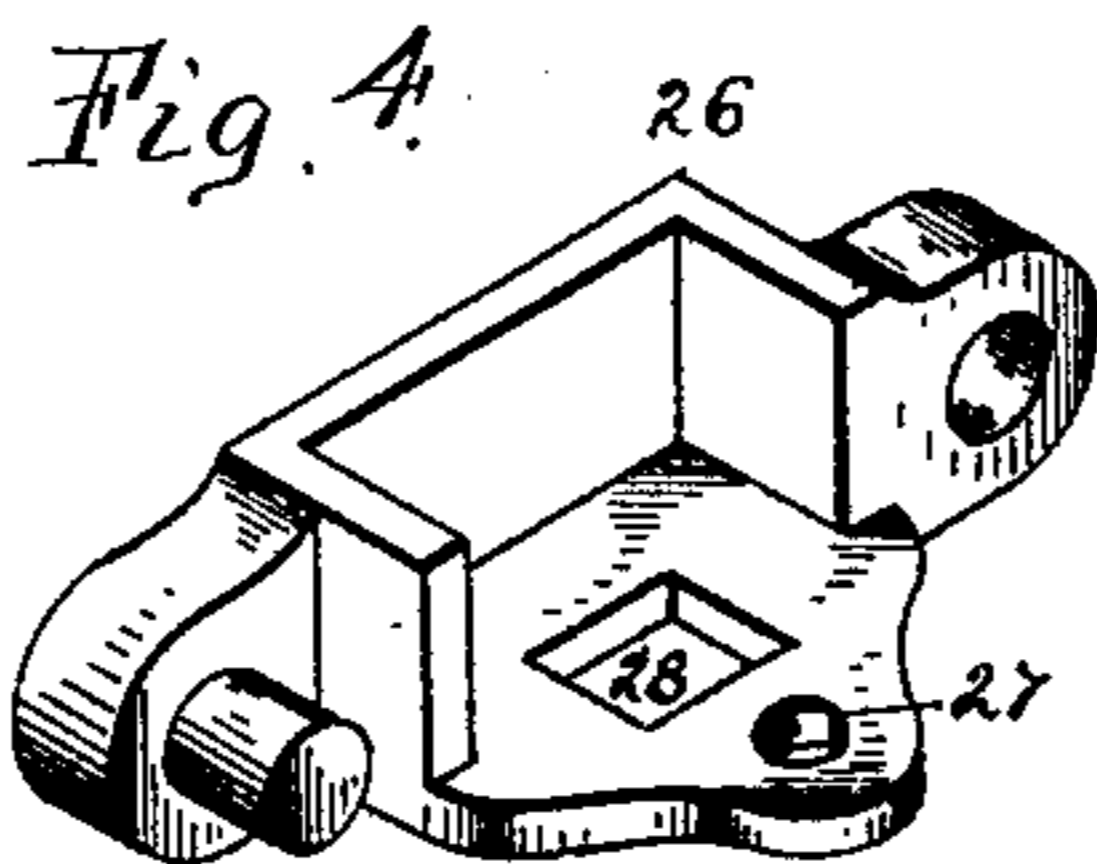
