

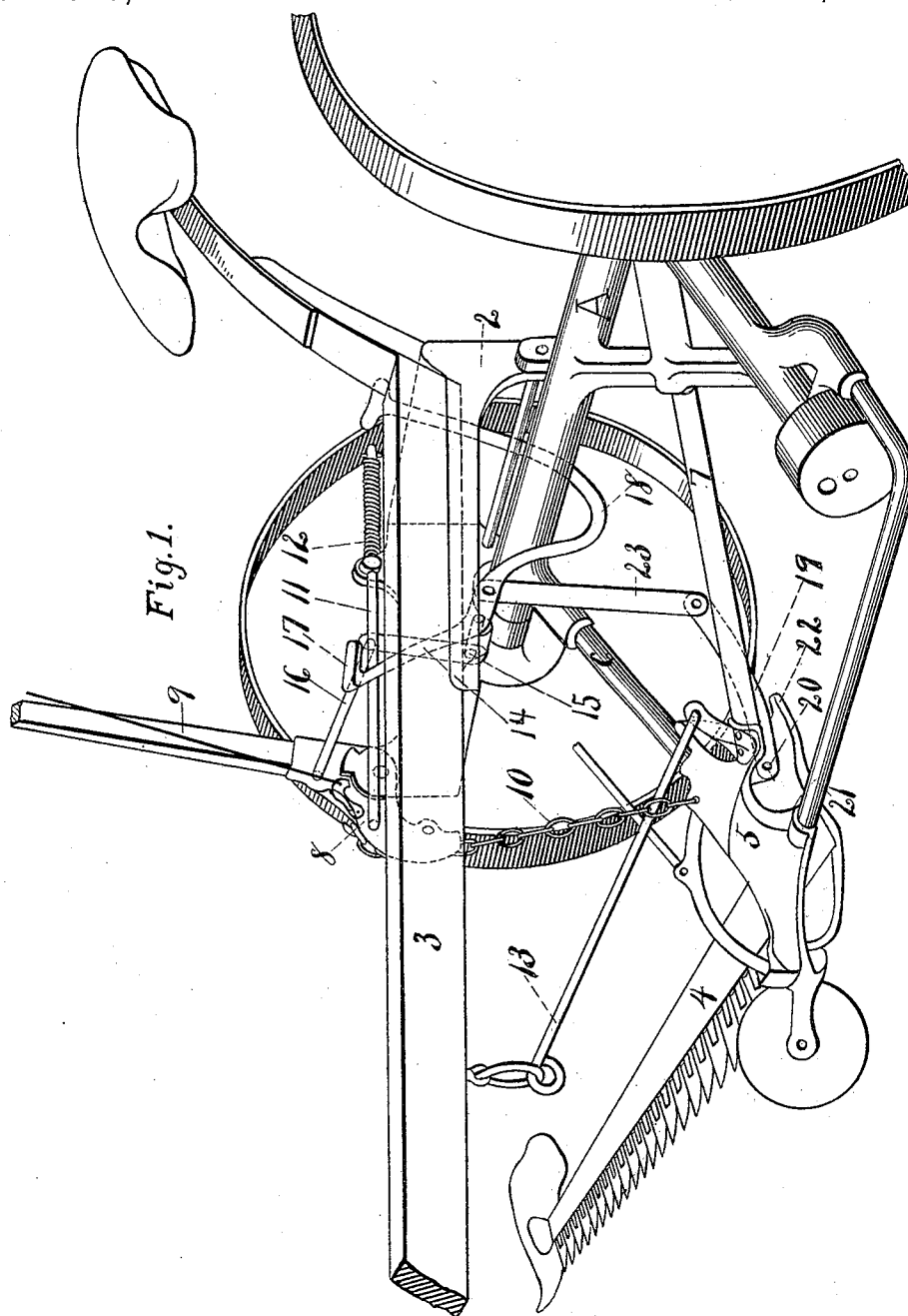
(No Model.)

3 Sheets—Sheet 1.

S. V. KENNEDY.
MOWING MACHINE.

No. 529,448.

