

BEST AVAILABLE COPY

M. SAMEL.
MOTOR PLOW.

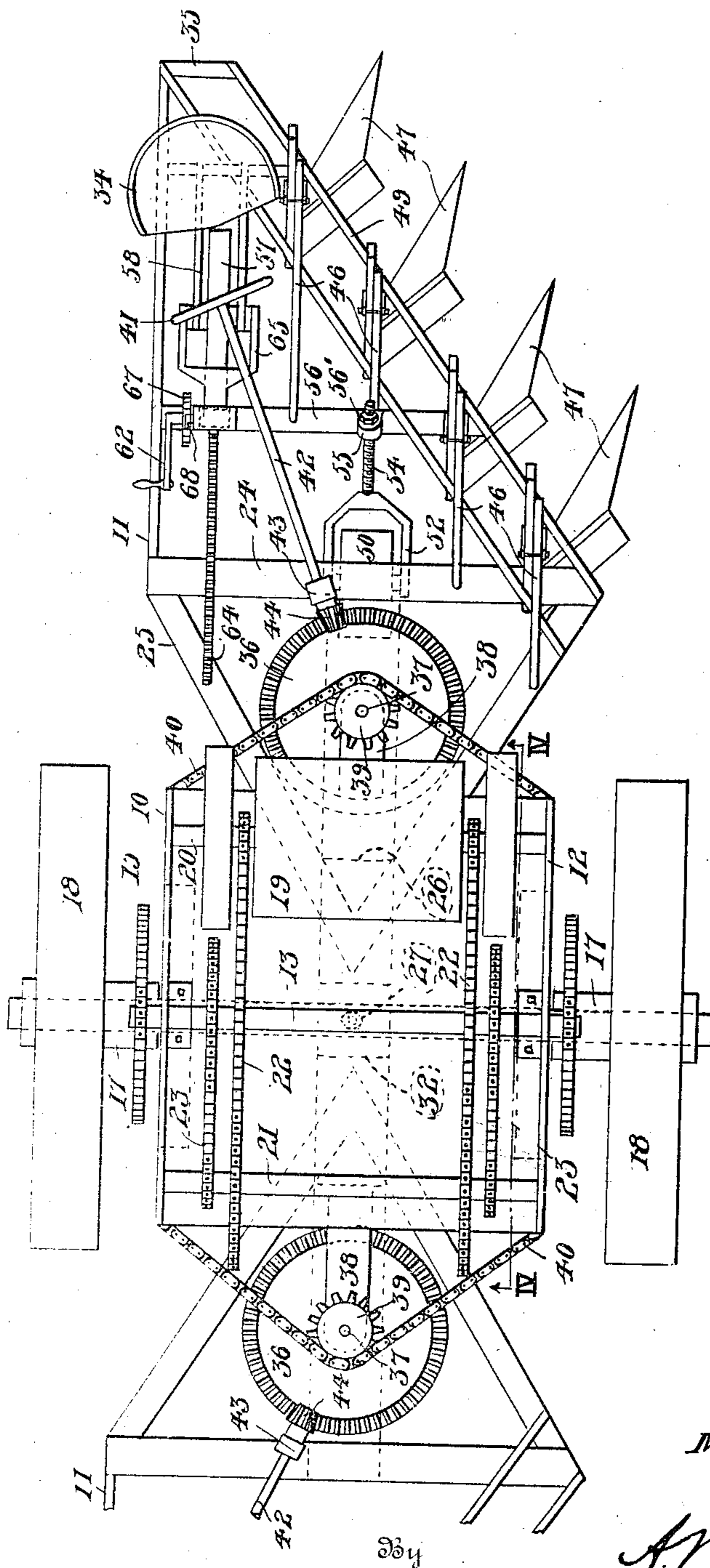
APPLICATION FILED JUNE 7, 1915.

1,154,889.

Patented Sept. 28, 1915.

4 SHEETS—SHEET 1.

Fig. 1.



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4 SHEETS—SHEET 2.

