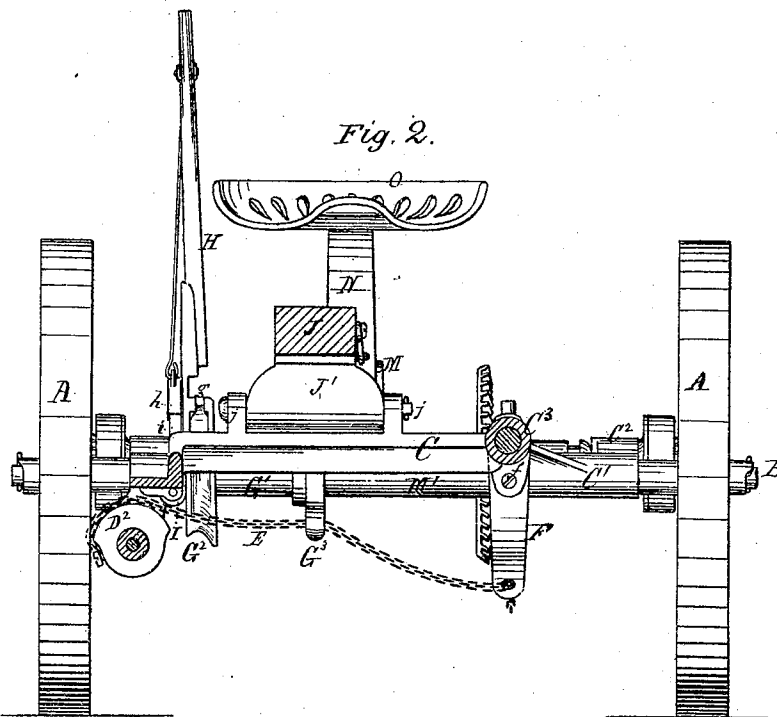
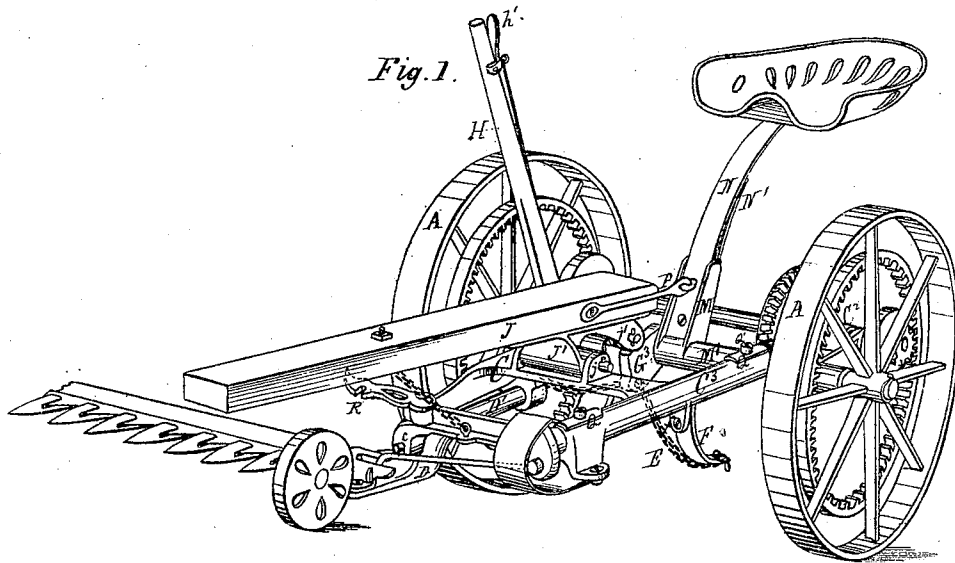


W. A. WOOD.
Harvesters.

No. 136,295.

Patented Feb. 25, 1873.



Witnesses.

Mc Eddy
Frank Wood

Inventor.

