

No. 638,056.

Patented Nov. 28, 1899.

B. F. MARTZ.
LAWN TRIMMER.

(Application filed Oct. 11, 1898.)

(No Model.)

Fig. 3.

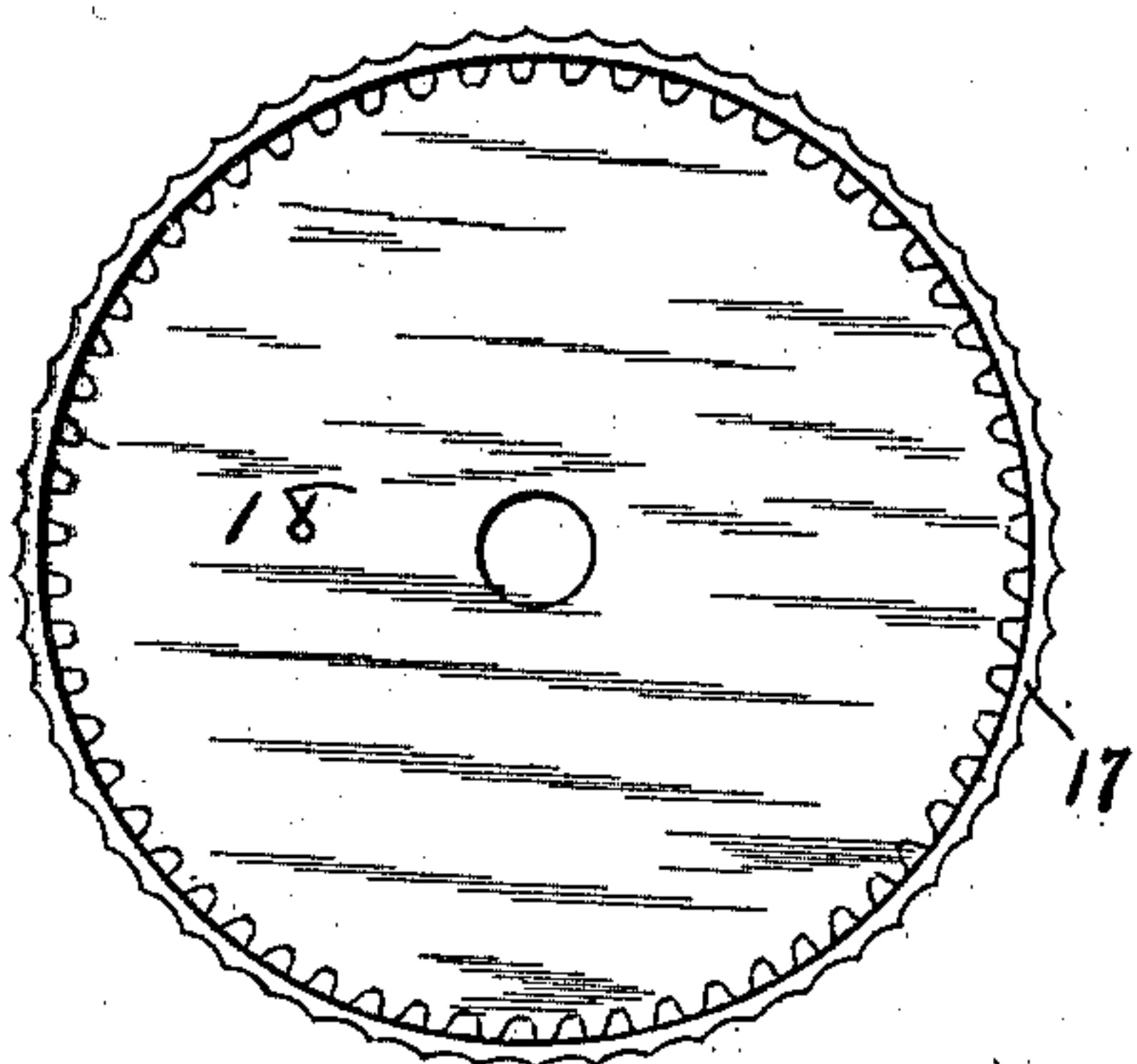


Fig. 4.

