W. A. WOOD, E. BOWHAY & J. M. ROSEBROOKS.

Mowing-Machine.

No. 168,951 Patented Oct. 19, 1875.

Fig. 1.

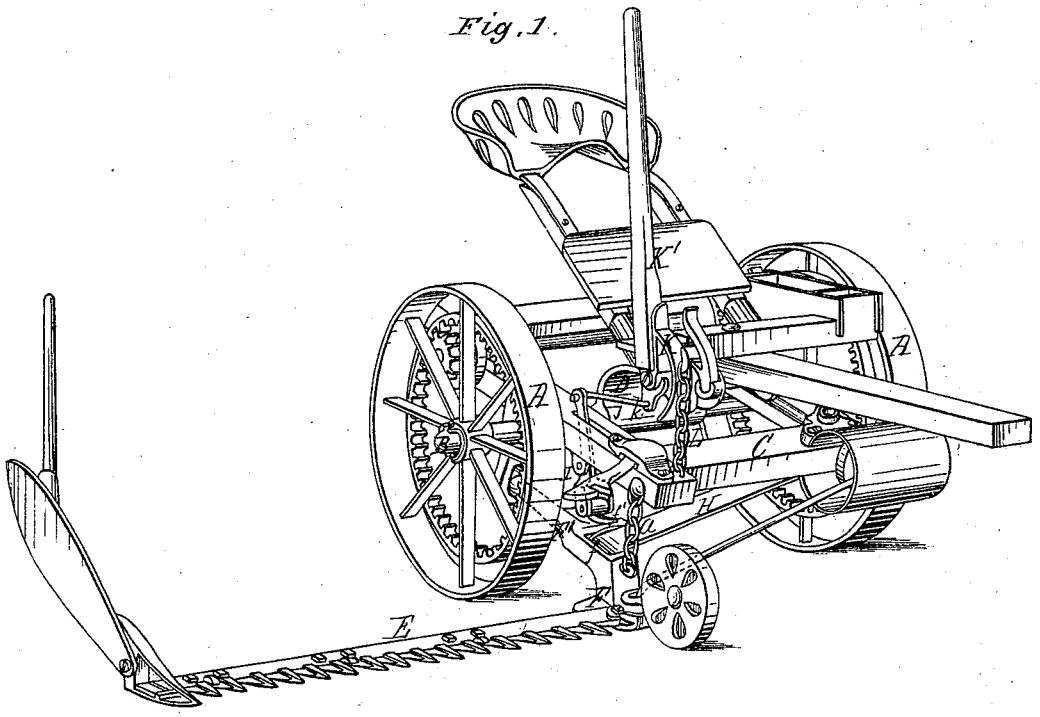
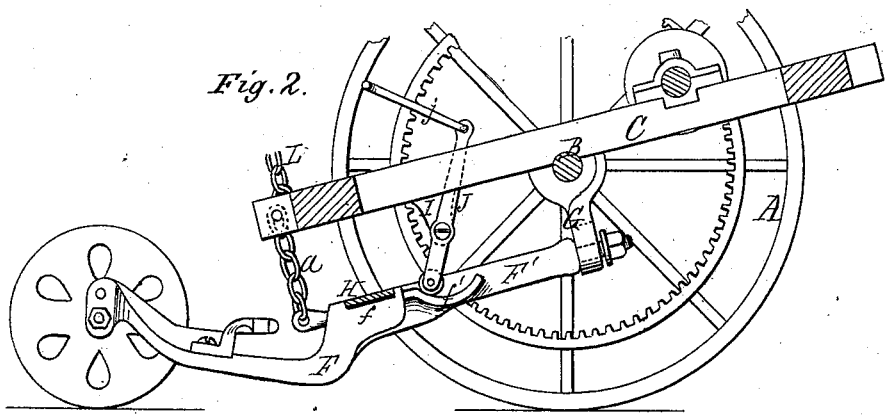


Fig. 2.



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UNITED STATES PATENT OFFICE.

WALTER A. WOOD, EGBERT BOWHAY, AND JOHN M. ROSEBROOKS, OF HOOSICK FALLS, NEW YORK, ASSIGNORS TO WALTER A. WOOD MOWING AND REAPING MACHINE COMPANY, OF SAME PLACE.

IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. **168,951**, dated October 19, 1875; application filed June 12, 1875.

To all whom it may concern:

Be it known that we, WALTER A. WOOD, EGBERT BOWHAY, and JOHN M. ROSEBROOKS, of Hoosick Falls, county of Rensselaer and State of New York, have invented certain new and useful Improvements in Mowing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 represents a perspective view of a machine embracing our improvements. Fig. 2 is a vertical longitudinal section through the same.

