J. ARBEITER.

Lawn Mower.

No. 89,004. Patented April 20, 1869.

Fig. 1.

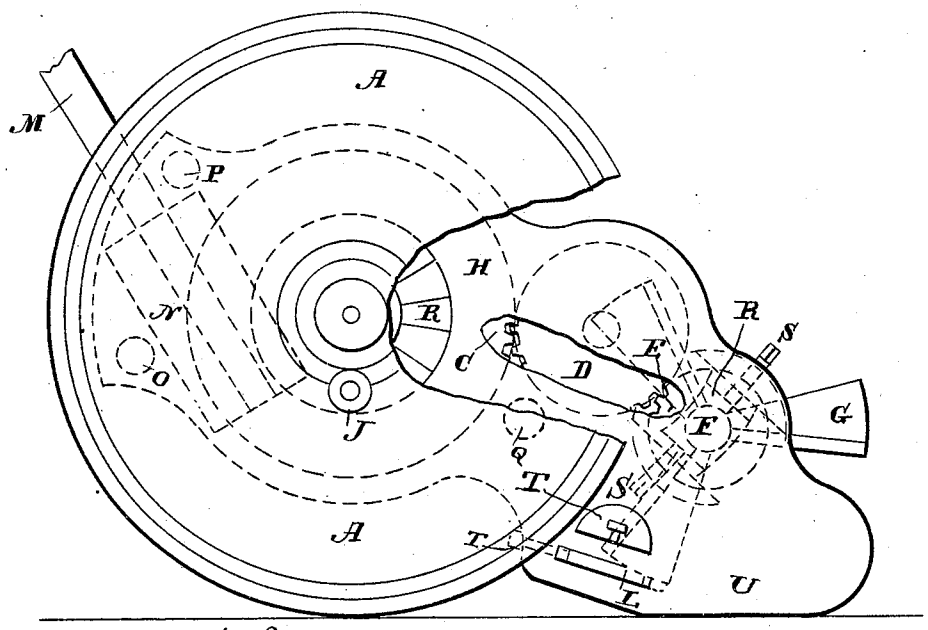
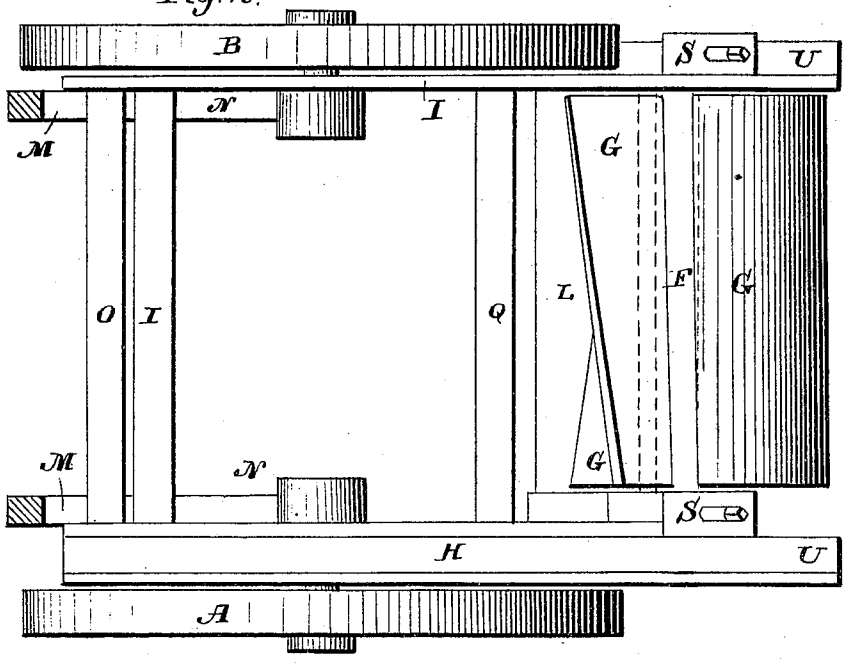


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOSEPH ARBEITER, OF EAST HARTFORD, CONNECTICUT.