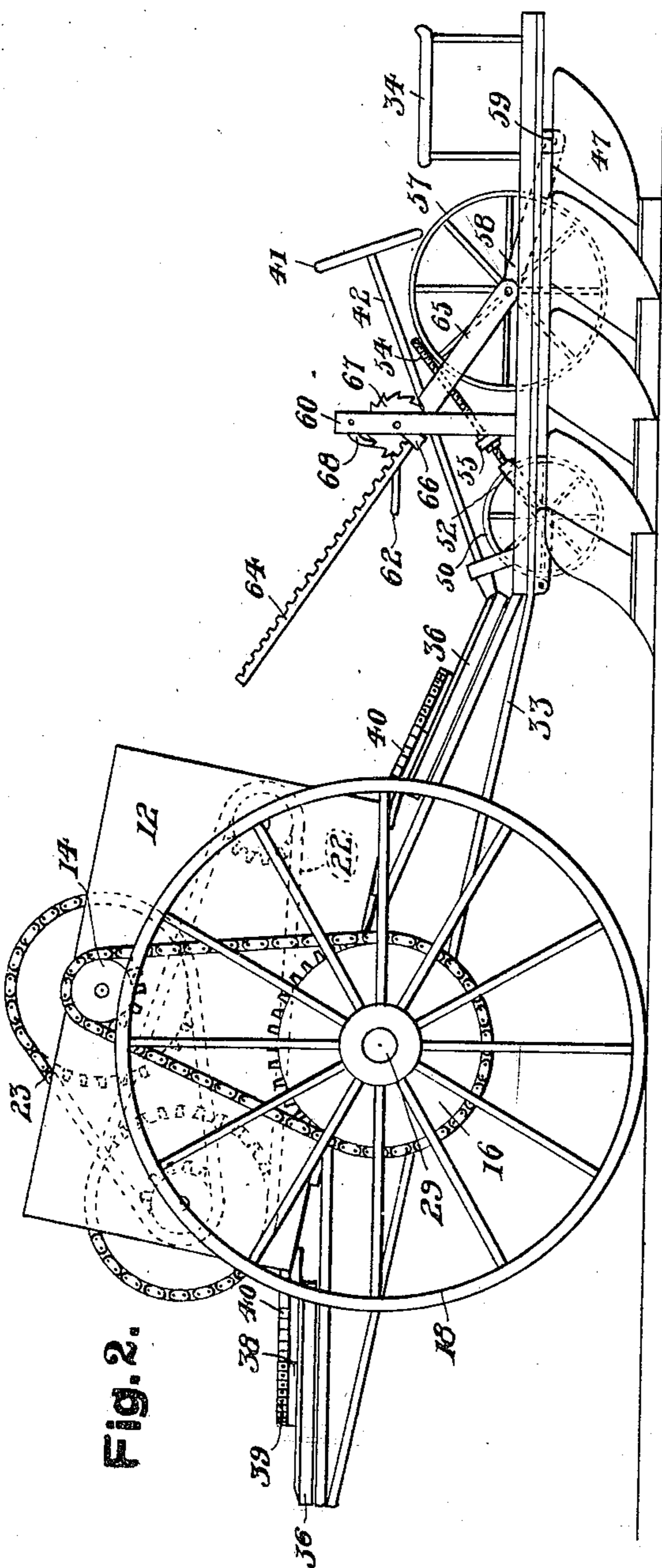


Fig. 2.

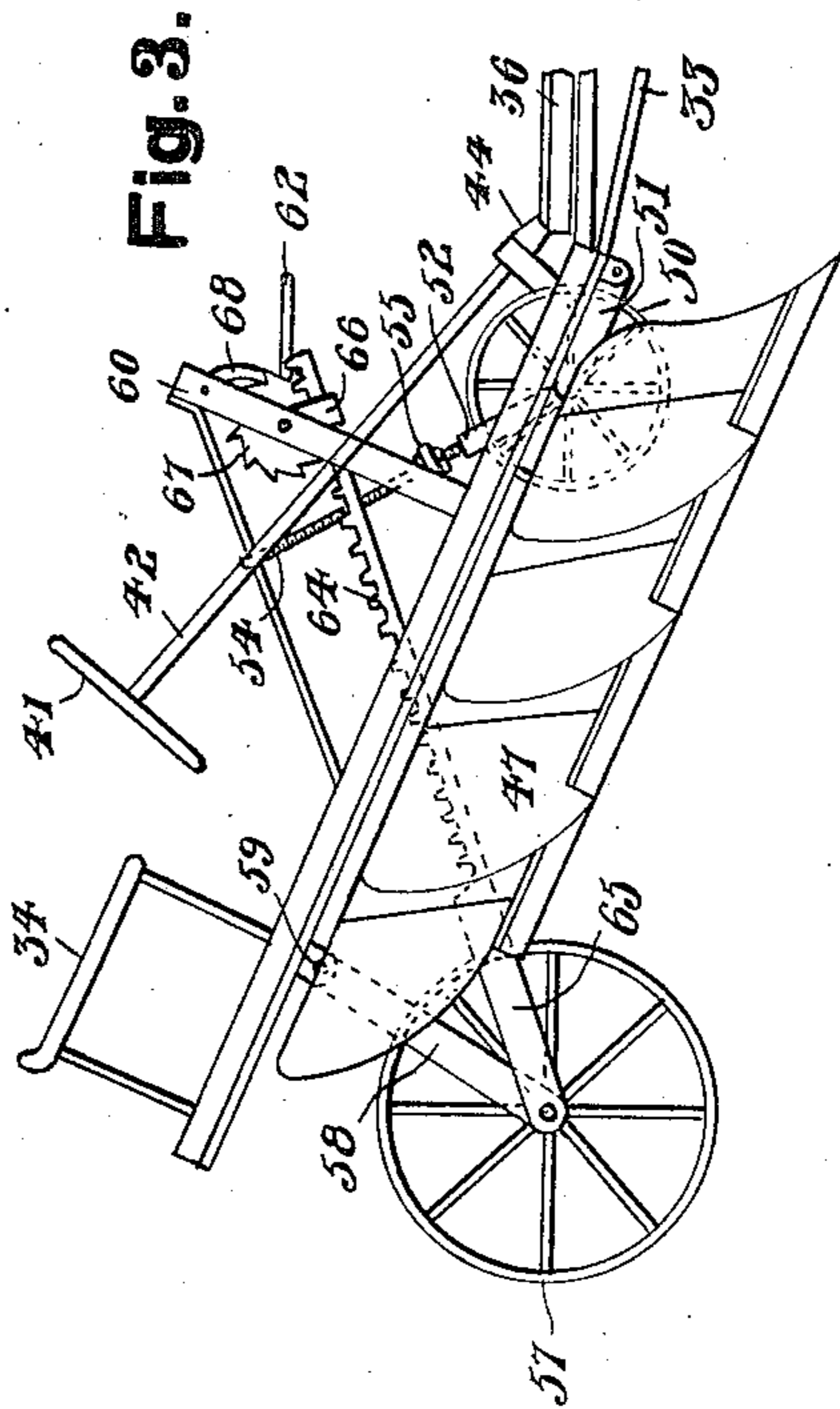


Fig. 3.

