

ALBERT M. ROSS.
Harvester.

2 Sheets--Sheet 1.

No. 122,492.

Patented Jan. 2, 1872.

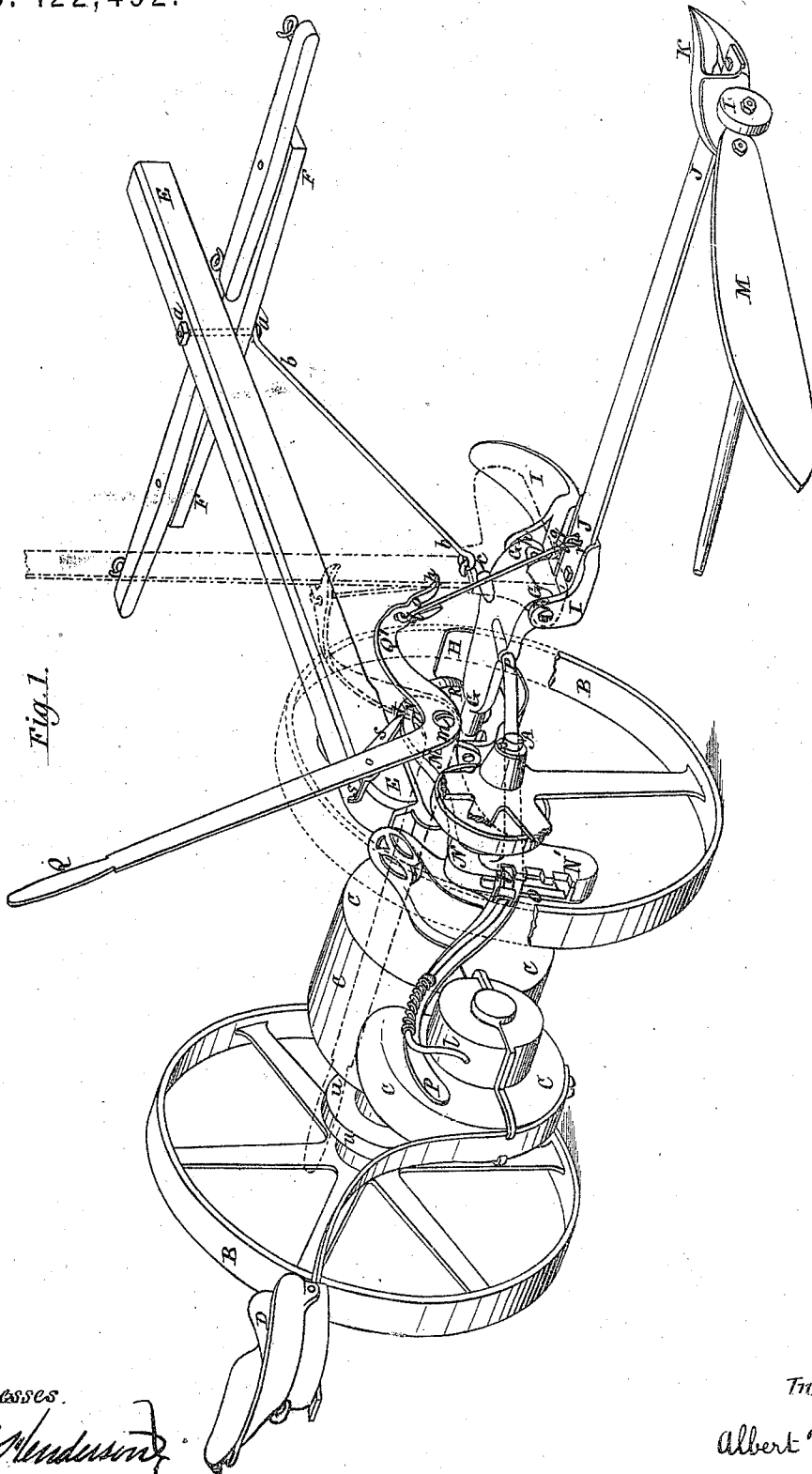


Fig. 1.

