

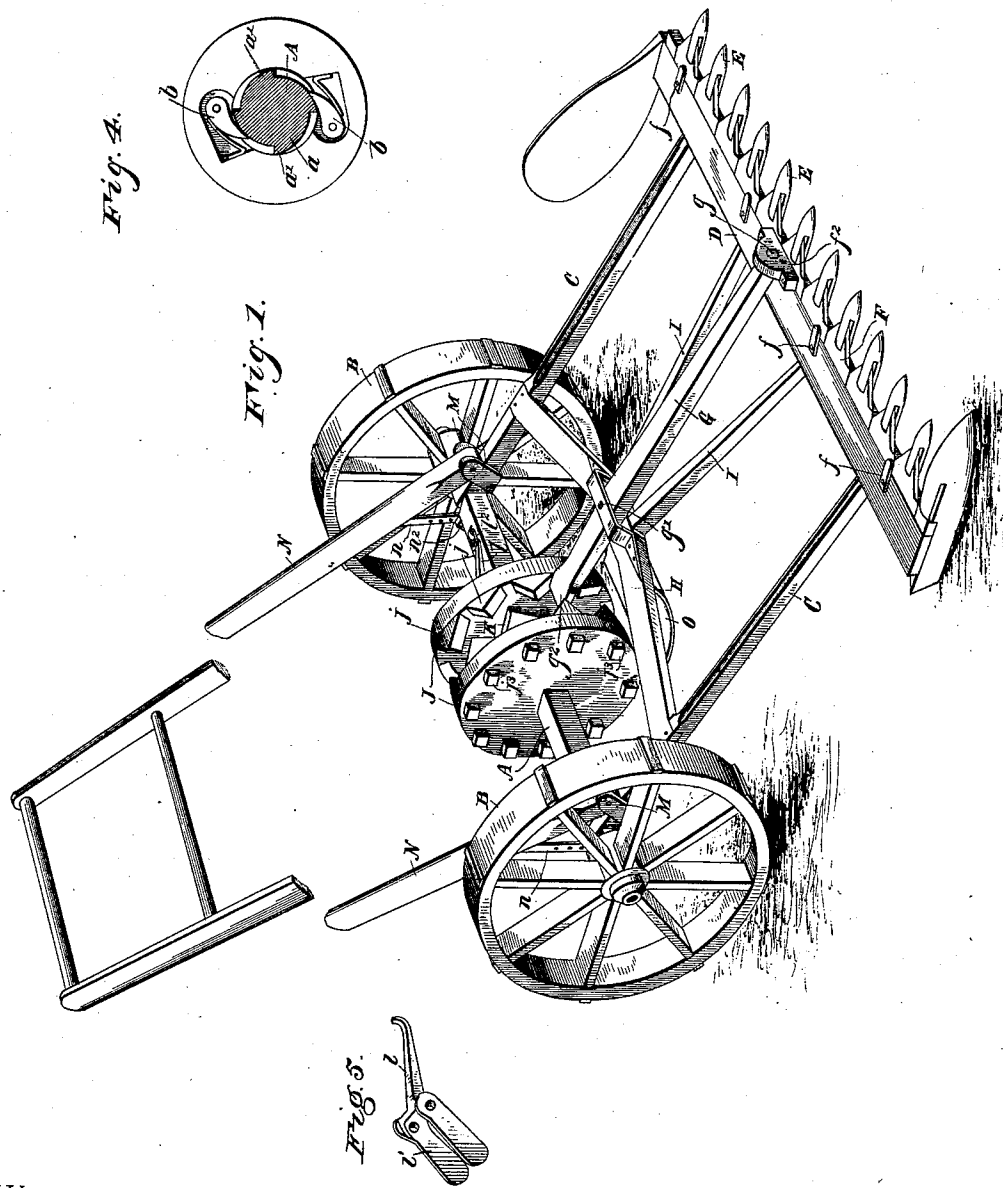
(No Model.)

2 Sheets—Sheet 1.

C. WIBERG.
LAWN MOWER.

No. 475,649.

Patented May 24, 1892.



Witnesses;

