(No Model.)

C. W. CHENEY.

MOWING MACHINE.

No. 258,555. Patented May 30, 1882.

Fig. 1.

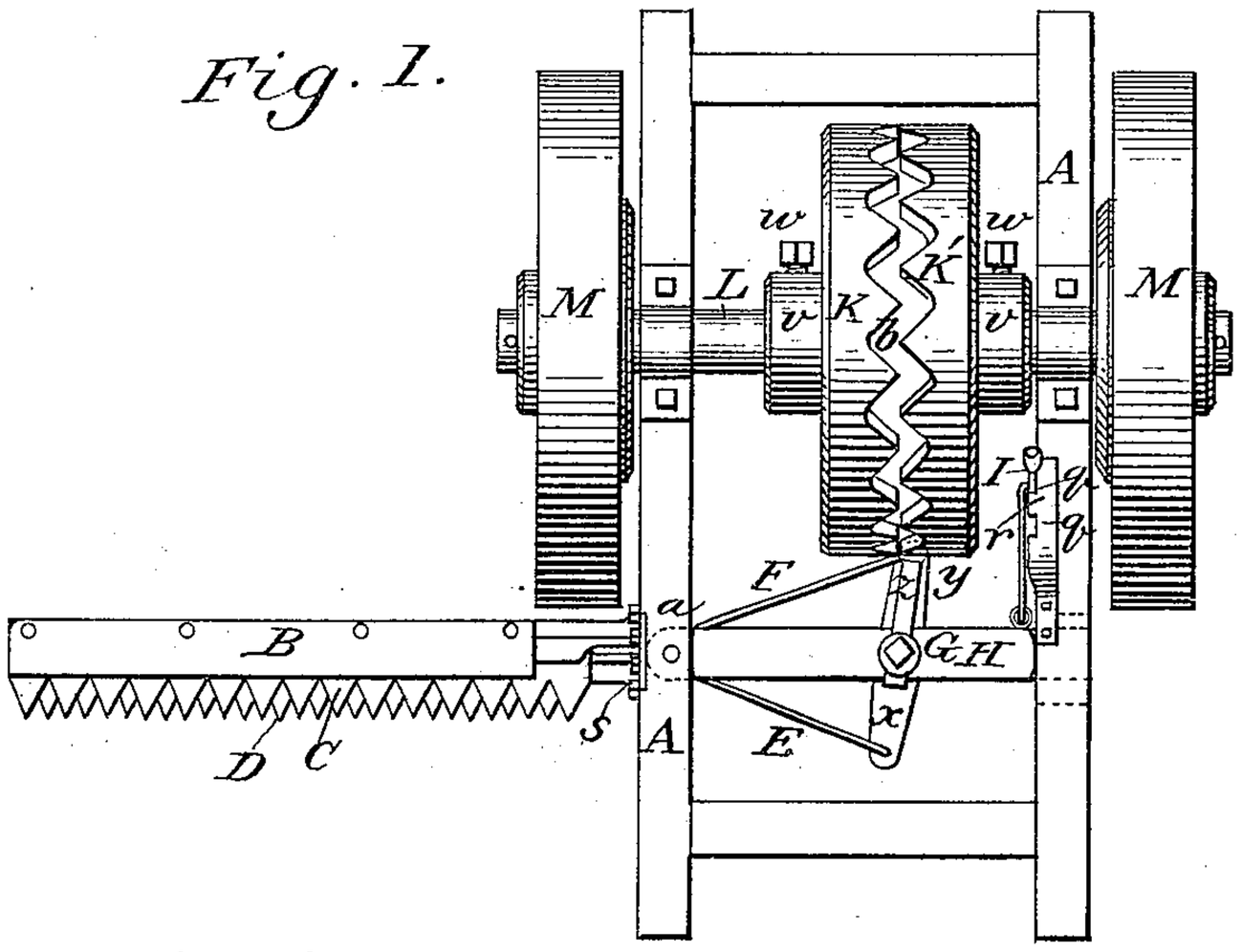


Fig. 4.

Fig. 3.