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4 SHEETS—SHEET 3.

Fig. 4.

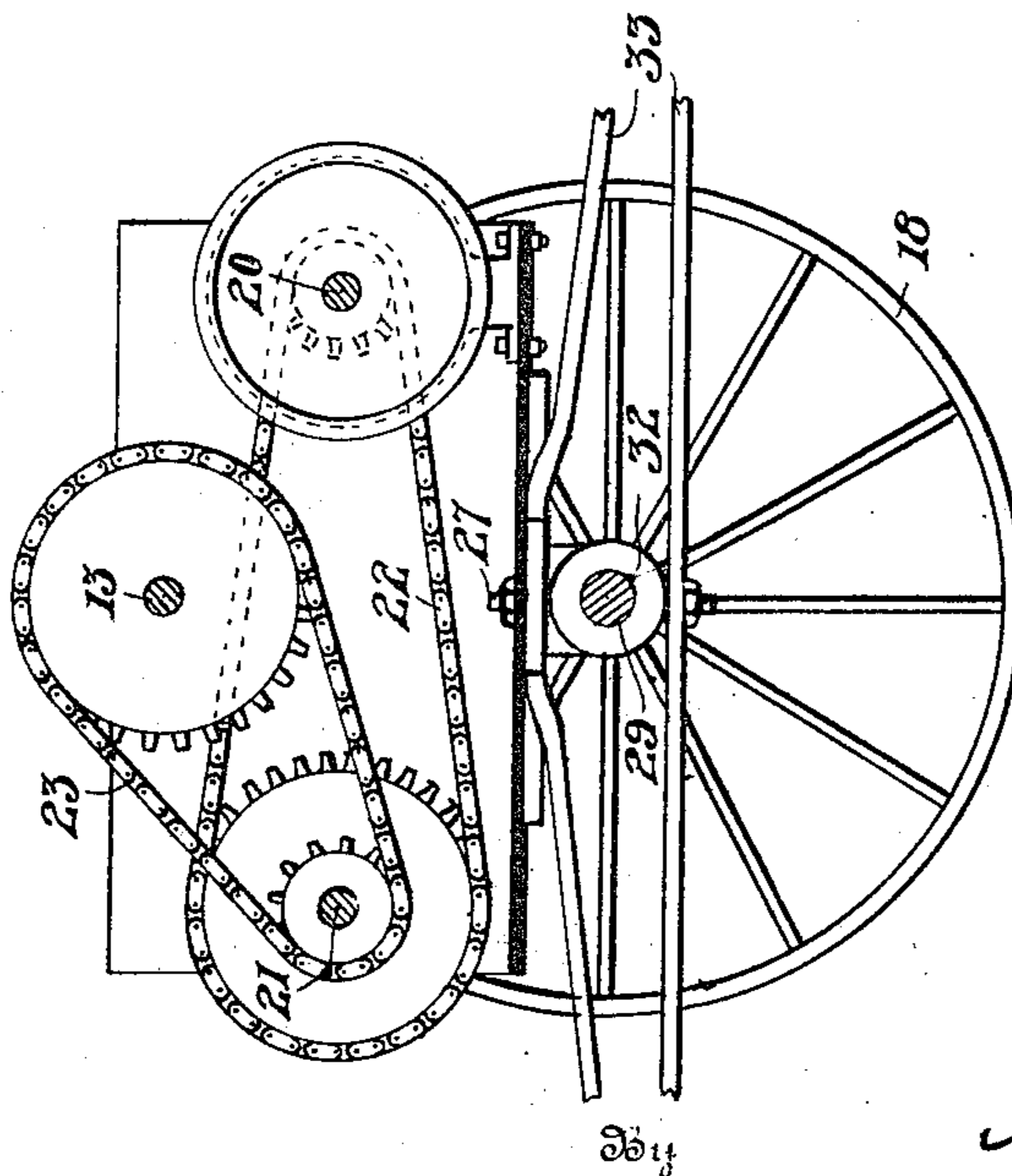
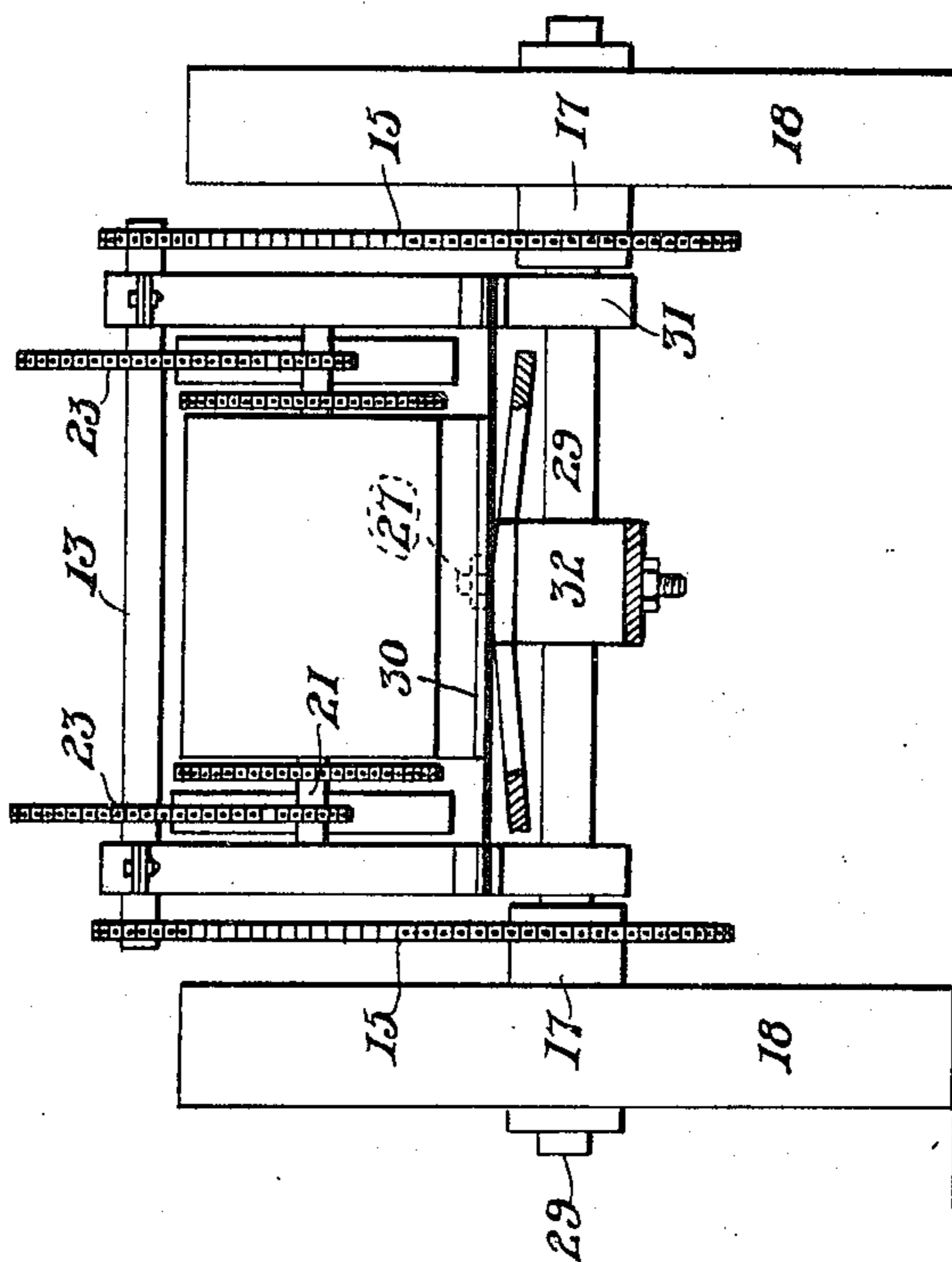


