

No. 610,694.

Patented Sept. 13, 1898.

L. H. SLAGHT.
LAWN MOWER.

(Application filed Oct. 27, 1897.)

(No Model.)

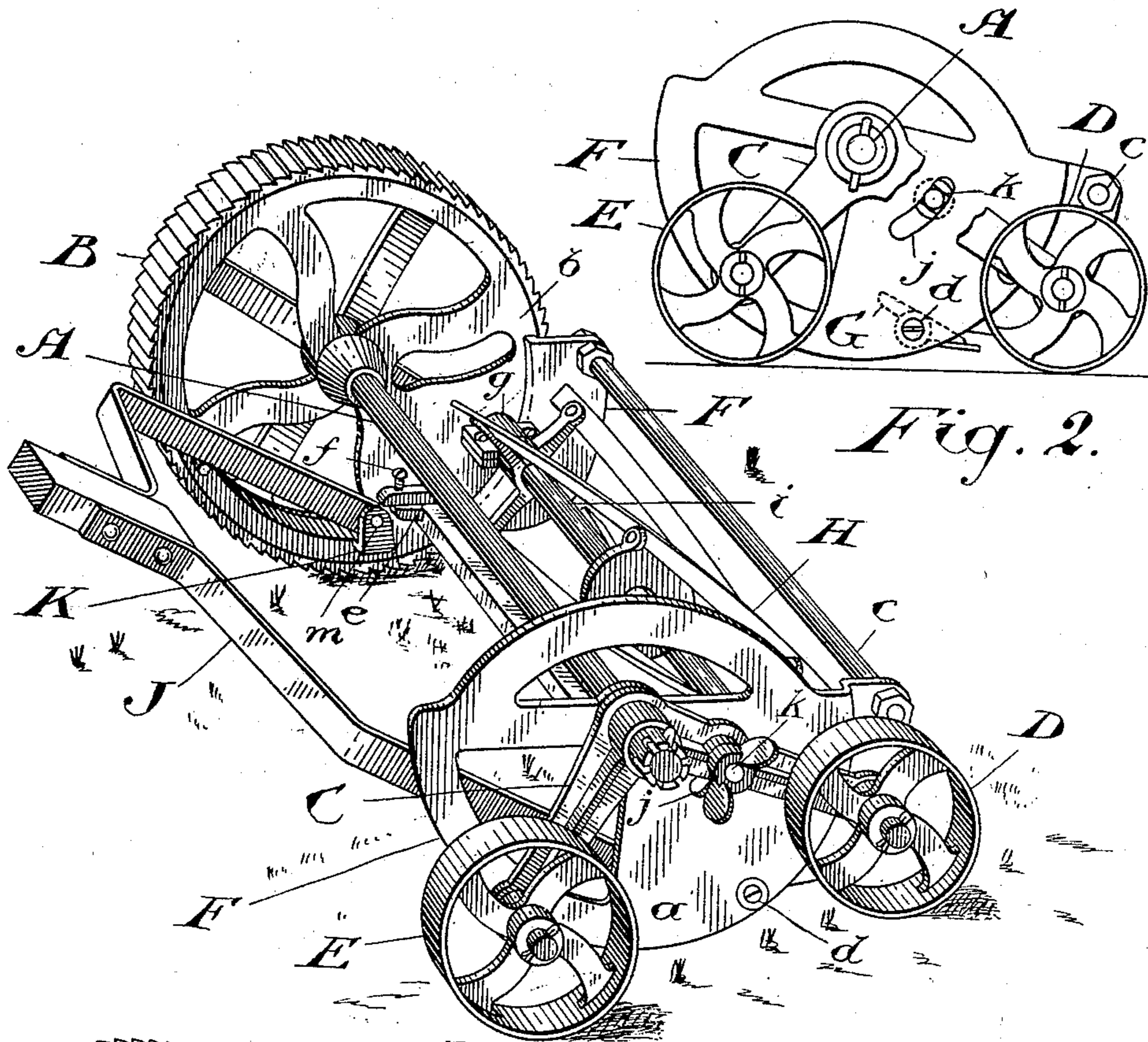


Fig. 1.