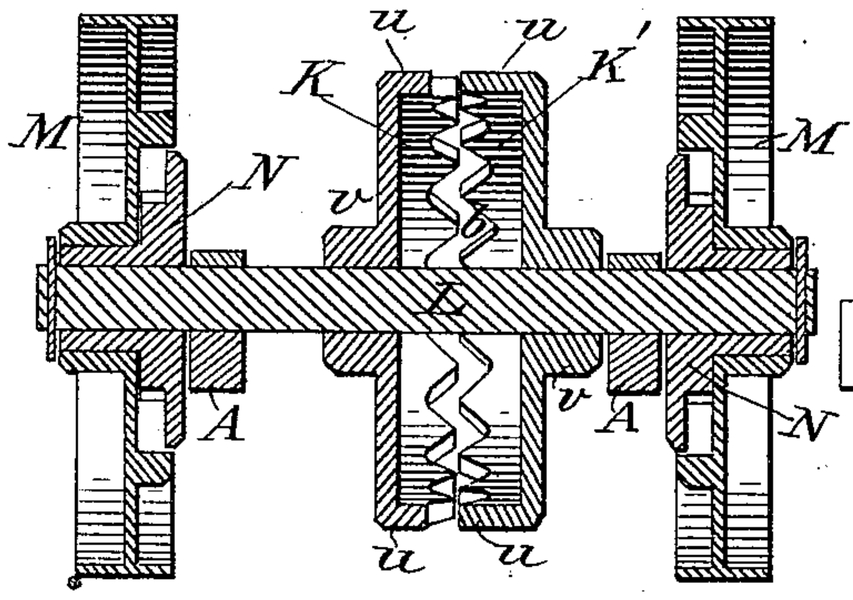
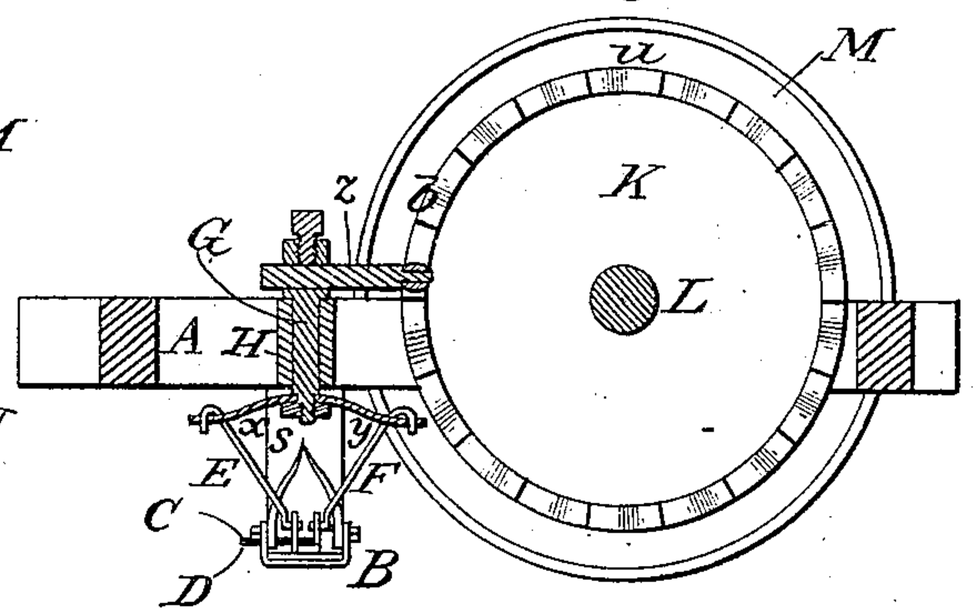
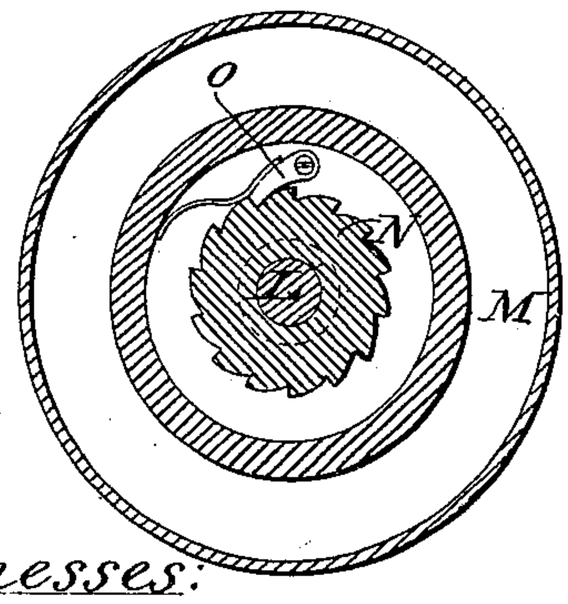


Fig. 5.





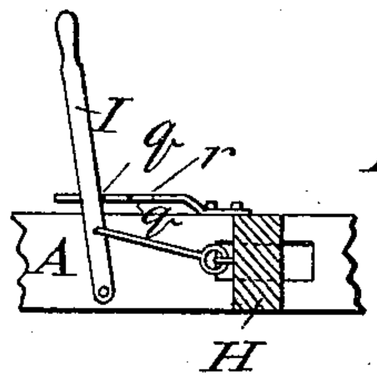


Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES W. CHENEY, OF ATHOL, MASSACHUSETTS, ASSIGNOR OF A PART TO C. WALTER KNOWLTON AND WILLIAM C. BOWERS, BOTH OF BROOKLYN, NEW YORK.

MOWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 258,555, dated May 30, 1882.