Patented Nov. 20, 1894.



WITNESSES

W. C. Swift.
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INVENTOR

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(No Model.)

3 Sheets—Sheet 2.

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Fig 2.

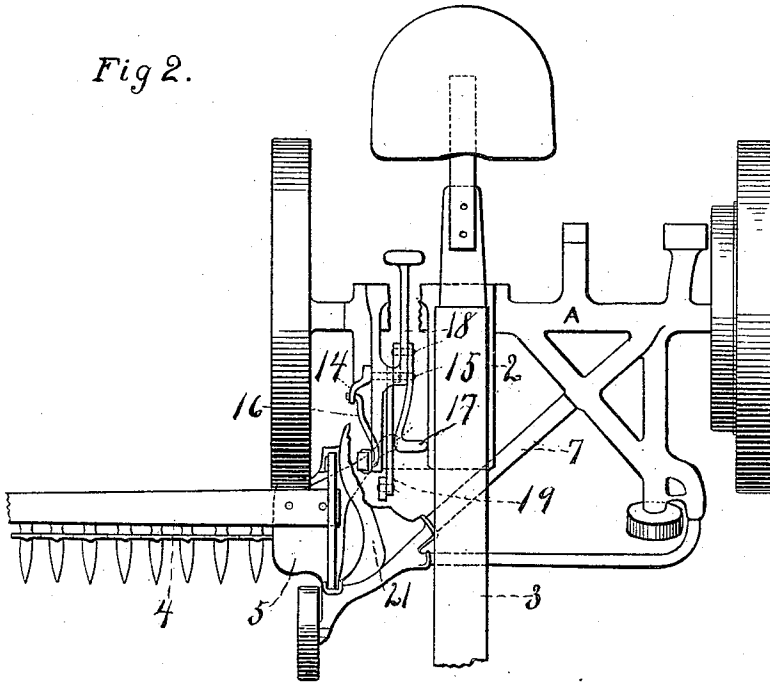
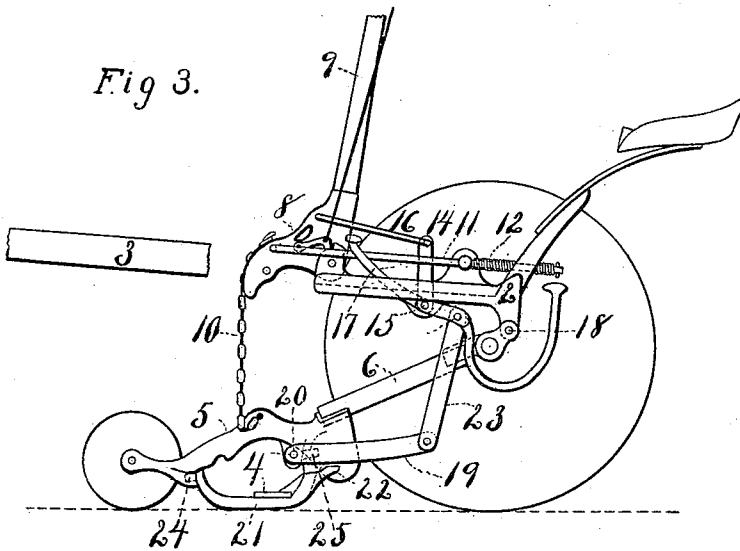


Fig 3.



Witnesses.

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(No Model.)

3 Sheets—Sheet 3.

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Fig 4.

