

L. D. BIDWELL.
MOWING MACHINE.

No. 84,790.

Patented Dec. 8, 1868.

Fig. 1.

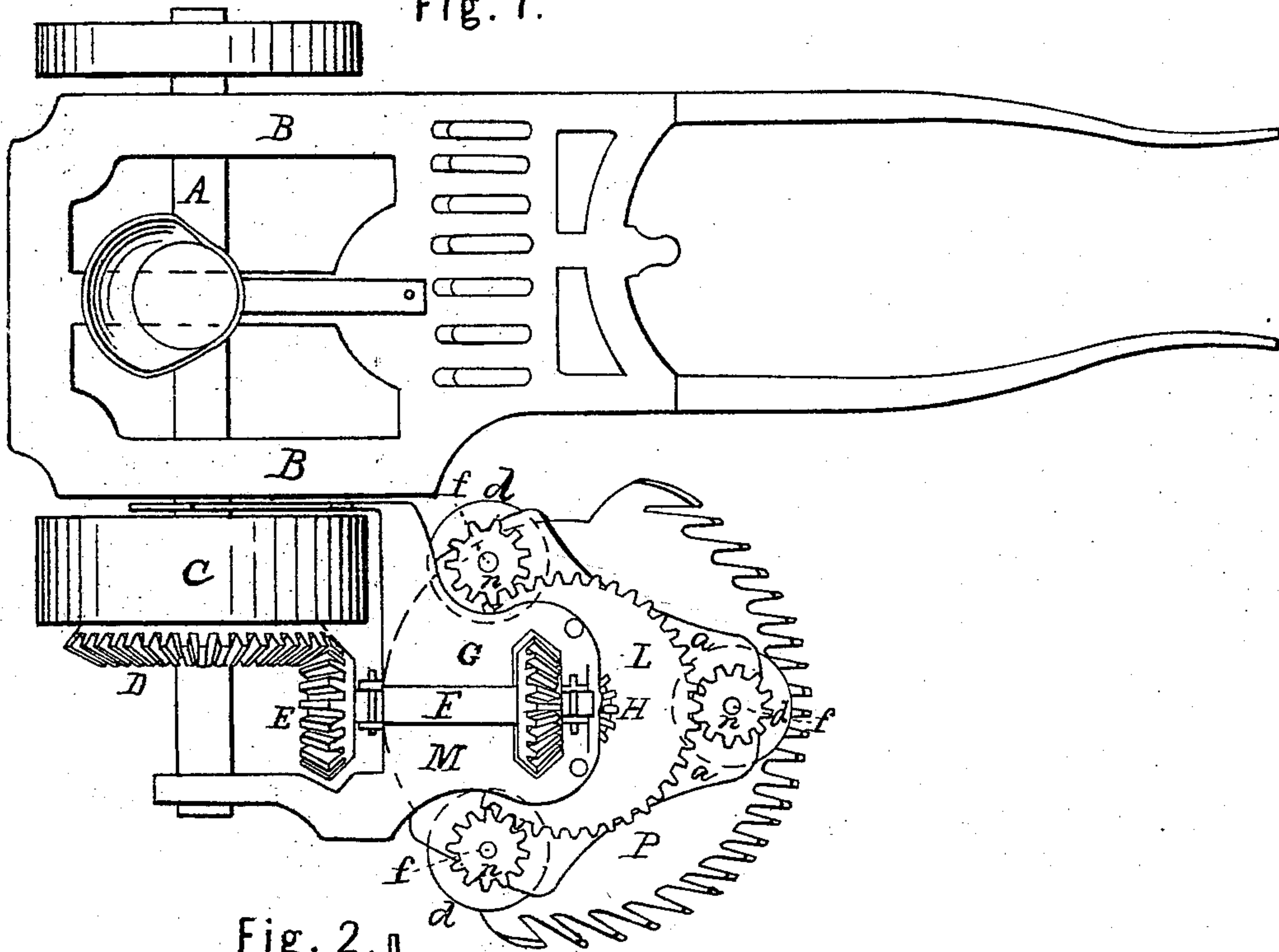
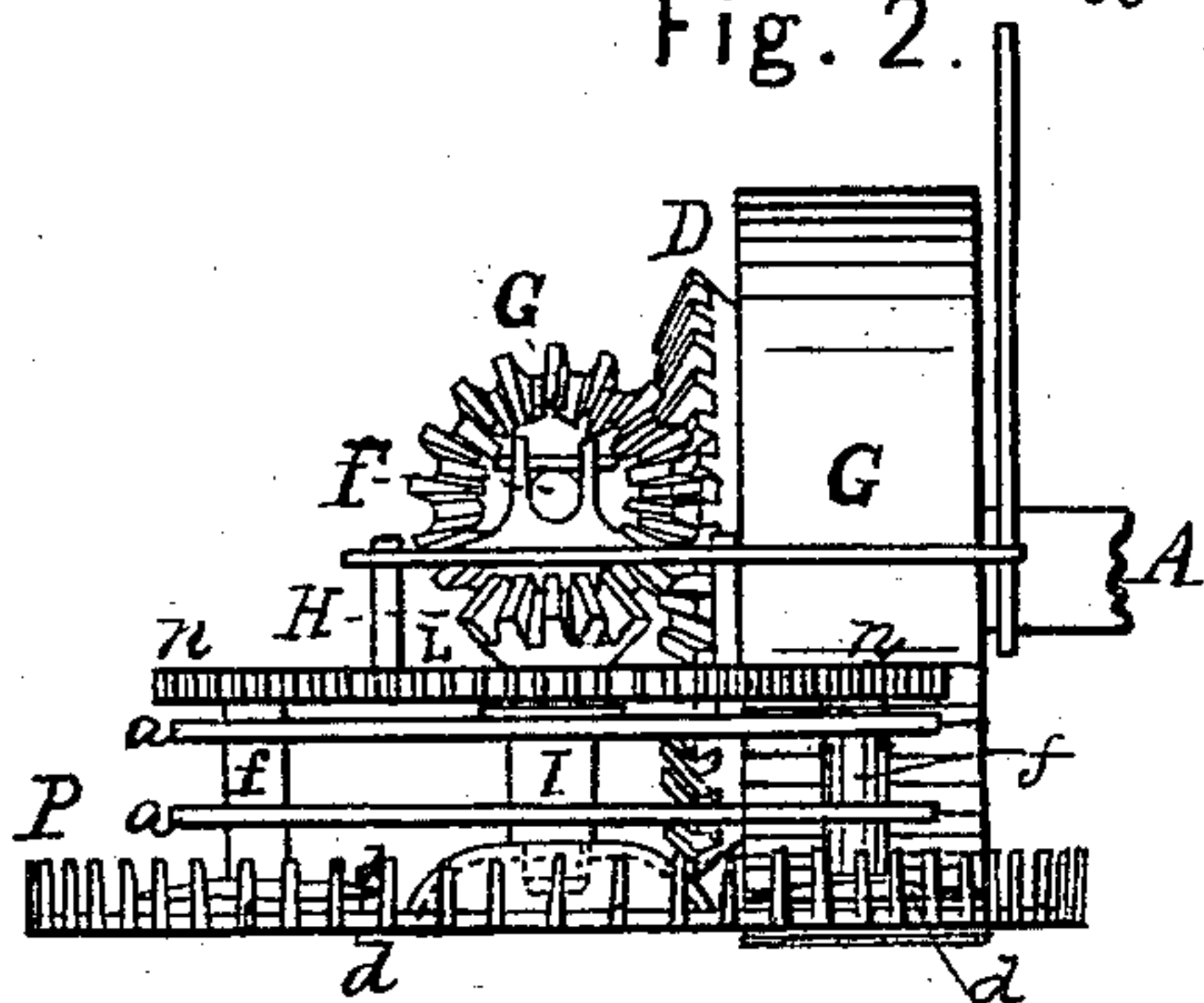