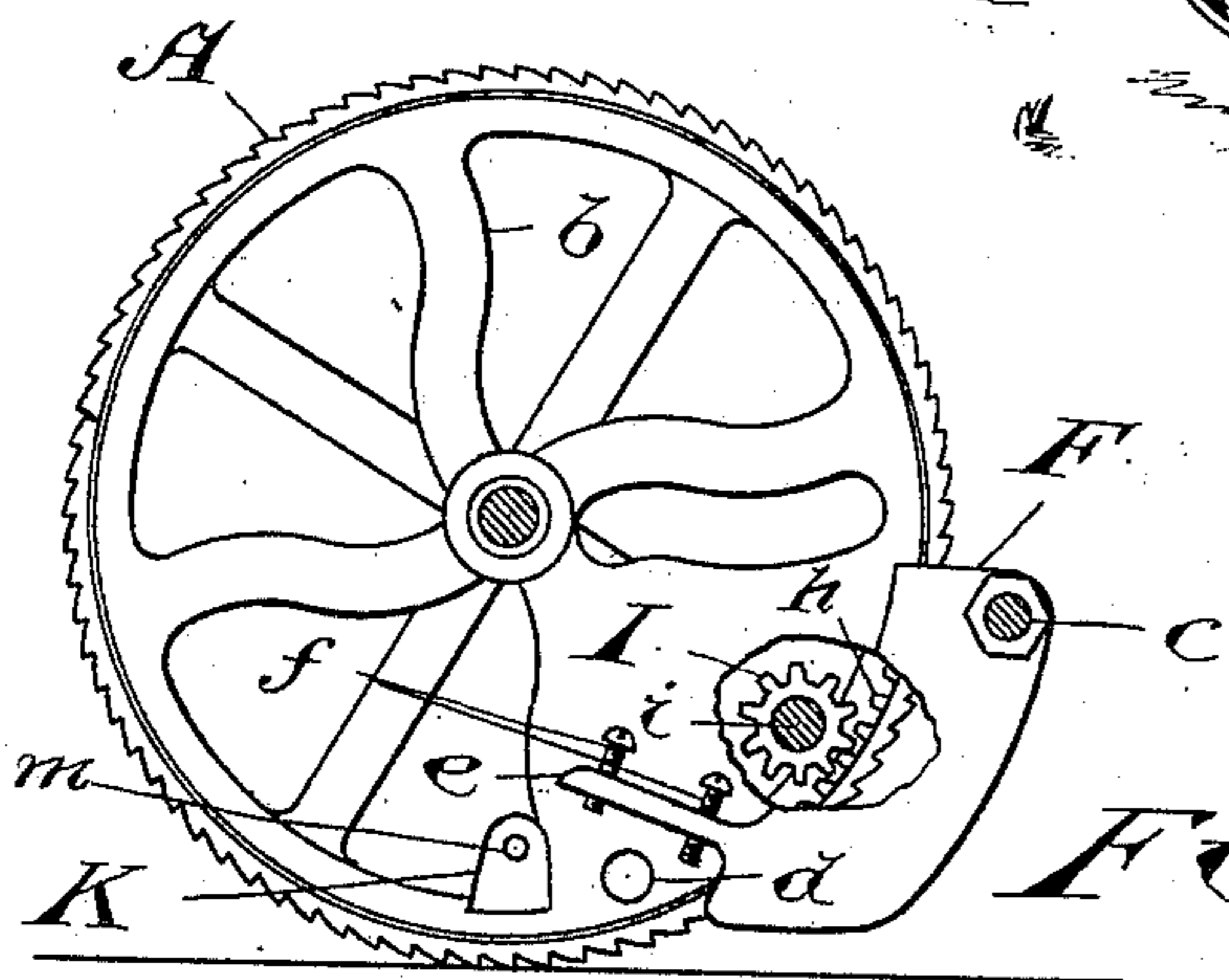


Fig. 2.

