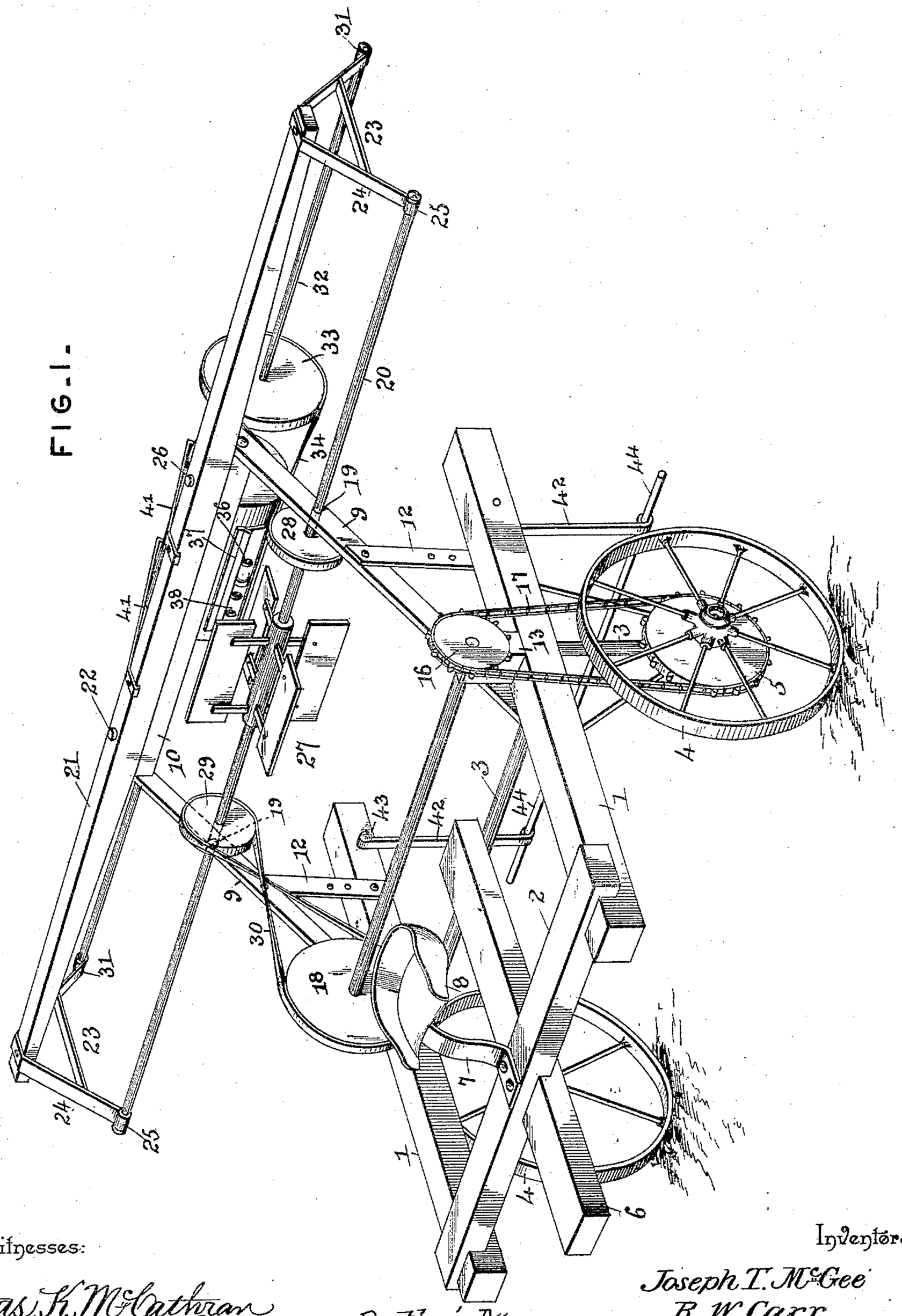
(No Model.) 2 Sheets—Sheet 1.

J. T. McGEE & R. W. CARR.

POISON DISTRIBUTER.

No. 467,619. Patented Jan. 26, 1892.

FIG. 1.



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(No Model.) 2 Sheets—Sheet 2.

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FIG. 2.

