(No Model.) 2 Sheets—Sheet 1.

S. V. KENNEDY.

MOWER.

No. 572,549. Patented Dec. 8, 1896.

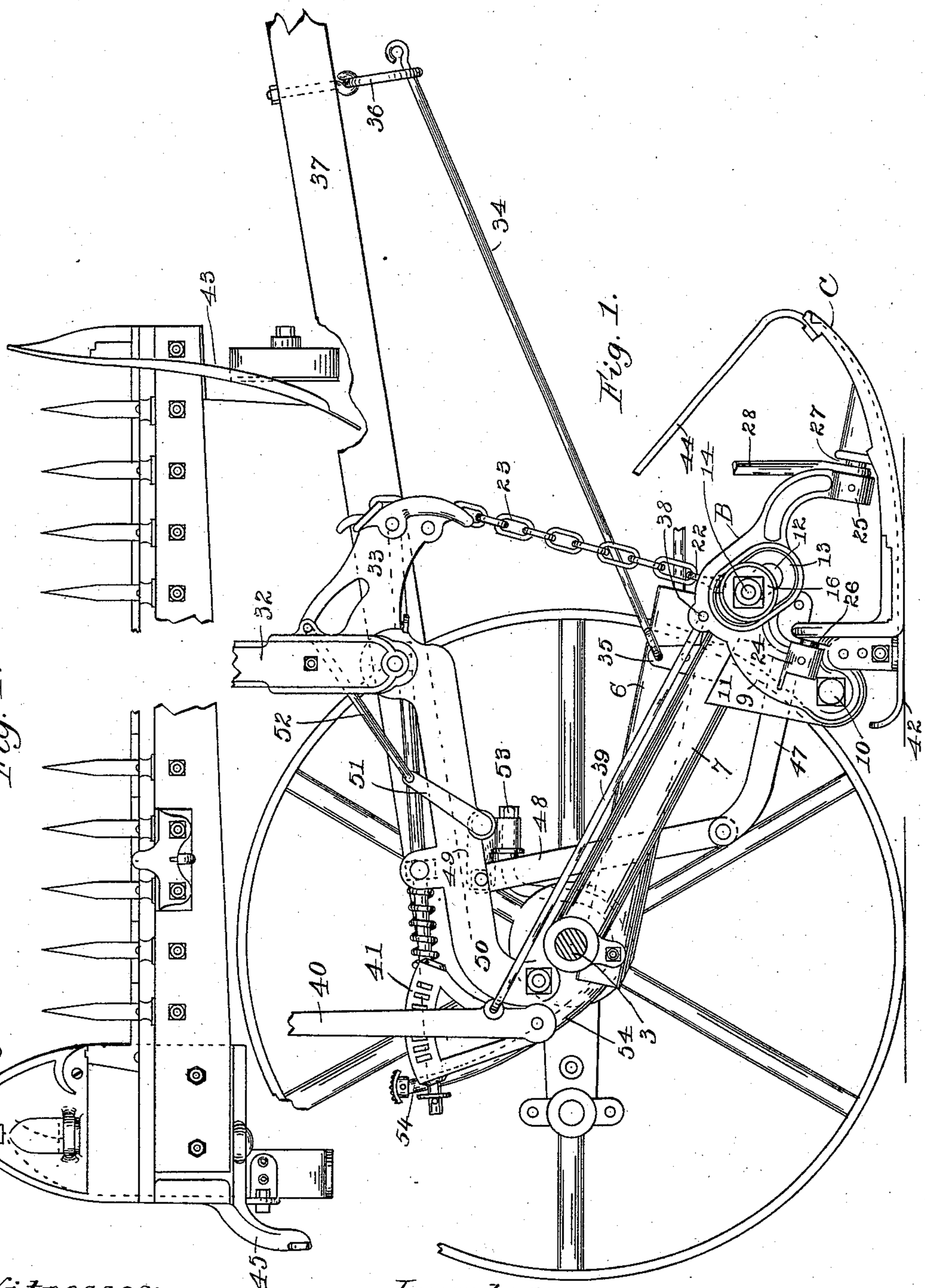

Fig. 1.

