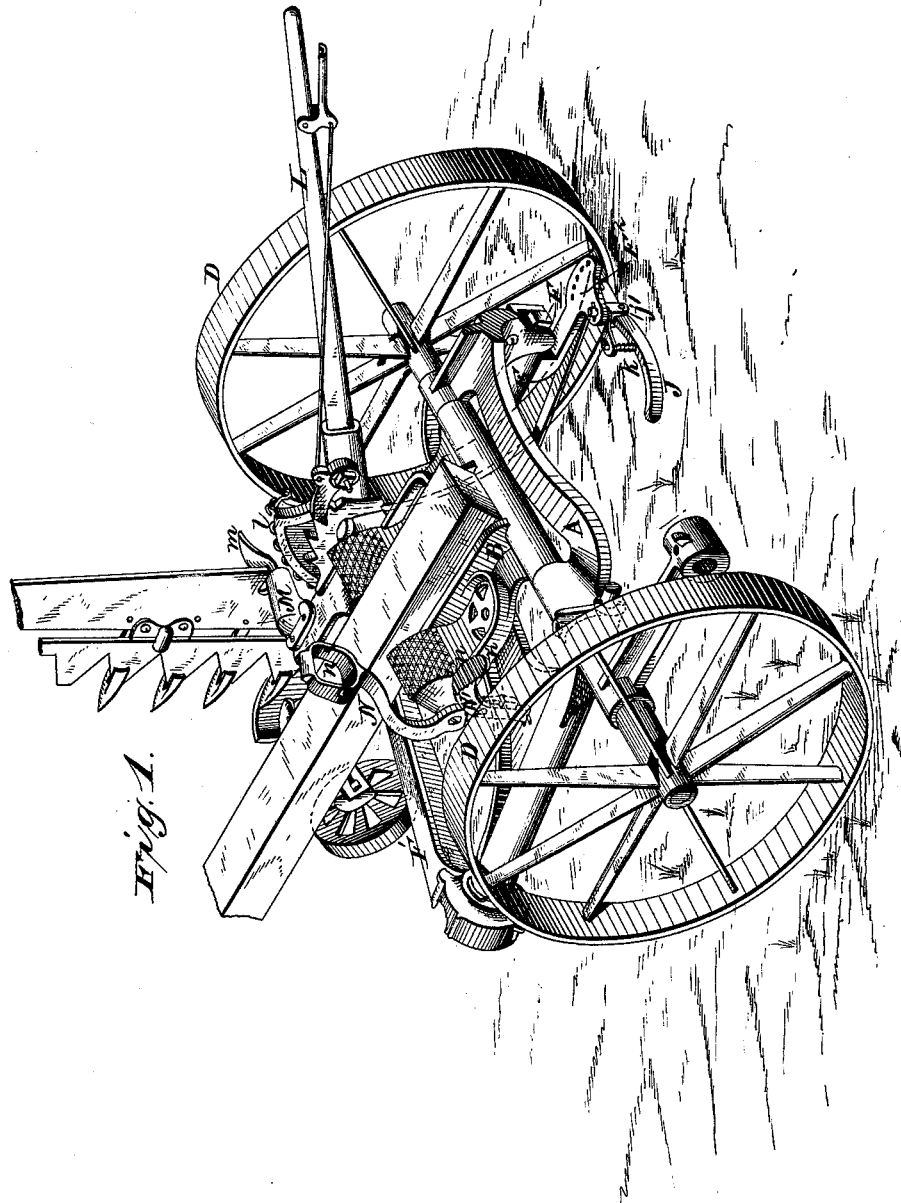


W. A. WOOD.  
Mowing-Machine.

No. 220,953.

Patented Oct. 28, 1879.