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UNITED STATES PATENT OFFICE.

LEWIS H. SLAGHT, OF WATERFORD, CANADA, ASSIGNOR TO ROXA SLAGHT,
OF SAME PLACE.

LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 610,694, dated September 13, 1898.

Application filed October 27, 1897. Serial No. 656,574. (No model.)

To all whom it may concern:

Be it known that I, LEWIS H. SLAGHT, accountant, of the village of Waterford, in the county of Norfolk and Province of Ontario, Canada, have invented a certain new and Improved Lawn-Mower, of which the following is a specification.

The object of my invention is to devise a light, simple, and easily-operated front-cut lawn-mower which may be quickly adjusted for any desired length of cut; and it consists, essentially, in swinging the frame carrying the rotary knives and the stationary knife or shear-plate upon and in front of the axle, one end of which carries the driving-wheel and the other a frame carrying two ground-wheels suitably located one in front of and one behind the axle. A clamp-screw and slot connection is formed between the wheel-frame and the knife-frame, so that the latter may be set at any desired angle with regard to the former for the purpose of regulating the cut, substantially as hereinafter more specifically described and then definitely claimed.

Figure 1 is a perspective view of my improved lawn-mower. Fig. 2 is an outside elevation of the ground-wheel end of the mower. Fig. 3 is an inside elevation of the driving-wheel end of the mower, partly broken away to expose the driving-pinion.

A is the axle of the mower, upon the outer end of which is journaled the driving-wheel B. To the other end of the axle is connected the wheel-frame C, preferably of the shape shown in the drawings. To the arms of this frame are connected, respectively, the leading ground-wheel D and the following ground-wheel E. The leading ground-wheel is in such a position in relation to the stationary knife or shear-plate, hereinafter described, as to lift it over all inequalities in the ground which may be met. The following ground-wheel E, I find in practice must be journaled a little more than its own radius behind the axle, so as to maintain the proper balance of the machine; but of course the exact position may be varied somewhat and a good result still be produced.

The axle A, the driving-wheel B, the frame C, and the ground-wheels D and E form the

running-gear of the machine and are hereinafter referred to by that designation.

Upon the axle A is swung the knife-frame F, comprising the end *a*, the end *b*, which is fitted to the inside of the driving-wheel, so as to form a gear-cover therefor, and the connecting-rod *c*, which also serves as a guard to the rotary knife, hereinafter referred to. At the lower part of the frame F the stationary knife or shear-plate G is journaled at *d d*. Immediately above each end of the shear-plate is located a rib *e*, through which are threaded the set-screws *f*, by means of which the shear-plate may be adjusted; but this is an ordinary arrangement and not claimed as new.

H is the rotary knife, suitably journaled in the bearings *g* in proximity to the shear-plate. Both the knives are located, as will be seen, in front of the axle, so that when the machine is in use it will cut considerably closer to any given point than is possible with the ordinary rear-cut machine.

The driving-wheel B is provided, as usual, with internal gear-teeth *h*, with which meshes the pinion I, connected to the end of the spindle *i* of the rotary knife. This pinion may be connected with the said spindle by any of the well-known internal pawl-and-ratchet connections in use in lawn-mowers.

A slot *j* is formed in the end *a* of the knife-frame F, and through it passes a carriage-bolt *k*. The end of this bolt passes through a hole formed in the wheel-frame C and has a thumb-nut screwed thereon, whereby the wheel-frame and the end of the knife-frame may be rigidly clamped together. Owing to the slot *j* being formed in the end *c* of the knife-frame F, the latter may be raised or lowered to any angle within the limit of the slot and securely clamped in that position by means of the thumb-nut. Other equivalent devices might of course be provided to serve the same purpose in a similar manner.

J is the bail of the handle, and K are lugs formed on the stationary frame F below the axle. Studs *m* project outwardly from these lugs, and upon these studs the ends of the bail are pivoted.