Fig. 4.

Witnesses:

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Inventor:

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per: V. D. Mercur

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(No Model.) 2 Sheets—Sheet 2.

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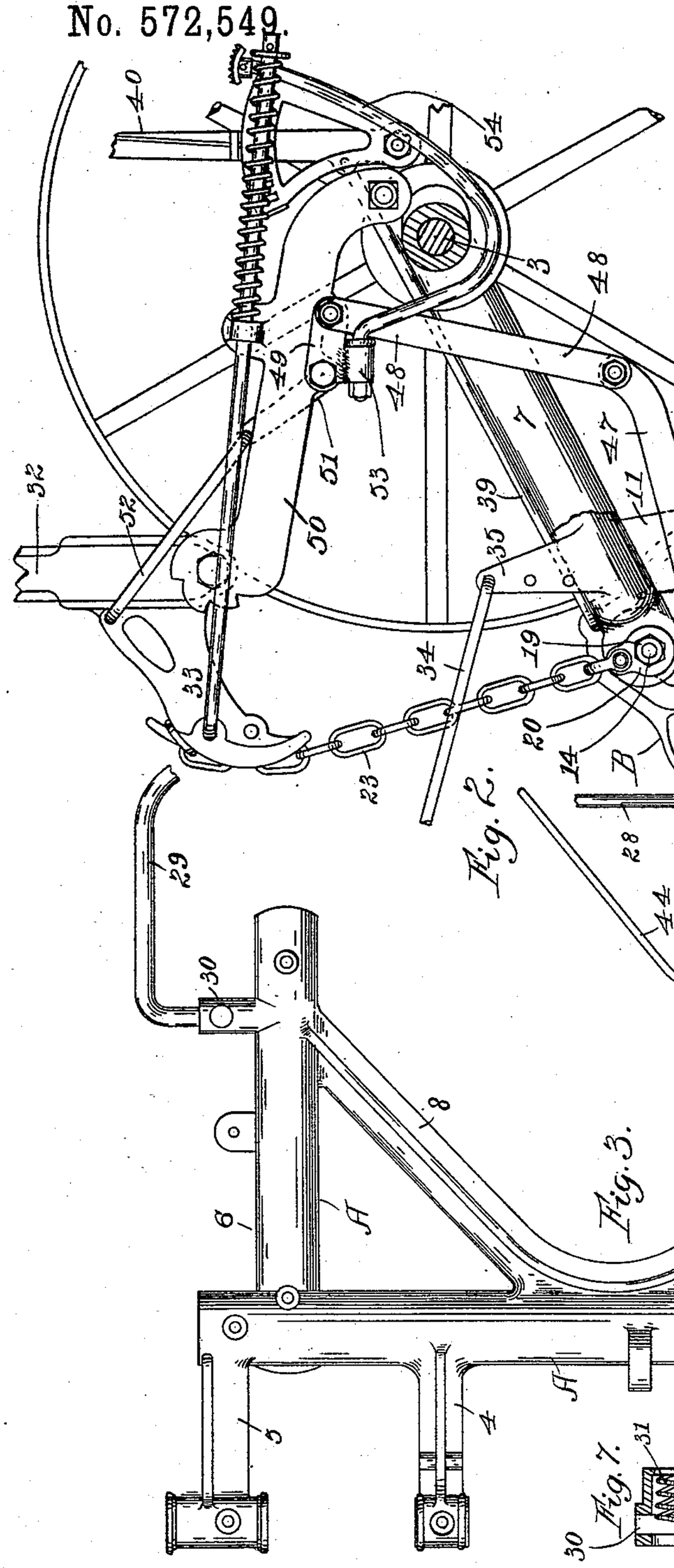

Fig. 2.

