagement with said wheel.

2. A compost spreader comprising a body, a conveyer mounted for movement therein, a means for moving said conveyer, a sprocket-chain operating said means, a driven axle journaled upon the body, a sprocket wheel attached to said axle and lying under said chain, a rocker pivoted upon the body, a link pivoted to said rocker, a lever fulcrumed to the body and having its power end pivoted to said link and its working end located for engagement with said chain upon one side of said sprocket-wheel, said rocker carrying an idle sprocket-wheel which is located upon the opposite side of the first said sprocket-wheel and around which said chain passes and a lever mechanism for moving the rocker and links simultaneously.

3. A compost spreader comprising a body, a conveyer mounted for movement therein, a driven axle journaled upon the body, a means for transmitting movement from said driven axle to said conveyer, said means comprising in part a shaft around which the conveyer passes, a ratchet wheel attached to said shaft, a lever fulcrumed to said shaft and having a pawl for engagement with said ratchet-wheel, a second lever pivoted to the first said lever and having a pawl for engagement with the ratchet wheel, a third lever fulcrumed to the body and having links which connect the portions thereof lying on opposite sides of the fulcrum point with the upper portions of said pawl carrying levers, the said third lever having an extension, a pitman having an eye which receives said extension, the opposite end of said pitman being pivoted to a wheel journaled for rotation upon the body, a rocker pivoted upon the body, means for moving said rocker and a link connecting said rocker with said pitman in the vicinity of the eye thereof.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN F. LOOS.

Witnesses:
W. F. GETSCH,
R. F. WENTWORTH.