IMPROVEMENT IN LAWN-MOWERS.

Specification forming part of Letters Patent No. 89,004, *dated April* 20, 1869.

To all whom it may concern:

Be it known that I, JOSEPH ARBEITER, of East Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Lawn-Mowers; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Dotted lines show concealed parts.

Figure 1 shows a side elevation of my improved lawn-mower, with a portion of the wheel and interior casing removed, so as to show the interior parts. Fig. 2 is a plan or top view of the machine.

My invention consists in driving the revolving cutter by means of a wheel instead of by a roller, as is usually done, and in arranging the gearing connecting the wheel with the revolving cutter within a box in such a manner as will prevent its being clogged or interfered with by earth or dust.

It also consists in an arrangement for adjusting the position of the revolving cutter.

A and B are the wheels of the machine. C, D, and E are geared wheels, connecting the wheel A with the arbor F of the revolving cutter. These wheels are inclosed within the box or case H, so that they are protected from anything that might interfere with their operation. The pitch-line of these wheels is shown on the drawings. L is the stationary cutter, against the edge of which the blades G of the revolving cutter shear in turning. K is a ratchet on the face of the wheel C, upon which the spring-pin J works in such a manner that when the machine is pushed forward the pin catches into one of the leaves of the ratchet; but when the machine is run backward the pin or pawl passes over the teeth, and does not move the wheel C. A portion of the wheel A is removed in the drawings to show the ratchet K. H is the box or case inclosing the wheels C, D, and E. It has a circular opening to permit the operation of the pawl J upon the ratchet K. A portion of the front is removed in the drawings to show the interior parts. The frame of the machine is formed of the box or case H and a corresponding plate, I, on the other side of the machine, connected by the cross-bars O P Q. The sides H and I support the axles of the wheels A and B and the boxes R, which hold the arbor F of the revolving cutter. The ends of the axle F rest in the boxes R, which move in grooves concentric with the geared wheel D, and are adjustable by means of the screws S S. By the use of these screws the edges of the revolving cutter G G G can be made to shear against the edge of the stationary cutter L, and can be raised or lowered whenever desired. The stationary cutter L is also capable of adjustment by means of the screws T T. To the sides H and I are attached the sockets N N for the handles M, by which the machine is operated. U is a shoe, sliding upon the surface of the ground upon each side of the machine to regulate the height of the cutter.

The operation of my invention is as follows: When the machine is pushed forward by means of the handles M, the catch J enters into one of the teeth of the ratchet K, and the wheel A turns the revolving cutter rapidly by means of the intermediate geared wheels C and D. The revolving and stationary cutters act together as a shears to clip off the grass to the height of the cutter L, and leave it smooth and even.

When the machine is drawn backward the pawl J passes over the teeth of the ratchet R, and the wheel A does not operate the cutter.

The spring-pawl J can be so constructed as to be held out from the ratchet K at pleasure, so that the machine can also be run forward without turning the cutter.

The advantages of my invention are: It permits the use of simple spur-gearing between the wheel and the revolving cutter, which admits of being boxed in instead of having a wheel and pinion on one of the axles, as is usually the case, which prevents the wheels being all in the same line or plane. The necessary speed of the cutter is obtained in my improved machine by the larger size of the wheels A and B than it is possible to have with the roller usually employed to drive the rotary cutter. The blades G of the revolving cutter are capable of being lowered by means

of the screws S S, acting on the boxes R, so that they can be used longer without becoming too much worn than is the case with other cutters.

By my invention the dust and earth are kept from the geared wheels, whereby they run easier and last longer than when they are exposed, as in the lawn-mowers now used.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The sliding adjustable journal-boxes R, moving in curved slots, as described, when used in combination with the frame of a lawn-mower, resting on shoes at its forward end, and movable about the axle of the wheels A, and with a revolving cutter, substantially as described.

2. The revolving cutter, adjustable as described, in combination with the train of wheels A B C D, the whole arranged and operating substantially as specified.

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