

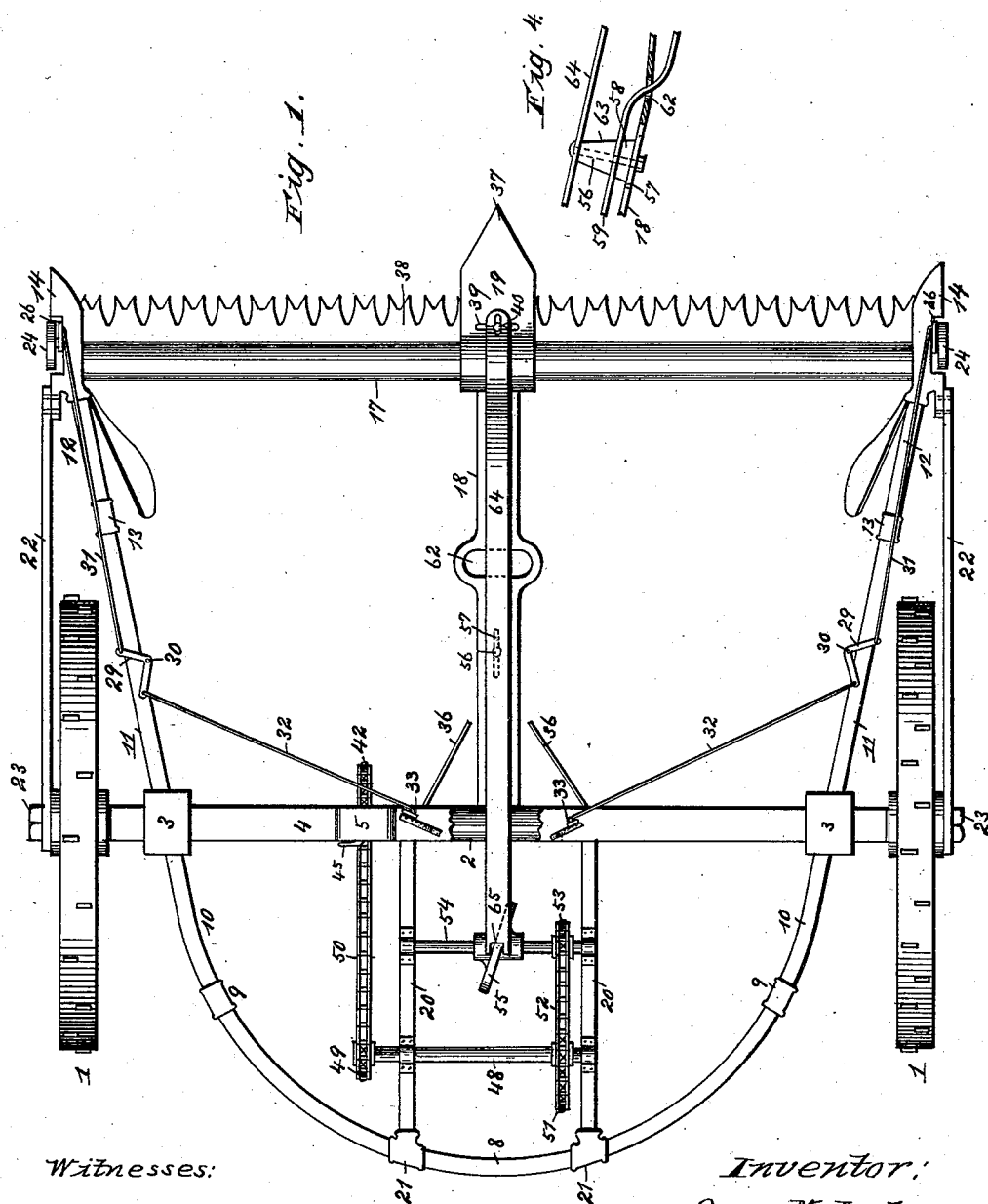
(No Model.)

2 Sheets—Sheet 1.

O. M. JARBOE.
MOWING MACHINE.

No. 548,878.

Patented Oct. 29, 1895.



