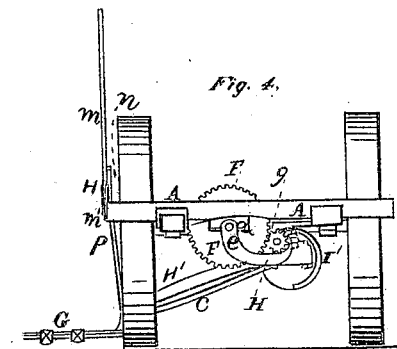
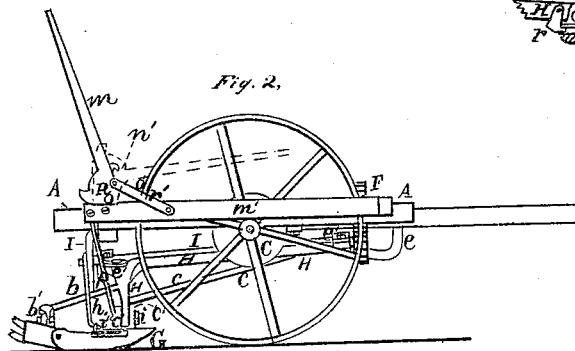
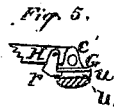
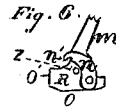
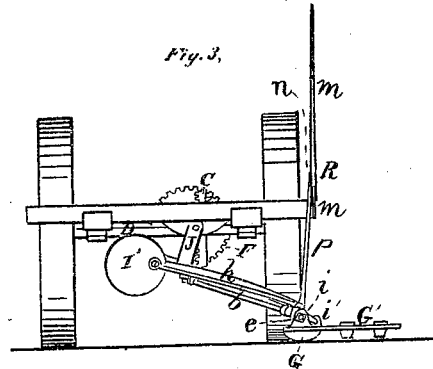
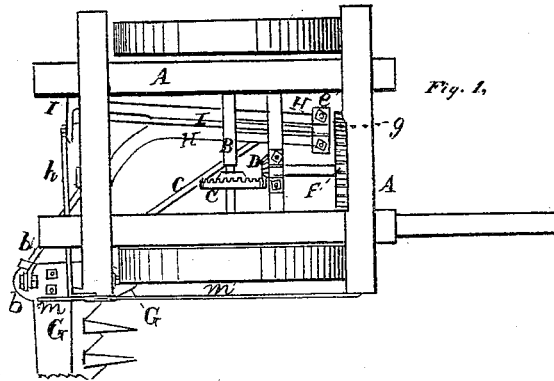


M. R. Shalter Mower.

No. 51,975

Patented Jan. 9. 1866



Inventor
M. R. Shalter

Witnesses
W. H. Burdette
M. Wheeler

UNITED STATES PATENT OFFICE.

M. R. SHALTERS, OF ALLIANCE, OHIO.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 51,975, dated January 9, 1866.

To all whom it may concern:

Be it known that I, M. R. SHALTERS, of Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Harvesters; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view of the harvester. Fig. 2 is a side elevation. Fig. 3 is a view of the rear end. Fig. 4 is a front view. Figs. 5 and 6 are detached sections.

Like letters of reference indicate like parts in the different views.

My improvement relates to constructing a vibrating gear-frame, and connecting the same directly to the shoe, whereby the cutting apparatus is adapted to the uneven surface of the ground, and the cutter-bar as it is raised and lowered is prevented from running too far through the guards, the crank-shaft and its connections being arranged on the vibrating frame operate the same in any position.

In the figures, A represents the frame of the machine connected to the driving-shaft B.

C, D, and F represent the gearing, arranged and operating in the usual manner.

H H' is the vibrating frame, cast in one entire piece, turned at right angles, or nearly so, at the rear end, H', where it is connected to the shoe. The front end is turned upward in the form of an arm, as seen at e, in Figs. 2 and 4, which is hinged to the journal-box a of the spur-wheel F, below the frame A.

c is a brace extending across the frame, as shown in Fig. 1.