Fig. 5.



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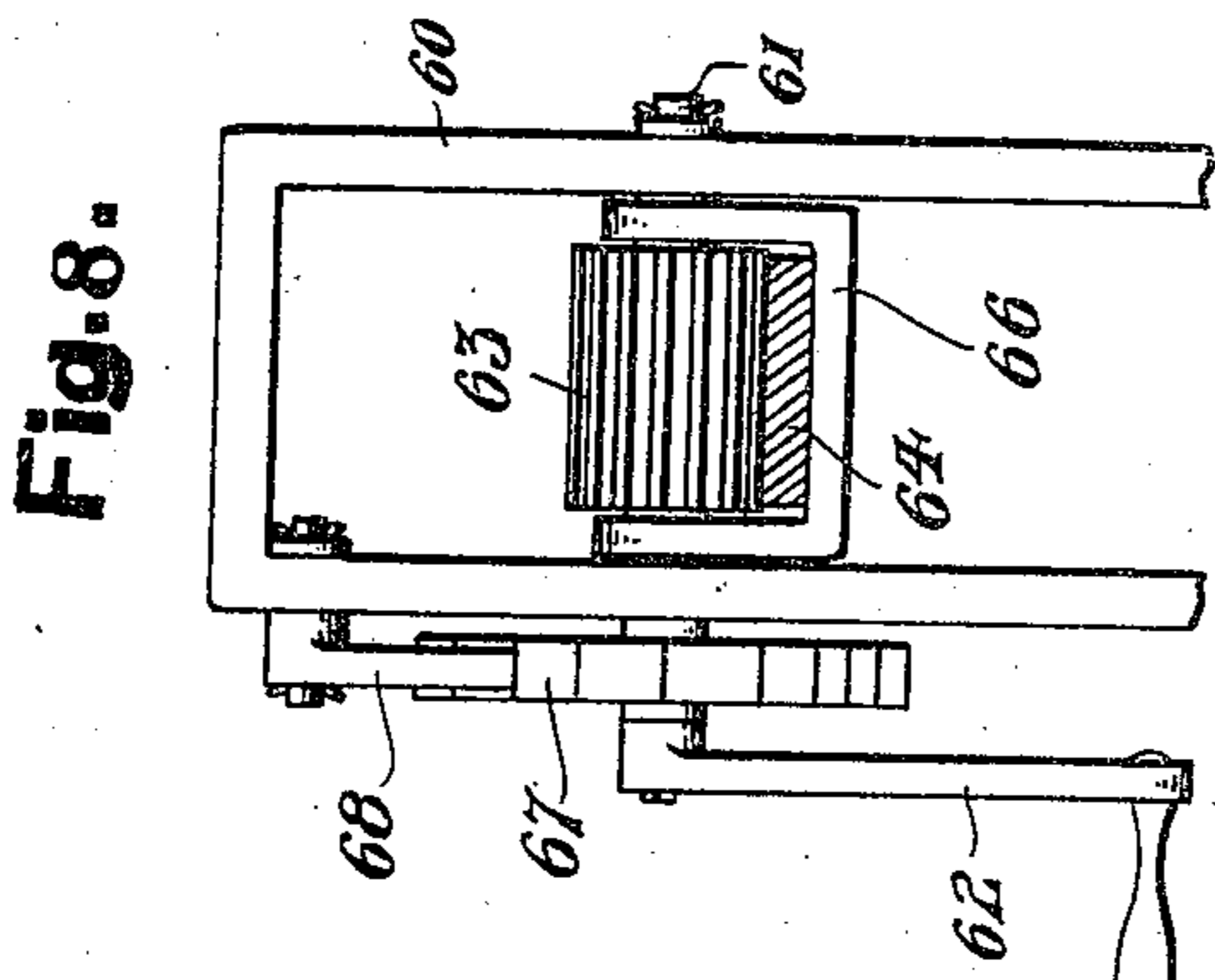