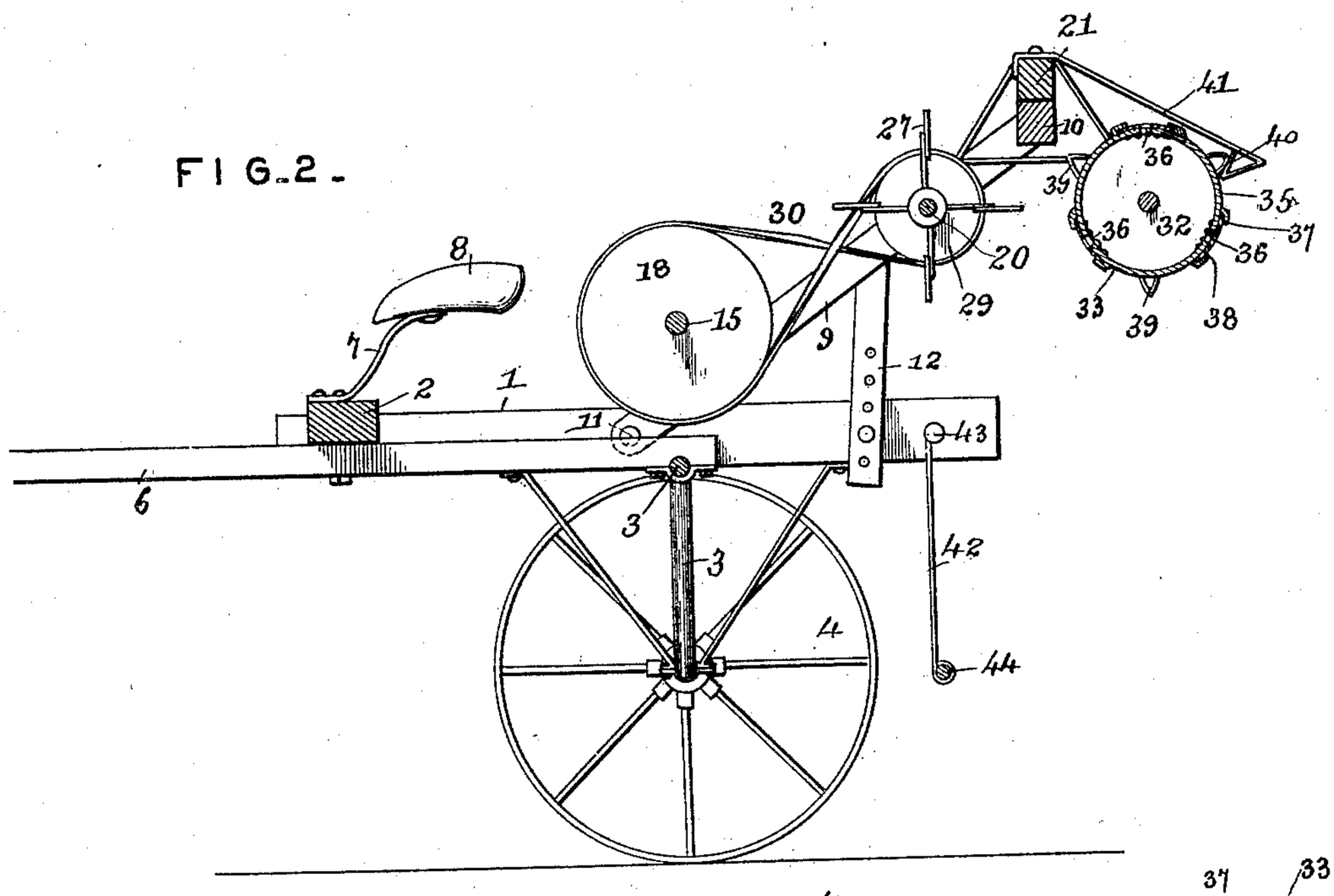