Application filed July 13, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. CHENEY, of Athol, of the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Mowing-Machines; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view of a mowing-machine containing my invention. Fig. 2 is a view showing the mechanism for moving the pivotal bar, to be hereinafter described. Fig. 3 is a vertical and longitudinal section taken between the two cam-wheels, and through the upright shaft and three arms thereof, to be hereinafter explained. Fig. 4 is a transverse section taken through the axle, its ratchet, and supporting-wheels. Fig. 5 is a section taken through one of the supporting-wheels and its ratchet-wheel and pawl.

The nature of my said invention is duly explained in the claims hereinafter made.

In Figs. 1 and 2, A denotes the frame of the machine as provided with a cutter-bar or carrier, B, which is to be hinged or adapted to the frame in a manner to enable the said bar to be turned from a horizontal up into a vertical position, or thereabout. Within the said bar, and arranged one over the other, are two saws or serrated cutters, C D, each of which at its inner end is jointed to one of two rods, E F, that are extended from and jointed to the two arms *x y*, projecting in opposite directions from an upright shaft, G, at the foot thereof. The said shaft G, arranged as shown, is supported by and turns in a pivotal bar, H, or a suitable box fixed to such bar. The bar H at its outer end, or that next the cutters, is pivoted to the frame A, so as to be capable of being vibrated horizontally therein, the pivot or hinge being shown at *a*. Furthermore, there is fulcrumed to the frame A a hand-lever, I, connected with or so adapted to the bar H as to serve as a means of moving such bar either toward or away from two cam-wheels, K K′, in order to carry the inner end of an auxiliary arm, *z*, projecting from the shaft G at its upper part, either into or out of the serpentine space *b* between the two cam-wheels. This arm *z* passes through the shaft G, and is secured thereto by means of a set-screw, thus adapting it to be easily adjusted or removed for repairs. Such cam-wheels are fixed concentrically upon the axle L by means of clamp-screws *w*, arranged in the hub *v* of such wheels. Each wheel has a flange, *u*, projecting laterally from it at its periphery, and notched so as to form within the notched flange of its fellow cam-wheel, when arranged therewith as shown, the serpentine space *b*. It should be observed that the said space and that between the cam-wheels is entirely open, so that any hay or matter that may get between the cam-wheels can be free to fall or escape from them without clogging the space *b* between their notched flanges. By having one cam-wheel adjustable toward or away from the other the vibrating motions of the cutters can be increased or diminished, as may be required. The cutter-bar B projects from a bracket, *s*, extending down from the frame A. Each of the supporting-wheels M revolves freely on the axle, and about a ratchet-wheel, N, fixed to the axle, there being to the wheel M a pawl or click, O, to engage it with the ratchet-wheel when the mowing-machine is being drawn forward. When the machine is moved backward the supporting-wheels M will revolve freely on the axle without turning it, so as to cause the cam-wheels to be revolved.

On the machine being drawn or pushed along over the surface of a field or plot of grass, while the wheels M may be bearing thereon, reciprocating rectilinear motion will be imparted to the cutters to cause them to co-operate, like shears, in severing the blades of grass that they may be forced against. These movements of the cutters will be effected by the two cam-wheels K K′, the shaft G and its three arms, and the rods E F, connecting the two lower arms with the cutters. When it may be desirable to arrest such movements the bar H is to be moved by the lever I, so as to draw the upper arm of the shaft G out of the serpentine space *b* between the cam-wheels. The lever I is held in either of its two extreme

positions by a notched bar or rack, *r*, arranged as shown, the lever being elastic, so as to enable it to be sprung into or out of either of the notches *q* of the rack.

By moving the bar H forward, so as to withdraw the upper arm of the shaft G out of the space between the cam-wheels, the machine may be moved along without any reciprocating movements of the cutters then taking place.

In the above-described machine the shaft G and its three arms become necessary in order to bring the upper arm into its correct position with the cam-wheels and the lower arms into their proper relations with the cutters.

I am aware that in the United States Patent No. 193,881 a "wave-wheel" is shown as composed of two disk-shaped sections separated by an intermediate wooden disk and firmly keyed to the axle. In my improvement I dispense with the wooden disk, whereby I cause the wave-wheel to be open from top to bottom, in order that any grass or matter that may get between its sections may have a chance to freely escape from the wheel without being held or stopped by any such intermediate disk. So by having one of the sections of the wave-wheel adjustable on the shaft relatively to the other I am able to vary the extent of vibration of the cutters, as hereinbefore stated.

What I claim as my invention is as follows, viz:

1. In combination with the frame A and main axle L, the two disconnected cam-wheels K K′, made adjustable relative to each other, the shaft G, provided with the three arms *x y z*, the pivoted bar H, the pitmen E F, and the two cutters C D, the whole constructed and arranged to operate substantially as and for the purpose set forth.

2. In combination with the cutters C D and pitmen E F, the shaft G, provided with the arms *x y* and the adjustable and removable arm *z*, and means for imparting to said shaft a rotary oscillating motion, substantially as described.

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