Fig. 8.

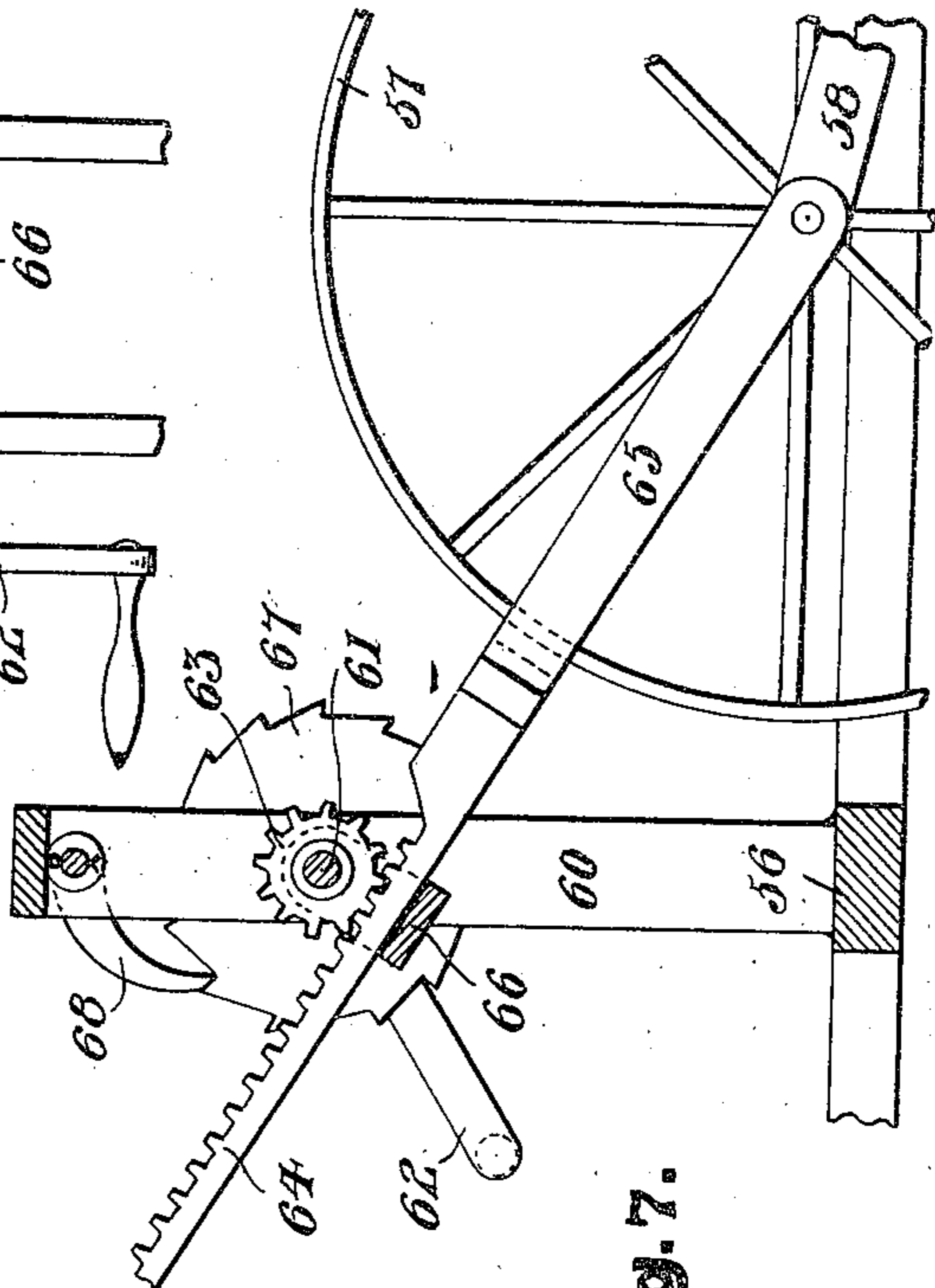


Fig. 7.