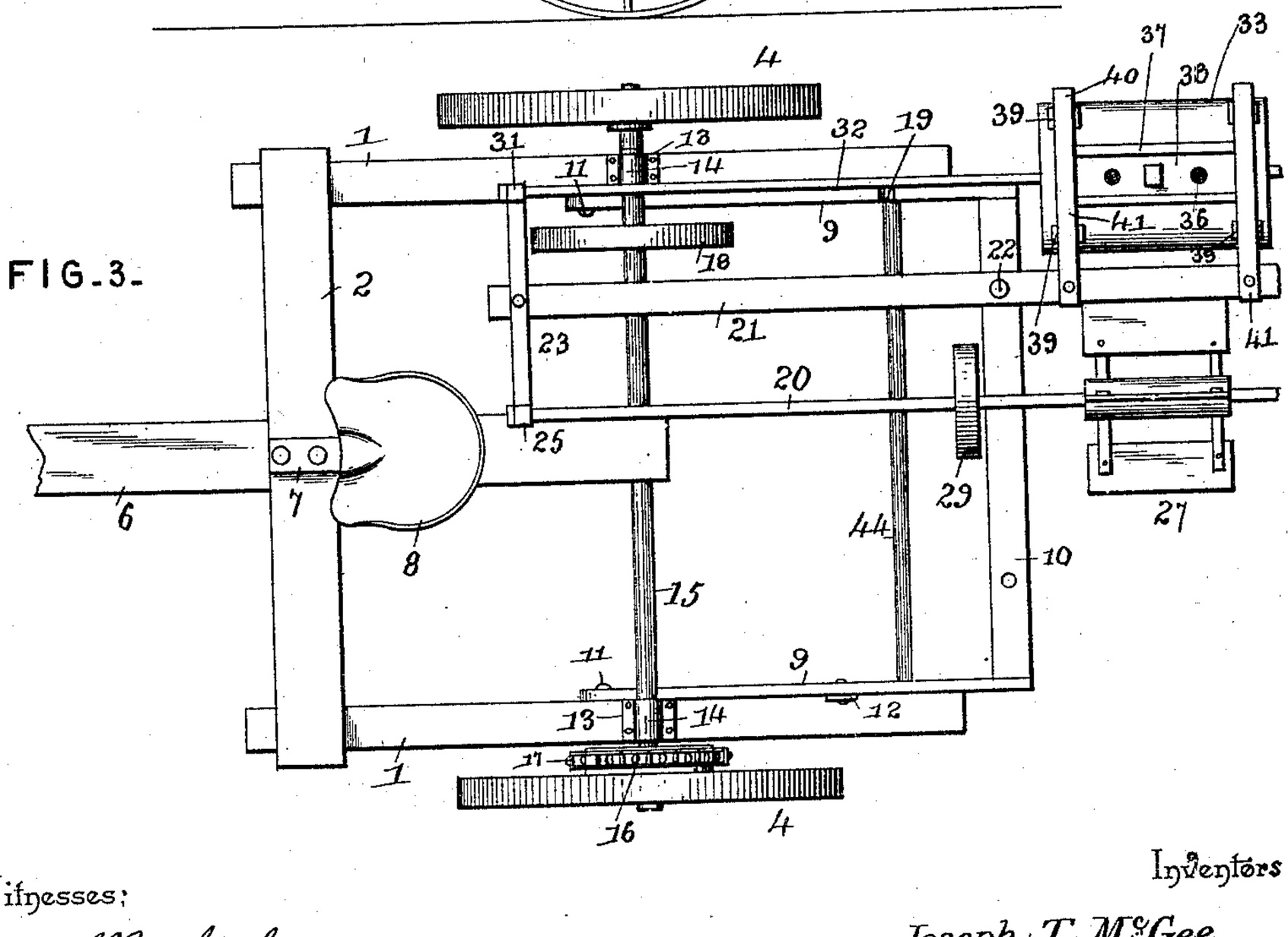