Wm. Aaron Wood

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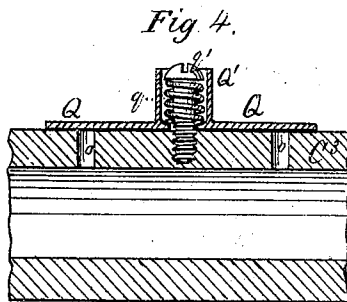
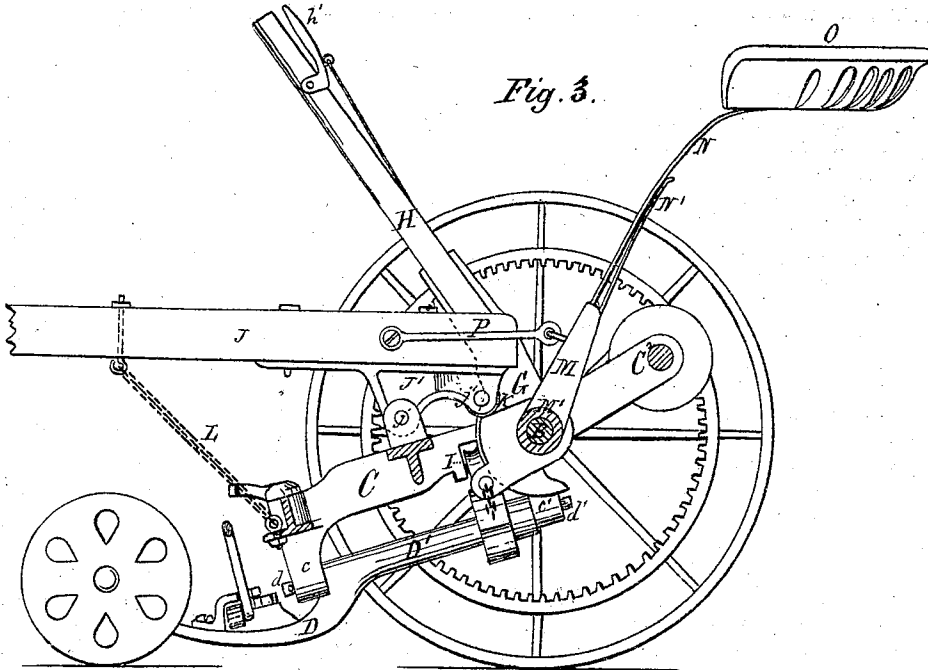


Fig. 5.



Witnesses

*Alb Eddy
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Inventor.

Wm Aaron Wood

UNITED STATES PATENT OFFICE.

WILLIAM ANSON WOOD, OF HOOSICK FALLS, NEW YORK.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 136,295, dated February 25, 1873.

To all whom it may concern:

Be it known that I, WILLIAM ANSON WOOD, of Hoosick Falls, county of Rensselaer, State of New York, have invented a new and useful Improvement 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 is a perspective view of a mowing-machine embracing my improvements. Fig. 2 is a front elevation, partly in section. Fig. 3 is a vertical longitudinal section, and Figs. 4 and 5 are detached views of parts of the machine hereinafter described.

Similar letters of reference denote corresponding parts in all the figures.

My invention relates to a novel means for raising the vibrating frame and finger-bar connected with said frame, and for controlling the outer or divider end of the finger-bar; also, to the manner of supporting the driver's seat, whereby it is maintained in a uniformly horizontal position, or substantially so, when the cutter-frame is vibrated; and consists, first, in providing the heel-shank or pivot of the shoe, to which the finger-bar is bolted, with a sheave or segment rigidly connected with said shank or pivot, and connecting said sheave, by means of a chain, with the lever and frame, either or both, as hereinafter described, in such manner that the chain may be made to raise the outer end of the finger-bar, and also to act as a stop to limit its downward movement in passing over dead furrows; second, in mounting the seat-standard loosely on the axle, and connecting it, by a link, with the tongue or tongue-plate in such manner as to remove the weight of the driver from the tongue, and at the same time to hold the seat in a uniformly horizontal position independent of the movements of the tongue and vibrating frame.

In the drawing, A A represent the drive-wheels; B, the axle; C, the metal main or vibrating gear and cutter-frame, made substantially rectangular in form, and provided at C¹ with sleeve-bearings for the axle B, and at C² C³ with similar bearings for the counter or bevel wheel and crank-shafts, the latter extending longitudinally of the machine, being provided at its forward end with a crank or

crank-wheel for driving the cutters. The inner or grain side of the frame has pendent ears or lugs *c c'* formed upon it, to which the inner shoe D, through its rear extension or shank D¹, is pivoted at *d d'* in such manner as to be free to rock or roll freely on its longitudinal axis. The shoe D has the finger-bar bolted to it in the usual manner, and the shank or shaft D¹ of said shoe is armed at its rear end with a pulley or segment sheave, D², to which one end of the chain E is connected for rocking the shoe and raising or holding the outer end of the cutting apparatus, as hereinafter explained. F is a pendent bracket attached to the outer side of the frame C, through the medium of an ear or lug, *f*, and through bolt, or in any other convenient manner, so that it may be readily removed and substituted, when desired, by a shorter bracket, F', Fig. 5. The outer end of the chain E is connected to this bracket F or F', and when properly adjusted serves as a stop to limit the downward movement of the outer or divider end of the cutting apparatus in passing over dead furrows or other depressions in the ground. G is a lever-plate, to which the lifting-lever H is connected. This lever-plate is mounted loosely on the axle B through the medium of a sleeve, G¹, and is provided with the grooved segment G², and at the opposite end of the sleeve G¹ with a perforated cam-lever arm, G³, through which the chain E passes. By this arrangement it will be seen that the backward movement of lever H serves not only to take up the slack of chain E, but also, when desired, to rock or roll the shoe, and thereby to raise the outer end of the cutting apparatus for passing obstructions, or for transportation, in a manner that will be readily understood. When preferred, the chain E, instead of passing through cam-arm G³ and being connected with the bracket F, may be connected with the lever H through the segment G² at *g*, and thus made to operate or lock the shoe in a manner similar to that above described. In this latter arrangement the chain E passes from the segment under a pulley, I, underneath the inner-side bar of frame C. The lever H is held at any required point of adjustment by means of a rack, *i*, on the frame and a pawl, *h*, attached to lever H, the pawl being released by a thumb-lever, *h'*, when