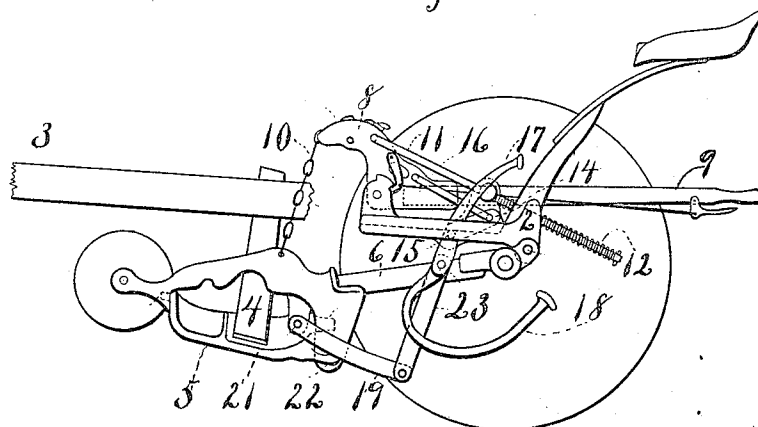
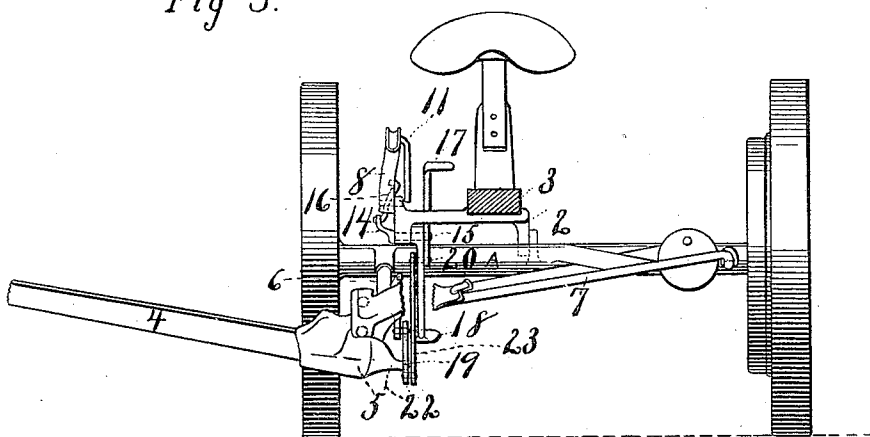


Fig 5.



Witnesses.
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Inventor.
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UNITED STATES PATENT OFFICE.

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

MOWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 529,448, dated November 20, 1894.

Application filed December 4, 1893. Serial No. 492,727. (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 new and useful Improvements in Mowing-Machines, of which the following is a specification.

My invention relates to improvements in mowing machines, its object being to provide means actuated by the foot of the operator for turning the hand lever quadrant to lift the cutter bar from the ground, and at the same time raise the outer end of the cutter bar more rapidly and higher than its inner end, so as to clear obstacles in its path.

To this end my invention consists in providing a lever pivoted to the hanger, and fulcrumed upon the heel of the cutter bar shoe. The power end of the lever is connected by a link to a foot operated lever, or treadle, pivoted to the frame of the machine. The treadle is also connected to the hand lever quadrant so that when depressed, the power end of the lever bearing upon the heel of the cutter bar shoe is thrust downward so as to tend to lift the outer end of the cutter bar and take up its sag. At the same time the hand lever quadrant is turned so as to lift the cutter bar bodily from the ground, the outer end of the cutter bar moving more rapidly than the shoe, the whole operation being performed by foot power.

My invention further consists in the construction and combination hereinafter more particularly described and claimed.

In the accompanying drawings forming part of this specification, Figure 1 is a partial perspective view of a mowing machine fitted with my improved attachments. Fig. 2 is a partial plan or top view of the same, certain of the parts being broken away to more clearly show the attachments. Fig. 3 is a sectional, side elevation of the machine looking from the stubble side of the machine, with the cutter bar resting upon the ground in position for work, and the lifting chain slackened by the use of the upper treadle. Fig. 4 is a similar view with the cutter bar raised to its limit by means of the foot lever, and Fig. 5 is a front view of the machine with the cutter bar thus raised.

In the drawings A represents the frame of

the machine, of which 2 is the casting or connection for the pole 3.

4 is the cutter bar; 5, the cutter bar hanger; 6 and 7, the braces connecting the hanger with the main frame; 8, the hand lever quadrant pivoted to the machine in the ordinary manner and provided with the hand lever 9, and 10 the chain connecting the quadrant with the hanger 5.

11 is a spring rod for assisting in the operation of turning the quadrant to lift the cutter bar, and 12 its actuating spring.

