

No. 801,059.

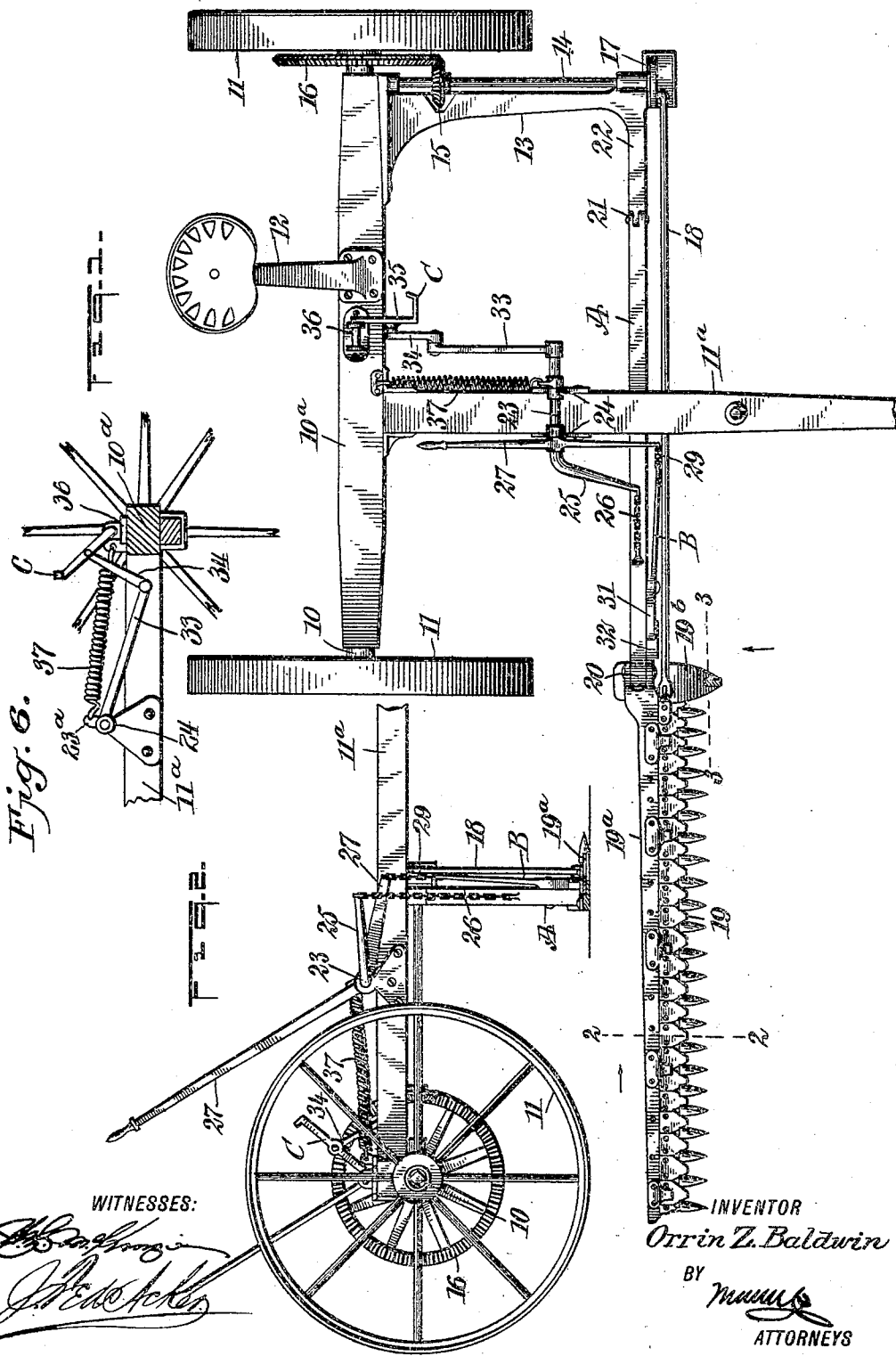
PATENTED OCT. 3, 1905.

O. Z. BALDWIN.

MOWING MACHINE ATTACHMENT.

APPLICATION FILED MAY 3, 1905.