FIG. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH THOMAS McGEE AND ROBERT WOOTEN CARR, OF BRYAN, TEXAS.

POISON-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 467,619, dated January 26, 1892.

Application filed October 13, 1891. Serial No. 408,596. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH THOMAS McGEE and ROBERT WOOTEN CARR, citizens of the United States, residing at Bryan, in the county of Brazos and State of Texas, have invented a new and useful Poison-Distributer, of which the following is a specification.

This invention relates to improvements in poison-distributers, the objects in view being to provide a cheap and simple machine for thoroughly distributing powdered poison in an efficient manner over the entire surface of cotton-plants for the purpose of destroying the worms, and, furthermore, to so construct the machine as to adapt it to readily pass through ordinary-sized gates.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a poison-distributer constructed in accordance with our invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a plan thereof, the machine being in position to pass through gates.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 designates a pair of opposite side beams or sills, which are connected at their front ends by the transverse beam or sill 2. The beams 1 are supported upon a crank-axle 3, the cranked ends of which serve as bearings for the ground-wheels 4, one of which latter carries a sprocket-wheel 5, adapted to move therewith.

6 designates the draft-tongue secured to the center of the axle and to the under side of the cross-bar 2, into which latter it is let. A standard 7 supports a seat 8 for the accommodation of the driver. A pair of inclined side bars 9 are bolted at their lower ends to the inner sides of the opposite beams 1, immediately in front of the axle, and are connected at their upper ends by a transverse bar 10, the bars 9 and 10 constituting an inverted-U-shaped inclined frame, pivoted by the bolts 11 upon the main frame of the machine. Perforated straps 12 are secured to the opposite side bars 9, and, by means of bolts passed through their perforations into the beams 1, serve to adjust the U-shaped frame at any inclination. Short standards 13, terminating at their upper ends in bearings 14, are mounted on the beams 1 above the axle, and in the bearings a transverse shaft 15 is mounted for rotation. At one end the shaft carries a sprocket-pulley 16, which is engaged with and operated by the sprocket-wheel 5, through the medium of a sprocket-chain 17. Near the opposite end of the shaft a band-pulley 18 is mounted. The lower edge of one of the side bars 9 and the upper edge of the opposite side bar are provided with open bearings 19, and in the same is mounted for rotation a transverse shaft 20, considerably longer than the width of the U-shaped frame. A swinging bar 21 is pivoted, as at 22, near one end to the cross-bar 10 of the U-shaped frame and has depending hangers 23 connected to its ends. From the front sides of the hangers bearing-brackets 24 extend forwardly and terminate in bearing-eyes 25, which receive the extremities of and form bearings for the shaft 20. The bar 21 may swing with the shaft upon the pivot-bolt 22, or may be locked parallel to the bar 10 by means of a removable bolt 26, passed through the bar 21 and into the bar 10, for the reception of which the bars are provided with openings. When in such position, the shaft 20 will be in the bearings 19, formed in the side bars 9. At the center of the shaft 20 there is mounted a fan 27, adapted to rotate with the shaft, and at one side of the fan there is mounted on the shaft a pulley 28, while at the opposite side of the fan upon the shaft there is mounted a pulley 29, the latter being connected and driven by the pulley 18, through the medium of a crossed belt 30. The hangers 23 terminate at their lower ends in bearings 31, in which is mounted for rotation a transverse hopper-shaft 32. This shaft carries a pulley 33, which is connected by a crossed belt 34 to the pulley 23 of the shaft 20, through the medium of which the shaft 32 is rotated in a direction opposite to the shaft 20. Upon the shaft 32 there is in this instance mounted a single poison-distributing cylinder 35; but a series of such cylinders may be employed, if desired, whereby several rows of cotton may be simultaneously sprinkled. The cylinder is provided with a series of perforations 36, covered by wire-cloth,

and at each side of each series ways 37 are located, perforated slides 38 being mounted for reciprocation in the ways and adapted to open and close the discharge-openings in the hopper. Between each pair of series of openings inclined lugs 39 are located upon the exterior of the cylinder, near the opposite ends thereof, and the same are engaged and ridden over by the inclined shoulders 40, formed on the rear extremities of a pair of spring-knockers 41. From the rear ends of the beams 1 hangs a pair of arms 42, the upper ends of which are pivoted by bolts 43 to the beams, and the lower ends of which support a horizontally-disposed deflecting-rod 44.