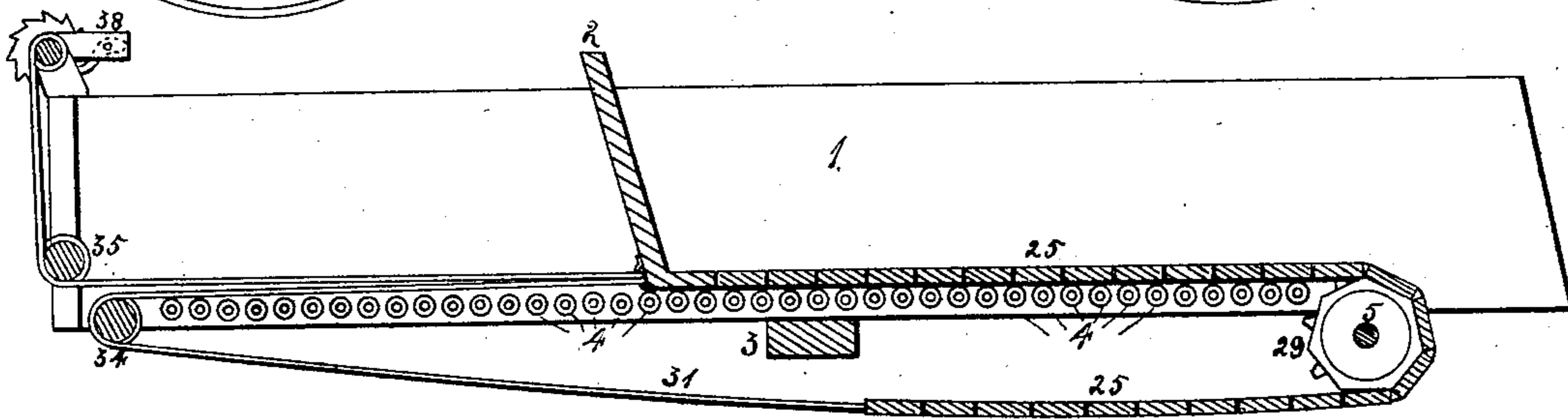
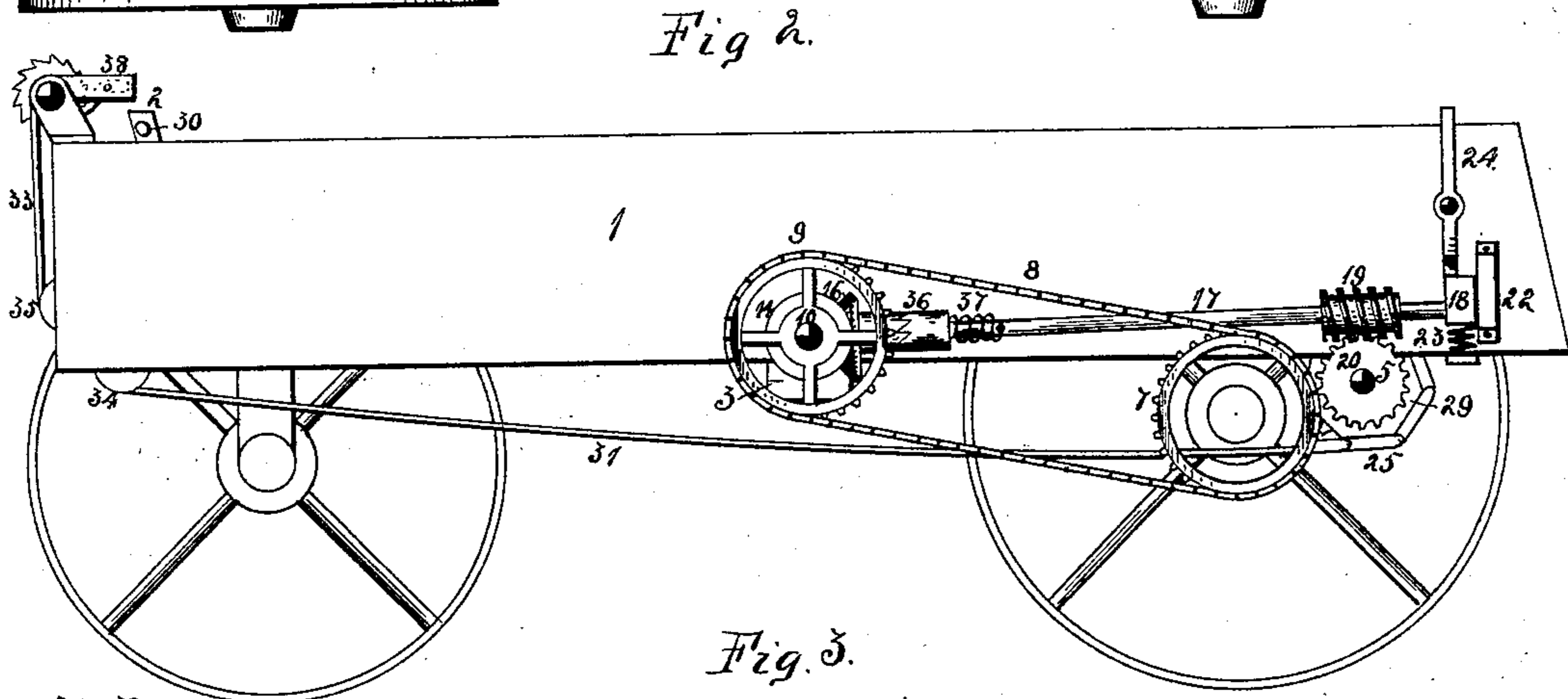