2 SHEETS--SHEET 1.



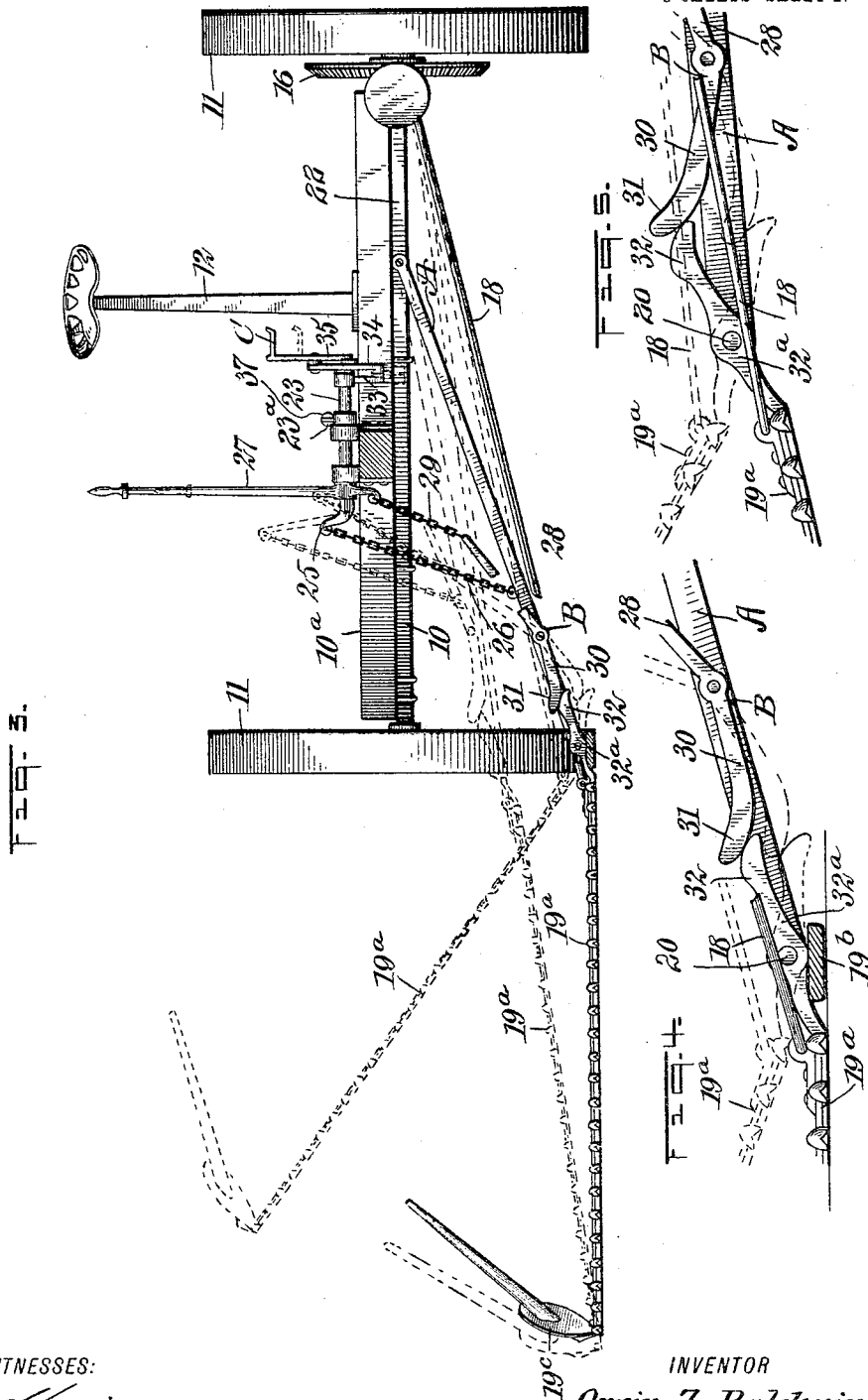
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WITNESSES:

Wm. M. G. Jones
J. F. Acker

INVENTOR

Orrin Z. Baldwin

BY

Mum

ATTORNEYS

UNITED STATES PATENT OFFICE.

ORRIN ZENAS BALDWIN, OF MERRICKVILLE, NEW YORK, ASSIGNOR OF
ONE-HALF TO JOHN W. WHITE, OF NORTHFIELD, NEW YORK.

MOWING-MACHINE ATTACHMENT.

No. 801,059.

Specification of Letters Patent.