desired. J is the tongue, and J' is the tongue or pole plate pivoted at j to the frame C at a point in front of the axle B, and, extending in rear of said pivot, is provided at its rear end with lugs or ears j', in which is mounted a friction-roller, K, in position to be acted upon by the cam-arm G³, which, when operated by the backward movement of lever H, serves to raise the rear end of the tongue, and therewith, through its pivotal connection j, the forward end of the frame C vibrating the said frame on axle B and raising the cutting apparatus. The downward movement of the forward end of the frame C is limited by means of a chain, L, connecting the frame with the tongue, and which may be set or adjusted, as desired. M is the seat-support consisting of a sleeve, M', through which it is mounted loosely on the axle B, and an upright socket piece to which the spring-seat standard N N' and seat O are connected in any convenient manner. The seat standard or socket M is connected by a link, P, with the tongue J at a point over or nearly over the pivotal connection j of the pole-plate J' with the frame C, said link serving to retain the seat-support, and the seat mounted thereon in suitable position for the support of the driver.

By this arrangement it will be seen that the seat is disconnected from and rendered independent of the movements of the vibrating frame, and also that the seat is made to maintain the substantially uniform horizontal relation of the tongue without being supported thereby, thus relieving the neck-yoke of the team of the weight of the driver.

Figure 4 represents in section my improved oil-hole cover, consisting of the plate Q, conforming on its inner or lower face to the shape of the box or bearing over which it is placed, and provided on its opposite face with a cup or socket, Q', in which is placed a spiral spring, q, surrounding the screw or bolt q', which fastens the cover to the box or frame. The spring q is held in place by the head of the screw or bolt, and serves to hold the cover tightly in place, but with a yielding pressure which permits it to yield for the purpose of oiling the bearings of the shafts. When it is desired to oil said bearing a quarter turn, more or less, is given to the plate Q, so as to uncover the oil-holes o o, the oil applied, and the plate returned to its former position, where, being tightly held down by the spring q, it effectually prevents all access of dirt to the bearings.

In the practical operation of the machine embracing my improvements, above described, where it is desired that the chain E shall act simply as a guide or stiffener to the finger-bar, or to give only a slight lift to the outer end, I use the short bracket F', to which the chain passes nearly horizontally across the frame of the machine, and consequently while said chain serves effectually to limit the downward movement of the outer end of the cutting ap-

paratus in the movement of the lever, as described, there is but slight deflection of the chain from a right line, and, therefore, but a limited degree of elevation of the outer end of the cutting apparatus; but where a greater elevation of the outer end of the cutting apparatus is desirable for any cause the longer bracket F is employed, giving greater deflection to the chain, or the chain is connected directly with the lever-segment G², as described, and in either case may be so adjusted that the driver, without leaving his seat, can raise the cutting apparatus from a horizontal or working position to a vertical position for passing obstructions or for transportation, and in this latter position the cutting apparatus may be retained by a spring-latch, R.

In the operation of the lifting devices it will be seen that in the backward movement of the lifting-lever H, as described, the first effect will be the vibration of the main frame on the axle through the action of the cam-lever G³ on the rear extension of the tongue, as explained, thereby lifting the inner end of the cutting apparatus sufficiently to pass ordinary obstructions, the lever G³ at the same time taking up the slack in chain E and gagging the outer end of the finger-bar. After the vibration of the frame is effected, as above, the form of the cam G³ is such, as shown in Figs. 1 and 3, as to permit it to pass the roller K in the tongue-plate without further relative movement of the vibrating frame and tongue; and by this continued movement of the cam the chain E is deflected and made to raise the outer end of the cutting apparatus to any desired extent.

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

1. The sheave or segment D² on the shoe D, in combination with the chain E extending horizontally or nearly so from said sheave, and attached to a fixed point on the frame, and operating substantially as described.

2. The lifting-lever H, provided with the cam-arm G³ operating upon the rear extension of the tongue, for vibrating the frame and permitting the further movement of the lever independently of both frame and tongue, for raising the outer end of the cutting apparatus, substantially as described.

3. The cam G³ applied to the lever H, in combination with the heel extension of the tongue and the lifting-chain E, arranged and operating substantially as described.

4. The seat-support, mounted loosely on the axle, and connected with the tongue by means of the link P, substantially as and for the purpose described.

In testimony whereof I have hereunto set my hand this 2d day of October, A. D. 1872.

WM. ANSON WOOD.

Witnesses:

A. C. EDDY,
FRANK WOOD.