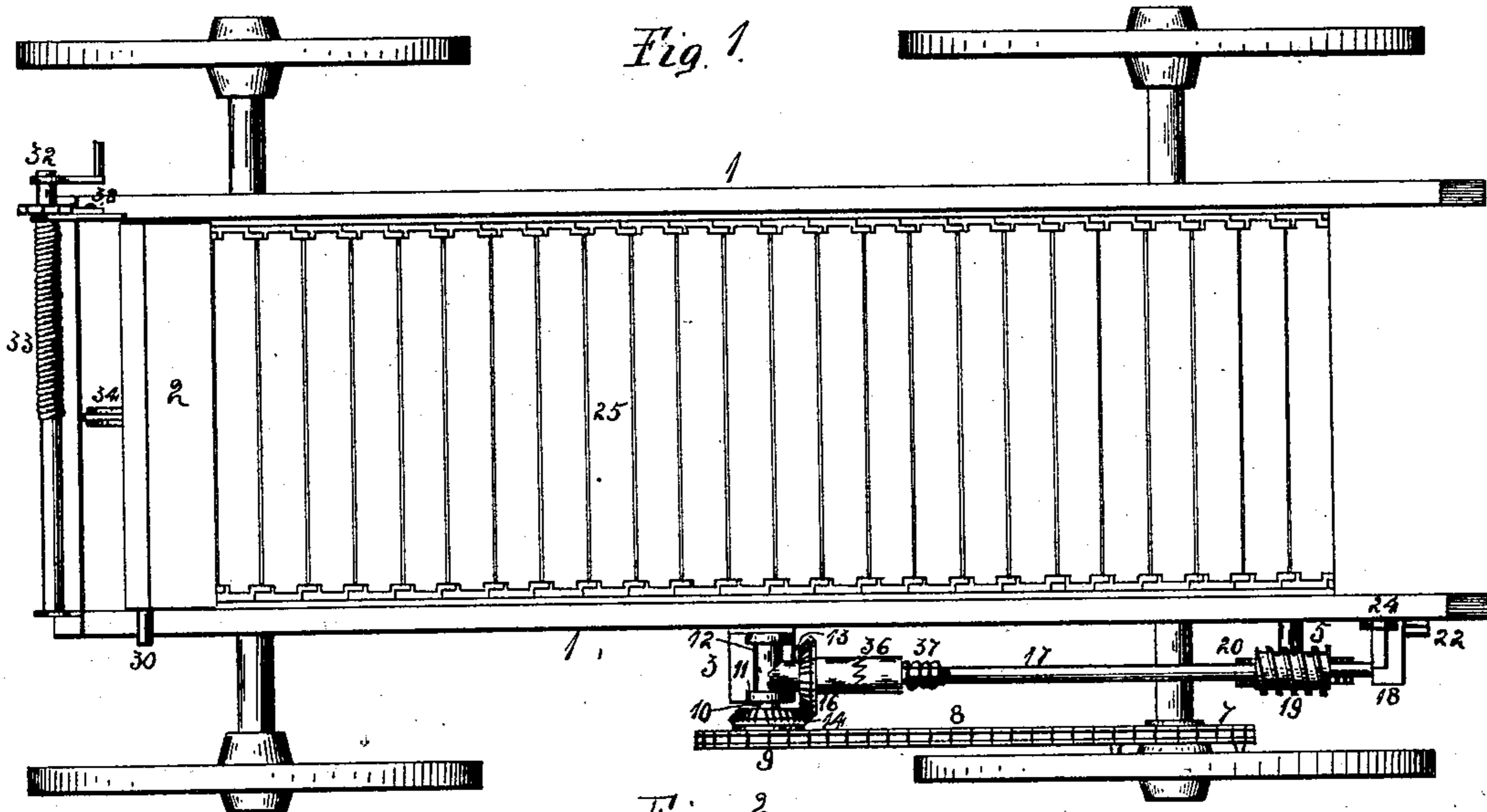