Patented Oct. 3, 1905.

Application filed May 3, 1905. Serial No. 258,574.

To all whom it may concern:

Be it known that I, ORRIN ZENAS BALDWIN, a citizen of the United States, and a resident of Merrickville, in the county of Delaware and State of New York, have invented a new and Improved Mowing-Machine Attachment, of which the following is a full, clear, and exact description.

The purpose of the invention is to provide a very simple and economic attachment to any mowing-machine adapted to be used in conjunction with the ordinary lift-lever of the cutter-bar, which attachment mainly consists of means for raising the inner shoe of the cutter-bar at any time for the purpose of clearing an obstruction without necessarily interfering with the outer end or outer shoe of the cutter-bar, which portion of the bar remains in action.

Another purpose of the invention is to provide a heel or inner-shoe lifting mechanism adapted to be operated by the foot, leaving the hands free, and which will in no manner interfere with the lever or lifting the outer end of the cutter-bar, but which may be operated simultaneously with the regular lifting-bar or alternately therewith, so as to give a lift to the cutter-bar when required, first at the heel and then at the outer end, or vice versa, so as to clear any obstruction in the path of the cutter-bar without necessarily raising the entire bar, permitting at least one portion of the bar to continue cutting.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a mowing-machine, the cutter-bar being on the ground throughout its length and showing the two lift-levers in normal position. Fig. 2 is a side elevation of the machine, the parts being in the position shown in Fig. 1, the cutter-bar being in section, which section is taken on the line 2 2 of Fig. 1. Fig. 3 is a front elevation of the machine, the inner shoe being in section, the said section being taken on the line 3 3 of Fig. 1. Fig. 4 is a detail front elevation of a portion of the cutter-bar and suspension-bar to which it is hinged and parts operated by the usual lift-lever to raise the bar at its outer end, the bar being shown down

in positive lines and partly elevated in dotted lines. Fig. 5 is a view similar to Fig. 4, illustrating the heel of the cutter-bar as raised by the auxiliary or foot lever in positive lines and showing by dotted lines the position of the cutter-bar when raised by both lift-levers, said bar being then lifted at its heel and likewise at its outer end; and Fig. 6 is a detail view, in side elevation, showing the connections between the shaft and the foot-lever.

The machine is constructed in the usual manner, consisting in the main of an axle 10, upon which supporting-wheels 11 are suitably mounted, and on the axle a body-bar 10^a is clipped or otherwise secured. From the said body-bar 10^a at the right-hand side of its center the pole 11^a is carried forward and the driver's seat 12 is supported on the said body-bar 10^a. A bracket 13 extends forward from the left-hand end of the body-bar 10^a, and in suitable bearings on this bracket a drive-shaft 14 is mounted to revolve, which drive-shaft is shown as provided with a bevel-pinion 15, meshing with a bevel-gear 16, secured to the left-hand supporting-wheel 11.

At the outer end of the drive-shaft 14 an eccentric 17 is secured, and a pitman 18 is connected with the eccentric and is pivotally attached to the sickle-bar 19 of the cutter-bar 19^a, as is shown in Fig. 1. The said cutter-bar is provided with the customary inner shoe 19^b and outer shoe 19^c.

A suspension-bar A is located at the forward portion of the machine in alinement with the cutter-bar 19^a. This suspension-bar A is hinged or pivoted to the inner end of the cutter-bar 19^a, as shown at 20 in the drawings, and the inner end of the said suspension-bar A has a hinged or pivotal connection with a horizontal arm 22, extending forwardly from the bracket 13 in direction of the cutter-bar, as is shown in Figs. 1 and 3.

A shaft 23 is journaled in suitable bearings 24, carried by the tongue or pole 11^a, and the said shaft 23 is located to the rear of the suspension-bar A, as is shown best in Fig. 1. At the right-hand end of the shaft 23 a crank-arm 25 is formed or secured, which crank-arm 25 has normally a forward inclination and extends more or less also in direction of the right-hand side of the machine. This crank-arm 25 is connected with the lifting-bar A by a chain 26 or its equivalent, the attachment to the bar being made adjacent to its pivotal connection with the cutter-bar.