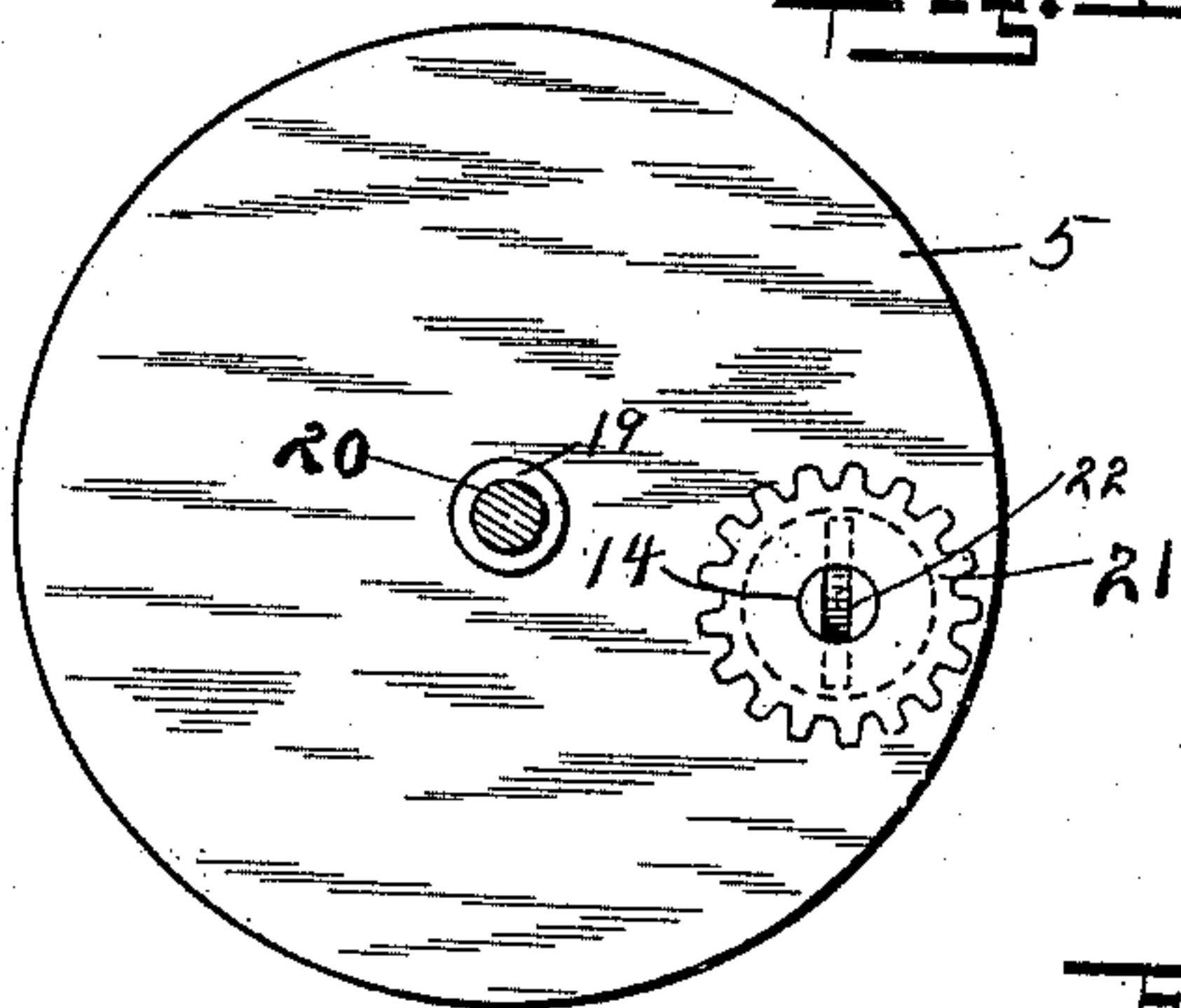