Witnesses.
W. E. Anderson
Edmund Masson

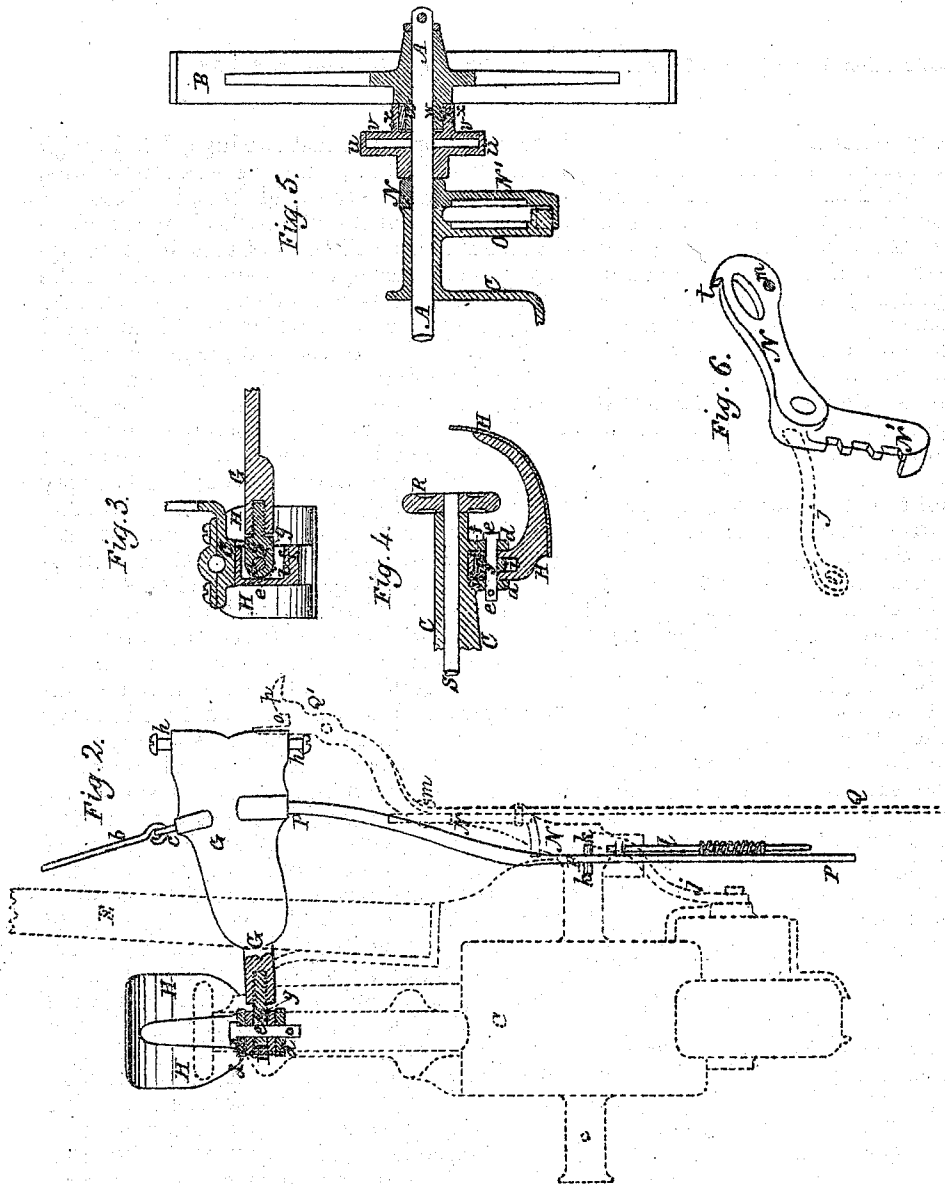
Inventor.
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Inventor.
Albert M. Ross.
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UNITED STATES PATENT OFFICE.

ALBERT M. ROSS, OF ILION, NEW YORK.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 122,492, dated January 2, 1872.

To all whom it may concern:

Be it known that I, ALBERT M. ROSS, of Ilion, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Harvesting-Machines; and that the subjoined description in connection with the accompanying drawing will give a full, clear, and exact conception of the same.

Of the accompanying drawing, Figure 1 represents in perspective so much of a mowing-machine as will illustrate my particular invention. Figs. 2, 3, 4, 5, and 6 represent details of the machine, which will be hereafter more fully referred to.

Similar letters of reference, where they occur in the several separate figures, denote like parts of the machine in the drawing.

My invention relates, first, to a combined lifting and latch-lever for raising and holding up the cutting apparatus in a vertical or nearly vertical position. It relates further to the arrangement by which the inner end of the coupling-arm and the wrist-wheel shield are both united by the same pin or bolt to the same lugs, but so that the former may have both a vertical and a rolling motion, while the latter is immovable, or practically so. It relates further to the arrangement, in connection with the lifting and latching-lever and the coupling-arm, of a second lever for rocking the coupling-arm and adjusting the pitch or inclination of the points of the guards thereby.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawing.