(No Model.)

W. COMPTON.
MANURE SPREADER.

No. 482,785.

Patented Sept. 20, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

WHITEFIELD COMPTON, OF ROCKFORD, ILLINOIS.

MANURE-SPREADER.

SPECIFICATION forming part of Letters Patent No. 482,785, dated September 20, 1892.

Application filed April 12, 1892. Serial No. 428,914. (No model.)

To all whom it may concern:

Be it known that I, WHITEFIELD COMPTON, a citizen of the United States, residing at Rockford, county of Winnebago, State of Illinois, have invented certain new and useful Improvements in Manure-Spreaders, of which the following is a specification.

The object of this invention is to construct a manure-spreader adapted to the running-gear of any wagon, wherein a movable box-bottom is fed backward and the manure in the box scattered upon the ground.

In the accompanying drawings, Figure 1 is a plan view of my manure-spreader. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical longitudinal section showing the rollers upon which the platform runs. Fig. 4 is an isometrical representation of one of the connecting-brackets of the slats composing the movable platform.

In the construction of this manure-spreader I provide a wagon-box of ordinary dimensions, having the sides 1, a board connecting the forward ends thereof, a movable platform answering for the bottom of the box, the forward end-board 2, secured to the movable platform, and underneath the whole a cross-beam 3, holding the sides in their relative positions.

Two series of rollers 4 support the movable platform, rendering the friction of its passage quite inconsiderable, and the whole is mounted upon the running-gear of an ordinary wagon. A shaft 5 is journaled in brackets secured to the box near its rear end. A sprocket-wheel 7 is affixed to the spokes of one of the rear wheels of the wagon, and a chain belt 8 passes from this sprocket-wheel over a sprocket-wheel 9, mounted rigidly on a shaft 10, journaled within the bracket 11, secured to the upper side of the extending cross-beam 3. A sleeve 12 surrounds the shaft between its bearings in the bracket, and a transverse sleeve portion 13 extends from the side of the first sleeve and at right angles thereto. A miter-gear 14 is secured to the inner face of the sprocket-wheel 9, and meshing with this is a like gear 16, which latter is loosely mounted upon the shaft 17. The end of the shaft 17 is journaled in the sleeve 13 and extends rearward to the vertically-movable bearing-box 18 at its opposite end,

and the worm 19 is secured rigidly to the shaft 17 intermediate its bearings. This worm engages the gear-wheel 20, rigidly affixed to the shaft 5, before mentioned, communicating motion thereto from the rear wagon-wheel by the sprocket-wheel 7, attached to its spokes.

By reason of the connection between the bracket 11 and the shaft 17 the latter may be moved through a slight arc, withdrawing the worm 19 from engagement with the teeth of the gear 20. To accomplish this movement, I provide the bracket 22, guiding the bearing-box 18, and under this box I place the compression spiral spring 23, the tendency of which is to throw the worm 19 and the teeth of the gear 20 out of engagement. The tripping-lever 24, pivoted to one of the sides of the box, extends downward, engaging the bearing-box 18 and holding the worm 19 in engagement with the gear 20.

