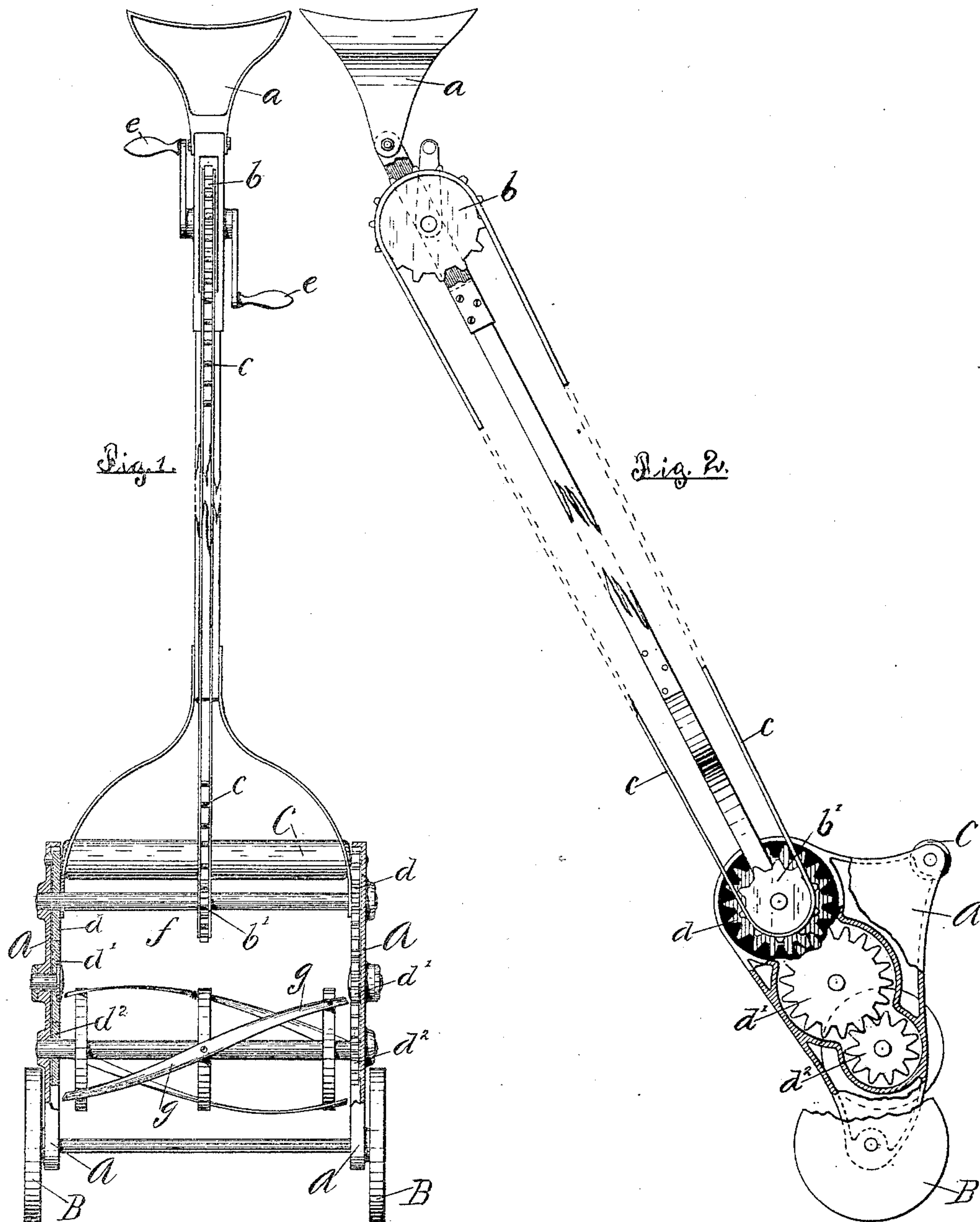


N. A. BATCHELLER.  
LAWN MOWER.

No. 437,808.

Patented Oct. 7, 1890.



Witnesses.  
Oliver  
Geo. T. Waldo.

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# UNITED STATES PATENT OFFICE.

NELSON A. BATCHELLER, OF BLACK RIVER FALLS, WISCONSIN.

## LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 437,808, dated October 7, 1890.

Application filed January 9, 1890. Serial No. 336,456. (No model.)

*To all whom it may concern:*

Be it known that I, NELSON A. BATCHELLER, a citizen of the United States, residing at Black River Falls, in the county of Jackson and State of Wisconsin, have invented certain new and useful Improvements in Lawn-Mowers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to lawn-mowers, and particularly to the means whereby the cutting apparatus is operated.

In an application filed simultaneously herewith, Serial No. 336,457, I have shown and described my improved means as applied to reciprocating cutting apparatus; but the form herein referred to is applicable to what are known as "rotating cutters."