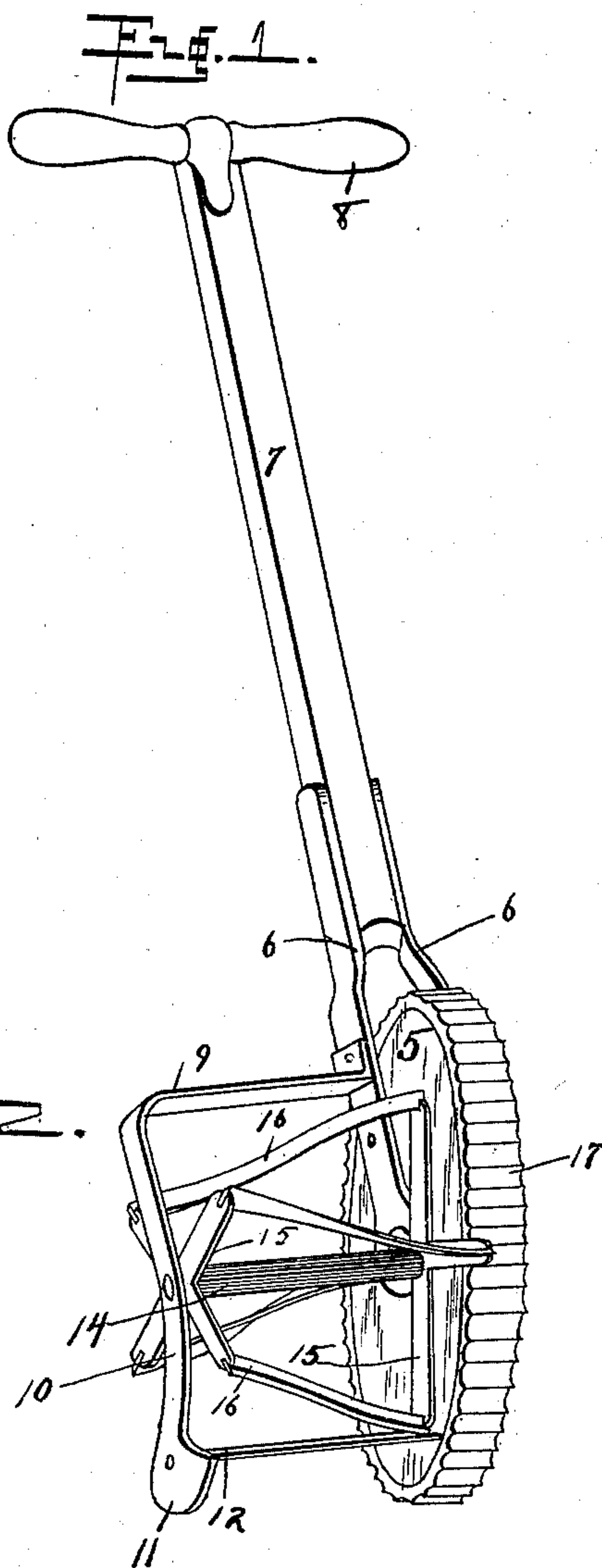