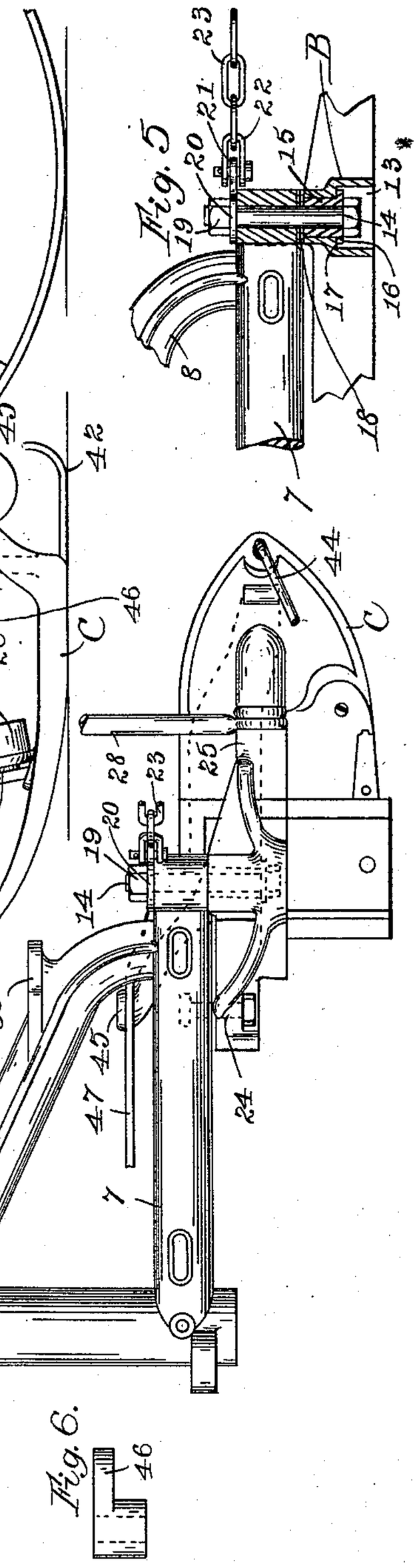

Fig. 5.

Fig. 3.

Fig. 7.

Fig. 6.

Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL V. KENNEDY, OF ST. PAUL, MINNESOTA.

MOWER.

SPECIFICATION forming part of Letters Patent No. 572,549, dated December 8, 1896.

Application filed April 1, 1895. Serial No. 544,063. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL V. KENNEDY, of St. Paul, Ramsey county, Minnesota, have invented certain Improvements in Mowers, of which the following is a specification.

My invention relates to improvements in mowing-machines, its object being to furnish a pivotal support for the finger-bar at the rear of and near its horizontal plane, so as to prevent any forward movement of the bar when tilted and also to furnish substantial support and connection at a point forward and above the pivot, so as to prevent lateral movement of the connected parts, whereby the bar would be thrown out of alinement, together with means for lateral adjustment on this support, so as to secure and maintain perfect alinement of the finger-bar and pitman.

To this end my invention consists in providing an arched or bifurcated hanger, which is pivotally connected by its rear leg to a depending lug carried by the main frame, which frame is preferably made of a single casting. The legs of the hanger are also provided with hinge members, to which is connected the finger-bar, so that the finger-bar stands forward of and a little below the hanger-pivot. The hanger is further supported at the top from the main frame by means of a stud-and-slot connection, which permits a limited movement of the hanger in a vertical plane upon its pivot and also permits of lateral adjustment upon said stud, whereby the connected finger-bar may be adjusted and held in alinement with the pitman.

Other features of construction will appear more fully in the following more specific description and claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a mower embodying my improvements, the right-hand driving-wheel being removed to disclose the construction. Fig. 2 is a partial side elevation looking toward the opposite drive-wheel. Fig. 3 is a detail plan view of the main frame with the attached finger-bar, shoe, and grass-guard. Fig. 4 is a detail plan view of the finger-bar and connected shoe. Fig. 5 is a detail illustrating the stud-and-slot connection between the hanger and frame, and Figs. 6 and 7 are other details.