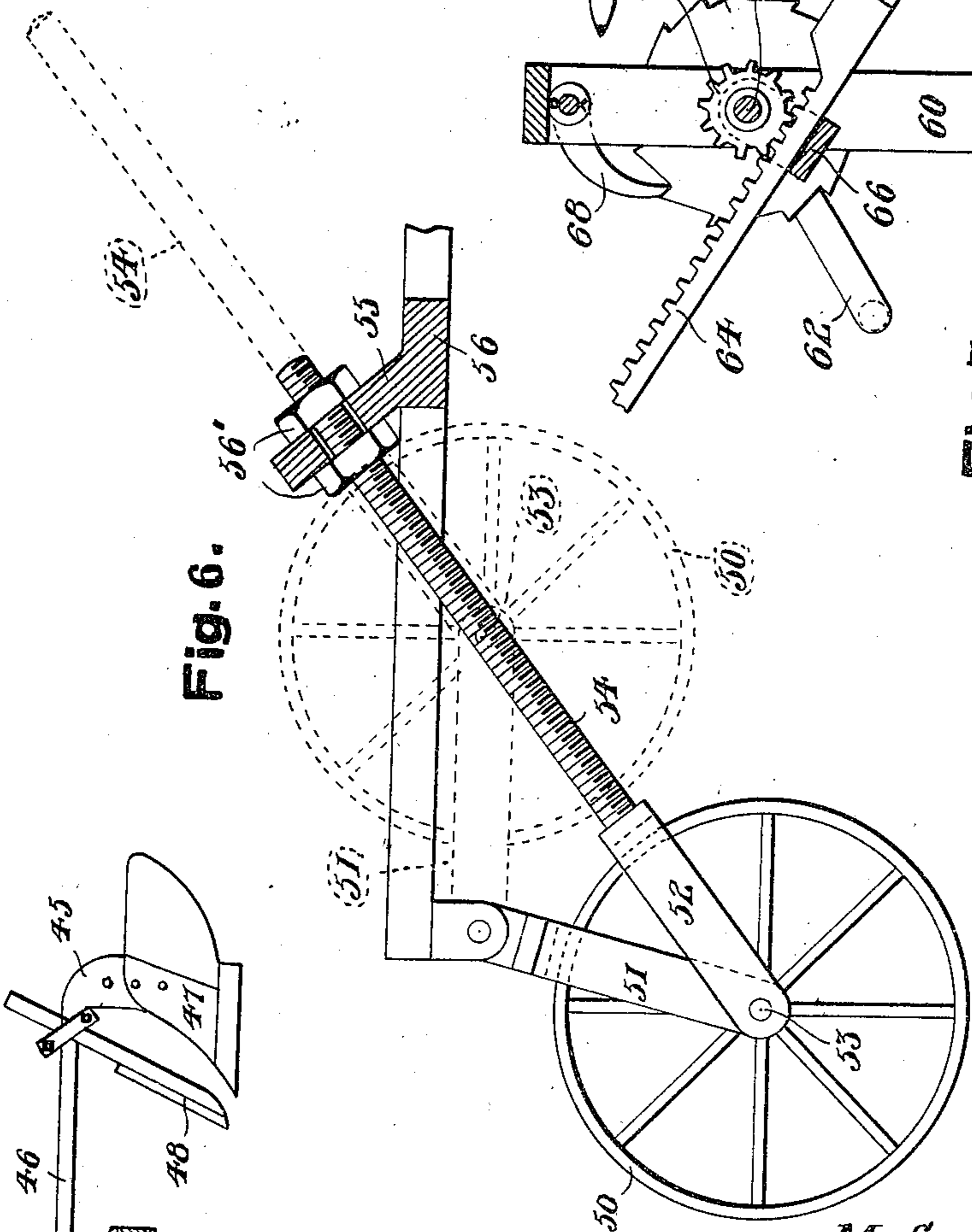
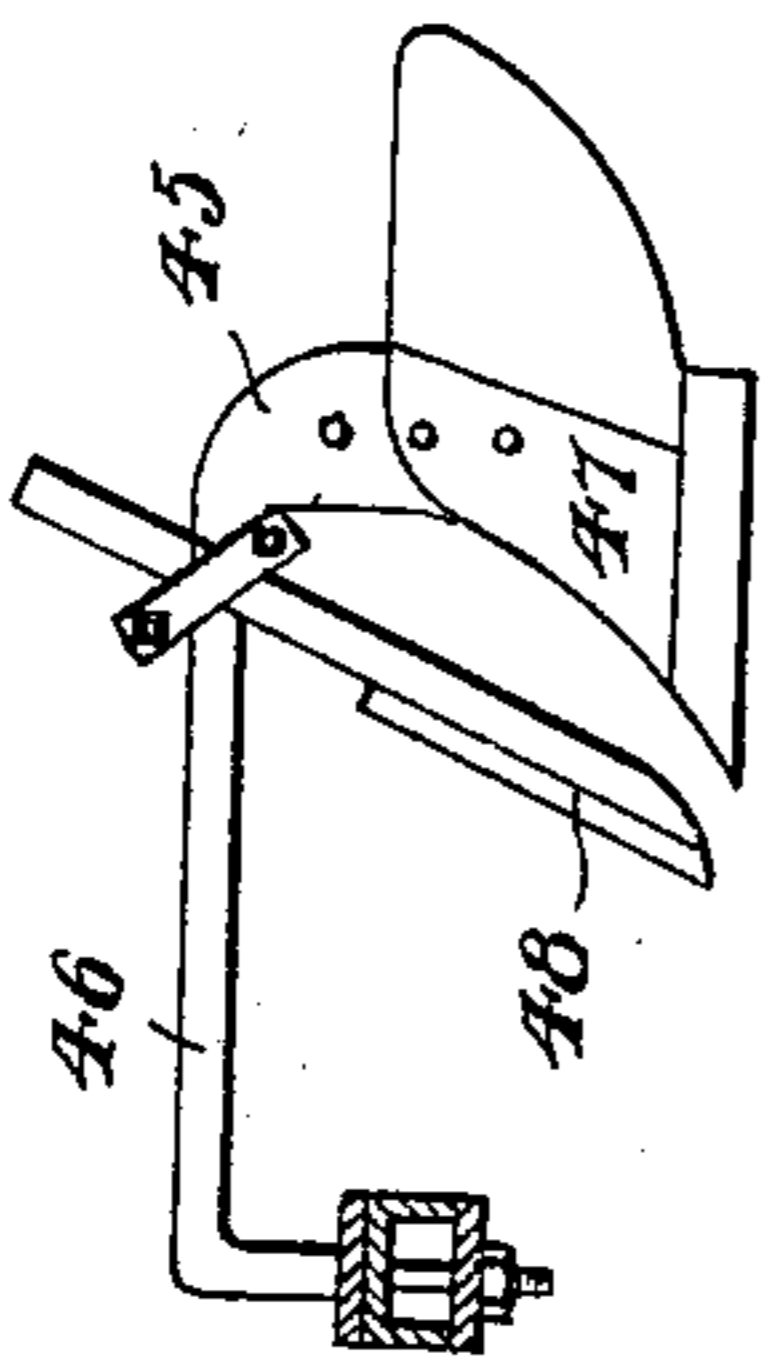