The general object of the present invention is similar to that disclosed in the application before referred to—namely, to provide a mower in which the cutting apparatus can be operated independently of the power driving the machine.

A further object is to provide a device which shall be simple in operation, but more effective where rough work is to be done than those of its same general character now on the market.

The invention therefore consists in the particular means whereby rotating movement is given the cutter, all as hereinafter described and specifically claimed.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a top view of my improved mower, and Fig. 2 is a side elevation partly in section.

In the drawings the frame of the machine is shown as composed of two side plates A A, preferably of iron, having bearings formed at or near one end for the axle of the wheels B B, forming the front supports for the machine, and at the other end for the supporting-roller C.

The cutter is of the ordinary kind, and con-

sists of blades *g*, attached to hoops or bands secured upon a shaft supported at either end in bearings formed upon the plates A A. This shaft has rigidly secured to it at each end a gear  $d^2$ , adapted to mesh with a gear  $d'$ , secured upon a short-headed shaft bearing in the frame A.

Rotatably supported by the frame A is a second shaft *f*, carrying near either end gear-wheels  $d$   $d$ , meshing with the wheels  $d'$   $d'$ , and it will thus be seen that when motion is imparted to the shaft *f* the same will be transmitted through the gears to the rotating cutter, the intermediate gear  $d'$  being necessary to give the cutter motion in the proper direction.

The handle of the apparatus is principally of ordinary construction, but at its upper part is either cut out or has secured to it an extension, as shown, between the sides of which a sprocket or band wheel *b* may be pivoted. Passing over this wheel is a sprocket chain or belt *c*, which in turn passes over a corresponding wheel *b'*, arranged at or near the center of the shaft *f*, before described.

Attached to each end of the shaft carrying the wheel are cranks *e e*, having suitable handles to which power is applied to rotate the cutter, the same being transmitted through the intermediate mechanism referred to.

As a further improvement, I bolt to the upper end of the handle a yoke or frame *a*, the same being so attached as to swing in a vertical plane. It will readily be seen, therefore, that the operator can propel the machine by pushing with his breast against this frame, and at the same time have free use of his hands to operate the cutting apparatus. This is not herein claimed, broadly, as it forms a part of and is broadly claimed in my aforesaid application.

It will be understood that friction-wheels may be substituted for the gears  $d$   $d'$   $d^2$ , or that the gear  $d'$  may be dispensed with and the pulleys  $d$   $d^2$  be connected by bands.

I am aware that heretofore it has been proposed to impart motion to the rotary cutter by means independent of the propelling power by pivoting upon the side of the handle of the machine a pulley and connecting the same by a belt to a pulley upon the end of the cut-



ter-shaft. This construction is defective, however, for the reason, first, that the power of only one hand of the operator can be applied thereto, as the other hand will have to  
5 be used to steady the machine and hold up the handle, and, second, by reason of the power being applied to only one end of the cutter-shaft the difficulty in keeping the machine steady when rough work is to be done  
10 is very great, the same being apt to be dragged out of a straight line when strain is applied. In my device, however, by arranging the sprocket-wheel in the middle of the handle both hands can be used to apply the power  
15 and at the same time to steady the machine, the same being impelled by pressure against the breast-frame; and, further, by transmitting the power to both ends of the cutter-shaft the disadvantages above mentioned are  
20 avoided.

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

1. In a lawn-mower, in combination with a  
25 suitable frame and handle, a rotatable cutter, a shaft carrying the same having bearings in the frame, wheels, as  $d^2$ , secured on each end of said shaft, a second shaft, as  $f$ , provided with wheels  $d$  at its ends and with a cen-

trally-located pulley or wheel  $b'$ , connection 30  
between said wheels  $d$   $d^2$ , a wheel or pulley pivoted in the handle near the upper part thereof and in line with the wheel  $b'$  and having a handle on each side for driving the  
35 same, and driving-connections between said wheel and the wheel  $b'$ , substantially as described.

2. In a lawn-mower, in combination with a suitable frame and handle, a rotatable cutter, a shaft carrying the same having bearings in  
40 the frame, wheels, as  $d^2$ , secured on each end of said shaft, a second shaft, as  $f$ , provided with wheels  $d$  at its ends and with a centrally-located pulley or wheel  $b'$ , connections  
45 between said wheels  $d$   $d^2$ , a wheel or pulley pivoted in the handle near the upper part thereof and in line with the wheel  $b'$  and having a handle on each side for driving the  
50 same, driving-connections between said wheel and the wheel  $b'$ , and a breast-frame pivoted to the handle of the machine, substantially as described.

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

NELSON A. BATCHELLER.

Witnesses:

W. C. JONES,

T. H. PHILLIPS.