13 is the draft rod connected to the cutter bar hanger.

14 is an upwardly projecting crank arm provided with a pivot 15, which takes a bearing in the pole casting or connection, the upper end of the arm being connected by the link 16 to the quadrant 8 above its pivot, as shown in Fig. 1. Rigidly connected to the pivot 15 is the upwardly projecting foot lever or treadle 17. Also rigidly connected to the pivot 15 is the rearwardly extending foot lever or crank 18, the foot rest or treadle part being normally in the position indicated in Fig. 1, for the convenient application of the foot of the operator.

19 is a lever, pivoted at 20 to the hanger 5, and adapted to bear upon the rearwardly extending heel 22 of the shoe 21 as a fulcrum, the power end of the lever being connected by the link 23 to the foot lever 18 in the rear of the pivot pin 15. The shoe 21 is hung on pivots 24 and 25 journaled in the hanger, in the ordinary manner.

Operation: The parts being in the position shown in Figs. 1, 2 and 3, with the cutter bar resting upon the ground in position for work, it being desired to lift the cutter bar by means of foot power, the foot is placed upon the treadle of the lever 18 and the lever thrust downward. The lever 19 bearing upon the heel 22 of the cutter bar shoe causes the outer end of the bar to move upward, coincident with the inner end. At the same time the crank arm 14 is carried backward and by means of its link 16 the quadrant 8 is rotated on its pivot, causing the chain 10 to lift the hanger 5 and the cutter bar bodily from the ground. The outer end of the cutter bar however, after the initial movement, is carried up

more rapidly and to a greater height than the inner end, by reason of the influence of the lever 19, thus enabling it to clear obstacles of a greater height than when raised merely by hand lever, without the described connection with the foot lever and the lever bearing on the shoe. The adjustment of the parts of the attachment is preferably such that their combined action serves at first merely to start the cutter bar upward in a level position, the sag being taken up by the lever bearing on the shoe. After the shoe has cleared the ground it is turned more and more on its pivots to raise the outer end of the cutter bar to a higher point.

The converse action of the attachment serves to return the cutter bar to the ground again for work.

The described attachment permits of the use of either hand or foot lever or both conjointly at will, the movement of the cutter bar being the same in each case.

I claim—

1. In a mowing machine, the combination with the pivoted cutter bar shoe and the lifting quadrant and chain, of the lever bearing upon said shoe, and the treadle engaging said lever and said quadrant and operative to first lift the cutter bar horizontally and then to throw its outer end higher than the inner end.

2. In a mowing machine, the combination with the cutter bar shoe and its lifting quadrant, of the lever bearing upon the inner side of said shoe, and the treadle mounted upon the frame of the machine and linked to said quadrant and said lever so as to operate them simultaneously, by the initial movement lift-

ing the cutter bar horizontally and by the further movement tilting its outer end upward.

3. In a mowing machine, the combination with the cutter bar hanger, and its lifting quadrant and chain, of the cutter bar shoe pivoted to the hanger, the lever pivoted to the hanger and bearing upon the shoe on the opposite side of its pivot from the cutter bar, the treadle pivoted to the frame of the machine, the link connecting it to said lever, the crank rigidly connected to said treadle and the link connecting said crank to said quadrant, substantially as described.

4. In a mowing machine, the combination with the pivoted cutter bar shoe, its lifting chain and spring actuated quadrant, of the compound treadle pivoted to the frame of the machine, the crank rigidly connected to said treadle and linked to said quadrant, the lever engaging said shoe and operative to rock it on its pivot to raise the outer end of the cutter bar, and the link connecting said lever with said compound treadle, whereby by the depressing of one of the treadles, the cutter bar is lifted from the ground, and its outer end raised higher than its inner end, and by depressing the other treadle the lifting tension of the quadrant spring is counteracted, substantially as described.

In testimony whereof I have hereunto set my hand this 28th day of November, 1893.

SAMUEL V. KENNEDY.

Witnesses:

T. D. MERWIN,
H. S. JOHNSON.