Fig. 6.

Fig. 9.



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UNITED STATES PATENT OFFICE.

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MOTOR-PLOW.

1,154,889.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MICHAEL SAMEL, a subject of the King of Hungary, residing at Cherry Valley, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Motor-Plows, of which the following is a specification.

This invention relates to certain new and useful improvements in motor plows.

The primary object of this invention is to provide a motor plow adapted to travel in either direction and having separate plow members operable separately during the different directions of movement during the plowing operation.

A further object of the invention is the provision of a motor carriage adapted for traveling to and fro over a field to be plowed and having adjustably positioned plow frames at its opposite ends, the said frames being alternately operably positionable and inoperatively elevated.

A still further object is to provide a motor frame having plow members at its opposite ends being automatically positionable, one of the same being in ground-engaging position, while the other is elevated from above.

With these general objects in view and others that will appear as the nature of the invention is better understood, the same consists in the novel combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the appended claims.

In the drawings forming a part of this application and in which like-designating characters refer to corresponding parts throughout the several views, Figure 1 is a top plan view of the device an end portion thereof being broken away. Fig. 2 is a side elevation of the same. Fig. 3 is a side elevation of the plow frames as eliminated from Figs. 1 and 2 and positioned opposite the plow frame shown in the said figures. Fig. 4 is a longitudinal sectional view taken upon line IV—IV of Fig. 1 through the motor carriage. Fig. 5 is an end elevation thereof. Fig. 6 is an enlarged side elevation of the adjustable ground wheel of one of the plow frames, the wheel being shown by dotted lines in its elevated position. Fig. 7 is an enlarged detail view partially in section and partially broken away of the

mounting means for one of the end wheels of the plow frames. Fig. 8 is an end elevation thereof, and Fig. 9 is a side elevation of one of the plow members detached from the plow frame.

The present device provides a motor driven carriage 10 having plow frames 11 secured to the opposite ends thereof, the rearwardly one of the said frames being operatively positioned in whichever direction the device is traveling. The carriage 10 is provided with opposite sides or plates 12 having a power shaft 13 transversely journaled therethrough and provided with sprocket wheels 14 upon its opposite outer ends over which sprocket chains 15 are positioned being operatively arranged upon relatively larger sprocket wheels 16 secured to the hubs 17 of the traction wheels 18. A motor 19 is mounted upon the carriage and has a driving shaft 20 which is operatively connected to a driven shaft 21 by means of sprocket chains 22, while the shaft 21 is operatively connected to the power shaft 13 by means of sprocket chains 23. In this manner, the running of the motor 19 in either direction, propels the device operatively to and fro over the field.

The plow frames 11 are of substantially V-shape pointing in opposite directions and are secured to the beam 24 at the base of triangular shaped frames 25 carried by the opposite ends of the carriage and having their pointed inner ends secured to and merging with a centrally arranged board 26 pivoted upon the king bolt 27.

The axle 29 is fixedly secured beneath the carriage bottom 30 by means of brackets 31 to the aforementioned traction wheels 18 having the hub 19 journaled upon the opposite outer ends thereof.

The afore-mentioned king bolt 27 projects vertically through the centrally enlarged portion 32 of the said axle and the brace strip 33 connects the beams 24 of the two frames 11 and is centrally pivoted to the lower end of the king bolt 27 at a point beneath the axle enlargement 32.

