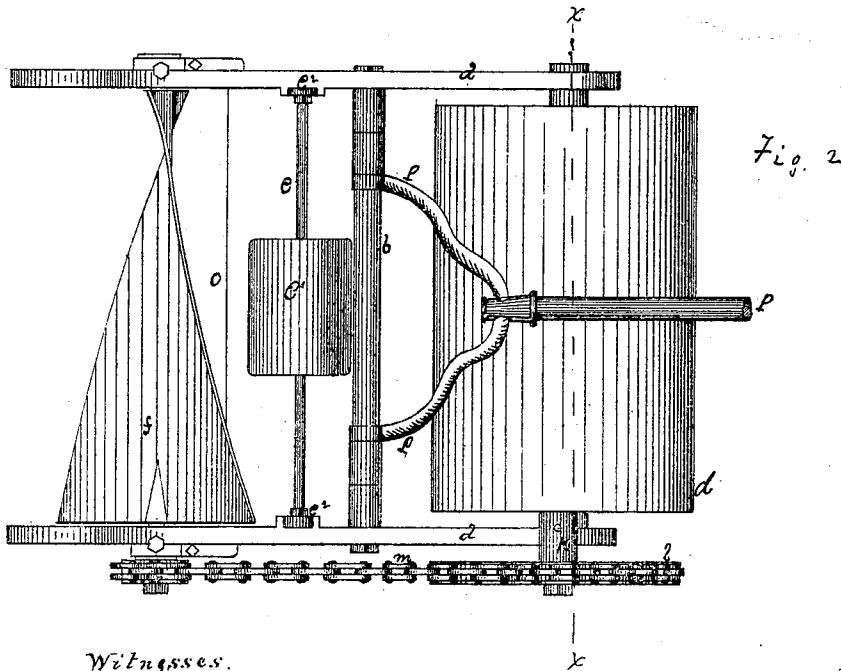
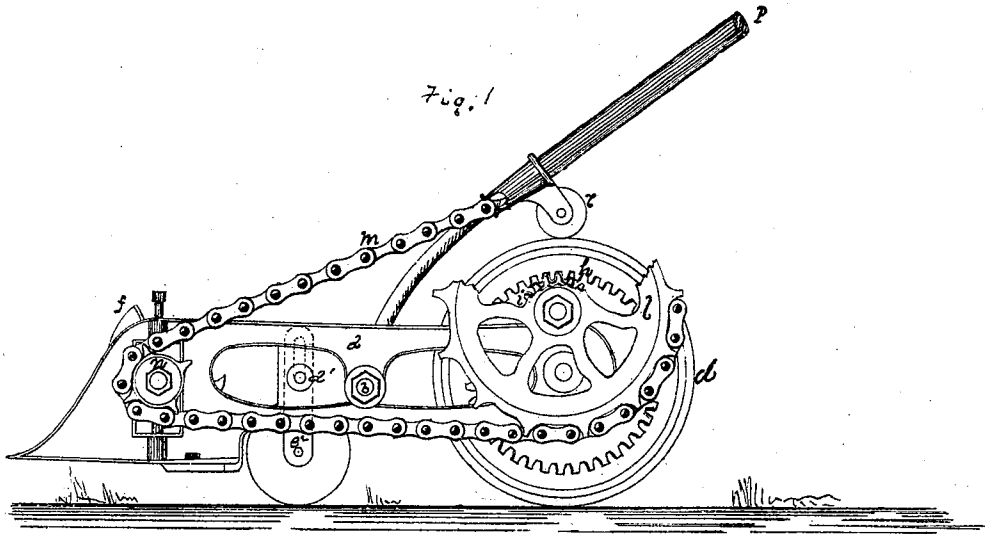


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Improvement in Lawn-Mowers.

No. 129,099.

Patented July 16, 1872.



Witnesses.

E. Schäferlin  
S. J. Simonds

Inventor.