Similar letters of reference denote corresponding parts in both figures.

The invention relates to a novel means for adjusting and controlling the hinged cutting apparatus, and will be understood from the following description, with reference to the drawings, in which—

A A represent the main driving and carrying wheels, mounted upon a common axle, B, with which the main frame C is connected, said frame carrying the secondary or bevel wheel and crank-shafts, arranged in any usual or preferred manner. D is the seat and tongue plate or frame mounted and turning freely on the main axle, thereby permitting the main frame C, with which the hinged cutting apparatus is connected, to rise and fall with said cutting apparatus as the latter follows the uneven surface of the ground over which it is drawn. The cutting apparatus may be hinged to the frame C in any convenient or suitable manner. We have shown the bar E, to which the fingers are attached, rigidly bolted to a shoe, F, which is extended in rear of and upward from the finger-bar in the form of a thrust brace or shank, F′, which at its rear end is swiveled in the lower slotted end of a pendent bracket, G, attached to the vibrating main frame C. Just in rear of the finger-bar E this shoe has a socket formed in it at *f* for the reception of one end of a lateral brace, H, which is hinged or pivoted to the shoe in such manner as to permit the shoe to rock on its longitudinal axis. The brace H is made in the form of a stiff plate or strap spring, and, being bolted at its outer upper end to the frame C, serves to hold the shoe F down to its work with a yielding pressure when the machine is in operation. The ordinary hinged brace may, however, be used in lieu of the spring, if desired, leaving the cutting apparatus to follow the ground, held down by its gravity alone. A chain, *a*, connecting the shoe F with the inner front corner of the frame C, prevents the shoe from dropping too low in abrupt depressions in the ground. The shoe F or shank F′ in rear of the brace H is provided with a horizontal projection, *f′*, concave on its upper face, from front to rear, and forming a heel extension of the shoe beyond or upon the stubble side of its pivotal center. The frame C has a pendent bracket, I, secured to it directly over the concave projection *f′*, to which an upright lever, J, is pivoted, arranged slightly in rear of the center of the concave, so as to be eccentric thereto, and the lower end of this lever is armed with a friction-roller, which moves back and forth in contact with the concave face of the projection *f′*, serving, as it moves toward the rear, to depress the projection *f′*, and thus, by rocking the shoe F on its longitudinal axis, to raise the outer end of the cutting apparatus. The upper long arm of the lever J is connected, by a rod or link, *j*, with a spur or heel projection, *k*, on the lifting-segment K, which is pivoted upon the tongue plate or frame and has a lever, K′, applied to it for operating it in the usual manner. The segment is connected by the usual cord or chain L with the forward end of the vibrating main frame C, and serves, as the lever K′ is vibrated backward and forward, to raise and lower said end of frame for adjusting the height of the cutters or raising the cutters far enough from the ground to pass obstructions, or for purposes of transportation from field to field, the segment being held at any desired adjustment by a foot-pawl, *m*.

By the arrangement of parts above described it will be seen that, as the lever K′ is drawn back for raising the forward end of frame C, and with it the inner end of the cutting apparatus connected therewith, the upper end of the lever J, through its connection with the

heel-spur on the lifting-segment, is drawn forward, and the friction-roller at its lower end, moving backward, comes into contact with the projection *f'* and tends to depress the same, as explained, and, by preventing the shoe from turning on its longitudinal axis, causes the outer end of the cutting apparatus to be raised with the raising of the inner end.

The relation of the concave projection to the lever J is such that when the machine is at work the friction-roller is slightly removed from contact with the projection *f'*, for permitting the outer end of the cutting apparatus to fall below the inner end in following the surface of the ground, this relation being due to the inclined position of the lever J and the eccentric position of the projection relative to the pivot of said lever. Consequently, in raising the cutting apparatus, the inner end rises first, until, by the rocking of the shoe and the vibration of the lever J, the projection comes into contact with the friction-roller, when the rocking movement of the shoe is checked and a continued movement of the lifting-lever, owing to the eccentric position of the lever J, causes the outer end to be raised more rapidly than the inner end, until it overtakes or passes said inner end, according to the form of the projection *f'* or the degree of eccentricity of the lever J thereto.

Parts of the machine not particularly described may be constructed and arranged in any usual or preferred way.

Having now described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The pivoted shoe F, provided with the heel, spur, or projection *f'*, having the curved eccentric surface, in combination with the lever J, arranged and operating substantially as and for the purpose described.

2. The combination of the lifting-segment K for raising the inner end of the cutting apparatus with the lever J connected therewith, and the heel projection *f'* on the pivoted shoe for raising the outer end of the cutting apparatus, the combination being and operating substantially as described.

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