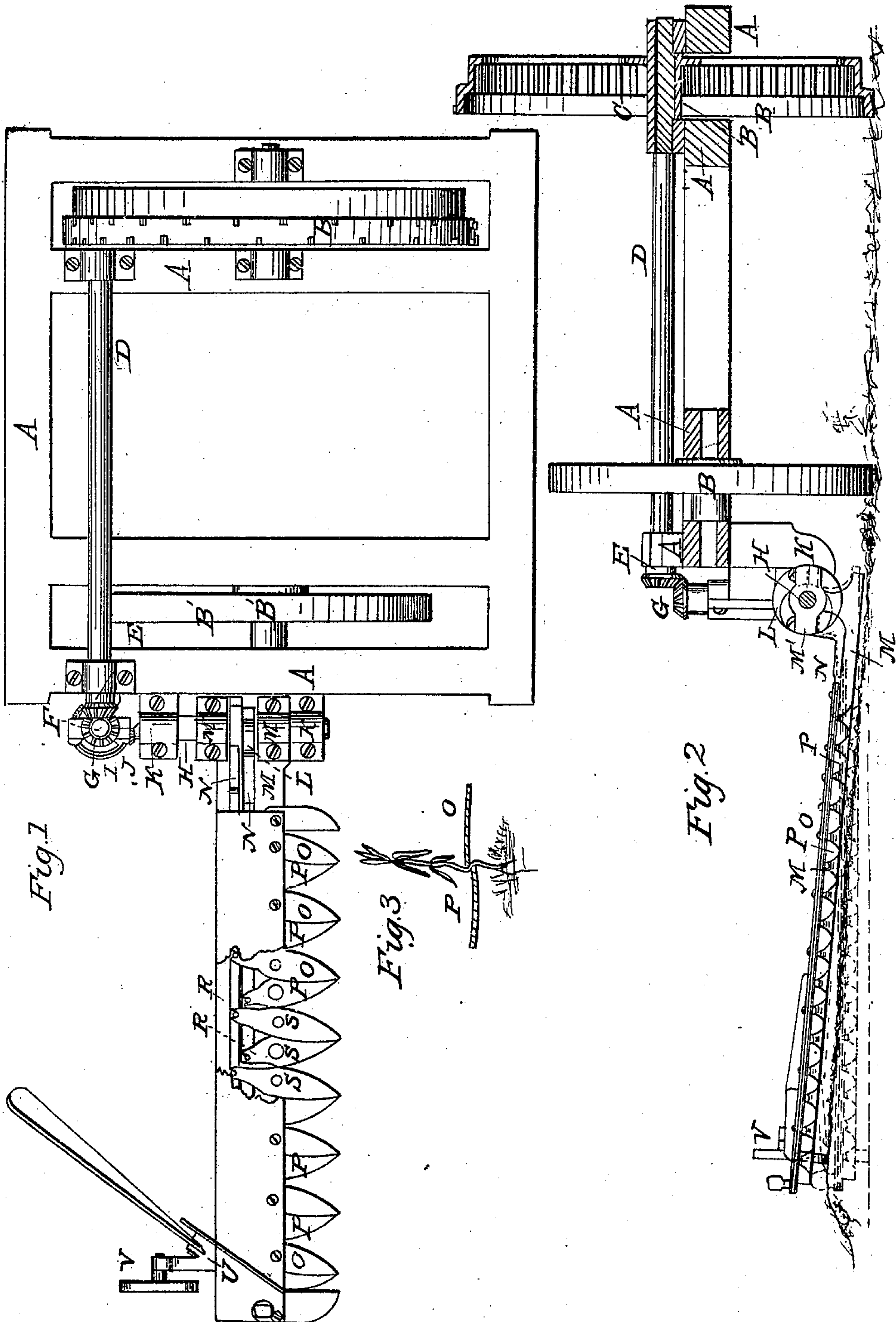


BURNETT & VAN DER WOERD.