Witnesses:

F. G. Fischer
W. J. Porter

Inventor:
Owen M. Jarboe

By *Higdon & Higdon*
Attys.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

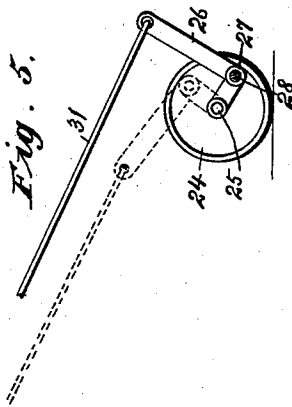
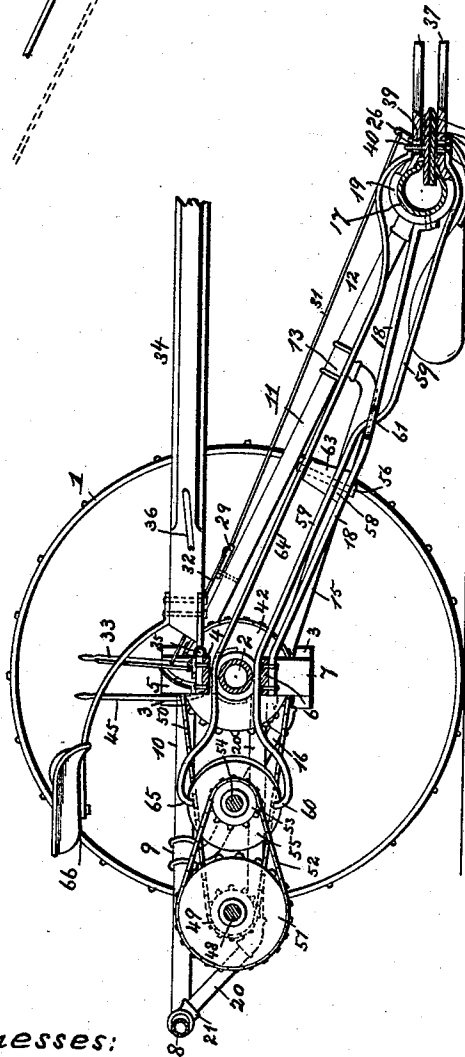


Fig. 7.



Fig. 6.

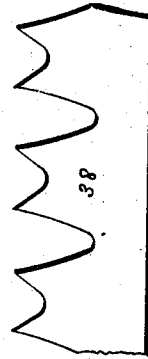
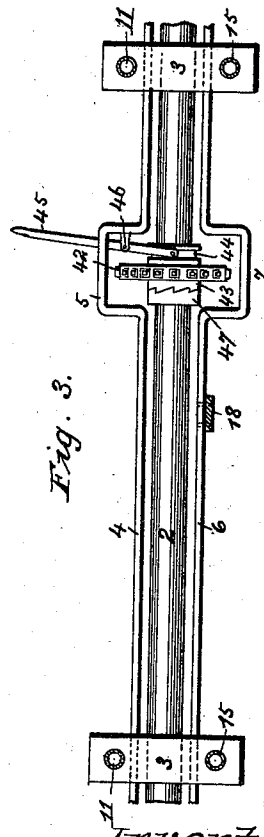


Fig. 3.



Witnesses:

F. G. Fischer

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Inventor:

Owen M. Jarboe

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UNITED STATES PATENT OFFICE.

OWEN M. JARBOE, OF CARROLLTON, MISSOURI.

MOWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 548,878, dated October 29, 1895.

Application filed September 25, 1894. Serial No. 524,023. (No model.)

To all whom it may concern:

Be it known that I, OWEN M. JARBOE, of Carrollton, Carroll county, Missouri, have invented certain new and useful Improvements in Mowing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to mowing-machines; and my object is to produce a mowing-machine which is effective in operation and which may be adjusted to cut at varying heights.

A further object is to produce a mowing-machine which is exceedingly light, strong, durable, and inexpensive of construction.

With these objects in view the invention consists in certain novel and peculiar features of construction and combinations of parts, as will be hereinafter described and claimed.

In order that the invention may be fully understood, I will proceed to describe the same with reference to the accompanying drawings, in which—

Figure 1 is a top plan view, partly broken away, with the tongue removed, of a mowing-machine embodying my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is an enlarged view of parts of the machine which will be hereinafter described, and Figs. 4, 5, and 6 are also views of parts which will be hereinafter described.

Like reference-numerals denote corresponding parts in the several figures, in which—

1 designates the carrying-wheels, and 2 the axle thereof. Said carrying-wheels are mounted upon said axle in such manner that when the machine moves forward the axle and the cutting mechanism hereinafter to be described are operated, and when moved rearwardly or backed the wheels turn loosely upon the axle without rotating the same. The well-known pawl-and-ratchet construction will be employed to accomplish this purpose; but as it forms no part of my invention it is not deemed necessary to illustrate the same in the accompanying drawings.

Arranged adjacent to each carrying-wheel is a vertical standard 3, said standards being mounted loosely upon the axle, and connecting said standards and arranged parallel with and above the axle 2 is a bar 4, and said bar is bent at a point nearer one end than the

other, as at 5, to inverted-U shape, said U-shaped portion or bend extending vertically upward. Connecting the standards 3 and arranged parallel with and below the axle 2 is a bar 6, and said bar is bent vertically downward at 7 to U shape, and said bent portion 7 is disposed oppositely to the bent portion 5 of the bar 4, thus forming a vertical space between said bars, the object of which will be hereinafter explained. A pipe or rod is bent to approximately semicircular form, as at 8, and is arranged horizontally in a plane slightly above the bar 4, and has its opposite ends connected by the T-couplings 9 with the short pipes 10, the front ends of which engage apertures in the standards 3, which thus support said pipes.

