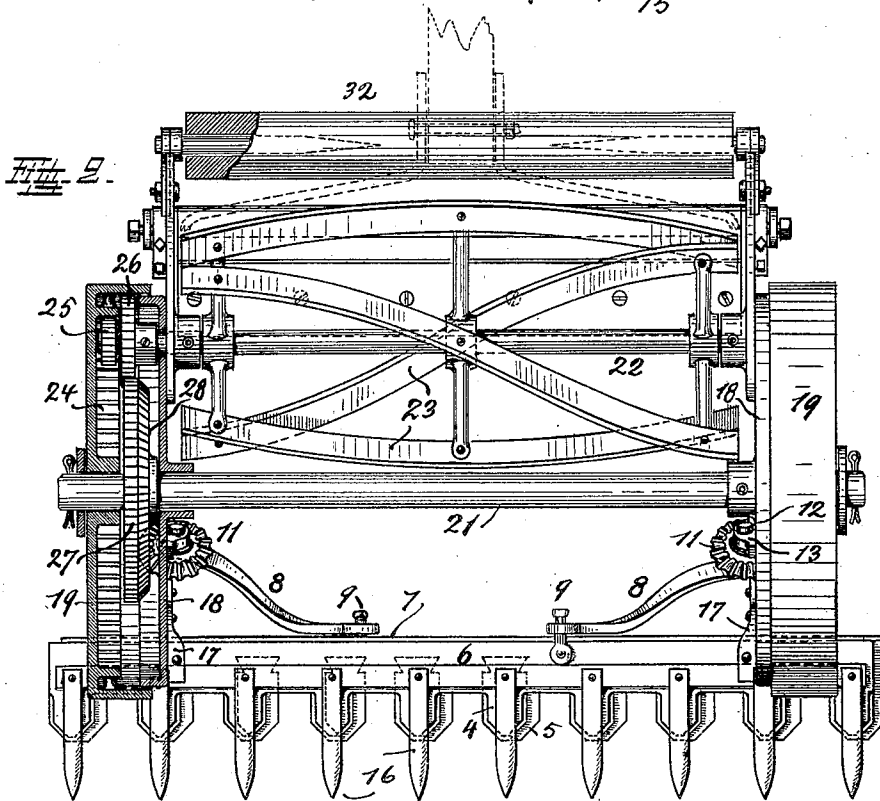
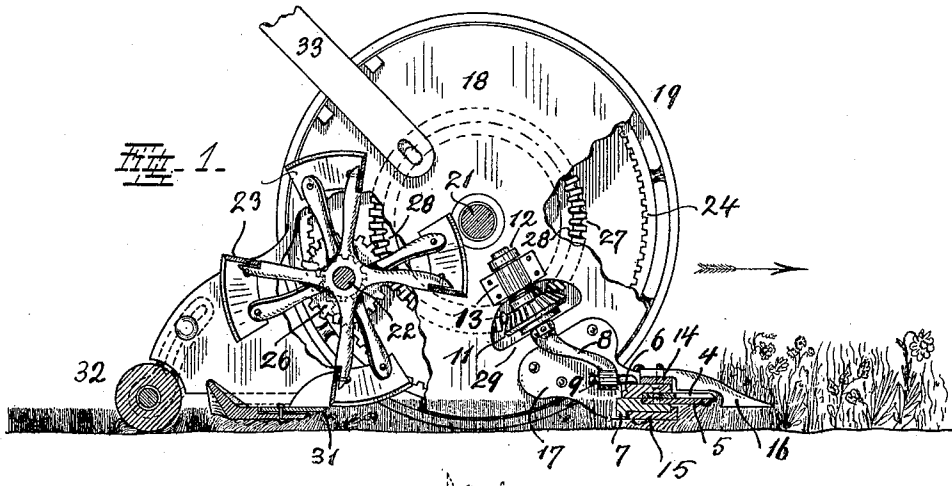


J. C. STREIBICH.
GRASS CUTTER.

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977,569.

Patented Dec. 6, 1910.



Witnesses.
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UNITED STATES PATENT OFFICE.

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GRASS-CUTTER.

977,569.

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To all whom it may concern:

Be it known that I, JOHN C. STREIBICH, a citizen of the United States, and residing at Little Rock, Pulaski county, State of Arkansas, have invented certain new and useful Improvements in Grass-Cutters; and I do declare the following to be a clear, full, and exact description thereof, attention being called to the drawing which accompanies this application and forms a part thereof.

