H. A. DEAN.

Pawl and Ratchet Mechanism for Mowing-Machines.

No. 219,698. Patented Sept. 16, 1879.

Fig. 1

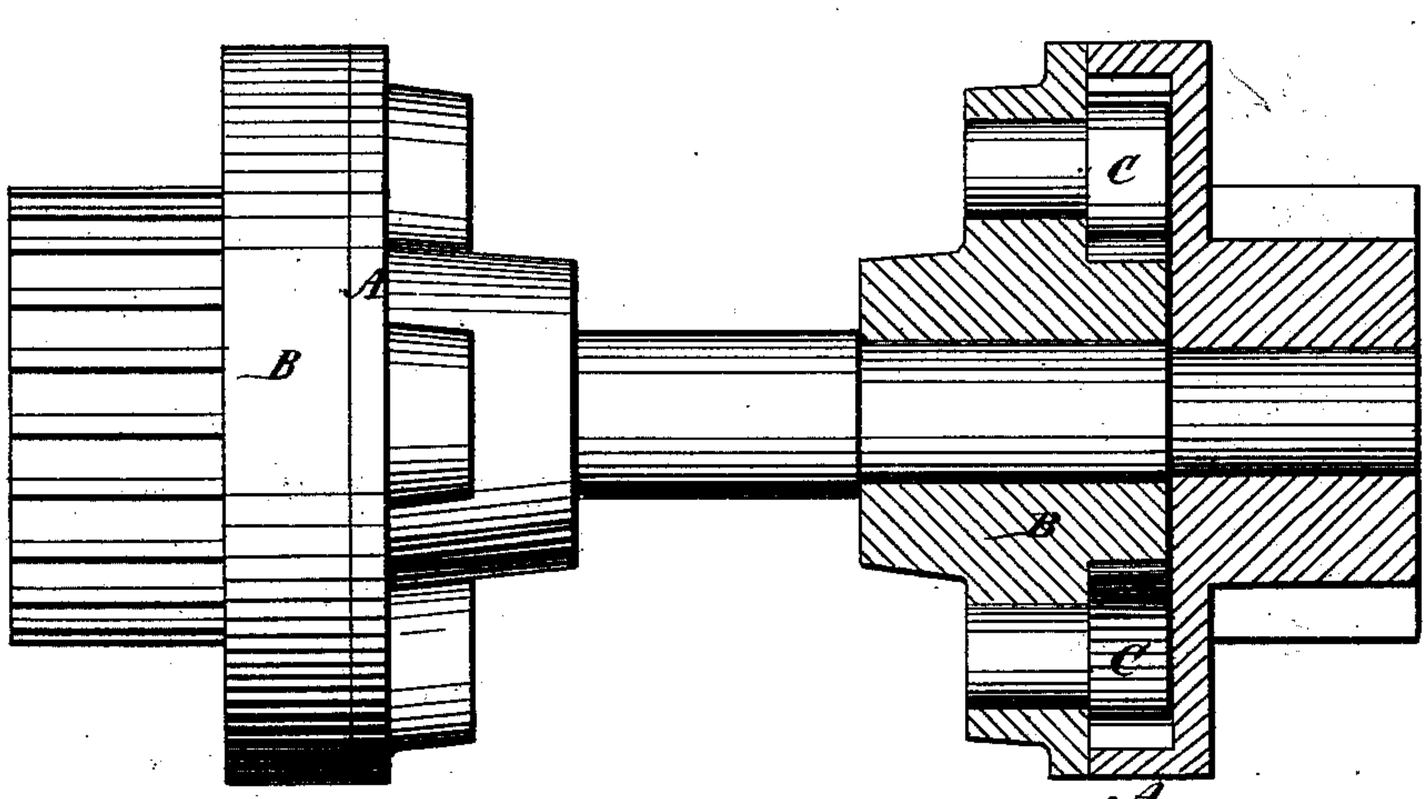
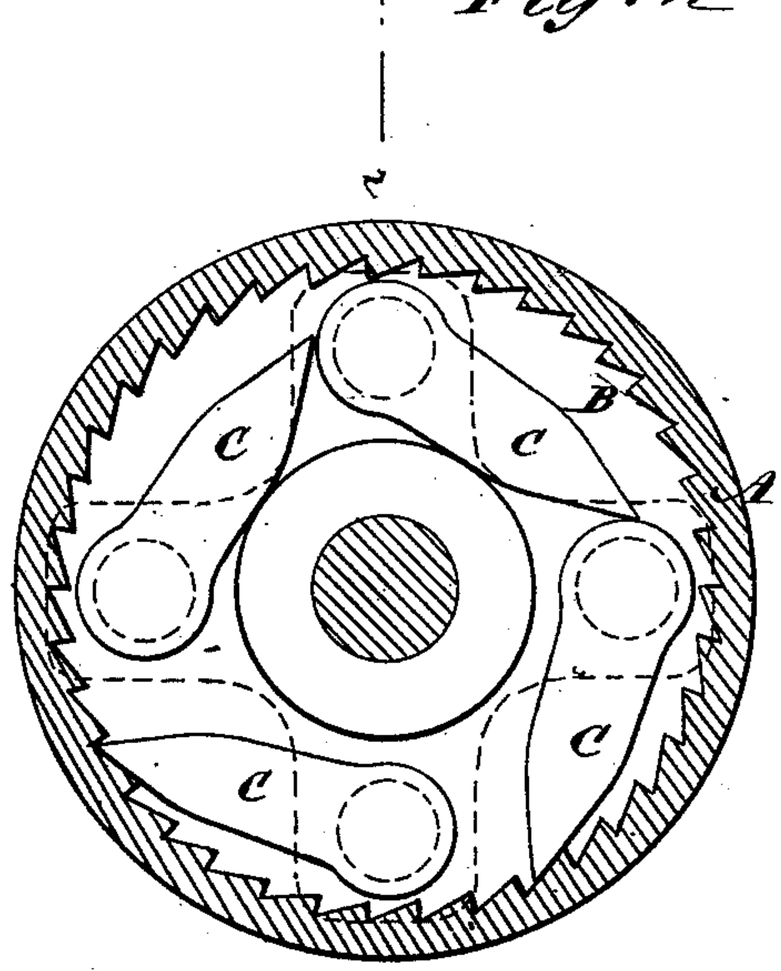