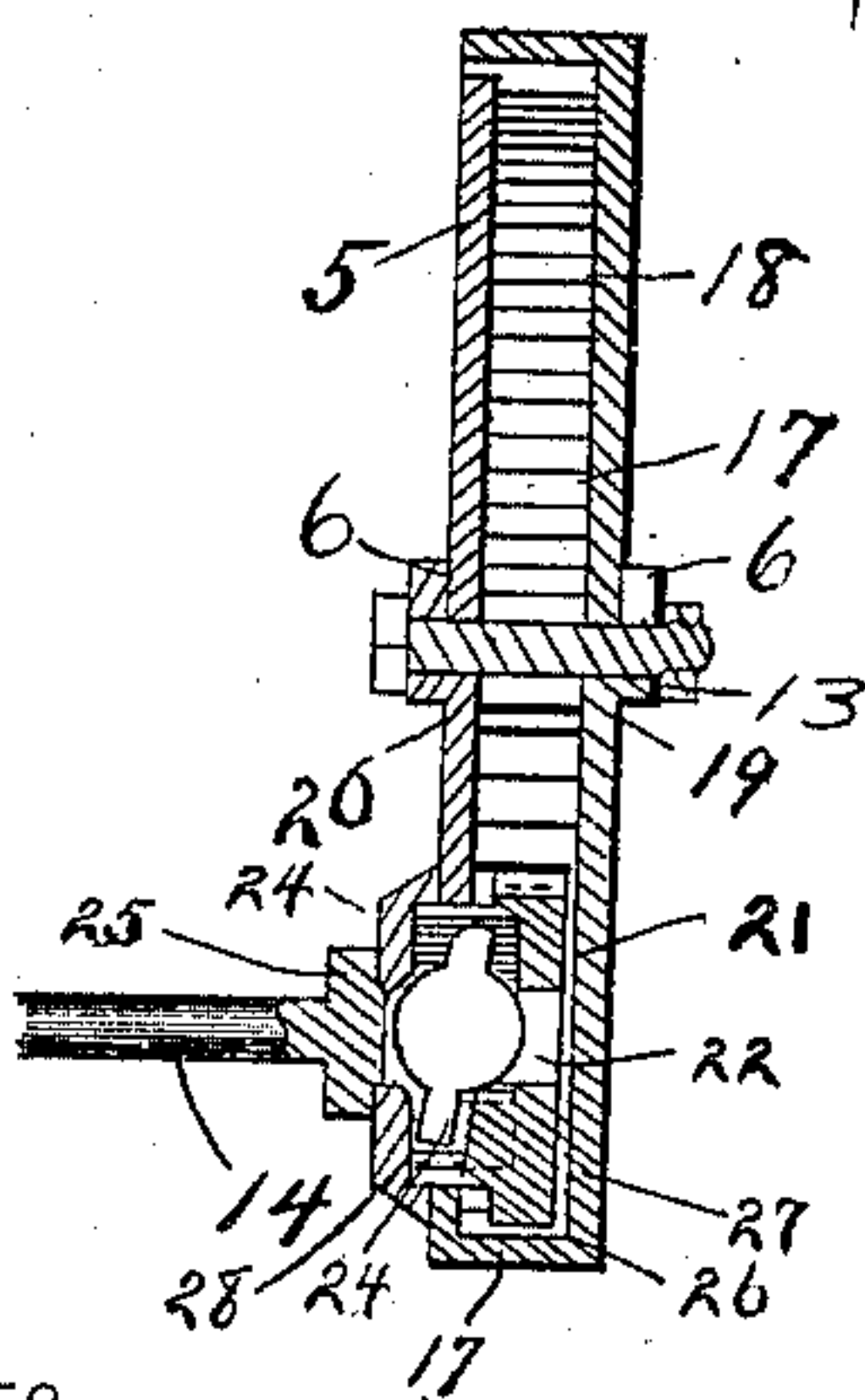


