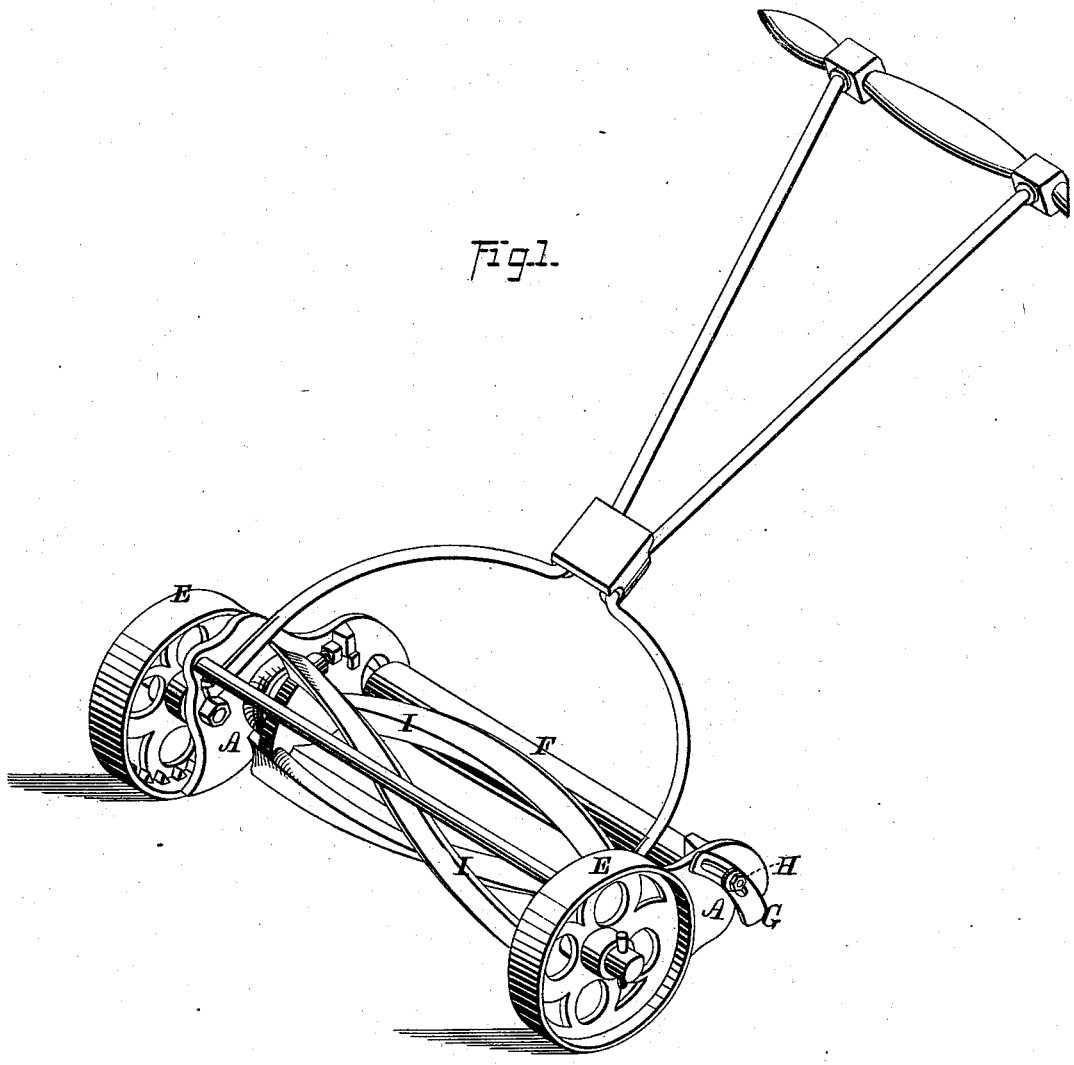
2 Sheets—Sheet 1.

T. COLDWELL

LAWN-MOWER.

No. 187,818. Patented Feb. 27, 1877.

Fig. 1.



WITNESSES:

Jas. E. Hutchinson

H. C. Hazard

INVENTOR.

Thos. Coldwell, by

Prindle & Lothrie attys

2 Sheets—Sheet 2.

T. COLDWELL.

LAWN-MOWER

No. 187,818. Patented Feb. 27, 1877.

Fig. 2.

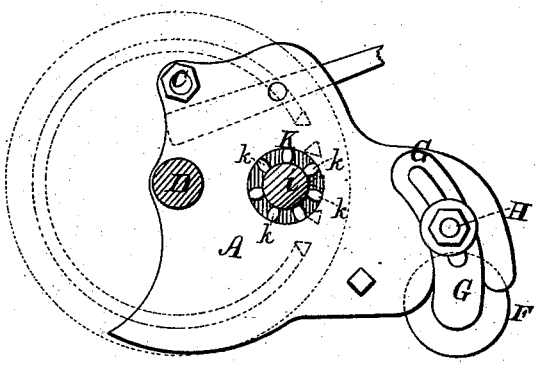


Fig. 3.