Fig: 2



WITNESSES:

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UNITED STATES PATENT OFFICE

HAMILTON A. DEAN, OF NEW LEBANON CENTRE, NEW YORK.

IMPROVEMENT IN PAWL-AND-RATCHET MECHANISMS FOR MOWING-MACHINES.

Specification forming part of Letters Patent No. **219,698**, dated September 16, 1879; application filed May 19, 1879.

To all whom it may concern:

Be it known that I, HAMILTON A. DEAN, of New Lebanon Centre, in the county of Columbia and State of New York, have invented a new and Improved Pawl-and-Ratchet Mechanism for Mowing-Machines, of which the following is a specification.

Figure 1 is a side elevation of the ratchets, partly in section, on line *x x*, Fig. 1. Fig. 2 is a sectional elevation on line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish a ratchet for mowing-machines that shall operate without springs, and with so small a dead-point as to obviate the necessity of jerking the machine forward or backward at any time to get it into gear.

In the drawings, A represents the ratchet-pinion, containing thirty-eight teeth, occupying less space in the rim than the old-style pinion, which contains but nineteen teeth. The difference between the two is, that in the improved ratchet the multiplication of the teeth diminishes the space for lost motion, and enables the ratchet to operate at the instant the team moves.

B is the ratchet head or holder, in which are bored four equidistant holes for the reception of the pins or shanks of the pawls C C. These pins play loosely in their sockets, so that the pawls drop into the ratchet by their own weight, and the pawls being four in number, one will always be in position to fall in gear with the ratchet-teeth.

The pawls are made of such a length and so arranged within the ratchet-head with regard to each other that their points or free ends rest upon the hinged ends of the adjoining pawls. By this construction the hinged ends of the pawls serve as stops or supports to the free ends of the same, holding them in such close proximity to the teeth of the ratchet that they have but a short distance to fall to engage the said teeth, and permitting the hub or boss of the ratchet-head to be reduced in size, as no other stops or supports are required.

Among the advantages of this ratchet over others in use on mowing-machines are the following: It has no springs to break and cause annoying delays in work; its motion is instantaneous; it prevents the clogging of the machine when mowing heavy or lodged grass; it is small, light, strong, and durable, and quiet in operation; and because of possessing these advantages in addition to those heretofore enumerated, it is the most economical ratchet with which I am acquainted.

I am aware that three pawls held in sockets of the ratchet-head is old, and I therefore do not claim, broadly, a plurality of pawls; but

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

The pawls C, provided with gudgeons or journals at right angles to their length to adapt them to enter the holes of the ratchet-head B, and so arranged within the said head that each of their points, when not engaging the ratchet, rests upon the adjoining pawl, in combination with the said head and the pinion A, substantially as herein shown and described.

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Witnesses:

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