J. Mulvihill
D. O. Mulvihill

Inventor
Charles Wiberg

By *his* Attorneys,

C. A. Snow & Co.

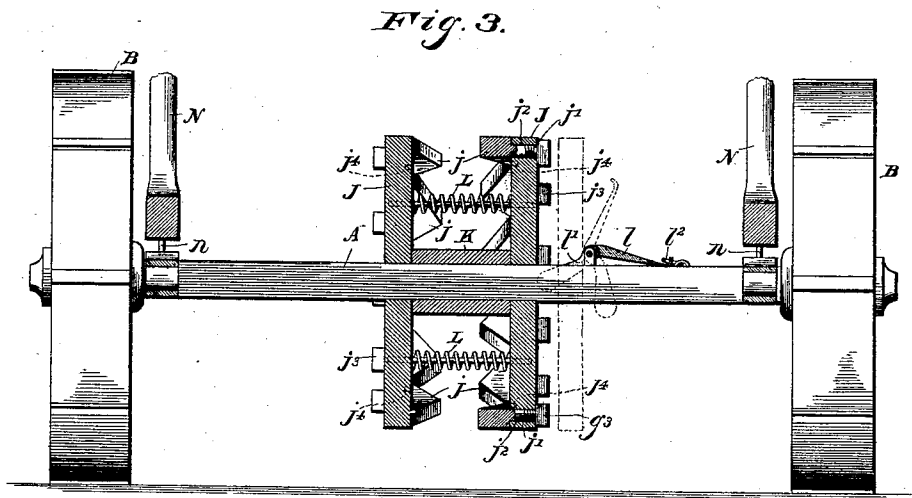
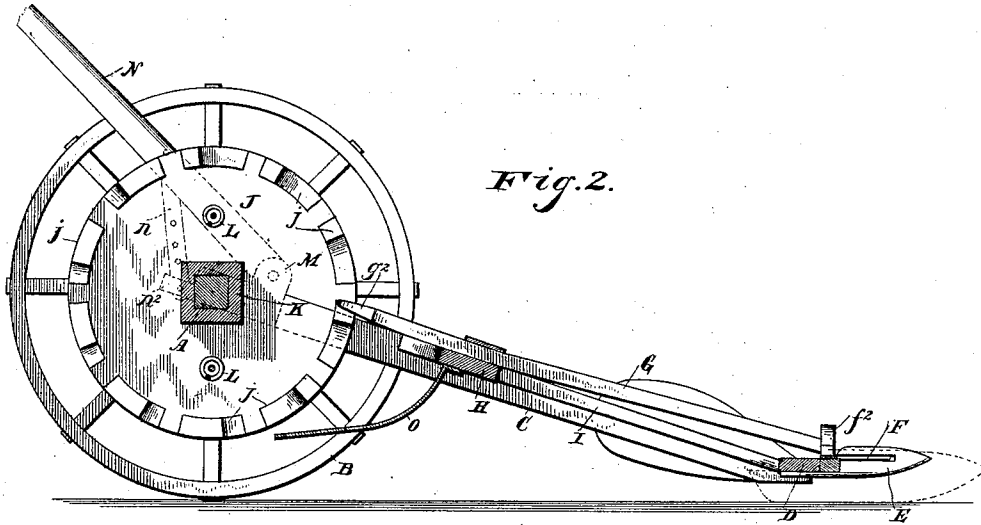
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UNITED STATES PATENT OFFICE.

CHARLES WIBERG, OF NORTH PLATTE, NEBRASKA.

LAWN-MOWER.

SPECIFICATION forming part of Letters Patent No. 475,649, dated May 24, 1892.

Application filed November 17, 1891. Serial No. 412,187. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WIBERG, a citizen of the United States, residing at North Platte, in the county of Lincoln and State of Nebraska, have invented a new and useful Lawn-Mower, of which the following is a specification.

This invention relates to lawn-mowers; and it has for its object to provide a machine of this character which can be as equally advantageously used as a hand or a horse mower, and to provide a machine so constructed that the various parts may be easily reached when out of order, and one in which the various parts may be readily replaced with ease and at but a small cost, and also a mower which provides for a rapid and certain cut.

With these and other objects in view the invention consists in the novel construction hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a lawn-mower constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a vertical transverse section through the axle and operating-disks. Fig. 4 is a detail view of the axle and wheel ratchet device. Fig. 5 is a detail perspective of the clamping-lever.

Referring to the accompanying drawings, A represents a revolving squared axle provided with the ordinary spindles *a*, having the ratchet-teeth *a'* located near their inner flanged ends and adapted to receive the ordinary traction-wheels B, each of which are provided within the hubs thereof with the spring-actuated pawls *b*, that are adapted to engage the ratchet-teeth *a'* upon the square axle A, and when moving in a forward direction by engaging the same the said axle is caused to revolve, and thus impart motion to the machine in the manner to be described; but when the machine is backed the said pawls ride over the ratchet-teeth and will not cause the machine to operate, as is usual in this class of machines. Pivotally mounted upon or connected with the squared axle, adjacent to the wheels B thereon, are the forwardly-extending frame-arms C, connected at their outer ends by the front bar D, carrying a series of ordinary guard-fingers E, within which laterally