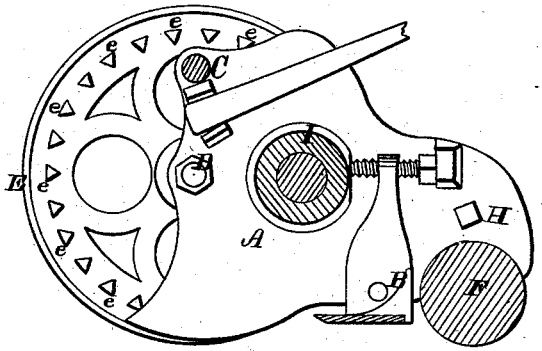
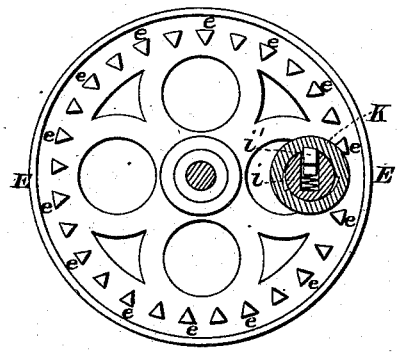


Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS COLDWELL, OF NEWBURG, NEW YORK.

IMPROVEMENT IN LAWN-MOWERS.

Specification forming part of Letters Patent No. **187,818**, dated February 27, 1877; application filed November 20, 1876.

To all whom it may concern:

Be it known that I, THOMAS COLDWELL, of Newburg, in the county of Orange, and in the State of New York, have invented certain new and useful Improvements in Lawn-Mowers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my improved lawn-mower as arranged for use. Fig. 2 is an end elevation of the same, the interposing driving-wheel being removed; and Figs. 3 and 4 are cross-sections, upon lines passing inside and outside, respectively, of the end of the frame.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is mainly to lessen the cost of construction of a lawn-mower without impairing its efficiency; to which end it consists in the means employed for communicating the motion of the bearing-wheels to the revolving wiper, substantially as and for the purpose hereinafter specified.

In the annexed drawings, A and A represent two side plates, which have the special form shown in Figs. 2 and 3, and are connected together by means of a cutter-bar base, B, that is secured to and extends between their lower rear edges, and a brace-rod, C, which extends between their upper front edges.

At a suitable point near the vertical center, at the front edge of each plate A, is secured an axle-arm, D, which extends horizontally and laterally outward, and has journaled thereon a ground or driving wheel, E. A bearing-roller, F, is journaled at each end within a bearing-plate, G, which plate has a curved form, and is slotted longitudinally, and is secured to or upon the outer face of the side plate A by means of a bolt, H, that passes through both of said parts. By loosening said bolts said plates G may be moved longitudinally, so as to change the relative positions of said roller F and the rear portion of the plates A, and cause the latter and the cutter-bar B to be nearer to or farther from the ground.

Near the longitudinal centers of the side plates A is journaled a three-armed wiper, I, of usual construction, the journals *i* of which project through said plates, and upon the outer end of each has journaled a pinion, K, that is free to revolve in one direction, but is prevented from rotating in the opposite direction by means of a spring-pawl, *i'*, which is contained within a suitable recess in said journal, and engages with teeth that are provided within the inner periphery of said pinion.

Upon the outer face of each pinion K is provided a series of teeth, *k*, which extend horizontally outward, and have, preferably, an elliptical form in cross-section, and are disconnected from each other, and are connected with said pinion only at their bases. Upon the inner face of each wheel E is provided a series of teeth, *e*, which have a triangular shape in cross-section, are arranged as shown in Figs. 3 and 4, and, like the teeth *k* of the pinion K, extend laterally outward, and are connected at their bases only with said wheel.

The pinion K is arranged within the line of the teeth *e*, so that the latter forms an internal or female gear, and when in operation the teeth *k* pass outward entirely through the spaces between said teeth *e*, while the latter, in a like manner, pass inward through the spaces between said teeth *k*, by which means any grass or weeds falling into said gearing will be pressed outward without injury, while in the use of ordinary gearing anything falling into the teeth will be pressed to the bottom of the intervening spaces, and obstruct, if not arrest, the movement of the gears.

In practice, it is found that my gearings work with perfect freedom, and do not become clogged by the cut grass, the self-freeing construction of the teeth rendering unnecessary the casing or covering usually employed.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

As a means for operating the rotary wiper I, the pinion K, provided upon its outer face with the laterally-projecting teeth *k*, and the driving-wheel E, having upon its inner face horizontally inward-projecting teeth *e*, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of October, 1876.

THOMAS COLDWELL.

Witnesses:
GEO. S. PRINDLE,
S. F. AUSTIN.