The customary lifting-lever 27 for the cutter-bar is fulcrumed on the said shaft 23, and the forward end of the lever 27, which is an angle-lever, is connected with an angle trip-lever B, which is fulcrumed on the front portion of the suspension-bar A near its pivotal connection with the cutter-bar 19". One member 28 of the angle trip-lever B extends upward and in direction of the left-hand side of the machine and is connected with the outer end of the lift-lever 27 by means of a chain 29 or its equivalent. The other member 30 of the said angle trip-lever B extends in direction of the cutter-bar 19", as is shown best in Figs. 3, 4, and 5, and is provided at its outer end with an outwardly-curved head 31, having its under face more or less convexed. The convexed face of the said head 31 is always in engagement with a convexed surface on a head 32, forming a portion of an arm 32", which extends from the heel of the cutter-bar, being rigid therewith, so that when the lift-lever is carried backward, for example, the head 31 will operate upon the head 32 to press the same downward, as is shown by dotted lines in Fig. 4, and thereby raise the outer end of the cutter-bar.

A crank-arm 33 is secured to the left-hand end of the shaft 23, and said crank-arm 33 extends in a reverse direction to the crank-arm 25—namely, downward and rearward. The said crank-arm 33 is pivotally attached to a link 34 and said link in its turn is connected with the forwardly-extending portion 35 of a foot-lever C, the horizontal or transverse portion 36 of which foot-lever is journaled in suitable bearings on the body-bar 10", as shown in Fig. 1. The foot-lever C is within convenient reach of the driver when he is in the seat 12.

A spring 37 is attached to an upwardly-extending member 23" of the shaft 23 and to the body-bar 10", and the said spring tends to normally carry the foot-lever C to an upper inclined position (shown particularly in Figs. 2 and 3) by forcing the shaft 23 to rock forwardly; but the weight of the cutter-bar as it is lowered to the ground also tends to carry the foot-lever to its upper or normal position. It will be understood that the thrust of the spring 37 is in a forward direction and that the said spring is contracted when the foot-lever C is depressed.

The auxiliary or foot lever C, being connected with the suspension-bar A, is adapted when the said lever C is carried downward and forward to lift the heel portion of the cutter-bar from the ground in order to avoid any obstruction that may be in the path of that portion of the cutter-bar, and at the same time the outer end portion of the cutter-bar remains on the ground and the cutters at that portion of the bar operate to cut the grass.

It will be observed that while the two lift-

levers C and 27 are independent of each other, one raising the cutter-bar from the heel and the other from its outer end, said levers may be operated alternately or together with good results. For example, on very stony or undulating ground it may be desirable to lift the cutter-bar at one time from its outer end and shortly afterward from its inner end, and it may be desirable at other times to raise the cutter-bar bodily from both of its ends, in which event both levers are operated simultaneously.

By positive lines in Fig. 5 I have illustrated the cutter-bar as elevated at its heel or inner end, its outer end being on the ground, which position of the cutter-bar is brought about when the foot-lever C has been carried downward, and by dotted lines in the same figure I have illustrated the cutter-bar as elevated both at its inner end or heel and at its outer end, which is accomplished by operating both of the levers C and 27 at the same time.

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

In mowing-machines, the combination with a wheel-supported frame, a cutter-bar, a suspension-bar hinged to the cutter-bar and having hinged connection with the frame, a fixed arm integral with the inner end of the cutter-bar, extending in direction of the suspension-bar and having movement thereon, which arm terminates in a head having a convexed upper surface, an angle trip-lever pivotally mounted upon the suspension-bar, the member of the said lever extending in direction of the cutter-bar terminating in a head having a convexed face which is in engagement with the corresponding face of the said extension-arm head, of a shaft transversely mounted on the pole of the machine, a rearwardly-extending crank-arm at the left-hand end of the said shaft, a foot-lever mounted upon the said frame, a link connection between the foot-lever and the said crank-arm, a second crank-arm at the right-hand end of the shaft, extending forwardly and in direction of the right-hand side of the machine, a flexible connection between the right-hand crank-arm and the suspension-bar between its center and right-hand end, an angular hand-lift lever mounted to turn on the right-hand end of said shaft, a flexible connection between the forward member of the hand-lever and the trip-lever on the suspension-bar, and a spring attached to the frame and to an upwardly-extending member of the shaft, which spring exerts forward tension on the member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ORRIN ZENAS BALDWIN.

Witnesses:

MYRTLE A. WHITE,
MABEL L. HEINAMAN.