Not alone does the construction above described permit of the machine working very

closely up to any given point, but owing to the absence of the heavy trailing roller and frame usual in rear-cut mowers a great saving in weight is effected, and the single drive
 5 materially lessens the waste of power through friction or unequal driving at the opposite ends of the rotary knife. Further great advantage lies in the quickness by which the length of cut of the machine can be adjusted,
 10 the simple process of loosening the adjusting thumb-nut, raising or lowering the knife-frame, and then reclamping it being in advance of the slow method of adjusting the frame bearing the trailing roller of an ordinary rear-cut machine.

What I claim as my invention is—

1. In a lawn-mower, the running-gear comprising an axle, a driving-wheel journaled on one end of said axle, a frame carried at the
 20 other end, and two ground-wheels journaled thereon one in front of the axle, in combination with a knife-frame journaled on the axle and extending in front thereof; and means for adjusting the relative position of the
 25 knife-frame and running-gear, substantially as and for the purpose specified.

2. In a lawn-mower, the running-gear comprising an axle, a driving-wheel journaled on one end of said axle, a frame carried at the
 30 other end, and two ground-wheels journaled thereon one in front of the axle and one behind, in combination with a knife-frame journaled on the axle and extending in front thereof; and means for adjusting the relative
 35 position of the knife-frame and running-gear, substantially as and for the purpose specified.

3. In a lawn-mower, the running-gear comprising an axle, a driving-wheel journaled on
 40 one end of said axle, a frame carried at the other end, and two ground-wheels journaled thereon one in front of the axle and one behind, in combination with a knife-frame journaled on the axle and extending in front thereof;
 45 and a clamp-screw and slot connection between the end of the knife-frame and the wheel-frame whereby the relative position of the knife-frame and the running-gear may be adjusted, substantially as and for the pur-
 50 pose specified.

4. In a lawn-mower, the running-gear comprising an axle, a driving-wheel journaled on one end of said axle, a frame carried at the
 55 other end, and two ground-wheels journaled thereon one in front of the axle, in combination with a knife-frame journaled on the axle

and extending in front thereof; and a clamp-screw and slot connection between the end of the knife-frame and the wheel-frame whereby the relative position of the knife-
 60 frame and the running-gear may be adjusted, substantially as and for the purpose specified.

5. In a lawn-mower, the running-gear comprising an axle, a driving-wheel journaled on one end of said axle; a frame carried at the
 65 other end, and two ground-wheels journaled thereon one in front of the axle and one behind, in combination with a knife-frame; a stationary knife or shear-plate connected thereto; a rotary knife journaled therein; a
 70 pinion on the axle of the rotary knife meshing with a gear formed within the driving-wheel and means for adjusting the relative position of the knife-frame and running-gear, substantially as and for the purpose specified. 75

6. In a lawn-mower, the running-gear comprising an axle, a driving-wheel journaled on one end of said axle; a frame carried at the
 other end, and two ground-wheels journaled thereon one in front of the axle and one be-
 80 hind, in combination with a knife-frame; a stationary knife or shear-plate connected thereto; a rotary knife journaled therein; a pinion on the axle of the rotary knife meshing with a gear formed within the driving-
 85 wheel; and a clamp-screw and slot connection between the end of the knife-frame and the wheel-frame whereby the relative position of the knife-frame and the running-gear may be adjusted, substantially as and for the
 90 purpose specified.

7. In a lawn-mower, the running-gear comprising an axle, a driving-wheel journaled on one end of said axle, a frame carried at the
 95 other end and two ground-wheels journaled thereon one in front of the axle and one behind, in combination with a knife-frame; a stationary knife or shear-plate connected thereto; a rotary knife journaled therein; a
 100 pinion on the axle of the rotary knife meshing with a gear formed within the driving-wheel; a handle pivoted at each side of the knife-frame below the axle; and means for adjusting the relative positions of the knife-frame and running-gear, substantially as and
 105 for the purpose specified.

Waterford, October 18, 1897.

LEWIS H. SLAGHT.

In presence of—

A. M. TOBIN,
 O. H. DUNCOMBE.