WITNESSES

*Frank L. Curand*  
*Alexander Mahon*

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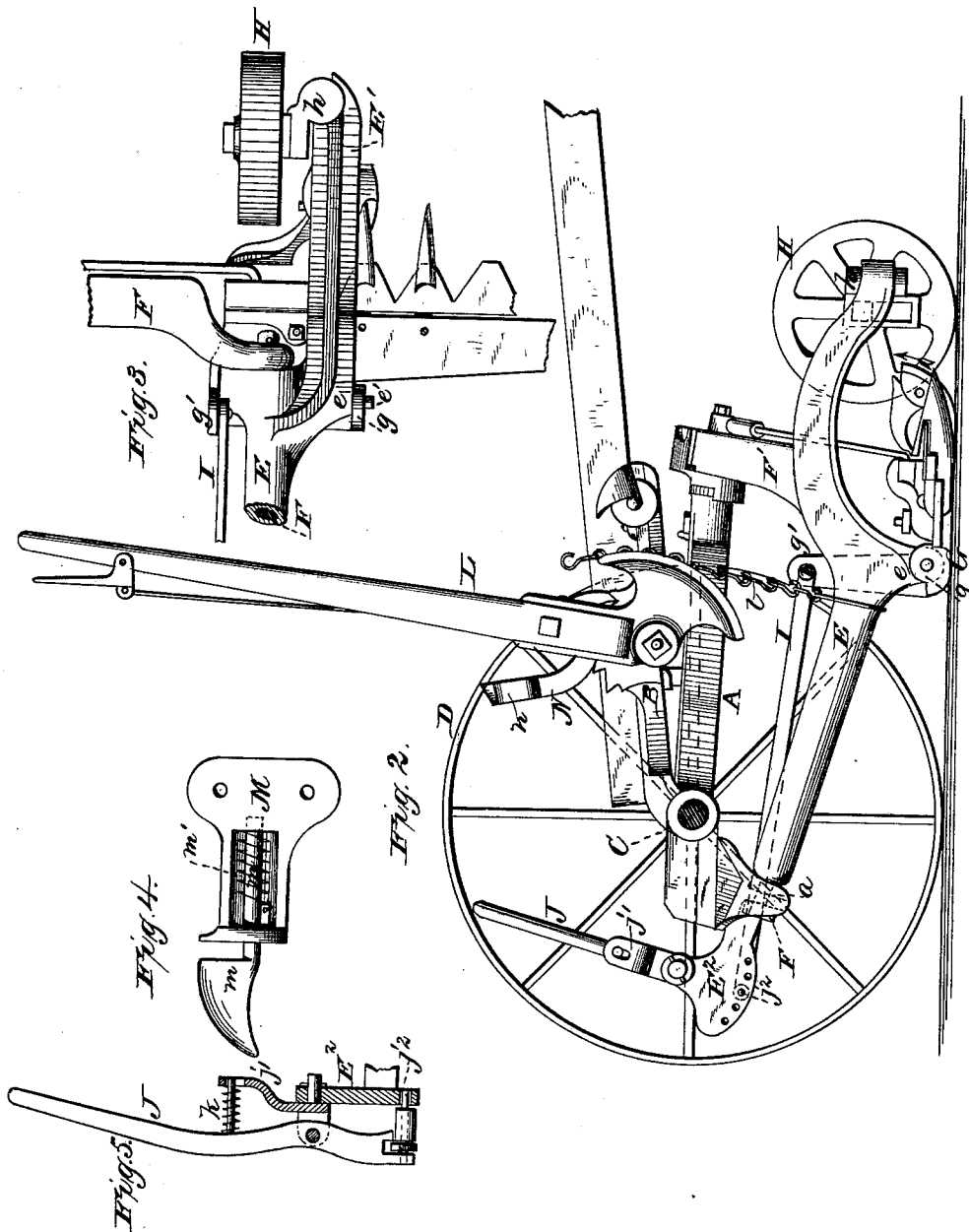
INVENTOR/

*Wm Anson Wood*  
*A. M. Smith*  
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# UNITED STATES PATENT OFFICE.

WILLIAM ANSON WOOD, OF ALBANY, NEW YORK, ASSIGNOR TO FRANK WOOD, OF SAME PLACE.

## IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. **220,953**, dated October 28, 1879; application filed May 21, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM ANSON WOOD, of the city and county of Albany, 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 drawings, making part of this specification, in which—

Figure 1 is a perspective view of a mowing-machine with my improvements applied. Fig. 2 is a side elevation taken on the grain side, with the inner driving-wheel removed. Fig. 3 is a plan view of the inner shoe and its attachments. Fig. 4 is a bottom view of the rocking latch for holding the cutting apparatus in its folded position; and Fig. 5 is a rear elevation of the tilting-lever, with the supporting-arm connecting it with the thrust-bar shown in section.

Similar letters of reference denote corresponding parts wherever used.

My invention relates to a novel arrangement of means for rocking the cutting apparatus on its longitudinal axis, and for conveniently folding it for transportation; also, to the construction and arrangement of the thrust bar or brace and arm supporting the inner shoe, for facilitating the above operations, and to certain details of construction and arrangement hereinafter described.

In the accompanying drawings, A represents the main frame, and B the pole-frame, both connected by sleeves with the main axle C, upon which the driving-wheels D D are mounted. E is the thrust-bar, to the forward end of which the inner shoe, G, is pivoted, said bar being made in the form of a sleeve, mounted and turning on a through-rod, F, which is pivoted at its rear end in a pendent bracket, a, on the inner rear corner of the main frame, and has its forward end connected with the lower vibrating end of a coupling-brace, F', the outer end of which is connected by a sleeve or collar with the forward end of the crank-shaft sleeve on the main frame, as shown. By this arrangement the thrust bar or sleeve E is adapted not only to rock freely on the rod F, but it can be raised or lowered at its forward end, as may be required for adjusting the cutters.

The thrust-bar E at the forward end of the sleeve part is expanded in width on its lower side, and is provided with a short transverse sleeve, e, (see the dotted lines, Fig. 2,) or, if preferred, with pendent perforated lugs or ears fitting in a semi-cylindrical socket and between lugs or ears g at the heel end of the shoe, a bolt or pin, e', passing through said sleeve e, and lugs g serving to hinge the heel end of the shoe to the forward end of the thrust-bar. An arm, E', formed on the forward end of the thrust bar or sleeve E, extends over the shoe G in an arching form, and has the carrying-wheel H, connected by a swiveling plate, h, with its forward end, in advance of the shoe. The wheel is thus made to support the inner end of the cutting apparatus without being connected with the shoe, and the latter, with the cutting apparatus attached, can, consequently, be more easily rocked for raising or depressing the points of the cutters.