Pipes or rods, each preferably in the form of two sections 11 and 12, connected by the T 13, extend divergently forward and downward from their rear ends, which are secured in the front ends of the apertures of the standards 3, engaged by the front ends of the pipes 10, and the front ends of said pipes are detachably but firmly connected to the sickle-guards 14. Said pipes are braced and stiffened by the pipes or rods 15, which are secured at their rear ends in the apertures near the lower ends of the standards 3 and have their front ends engaging the T-couplings 13 and are also braced by the pipes 16, which have their front ends engaging the apertures of the standards 3, engaged by the rear ends of the pipes 15, and their rear ends engaging the T-couplings 9.

Extending transversely of the machine and secured at its opposite ends in the sickle-guards 14 is the pipe 17, and said pipe is braced and strengthened at its middle by the longitudinally-extending bar 18, which is secured at its rear end to the under side of the cross-bar 6 and at its front end to the centrally-located sickle-guard 19, which is provided with a circular opening through which said pipe 17 extends. The frame is further braced by means of the longitudinally-extending and parallel pipes 20, which are secured at their front ends in any suitable manner to the cross-bar 6 and at their rear ends to the T-couplings 21, carried by the pipe 8. The frame is also braced longitudinally by the side bars 22, which are secured at their front

ends to the sickle-frames 14, and at their rear ends are mounted loosely upon the projecting end of the axle and are retained in such position by the ends 23 engaging said projecting ends of the axle.

24 designates casters or small supporting-wheels for the front end of the machine, and mounted loosely upon cylindrical pins 25, projecting inwardly from said supporting-wheels, are L-shaped levers 26, which are provided at their angle with bearing-apertures 27, in which are loosely mounted cylindrical pins 28, projecting outwardly from the sickle-guards 14. The bearing-apertures 27 are greater diametrically than said pins to allow of a limited movement of the pins within said openings when the front end of the machine is vertically adjusted, as will be hereinafter more fully explained.

29 designates bell-crank levers, which are pivoted at 30 to the diverging pipes 11, and the outwardly-projecting arms 29 of said levers are pivotally connected through the medium of the link-rods 31 with the upper ends of the L-shaped levers 26, and the other arms of said levers are pivotally connected through the medium of the link-rods 32 with the grip-levers 33, which are pivotally mounted upon the bar 4 at opposite sides of the tongue 34, which is pivotally mounted or hinged at 35 to said bar 4, and is braced from lateral movement by the forwardly-converging rods or bars 36, said rods or bars being secured at their rear ends to the bar 4 in any suitable manner. These grip-levers in practice will be provided with spring-actuated dogs and toolled segments for engagement with said dogs, so as to lock said levers and therefore the front end of the machine at any point in their adjustment; but as such construction is old and well known in the art it is not necessary to describe the same in this connection.

The sickle-guards 14 and 19 are bifurcated in their front ends to form the parallel arms 37, and fitting snugly between said arms and one upon the other are the cutting-blades 38, which are of the construction shown or of any other suitable or preferred construction, and projecting upwardly from one of said cutting-blades and through the transverse slot 39 in the upper arm of the middle sickle-guard is a pin 40, and a similar pin 41 depends vertically from the other cutting-blade and also extends through a transverse slot 39 in the lower arm of the said guard.

Returning now to the power mechanism, 42 designates a sprocket-wheel which is mounted loosely upon the shaft 2 and occupies the vertical space between the bent portions 5 and 7 of the cross-bars 4 and 6, and said sprocket-wheel is provided or formed at one side with a clutch-face 43 and at the opposite side with an annularly-grooved collar 44, and a lever 45, pivoted to a lug 46, projecting from the bent portion of the bar 4, loosely engages the groove of said collar, so that the clutch-face of said sprocket-wheel may be thrown into or out of

engagement with the clutch-face collar 47, mounted rigidly upon the axle. Extending transversely and journaled in bearings carried by the parallel pipes 20 is a shaft 48, and mounted upon one end of the shaft is a sprocket-wheel 49, which is connected with the sprocket-wheel 42 by the chain 50. A second sprocket-wheel 51, mounted upon said shaft, is operatively connected by the chain 52 with the sprocket-wheel 53, carried by the shaft 54, also journaled in bearings carried by said pipes 20, and mounted rigidly and centrally upon the shaft 54 is a cam-wheel 55.