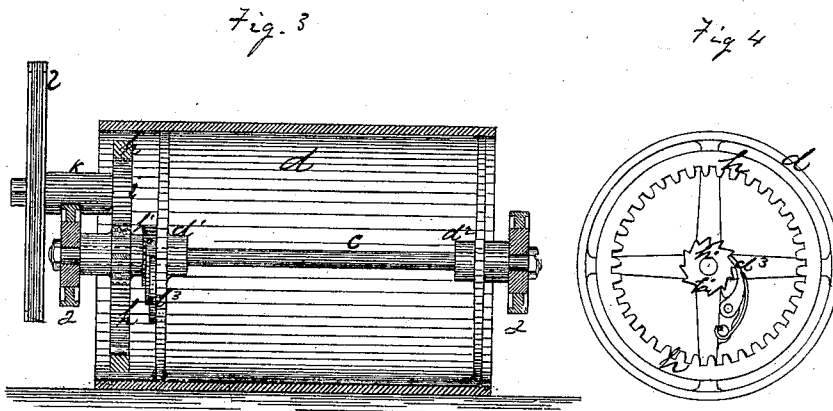
Lucretia Chapman  
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## UNITED STATES PATENT OFFICE.

LUKE CHAPMAN, OF COLLINSVILLE, CONNECTICUT.

## IMPROVEMENT IN LAWN-MOWERS.

Specification forming part of Letters Patent No. 129,099, dated July 16, 1872.

## SPECIFICATION.

I, LUKE CHAPMAN, of Collinsville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Lawn-Mowers, of which the following is a specification, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation with a part of the chain-wheel broken away to show parts beyond it. Fig. 2 is a plan view. Fig. 3 is a central vertical section through the line  $x x$  in Fig. 2. Fig. 4 is a view looking into the left end of the driving-drum, omitting the spokes of the inside gear-wheel  $h$ .

My improvements are two in number—namely; first, placing the gears which are used within the driving-drum, thus removing them from danger of clogging with grass, and from danger of other accidents; secondly, the arrangement of a small roller on the under side of the handle, which bears upon the driving-drum when the handle is pressed down upon, and thereby allows the operator to raise the front of the machine, as is often necessary, at pleasure.

The letter  $a$  indicates the two sides of the frame of the machine, held together by the rod  $b$ , which is a fixed rod, and by the rod  $c$ , which forms an axis for the driving-drum  $d$ , also a fixed rod. The shaft  $e$  and the flier  $f$ , which are both rotary, also perform service in this direction. The bearings of the drum are at  $d^1 d^2$ . To one of the arms of the drum is pivoted a spring-pawl,  $d^3$ , which, when the machine is run forward, catches in the notches or teeth of the hub  $h'$ , which is the hub of the gear-wheel  $h$ , and thus causes the gear-wheel to revolve with the drum. When the machine is run backward the gear-wheel  $h$  and its attendant devices do not move at all. The gear-wheel  $h$  has an inside gear on the interior of its circumferential rim, meshing into and driving the pinion  $i$ , which is hung on a shaft running through the journal-box  $k$ , and having upon its outer end the chain-wheel  $l$ ,

from which the endless chain  $m$  runs to the chain-pinion  $n$ , and thereby rotates the flier  $f$ , which drives the grass against the edge of the cutter  $o$  and thereby cuts it. The gear-wheel  $h$  and the pinion  $i$  are both situated within the drum  $d$ , out of the way of grass or accidents. The handle  $p$  is pivoted by the bail  $p'$  to the shaft  $b$ , and has hung on its under side the small roll  $r$ , which serves as a fulcrum when borne down upon the drum  $d$ , whereby the operator may lift the front of the machine. As this fulcrum is a roll it does not interfere to any considerable extent with the motion of the drum. The letter  $e^1$  indicates a roll hung on the shaft  $e$ , which shaft is hung in the lower ends of short adjusting bars  $e^2$ , which rest in grooves or seats prepared for them on the inside of the frame pieces  $a$ , and are attached to the same by screw-bolts  $a'$  running through vertical slots in the bars, whereby the height of the front part of the machine and consequently of the cutter  $o$  can be regulated at pleasure.

Although I use a chain to communicate motion from the wheel  $l$  to the rotary flier in front, yet this motion can readily be communicated by a train of gears or its equivalent.

I claim as my invention—

1. The combination and arrangement of the lawn-mower frame  $a$ , the drum  $d$ , the gear  $h$  situated within the drum, the pinion  $i$  also within the drum and its shaft, the wheel  $l$ , the chain  $m$ , the wheel  $n$  and its shaft, with the flier  $f$ , the whole constructed, arranged, and operating substantially as described, for the purposes set forth.

2. The combination and arrangement, in a lawn-mower, of the handle  $p$ , the roll  $r$ , and the drum  $d$ , substantially as described, and for the purpose set forth.

LUKE CHAPMAN.

Witnesses:

J. H. BIDWELL,  
OLIVER F. PERRY.