The bottom of the wagon-box is composed of the slats 25, resting, as before described, upon the two series of rollers 4. The connection between the slats 25 of the flexible bottom is composed of a bracket 26, made in rights and lefts for the opposite ends of the slats. These brackets have a central web portion and extending forward from this a projection bearing a transverse pintle, and a rearward extension of the bracket has a corresponding arm for the reception of the pintle of the adjacent brackets.

The hole 27 in the web of the bracket admits a bolt for attaching the bracket to the slat, and an opening 28 is provided for receiving the teeth of the sprocket-wheels 29, over which the bottom runs. These sprocket-wheels are mounted rigidly on the shaft 5 and are polygonal in form, the teeth arising from the faces of the wheels, which faces are of a length substantially equal to the width of the slats of the movable bottom. That end of the movable bottom at the front of the wagon bears the upwardly-extending end-board 2, before mentioned, rising rigidly from the slat at this end.

A projection 30 extends from the end-board for engaging the lever 24 when the bottom is rolled to its most rearward position. A flexible connection 31, passing under the running-gear, joins the front and the rear ends of the

platform, and the windlass 32 has also a flexible connection 33 with the front end of the platform for drawing the latter forward to its normal position. The grooved roller 34 receives the connection between the ends of the platform, and the pulley 35 passes the flexible connection from the windlass to the fore end of the platform. The platform thus, with the flexible connection between its ends, forms a continuous belt running over the sprocket-wheels 29, and by rotating the shaft 5, bearing the sprocket-wheels, it is evident that the platform will be moved under the running-gear.

To allow a backward movement of the wagon not to affect the feed of the platform, I provide a spring slip-clutch on the shaft 17, formed as follows: The hub of the beveled gear 16 is notched with inclined teeth and a collar 36 has corresponding teeth. This collar 36 has a slight movement with the length of the shaft, but is fixed rotatively by a feather connection therewith. A spring 37 holds the collar in engagement with the teeth of the beveled gear 16 during the forward movement of the wagon; but upon any backward movement thereof the spring is compressed and the ratchet-teeth slip by one another without engaging.

In use the spreader-box is loaded with manure, the bottom being in its forward position, and the whole drawn to the field where it is desirable to scatter its contents. The shaft 17 is depressed against the action of the spring 23, the worm 19 thereon engaging the teeth of the gear 20, and by reason of the chain connection with the wheel 7 the bottom will be fed backward, slowly scattering the fertilizer as the wagon proceeds. It is evi-

dent that a rapidly-revolving cylinder may be placed in the rear end of the spreader-box, pulverizing and scattering the manure as it is fed thereon by the backward movement of the box-bottom. The lever 24 holds the worm in engagement with its gear until the projection 30 on the end-board 2 moves backward and trips this lever, when the force of the spiral spring 23 throws the worm from engagement with the teeth of the gear and the movement of the platform ceases. The platform is brought back to its normal position by the windlass 32, the pawl 38 of which is thrown out of engagement during the rearward travel of the platform.

As before explained, a backward movement of the wagon does not affect the movement of the platform, only the forward movement of the wagon driving the latter.

I claim as my invention—

1. A manure-spreader having a box, a movable bottom therefor, a shaft for driving the bottom, and a bottom composed of slats joined by brackets at each of their ends, each bracket having a pintle at one end and an eye at its other end.

2. A manure-spreader having a box, a movable bottom therefor, a shaft for supporting and driving the bottom, a polygonal wheel on the shaft, sprocket-teeth on the faces of the wheel, the bottom composed of slats joined by brackets at each of their ends, each bracket having a recess in its under face for the teeth of the sprocket-wheel, and a pintle at one end and an eye at the other.

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Witnesses:

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