Pivotally mounted upon a bolt 56, projecting through a longitudinal slot 57 in the brace-bar 18 and resting upon the interposed washer or spacing-block 58, is a lever 59, which extends for a suitable distance parallel with the brace-bar 18. The rear portion of this lever extends horizontally between the cross-bar 6 and the axle 2 and rearward of said cross-bar and axle is bent to form the upwardly-projecting and bifurcated rear end 60, which embraces the cam-wheel 55 vertically below its center. In advance of its pivotal point said lever is bent downwardly at 61 through the transverse slot 62 in the brace-bar 18; and thence extends to a point below the middle guard 19 and pivotally engages the depending pin 41. Mounted pivotally, also, upon said bolt 56 and upon the collar or spacing-block 63, interposed between the same and the lever 59, is a lever 64, which extends approximately parallel for a suitable distance with the adjacent portions of the brace-bar 18 and the lever 59. The rear portion of this lever extends horizontally between the upper bar 4 and the axle 2 and is bent to form the downwardly-projecting and bifurcated end 65, which embraces the cam-wheel 55 at a point vertically above its center. The front portion of said lever is bent over the middle guard 19 and pivotally engages the upwardly-projecting pin 40. The levers 59 and 64 at their point of connection with the pins 41 and 40, respectively, are longitudinally slotted, so as to permit of a lateral operation of said levers.

Mounted upon a spring projecting from the rear end of the tongue is the seat 66, which is within convenient reach of the levers 33 and the lever 45.

As the machine is drawn over the ground, the rotation of the wheels 1 and the axle 2, through the medium of intermediate power-transmitting mechanism, causes the rotation of the cam-wheel 55—that is, when the clutch-sections 43 and 47 are in engagement—and this rotation of the cam-wheel causes the pivotal operation of the levers 59 and 64, and these levers, being pivotally connected at their front ends to the pins projecting from the cutting-blades, cause said blades to reciprocate in opposite directions and thereby mow or cut the grain or grass being operated upon.

When it is desired to change the altitude of the cutting mechanism, the grip-levers 33

are operated in the direction required, and this operation causes the L-shaped levers 26 to pivotally operate upon the pins 25 of the front supporting-wheels 24, and thereby raise 5 or lower the pins 28 and the front end of the machine, from which said pins project, as will be understood.

From the above description it will be apparent that I have produced a mowing-machine 10 which is of light draft, under perfect control of an operator, and is simple, strong, and inexpensive of construction and effective in operation.

Having thus described my invention, what 15 I claim as new, and desire to secure by Letters Patent, is—

1. In a mowing machine, the combination with a pair of wheels, an axle connecting the same and a framework mounted upon the 20 axle, and consisting of the vertical standards 3, the transverse bars 4 and 6, respectively, connecting said standards above and below the axle, the rearwardly-projecting semi-circular portion, the forwardly-diverging portion; both carried by said standards and composed of hollow pipes or rods, shoes mounted 25 upon the front ends of the diverging portion, and a hollow pipe connecting the same and carrying at its middle a transversely-slotted shoe, of a pair of cutter-bars mounted in said shoes and provided with pins projecting 30 through said slots, a pair of levers pivoted near their middle in a longitudinal slot in a part of the framework, and having their front ends pivoted to the said pins and their rear 35 ends bifurcated, and a rotating cam-wheel mounted in the framework and engaging the bifurcated rear ends of said levers, substantially as set forth.

40 2. In a mowing machine, the combination with a pair of wheels, an axle connecting the

same, and a framework mounted upon the axle, and consisting of the vertical standards 3, the transverse bars 4 and 6, respectively, 45 connecting said standards above and below the axle, and bent oppositely to form a vertical elongated space, the rearwardly-projecting semi-circular portion, the forwardly-diverging portion; both carried by said standards and composed of hollow pipes or rods, 50 shoes mounted upon the front ends of the diverging portion, and a hollow pipe connecting the same and carrying at its middle a transversely slotted shoe, of a pair of cutter-bars mounted in said shoes and provided with pins 55 projecting through said slots, a pair of levers pivoted near their middle in a longitudinal slot in a part of the framework and having their front ends pivoted to the said pins and their rear ends bifurcated, a sprocket-wheel 60 mounted loosely on the axle within the said elongated space, and provided with a clutch-face and with an operating lever, a clutch-section rigidly mounted upon the shaft and opposing the said clutch-face, a second shaft 65 mounted in the rear end of the framework and provided with a small and a large sprocket-wheel, a chain connecting the small one with the sprocket-wheel of the axle, a third shaft mounted in the framework and provided with 70 a sprocket-wheel and a cam-wheel, which engages the bifurcated ends of the levers, and a chain connecting the sprocket-wheel of the last-mentioned shaft with the large sprocket-wheel of the shaft to the rear, substantially 75 as set forth.

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

OWEN M. JARBOE.

Witnesses:

J. G. HOUSTON,

JAMES M. MCPHETRIDGE.