In the drawings, A represents the main frame of the mower, consisting of a single casting. The cylindrical member 2 serves as a sleeve for the axle 3 and is provided with rearwardly-extending arms 4 and 5 to furnish journal-support for the driving-gear. The left-hand member 6, at right angles with the member 2, is a crank-shaft sleeve. The right-hand member 7, also at right angles with the sleeve 2, but inclined downward slightly more than the member 6, serves as a connection and support for the finger-bar, and the V-shaped double brace 8, with its apex connected to the axle-sleeve and its legs to the ends of the members 6 and 7, strengthens and renders the frame rigid.

B is an arched hanger, the rear leg 9 of which is supported upon the pivot 10, connected to the lug 11, depending from the frame member 7. This hanger is also provided with a transverse slot 12, which has the curvature of a circle with the pivot 10 for its center. The face of the hanger is provided with the groove 13 parallel with, but wider than, the slot 12 for the purpose hereinafter described. The stud-bolt 14, passing through and secured to the frame member 7, carries a sleeve 15, which fits snugly in the slot 12 and has a flange 16 on its outer end bearing against the shoulders 17, formed by the bottom of the groove 13, thus holding the hanger against the frame, the groove 13 serving as a recess for the projecting end of the sleeve 15 and the head of the bolt 14. This stud-and-slot connection, forming, as it does, a positive guide for the hanger as the same is lifted by the lever 40, serves to withstand the lateral strain of the finger-bar upon the hanger, instead of said strain being thrown entirely upon the pivotal connection, whereby it is possible to make the hanger very much smaller and lighter than would otherwise be necessary.

The lateral position of the hanger may be adjusted by means of washers 18, interposed between it and the frame, whereby the finger-bar may be set and held in alinement with the pitman. Arranged upon the other end of the bolt 14 and between its nut 19 and the frame member I provide a washer 20, having an eye 21, to which is attached the clevis 22, carried by the lifting-chain 23.

The legs of the hanger B carry journals 24 and 25 to receive the gudgeons 26 and 27, furnishing a hinge-support for the finger-bar shoe C. Connected at one end to the gudgeon 27 is the grass-guard 28, which extends in front of the frame and has its other end formed with a reverse bend 29, entering a socket 30, in which is arranged a spring 31, adapted to bear upon the end of the rod to prevent its rattling in the socket. 32 is the lifting-lever, carrying the quadrant 33, to which the chain 23 is attached.

34 is the draft-rod, connected at its rear end to the upwardly-projecting lug 35 upon the frame and running through a link or eye 36, supported upon the pole 37.

The hanger B is provided with an eye 38 at its top, to which is connected the rod 39, running to the lever 40, pivoted to the frame of the machine, the angular position of which is adjustable upon the quadrant 41 to determine the height or position of the hanger. By throwing the lever backward the hanger is lifted, turning on its pivot 10, so as to tilt the points of the guards upward, but without any appreciable forward movement of the finger-bar.

The rear end of the adjustable sole-plate or heel 42 upon the shoe C is at the same distance from the points of the guards as the rear end or heel of the divider-shoe upon the outer end of the finger-bar. Consequently the points of the guards are all tilted to uniform height. The shoe C is provided with the usual fender-rod 44 and has also a rearwardly and laterally extending arm 45, the top of the end of which is normally in line with the pivot of the hanger.