reciprocate the knives of an ordinary cutter-bar F, held therein by the clamps *f* or other suitable securing devices. The said cutter-bar is provided with the perforated lug *f*², secured centrally to the top thereof and adapted to receive the rounded end of the pin *g* of the vibrating lever or pitman G. The said vibrating lever G is pivotally secured near its inner end upon the pivot-bolt *g'* to the intermediate cross-bar H, connecting the opposite parallel arms C directly in front of the axle, and suitably braced to the front connecting-bar G by means of the forwardly-extending brace arms or bars I. The said bar G is further provided with a flattened and enlarged inner end *g*², that is adapted to be engaged by the operating-disks J, from which a vibrating motion is imparted through the said lever to the laterally-reciprocating cutter-bar. Said operating-disks J are centrally mounted upon the square axle and are suitably spaced apart from each other by means of the interposed spacing block or sleeve K, also mounted upon said axle between the opposite disks. Securely bolted near the rims and upon the inner faces of said disks and projecting toward each other are the alternately-arranged triangular blocks *j*, each of which is provided with threaded bolts *j'*, that extend through perforations *j*² in each disk and are engaged by the nuts *j*³, screwing thereon upon the outer faces of said disks, and thus providing means whereby the blocks may be readily detached when worn out and any-sized block having their slanting sides at any angle may be readily inserted in their positions upon each disk, said blocks being further provided with the grasping-teats *j*⁴. The said blocks are so arranged that the apices of those upon one disk are directly opposite the space between those upon the opposite disk and may be said to thus project within the same, thereby forming a sinuous groove or way, in which the enlarged head *g*² of the vibrating pitman G travels, the sides of said enlarged head passing over the inclined sides of each of the triangular blocks, which thus guide and steady the pitman or lever in its oscillating or vibrating movement as the machine moves in a forward direction.

When the machine is used as a horse-mower, means are provided whereby the same

may be thrown out of gear, as illustrated in the drawings. For this purpose separating-springs L are interposed between the disks J and tend to normally press the same apart, one of which slides upon said axle; but by means of the clamping-lever l, hereinafter described, the two disks are held in their normal spaced position, allowing the ends of the vibrating lever to be engaged by the cam-groove formed between the same. Secured to the opposite parallel arms C, directly in front of their pivotal connection with said axle, are the straps M, between which are pivotally secured the rearwardly-extending handle-bars N, from which, near their connection with said straps, depend the perforated arms n, that are adapted to be adjustably connected with the lugs n², extending from the rear inner end of the arms C upon the outer side of the axle to which the same are connected, and thus provides a construction which allows said handles to be vertically adjusted, according to the option of the operator, and also, as can be readily seen, provides means whereby the entire front carrying the cutting apparatus may be elevated above the cutting plane when desired, although when horsepower is used to move the machine other devices may be conveniently employed for elevating said frame.

In order that the triangular blocks may not become clogged and interfere with the movement of the vibrating lever, I provide the machine with a curved shield or guard O, secured to the under side of the intermediate cross-bar H and extending beneath both of said disks, and thus protects the sinuous groove formed between the same.

Inasmuch as the whole wear of the machine is practically upon the vibrating lever and the triangular blocks, it is one of the primary objects of this invention to provide such parts separate and independent of the other parts, so that the same may be readily replaced without interfering with the other parts of the machine. It may be noted more accurately at this point that the lever l is pivoted upon the top of the axle adjacent to the sliding disk and has the forked clamp end l' straddling the axle and engaging said disk upon said opposite sides, as illustrated in Figs. 2 and 5, and when the lever is pressed down

upon the top of the axle and the forked ends thereof firmly press the movable disk against the spacing-block K the said lever is held in such locked position by means of the ring-catch l², located upon the top of the axle and engaging the outer hook end l³ of said lever.

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

1. In a lawn-mower, the combination, with a revolving axle, of a forwardly-extending cutter-bar loosely connected to said axle, a vibrating lever having an enlarged inner flattened end pivoted upon said frame and connected at its other end to the cutter-bar, a stationary and an opposing spring-actuated sliding disk mounted centrally upon said axle, a series of independent alternately-disposed triangular blocks having integral bolts detachably clamped through said disks near the rims thereof, and inwardly-projecting teats engaging said disks to prevent the turning of said blocks, said blocks being disposed so as to alternately engage the inner flattened end of said lever, and means for clamping said sliding disk in an operative position opposite the stationary disk, substantially as set forth.

2. In a lawn-mower, the combination, with a revolving axle, of a forwardly-extending cutter-bar frame loosely connected to said axle, a vibrating lever pivotally secured to said frame and connected at one end to the cutter-bar, a stationary and an opposing sliding disk mounted centrally upon said axle and spaced from each other, the same being provided with a series of alternately-disposed blocks engaging the inner end of said lever and vibrating the same, a series of outwardly-pressing springs interposed between said disks, and a clamping-lever pivoted upon said axle adjacent to the sliding disk and having an inner forked end adapted to engage the sliding disk on each side of the axle, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES WIBERG.

Witnesses:

GEO. E. FRENCH,
W. D. PULVER.