This invention relates to improvements in the construction of grass-cutters of a certain type as shown and consists of the particular features hereinafter described and claimed and illustrated in the accompanying drawing, in which:—

Figure 1, shows a vertical section of the improved cutter with parts broken away. Fig. 2, is a top-view of the same with parts broken away and others shown in section.

For cutting, I use two sets of knives, an upper set 4 and a lower set 5, each set of these knives being connected to a bar by which it is actuated, there being a bar 6 for the upper set of knives and a bar 7 for the lower one.

The cutting action consists of the knives of one set, being moved laterally with respect to the other set, which movement is a reciprocal one, bars 6 and 7 being moved accordingly in opposite directions. This movement is accomplished by connecting rods 8, each jointed at one of its ends, one to bar 6 and the other to bar 7, the connection being indicated at 9 in each case. Cranks are used to actuate these connecting rods, the application being in the form of crank-wheels 11 and to which the other ends of connecting rods 8 are jointed. Each crank-wheel is mounted on a stud 12, which studs are supported in bearings 13.

The knife-bars are guided and supported in a suitable manner as for instance, between two frame-bars 14 and 15.

Customary knife-guards 16 are used and connected to the upper one of these frame-bars. Brackets 17 are provided, whereby these frame-bars are supported at their ends.

The construction of this cutting-mechanism is so devised that it may be operated in connection with a lawn-mower of customary type and in which spirally shaped cutting blades constitute the cutting-means. Accordingly, bearings 13 which support

crank-wheels 11 and brackets 17 which support frame-bars 14 and 15, are attached to opposite circular plates 18 which form part of the inclosure or casing of customary traction-wheels 19. These plates 18, together with an axle 21 to which they are rigidly attached, form the skeleton or frame-structure of the mower. The axle projects at both sides beyond these frame-plates 18 and supports on these projecting ends the traction-wheels which are loosely mounted. Shaft 22 which carries and actuates the spiral cutting-blades 23 is also supported by the frame-structure mentioned, that is its ends are mounted in plates 18. The traction-wheels within their rims are provided with internal gear-wheels 24 which mesh into and drive gears 25 on shaft 22 thereby rotating this shaft. On this latter there are also mounted pinions 26 which mesh into and rotate spur-gears 27 loosely mounted on axle 21. These spur-gears are combined with bevel-gears 28 which serve to actuate crank-wheels 11, these latter being constructed accordingly and in the form of bevel-wheels. The traction-wheels are hollow and of sufficient width to contain this gearing and on the inner side they are closed by frame-plates 18 so that an inclosure is formed which excludes grass and prevents the same from clogging up the gearing. Openings 29 are provided in these frame-plates 18 and permit these bevel-crank-wheels 11 to make connection with bevel-gears 28 and to permit attachment to them of connecting-rods 8.

31 is a stationary knife-bar against which spiral-blades 23 cut.

32 is a supporting roller.

33 is the lower part of the handle of the mower which is connected to frame-plates 18.

Knives 4 and 5 and blades 23 being arranged to travel above the ground at different heights may supplement each other in their cutting-action, one serving as a preliminary cutter for the other. Or the arrangement may be so that the reciprocating knives do all the cutting, in which case the spiral-blades act as a fly-wheel to assist the movement of the knives.

Having described my invention, I claim as new:

In a grass-cutter, the combination of an axle, hollow-traction-wheels loosely mount-

ed thereon and provided with internal gear-
teeth inside of their rim, circular frame-
plates rigidly connected to the axle and
fitted to close the inner, open side of the
5 hollow traction-wheels, shaft-bearings pro-
vided opposite each other on these plates, a
shaft supported in these bearings and ex-
tending into the hollow-traction-wheels, a
cutter mounted on this shaft a pinion on
10 each end of this shaft and in mesh with the
internal gearing of the traction-wheels, gear-
wheels also mounted on this shaft, com-
bined spur and bevel-gears loosely mounted
on the axle and rotated by the gear-wheels
15 on the shaft, bevel-wheels in mesh with the
bevel-gears on the axle, stud-bearings on

the frame-plates for these bevel-gears last
mentioned, brackets on these frame-plates,
frame-bars supported between these brack-
ets, reciprocating knife-bars supported 20
on these frame-bars and connecting-rods
connecting them at their rear edges, one to
the bevel-gear on one of the frame-plates,
and the other to the bevel-gear on the other
frame-plate. 25

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

JOHN C. STREIBICH.

Witnesses:

F. W. GILMAN,
R. L. PITTARD.