The plow frames 11 are identically formed and oppositely arranged, each having a driver's seat 34 adjacent its outer pointed end 35. A beveled gear 36 is provided upon a stub shaft 37 journaled through a bracket 38 projecting outwardly from the carriage bottom 30, while a pinion 39 is secured to the upper end of the stub shaft 37. A sprocket

chain 40 is attached to the opposite adjacent corners of the carriage bottom and passes over the said pinion 39, while a steering wheel 41 having its shaft 42 journaled in a bracket 43 carried by the plow frame beam 24 is operatively connected to the said gear 36 by means of a beveled pinion 44 carried by the free end of the said steering shaft 42 and in constant mesh with the gear 36. By this arrangement, the operator positioned upon the seat 34 may shift the plow frames 11 whenever found desirable during the plowing operation. It being understood that each of the plow frames and the mechanism carried thereby as well as the steering devices for each are identical, one of the same will be now described. The plow frames 11 are provided with a plurality of plows 45 secured to corresponding sides 49 of the frames 11 by means of the plow beams 46, while the furrow turning mold boards 47 as well as the colters 48 are dependingly carried thereby.

A depth regulating wheel 50 is adjustably connected to each of the plow frames 11 by means of a link 51 pivotally attached substantially centrally beneath the respective beam 24 thereof. A yoke 52 is journaled to the axle 53 of the said wheel 50 and spans the wheel and is provided with a screw 54 freely extending through a bracket 55 upon the cross bar 56 of the frame, while opposite set nuts 56' upon the screw 54 are adapted for retaining the wheel 50 at the desired position for allowing the necessary depth of insertion of the said plows.

Each plow frame is also provided with a ground wheel 57 pivotally connected by links 58 to lugs 59 of the carrying frame substantially beneath the driver's seat 34 thereof. A frame 60 is mounted upon the cross bar 56 of the plow frame, and has a shaft 61 extending therethrough operable by means of a turn crank 62, while a roller gear 63 is secured to the shank 61 being held in constant mesh with the toothed portion 64 of the adjusting rack 65 of the wheel 54 by means of an encircling strap 66 depending from and journaled upon the said shaft 61. A ratchet wheel 67 is secured to the shaft 61, while a dog 68 is pivoted to the frame 60 being in normal contact with the wheel 67. In this manner, the gear 63 may be turned by the crank 62 and the wheel 57 thereby elevated, while upon releasing the dog 68, the wheel will descend for engaging the ground and assisting in supporting the plow frame to the operative movement of the device.

In operating the device for plowing, the driver positions himself in the seat 34 of one of the plow frames after the ground wheel 57 of that frame had been elevated in the manner above described and the weight of the operator will then lower the frame upon

which he is seated so as to operatively position the plows 45 thereof. Both of the opposite plow frames being secured to the carriage 10 and axle 29, such downward movement of one of the frames automatically elevates the opposite plow frame to its inoperative position and whereupon the ground wheel 57 of the elevated frame automatically lowers itself to its ground-engaging position. The depth regulating wheel 50 of the lower plow frame is then adjusted for the desired depth of cut of the plows 45 and the operatively positioned plow frame may be swung radially rearwardly of the carriage 11 by means of the steering wheel 41. The motor is operated in the required direction for dragging forwardly the lower plow frame which is operatively positioned in the rear thereof, it being evident that either one of such frames may be so positioned and the device operated by changing the direction of the motor shaft 20. An advantageous motor plow is thus provided adapted to be driven back and forth across a field for completely plowing the same and without the necessity of turning the plow around.

While the form of the invention herein shown and described is what is believed to be the preferred embodiment thereof, it is nevertheless to be understood that minor changes may be made without departing from the spirit and scope of the invention as set forth in the claims.

What I claim as new is:—

1. A motor plow comprising a carriage, an axle secured beneath the carriage, a king bolt extending through the bottom of the carriage and the said axle, a board and brace strip pivoted to the said bolt at opposite sides of the said axle, V-shaped members secured to the said board and extending in opposite directions therefrom, and triangular plow frames fixed to the opposite outer ends of the said V-shaped members and brace strip.

2. A motor plow comprising a carriage, an axle secured beneath the carriage, a king bolt extending through the bottom of the carriage and the said axle, a board and brace strip pivoted to the said bolt at opposite sides of the said axle, V-shaped members secured to the said board and extending in opposite directions therefrom, triangular plow frames fixed to the opposite outer ends of the said V-shaped members and brace strip, oppositely positioned plows upon the same corresponding sides of the said frames, the plows of one frame being operatively positioned when those of the other frame are in their inoperative elevated position, individual steering means for each of the said frames, automatically positioned ground wheels for the said frames, and adjustable depth regulating guide wheels upon the said frames.

3. A device of the class described comprising a carriage having an axle and traction wheel journaled upon the said axle, a motor upon the said carriage, operative connections between the said motor and wheels, a king bolt for the said carriage extending through the axle thereof, a tiltable mounted supporting means pivotally attached to the said bolt, and quadrilateral frames

fixedly secured to the opposite ends of the said supporting means and projecting over the opposite ends of the said carriage.

In testimony whereof I affix my signature.

MICHAEL SAMEL.

Witnesses:

GEO. SAMEL,

LUIS MISHOLERI.