To the lug 46, depending from the frame of the machine, is pivoted the gag-lever 47, which extends back over the arm 45 and stands normally slightly above it. The lever is connected by the link 48 with the crank 49, which is pivoted to the pole-casting 50. The crank-arm 51, rigidly connected to the crank 49, is connected by the rod or link 52 to the lever 32. The crank is also provided with a socket 53, into which is fitted the treadle-lever 54. It will thus be seen that with the depressing of the treadle-lever the gag-lever 47 is operated to bear upon the arm 45 and turn the finger-bar shoe upon its hinge, so as to throw the outer end of the finger-bar upward. At the same time, through the crank-arm 51 and rod 52, the lever 32 is operated to lift the forward part of the frame and connected parts around the axle 3 as a center, and conversely the operating of the lever 32 serves to actuate the gag-lever. The initial movement of both serves to first lift the frame and finger-bar into engagement with the gag-lever, so that the outer end of the finger-bar is not allowed to drop, and as the movement continues it is raised more rapidly and higher than the frame. By supporting the finger-bar shoe upon the arched hanger, pivoted, as described, at its rear and in nearly the same horizontal plane as the finger-bar, in the tilting of the finger-bar the alinement between the pitman and the sickle-bar (not shown) is practically unvaried, which is of great practical value in the operation of the machine.

I claim—

1. In a mowing-machine, the combination with the finger-bar shoe and the main frame having a pivot-stud adjacent the shoe, of the hanger hinged to said shoe and mounted on said pivot, the stud-and-slot connection between said hanger and frame, whereby the rotary movement of the hanger on its pivot is limited, and means for longitudinally adjusting the position of the stud in said slot, so as to aline the finger-bar.

2. In a mowing-machine, the combination with the finger-bar shoe and the main frame, of the pivot-stud projecting laterally from said frame slightly above, and in the rear of, said shoe, the arched hanger hinged to said shoe and mounted upon said pivot-stud, and provided with a circularly-curved slot having said pivot for its center, the stud upon the frame projecting through said slot, the head or washer upon the end of said stud engaging said hanger and holding it in place on said stud, and means for adjusting the distance of said head or washer from said frame.

3. In a mowing-machine, the combination with its frame, of the depending lug carried by said frame, the arched hanger pivoted by its rear leg to said lug, the stud and curved slot connection for the top or arch of said hanger with said frame, the means for adjusting the position of the stud in said slot, so as to laterally vary the position of said hanger, the shoe hinged to the legs of said hanger forward of its pivot, and the finger-bar carried by said shoe.

4. In a mowing-machine, the combination with its frame, of the arched hanger pivoted by its rear member to the frame, the finger-bar shoe hinged to both members of the hanger, the means upon the frame for limiting the rotary movement of the hanger on its pivot, and the means for laterally adjusting the angular position of the hanger with relation to the frame.

5. In a mowing-machine, the combination with the main frame and the finger-bar shoe, of the arched hanger hinged to said shoe having pivotal support upon the frame in the rear of the finger-bar, a curved guide concentric with said pivot, and the stud engaging said guide, said guide and stud being arranged one upon the frame and the other upon said hanger, the means for laterally adjusting the hanger in said stud-and-guide connection, and the means for turning said hanger upon its pivot to tilt the finger-bar.

6. In a mowing-machine, the combination with its frame, of the arched hanger pivoted by its rear member to the frame and provided with a slot concentric with its pivot, the headed stud engaging said slot and connected to said frame, the interposed removable wash-

ers arranged upon said stud between said hanger and said frame, and the finger-bar shoe hinged to both members of the hanger.

7. In a mowing-machine, the combination with the main frame, of the depending lug carried thereby, the arched hanger having its rear member pivoted to said lug, the stud-and-slot connection for the arch of the hanger with the frame, the curve of the slot being concentric with the pivot, the means for laterally adjusting said hanger to and from said frame at the point of said stud-and-slot connection, the shoe hinged to the limbs of said hanger, the finger-bar carried by said shoe, its divider-shoe, and the heels upon said shoes projecting rearward an equal distance from the points of the guards.

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

SAMUEL V. KENNEDY.

Witnesses:
D. H. MACGOWAN,
R. F. BALL.