The lug g' on the outer side of the shoe rises in the form of a fixed lever, and has a rod, I, pivoted to its upper end, the rear end of said rod being connected with a lever, J, pivoted in a plate or bracket, j', which in turn is swiveled in an arm, E<sup>2</sup>, rigidly connected with the rear end of the thrust-bar sleeve E. The arm E<sup>2</sup>, below the lug or ear in which the plate j' is pivoted, is expanded into quadrant shape, (see Fig. 2,) and has a series of perforations, with any one of which a pin, j<sup>2</sup>, on the lever J may engage for holding the lever and the cutters operated thereby at any desired adjustment, said pin being held in engagement by means of a spring, k, applied between the upper arm of the lever and the plate or swiveling bracket j', as shown in Fig. 5. By pressing inward upon the lever and overcoming the tension of the spring k, the pin is withdrawn from the perforation in arm E<sup>2</sup>, and the lever can then be moved forward or backward for rocking the points of the cutters up or down, as the condition of the ground or of the crop may require.

When the lever is locked by the pin j<sup>2</sup>, as explained, by pressing outward upon its upper end, (a direction in which the lever is then rigidly connected with the thrust-bar sleeve,) the latter can be rocked on the rod F, for raising the outer end of the cutting apparatus to

pass an obstruction, or for folding it up at the side of the machine for transportation, as shown in Fig. 1.

The lever J is located within convenient reach of the driver in his seat on the machine, and, through the connections described, enables him readily and easily to adjust the points of the cutters and to raise the outer end of the cutting apparatus while the machine is at work.

A second lever, L, provided with a lifting-segment and a cord or chain, l, connecting it with the forward end of the thrust arm or sleeve E, enables the attendant to lift the inner end of the cutting apparatus, and in connection with the lever J places the cutting apparatus completely under his control.

The cutting apparatus when folded for transportation, as shown in Fig. 1, is caught and held by a rolling latch, m, pivoted in a sleeve-bracket, M, attached to the inner front corner of the pole-frame, said latch being held in position for locking the cutting apparatus in its folded position by a spring, m', surrounding its pivot. (See Fig. 4.)

When the cutting apparatus is raised into the position described, the rear edge of the finger-bar comes in contact with the inclined face of the latch, and rocks it up and back to permit the bar to pass by when the spring retracts the latch, and causes it to effectually lock the bar in its folded position, as shown.

The pivot of the latch m is arranged in a horizontal plane, in a line parallel with the plane in which the finger-bar moves in being folded for transportation, and the latch moving in a plane at right angles to said path and to the line of its pivot, none of the strain due to the weight or jolting of the finger-beam falls upon the spring holding said latch in place. Consequently the latch is much less liable to be accidentally displaced than the usual form of latch, a lighter spring can be used, and the latch can be more easily withdrawn for releasing the cutting apparatus.

The main frame A is connected with the pole-frame B in advance of the axle by a toggle-link, arranged in convenient proximity to the driver's foot-support, and consisting of a treadle-lever, M, pivoted to the pole-frame, and connected at its lower end to a treadle link or lever, N', pivoted at its lower end to the main frame A.

The lever N, where the link N' crosses it, is recessed or cut away, forming shoulders or stops at each end of the notch, which serve to limit the relative movement of the parts. The

lever N, extending above its pivotal connection with the frame B, is provided with a stirrup, n, and the driver, by placing his foot therein and pressing forward on the lever, can rock the frame upward on the axle, as desired.

The link N' also extends above its pivotal connection with the lever N, and is also provided with a treadle, n', and the driver by placing his foot thereon can force the forward end of the frame A downward to the extent of its throw, as desired.

It will be seen that by the construction and arrangement of the parts described the machine when in operation is placed fully under the control of the attendant, who is thus enabled to adapt it to the varying conditions of the crop and of the ground over which the machine passes.

It will be obvious that the form and construction of some of the parts may be varied to suit the organization of the machine to which they may be applied.

Parts of the machine not particularly described may be constructed in any usual way.

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

1. The cutting apparatus connected with the frame of the harvester through the medium of the pivoted rolling thrust-bar and coupling arm or brace, in combination with the shoe connected directly to said thrust-bar by a transverse pivot at its heel end, substantially as described.

2. The shoe hinged to the thrust bar or sleeve, substantially as described, in combination with a carrying-wheel applied to a supporting-arm on the thrust-bar overhanging the shoe and separate therefrom, substantially as described.

3. The shoe G, hinged to the rolling thrust-bar, and provided with a rigid arm or lever, in combination with the link I and lever J, whereby the finger-bar can be rocked on its longitudinal axis and raised at its outer end by a single lever, as described.

4. The rolling latch m, having a horizontal transverse pivot arranged in a line parallel with the path of movement of the finger-beam in being folded for transportation, the latch moving at right angles thereto, substantially as and for the purpose described.

WM. ANSON WOOD.

Witnesses:

A. L. ANDREWS,  
J. S. WATSON.