Fig. 2.



Witnesses.

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Letters Patent No. 84,790, dated December 8, 1868.

IMPROVEMENT IN MOWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, L. D. BIDWELL, of Birmingham, in the county of New Haven, and State of Connecticut, have invented a new Improvement in Mowing-Machines; and I do hereby declare the following, when taken in connection with the accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in

Figure 1, a top view, and, in

Figure 2, a front view of the cutter part of the machine.

This invention relates to an improvement in machines for cutting grass, &c., such as are arranged to be driven by horse-power; and consists in the arrangement of several revolving cutters, and the several cutters fixed in a revolving head, so that the several cutters, while they all revolve around a common centre, have, of themselves, an independent rotary motion, whereby the rapidity of the cut is greatly increased.

In order to the clear understanding of my invention, I will fully describe the same, as illustrated in the accompanying drawings.

A is the axle of the machine, arranged, in bearings, on a frame, B, to which the horse is attached in the usual manner.

C, the driving-wheel on the axle A, has attached to it a bevel-gear, D, which works in a pinion, E, on a shaft, F, the said shaft F being at right angles to the axle A, or nearly so, and upon the opposite end of which is a bevel-gear, G, working in a pinion, H, so as to drive the shaft I; and upon the said shaft is arranged a head, consisting, in this case, of two plates, a, fixed to the shaft I, so as to revolve therewith.

In the said head are fixed several circular cutters, d, upon a shaft, f, arranged in bearings, so as to revolve freely.

Above the said head is arranged a gear, L, fixed, in a stationary position, in the frame M; and, upon the said shafts f is arranged a pinion, n, working into the gear L, as seen in fig. 1, so that, as the head, carrying the circular cutters, is caused to revolve by the forward

ward motion of the machine, the cutters themselves will also revolve, in consequence of the pinion n working into the fixed gear L, and will, consequently, revolve in an opposite direction to that in which the head drives the cutters.

In front of the cutters is arranged a circular finger-bar, P, of such form, as seen in fig. 1, that the cutters traverse over the openings between the fingers; therefore, as the machine is drawn along, the grass or grain gathers between the fingers, the head carrying the cutters along over the several spaces between the cutters. At the same time, the cutters themselves revolving, give, as it were, a longer cut, according to the time occupied in moving the cutters, than they otherwise would do, one motion serving to cut direct, while the other (the revolving cutter) serves, as it were, as a saw, thus combining a double cut in a single cutter.

The number of cutters to be arranged in the head will be proportionate to the size of the cutters, and should be such number, relatively to the velocity with which the head carries the cutters, that each cutter will operate once while the fingers are moving one length; that is, the cut should be made in the same proportion as in common mowing-machines.

I do not wish to be understood as claiming the arrangement of a rotary cutter or cutters in harvesters, as such, I am aware, is not new; neither do I claim any of the parts separately, but only in combination, as hereinafter named.

Having fully described my invention,

What I claim as new and useful, and desire to secure by Letters Patent, is—

1. The arrangement of the revolving cutters d in a revolving head, so as to give to the said cutters a double movement, substantially as herein described.

2. In combination with the above, the finger-bar P, constructed and arranged so as to operate in conjunction with the said cutters, substantially in the manner set forth.

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Witnesses:

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