This completes the construction, and the operation is as follows: As the machine moves along straddling the rows or row, as the case may be, motion is imparted to the shaft 15 through the medium of the sprocket-belt 17 and the sprocket-wheels 5 and 16, and motion from the shaft 15 is imparted in a reverse manner to the shaft 20 of the inverted-U-shaped frame, so that the fan is rapidly revolved. The motion of the shaft 20 is by the crossed belt 34 communicated reversely to the shaft 32, and with it is rotated the poison-distributing cylinder. As the cylinder revolves, the spring-knockers are raised by the lugs of the cylinder, and when released thump the cylinder so as to cause an agitation thereof, and thus shake the poison through the discharge-openings. The bar 45 being dragged along over the plants engages with the same, bending them down so as to expose their entire lengths to the action of the poison, which is blown and scattered thereover by the fan. By pivoting or loosely suspending the bar, injury to the plant is avoided, in that the plants are simply deflected and subsequently released. When in use as a distributer, the shaft 20 is mounted in its bearings and the bar 21 locked rigidly upon the inclined frame. However, in passing through gates or other small openings too narrow to permit of the passage of the bar 21 and its appendages, the bolt that locks the bar 21 is removed and the bar, together with the mechanism supported thereby, turns upon the pivot-bolt 22, so as to be disposed longitudinal with the machine, and thus the machine as a whole is narrowed and enabled to pass any ordinary opening.

From the foregoing description it will be seen that we have provided a machine of great simplicity and cheapness of construction that is adapted to dust either a single or a series of rows of cotton-plants in a thorough manner, spreading the powder from the root to the top of the plant, and under the leaves as well as over them. The fan not only acts as a diffuser or spreader of the poison, but, operating in a direction away from the driver, protects the latter.

Having described our invention, what we claim is—

1. In a machine of the class described, the combination, with the main frame-work and an inclined frame supported thereby, of a rotatable shaft, a distributing drum or hopper mounted thereon, a fan located in front of the drum, and means for rotating the hopper and fan, substantially as specified.

2. In a machine of the class described, the combination, with the main frame-work and an inclined frame supported thereby, of a rotatable shaft, a distributing drum or hopper mounted thereon, a fan located in front of the drum, and means for rotating the hopper and fan in opposite directions, substantially as specified.

3. In a machine of the class described, the combination, with the main frame, of the inverted-U-shaped frame having its terminals pivoted to the opposite side bars of the main frame, the poison-distributing devices supported on the U-shaped frame, the depending perforated adjusting-straps connected to the opposite terminals of the U-shaped frame, and adjusting-bolts passed through the perforations and into the side beams of the main frame, substantially as specified.

4. In a machine of the class described, the combination, with the frame-work, of a rotatable shaft, a perforated hopper mounted for rotation on the shaft and provided with a series of trip-lugs, and a series of spring-knockers terminating in shoulders and adapted to ride over said knockers, substantially as specified.

5. In a machine of the class described, the combination, with the frame-work, of a bar pivoted thereon and adapted to be swung out of and into line with the frame-work, means for locking the bar against swinging, a distributing-hopper supported by the bar, and means for operating the hopper, substantially as specified.

6. In a machine of the class described, the combination, with the main frame and the inclined inverted-U-shaped frame supported thereby, the opposite side bars of which are provided at contrary edges with open bearings, of a bar pivoted on the upper end of the U-shaped frame and provided with front and rear hangers terminating in bearings, a shaft mounted in each pair of bearings of the hangers, the front shaft taking in the bearings of the U-shaped frame, a fan mounted on said shaft, a pulley at one side of the same, a poison-distributing hopper mounted on the rear shaft, a pulley at one side of the same, a belt connecting the pulleys, means for locking the bar against movement upon the frame, and means for transmitting motion to the front shaft, substantially as specified.

7. In a machine of the class described, the combination, with the main frame, the axle, the ground-wheels, and the sprocket thereon, of the pivoted inverted-U-shaped frame having the opposite bearing-openings at contrary edges, the pivoted bar 21, having the perforation, the locking-pin for the same, the front and rear hangers extending from the ends of

the bar and terminating in bearings, the hopper-supporting shaft journaled in the rear bearings, a pulley thereon, a front shaft mounted in the bearings of the U-shaped frame and in the bearings of the front hangers and carrying a fan, a pulley at each side of the fan, one of which is connected by a cross-belt to the pulley of the hopper-shaft, the standards 13, mounted on the main frame and terminating in bearings, the main shaft mounted thereon, the sprocket-wheel on the main shaft, the sprocket-chain connecting said wheel with the sprocket-wheel of the ground-wheel, the main pulley mounted on said shaft, and the cross-belt connecting the same with the pulley of the shaft that supports the fan, substantially as specified.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JOSEPH THOMAS McGEE.
ROBERT WOOTEN CARR.

Witnesses:
J. F. MITCHELL,
E. J. BURTON.