Harvester.

No. 12,123.

Patented Jan'y 2, 1855.



UNITED STATES PATENT OFFICE.

MARSHALL BURNETT AND CHARLES VANDER WOERD, OF BOSTON,
MASSACHUSETTS.

IMPROVEMENT IN GRAIN AND GRASS HARVESTERS.

Specification forming part of Letters Patent No. 12,123, dated January 2, 1855.

To all whom it may concern:

Be it known that we, MARSHALL BURNETT and CHARLES VANDER WOERD, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Machines for Mowing and Reaping; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan of the principal parts of a mowing-machine constructed according to our invention. Fig. 2 is a front view of the same, and Fig. 3 a section of two of the blades of the cutters.

Similar letters of reference indicate corresponding parts in the several figures.

Our invention relates to the method of driving the cutters when the cutter-bar is jointed by a hinge or pivot joint to the machine, for the purpose of allowing it to assume at all times a position parallel, or nearly, so to the ground.

It consists in making the pivot of the joint upon which the cutter-bar is hung to serve as the shaft for driving the cutters, so that the proper relation between the cutters and the mechanism for driving them will be preserved in all positions of the cutter-bar.

To enable those skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A is the frame or carriage of the machine, supported by two wheels, B B'.

B is the driving-wheel, and C a pinion on the shaft D, gearing with and receiving rotary motion from the toothed rack on the interior of the driving-wheel. The shaft D carries a bevel-gear, E, gearing with another bevel-gear, G, on an upright shaft, which by means of bevel-gearing I J transmits motion to the horizontal shaft H, which works in journals K K, attached to the carriage A, and transmits motion to the cutters.

So far all the parts of the machine are substantially similar to those of many other reaping and mowing machines.

M is the cutter-bar, having journal-boxes M' M' at the end next the carriage A, to fit to journals on the shaft H, from which that end is suspended. The other end of the bar is supported by a small wheel, V, in the usual manner. The attachment of the cutter-bar to the carriage A in the above manner allows it to

accommodate itself to irregularities in the surface of the ground, as is shown by the changes of position represented in black and red outline in Fig. 2, when the wheel V or either of the wheels B or B' run over elevations and depressions in the said surface, and it will be readily understood that by a rope attached to the outer end and properly arranged the outer end of the cutter-bar may be raised by the person driving, either to clear an obstruction while in operation or to be brought to an upright position out of the way.

The cutters which we have shown consist of two sets, O O and P P, of blades arranged like shears, pivoted to the cutter-bar by pins S S', and moved by two rods, N N, which are connected with them by pins R R', and are attached to two eccentrics, L L', on the shaft H. These eccentrics give to the rods the motion which they transmit to the cutters.

Though we have shown shears cutters, our invention is by no means limited to a cutter-bar carrying cutters of that description, but is applicable to a bar containing a sickle or sickles such as are most commonly used in reaping-machines. The sickle or sickles would be driven by an eccentric or eccentrics on the shaft H in the same manner as the rods R R' are driven, or by a crank or cranks on the said shaft. By making the shaft H serve to attach the cutter-bar to the carriage the mechanism by which the cutters are driven is operative in all positions of the bar; but if the cutter-bar were attached by a separate pivot, as it might be, the proper relation of the above-named mechanism to it could not be preserved in such a simple manner.

Our invention is also applicable to reaping as well as mowing machines; but we have considered it sufficient to show its application in a mowing-machine.

What we claim as our invention, and desire to secure by Letters Patent, is—

Making the same shaft or axle, H, which serves to drive the cutter-rods, cutter, or cutters serve also as the pivot or center of the joint between the cutter-bar M and the carriage A, substantially as herein described, thereby preserving the proper relation between the cutter or cutters and their driving mechanism.

MARSHALL BURNETT.

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Witnesses:

H. MONTGOMERY,

WM. GALLAGHER.