Fig. 2.



WITNESSES

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BENJAMIN F. MARTZ, OF GREENFIELD, INDIANA, ASSIGNOR OF TWO-THIRDS
TO HENRY HAHNE, OF SAME PLACE, AND WILLIAM J. BORREY, OF FAIR-
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LAWN-TRIMMER.

SPECIFICATION forming part of Letters Patent No. 638,056, dated November 28, 1899.

Application filed October 11, 1898. Serial No. 693,235. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. MARTZ, a citizen of the United States, residing at Greenfield, in the county of Hancock and State of Indiana, have invented new and useful Improvements in Lawn-Trimmers, of which the following is a full, clear, and exact specification.

My invention relates to certain new and use-
ful improvements in lawn-trimmers, and has
for its object to produce such a machine with
but a single driving-wheel, which, besides per-
forming all of the useful operations common
to machines of this character now in general
use, has in addition the very desirable prop-
erty of being able to cut to nearly the extreme
edge of the machine, thus obviating the de-
pressing of a track in the grass, as is done by
machines of the double-drive-wheel type.

20 With this and other objects in view my invention consists in the novel details of construction and combination of parts, to be clearly described in the following specification and fully set forth in the claim.

25 Referring to the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate similar parts, Figure 1 is a perspective view of my improved lawn-trimmer complete. Fig.
30 2 is a central horizontal sectional view of the gearing thereof. Fig. 3 is a side elevation of the drive-wheel; and Fig. 4 is a side elevation of the disk, showing its inner side.

In the drawings, 7 denotes a handle-rod, having a cross-bar 8 at one end and a pair of yoke-arms 6 at the other, through which an ordinary bolt 20 is secured, with a nut 13 threaded on its end. A hollow corrugated-tread drive-wheel 17 is journaled on the bolt 20 between the yoke-arms 6 and has a disk 5 loosely fitting in the opening in the side thereof and rigidly attached to one of the yoke-arms. A sleeve 19 is mounted on the bolt 20 between the drive-wheel 17 and the disk 5 for the purpose of keeping said parts in their proper relative positions. A frame is secured to the trundle-wheel thus formed, and comprises the arm 9, connected to a yoke-arm 6, and a side piece 10, depending therefrom and terminating at its lower end in a runner 11,

which is connected with the disk 5 by means of a fixed blade 12. A gear-wheel 21 meshes with gear-teeth 18 on the inner surface of the drive-wheel rim and is provided with a hollow sleeve 26, which projects through and is journaled in a circular opening in the disk, near the periphery thereof. A number of ratchet-teeth 27 are located within the sleeve 26 and are adapted to be engaged by a double pawl 24, carried in a slot 22 in the end of the shaft 14, which is journaled in the gear-wheel 21. This shaft 14 is journaled at one end in the side piece 10 of the frame and is provided near the other end with a shoulder 25, fitting against a cap 28, which covers the opening of the disk and its contents. At both ends of the shaft 14 are secured cross-arms 15, carrying between them the cutter-blades 16.

When the machine as above described is pushed over the lawn, the serrated edge of the drive-wheel makes sufficient engagement to turn said drive-wheel on its axis, causing the gear-wheel in mesh therewith to revolve at a comparatively high speed. During the forward movement of the drive-wheel the pawl engages the ratchet-teeth of the gear-wheel, turning the shaft and blades therewith and cutting the grass between said blades and the fixed blade 12; but on retracting the machine the pawl remains out of engagement with the ratchet-teeth, and so the shaft and blades are not affected.

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

In a device of the character described, a yoke-shaped handle, a bolt secured across the arms thereof, a hollow drive-wheel mounted to revolve on the bolt and provided with an open side, a disk rigidly secured on the bolt to close the open side of the drive-wheel, gear-teeth located around the inside of the drive-wheel rim, a gear-wheel meshing with the gear-teeth of the drive-wheel, a sleeve projecting from the gear-wheel and journaled in an opening of the disk, ratchet-teeth on the inside of the sleeve, a cap covering the opening of the disk and adapted to confine the sleeve to its proper position, an angular guard attached to the handle, a fixed blade sup-

ported between the guard and disk, a spindle journaled through the guard, cap and gear-wheel, a shoulder on the spindle bearing against the cap, a pawl pivoted in a slot
5 on the end of the spindle and adapted to engage the ratchet-teeth, cross-arms secured on the spindle, and cutter-blades carried by the

cross-arms to travel close to the fixed blade; substantially as described.

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Witnesses:

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