The vibrating frame is connected to the shoe G of the finger-bar G' by lugs c' extending up from the shoe, as seen in Figs. 2 and 3, between which the end of the part H' of the frame is placed and secured by a screw-bolt, i, passing through the lugs and frame. This connection can be rendered rigid by an adjustable clutch, r, pivoted to the side of the frame, and that hooks into the slot u of the shoe, as shown in Fig. 5, or by putting a pin through the lugs and arm above the screw-bolt. The rear end of the vibrating frame is hung to the frame A by an arm, J, (seen in Fig. 3,) which is hinged at the upper end to the frame.

I is the crank-shaft, arranged on the vibrating frame, as shown in Fig. 1, passing through journal-boxes e' at each end, on one end of which is a pinion, g, that works in the spur-wheel F, whereby the shaft is revolved. On the other end is the crank I', to which is connected the pitman h, that is attached at the other end, at i', to the cutter-bar, by which the vibrating motion is communicated to the cutters as the crank revolves.

b is a tubular brace secured to the frame H. H' and attached or hinged to the rear end of the shoe at b', so as to allow the cutter-bar to work, and by which the back part of the cutter-bar is connected to the vibrating frame.

The cutting apparatus is raised or lowered by means of the hand-lever m, the lower end of which is formed into a cam, R, shaped as shown in Fig. 2—that is, grooved out on the sides o o'—and fits onto the upper edge of a way, m', secured on the side of the frame B. On the inside of the cam, at the upper part, is a section of a pulley, n, (seen in Figs. 4 and 6,) that terminates at one side in a hook, n', on which is hooked or placed the end of a strap or cord, p, that is adjusted over the pulley n, extends down, and is attached to the shoe G.

r' is a link pivoted to the way m' and cam, as shown in Fig. 2, which allows the cam to be turned up or down on the way and holds it in the desired position. The cam turns on the pivot z, where it is connected to the link r', and the distance from z to the side or edge o' is greater than from z to o. Consequently as the cam is turned over onto the side o by moving the lever forward, as noted by the dotted lines in Fig. 2, together with the cord running over the groove in the pulley n, the cutting apparatus will be elevated. The edges or sides o o' of the cam being straight, as the cam is turned onto either of them to raise or lower the cutter-bar, it will remain in that position, and the strap p, too, passing down inside of the rear end of the cam, brings the weight inside of the plane or face of the cam, which will prevent it from turning without the aid of the lever. Thus the cutting apparatus can be raised or lowered and retained securely and firmly in either position, the same principle applying to the cam when adjusted onto either of the edges o or o' to raise or lower the finger-bar.

The vibrating frame, constructed and arranged as described, swings or moves back and forth on its hinged connections in the easiest manner, according to the position of the finger-bar, which will adapt itself to the unevenness of the ground. The frame is connected directly to the shoe of the finger-bar, as described, thereby dispensing with a double-jointed coupling or connection, and operates with equal if not greater facility, and as the crank-shaft I and its connections are arranged on the vibrating frame, the position of the frame does not interfere with the motion of the cutter-bar; but the cutters or knife runs through the guards back and forth the required distance, retaining the same length of stroke.

The finger-bar or cutting apparatus can be either flexible or rigid in its connection with the vibrating frame, as may be required, by adjusting the clutch in the shoe, or putting in

a pin, as before stated. When rendered flexible, the cutting apparatus can be turned up on the side of the machine for transportation.

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

1. The vibrating frame H H', constructed and arranged as set forth, carrying the crank-shaft I, and suspended from the main frame A A by the arms l and J by pivots in the line of the axis of the secondary shaft, extended and retaining the pinion g in gear with the spur-wheel F in any position of the vibrating frame.

2. The cam B and link r, in combination with the way m, when arranged and operating conjointly, substantially as and for the purpose set forth.

M. R. SHALTERS.

Witnesses:

W. H. BURRIDGE,
M. WHEELER.