The main axle A is supported in a pair of driving and carrying-wheels, B B, and upon this axle is supported and carried a metallic case, C, in which the gearing and moving parts are inclosed. D is the driver's seat, located at the rear of the machine; and E is the tongue by which the machine is guided and drawn, the heel of said tongue being fastened in or to a shoe or recess formed on the case or main frame. To the tongue at a the double-tree F is secured by a bolt, and from this bolt a draft-rod, b, extends downward and toward the cutting apparatus, and is secured at its lower end to the coupling-bar G, as shown at c. At the front under side of the case C, as more distinct-

ly seen in Fig. 4, are cast two lugs, d d, through which passes a bolt, e, and between these lugs, and so as to receive said bolt, is fitted the bent-up end f of the wrist-wheel guard H, so that said guard will be held therein quite rigidly. In and through the bent-up end f of the guard H there is a mortise, i, into which a head, g, is passed, and which head is also held by the bolt e, but so that said head, as well as the coupling-bar G in which it works, may move up and down, as occasion may require. This head g has upon it a screw-shank, seen in Fig. 3, which is screwed into the end of the coupling-bar G, so that said coupling-bar may rock or roll slightly in the line of its short axis, and in so doing it works upon the screw-thread of the shank of said head G. To the coupling-bar G, as at h, is hinged the inside shoe I, and to this shoe is bolted the finger-bar J, on the outer end of which is arranged the outer shoe K, friction-wheel L, and hinged track-clearer M. The fingers and cutters are arranged on the finger-bar in any of the usual well-known ways. Upon the main axle A is arranged an arm, N, which has a notched down-hanger, N', upon it, and which may have, as shown by dotted lines at j, a brace connected to or with it, which may pass over or take in the end of the shaft, upon which one of the gears in the case C is placed, where said shaft or its journal protrudes from said case. Adjacent to said down-hanger N', and secured to or cast upon the case and parallel to said down-hanger, there is a projection, O, against which the lower end of the down-hanger may abut or overlap without being attached to it, said projection forming one side of an open and slotted way, and the down-hanger the other side of such way, in which a pin or cross-head, k, Fig. 2, on the lever P, as well as the lever itself, may move up and down, as occasion may require. Upon the lever P there is a spring hand-bolt, l, which, when released, takes into one of the series of notches in the down-hanger to hold said lever and the coupling-arm G, which it actuates in its adjusted position. Upon the forward end of the arm N is pivoted, as at m, the lift and latch-lever Q, the rear or upper end of which is in convenient position to be seized and operated by the driver upon his seat at D, and the forward end Q' of

which is curved upward and outward toward the finger-bar, and its outer end notched to form a recess, *o*, to receive the finger-bar when it is raised up into a vertical or nearly-vertical position by said lever *Q*, and a latch, *p*, to hold it there. From the forward and outwardly-projecting end *Q'* of the lifting and latching-lever a link, *q*, extends, and is connected to the finger-bar at *r*, so that said bar may not only be readily lifted up by it into its locking position, but be controlled by it when said finger-bar is to be let down again by the driver in his seat. Upon the lever *Q* there is a dog, *s*, which takes against or into a notch or shoulder, *t*, upon the arm *N* for holding the finger-bar up above the ground, and this dog *s* can be detached from its stop, catch, or shoulder by the driver placing his foot upon the rear thereof and pressing it downward. The pawls and ratchets, or their substitutes, for making the wheels and axle turn together when the machine is advancing, and allowing them to turn independent of each other when the machine is backed or being turned around, are placed inside of the clutch-boxes; being well known and in common use, they are not shown in the drawing. The wrist-wheel, to which the pitman for driving the cutters is attached, is shown at *R*, Fig. 4. It is driven by the shaft *S*, which is incased, and which receives its motion from the main drive-gear in the inclosed case at and near the main axle *A*, which passes through said case. The object of the lever *P* is to turn the points of the guards up or down, as may be required, which it does by turning the coupling-bar *G* upon its screw-thread fastening on the pivoted head *g*. The lever *Q* not only raises and holds the finger-bar and cutting apparatus above the surface of the ground by means of the dog *s* and shoulder *t*, but also raises up said finger-bar and cutting apparatus into a vertical, or about, or a little beyond a vertical position, and there catches and holds it for ready transportation, and may from this position be let down again by the driver in his seat, he having complete control of it without moving from his seat.

When the finger-bar and cutting apparatus is to be raised up and held, and carried in its upright position, the lever *P* is raised so that

its bolt *l* will take the upper one of the notches shown. The other lever *Q* is then brought down, which swings up said finger-bar and cutters until opposite the latch or recess in said lever, where it is caught and held. If it be desirable, when the finger-bar and cutters are in this upright position, to secure them against dropping by any accidental moving of the lever *Q*, it is only necessary to drop the spring-bolt and its lever from the upper to the second notch, and this locks the lever *Q* so that it cannot be moved enough to release said bar and cutters or until the spring-bolt and lever are again raised to an upper notch.

I have described my lifting and latching-lever as applied to a turning axle, which requires it to be hung loosely thereon. It may be used with a stationary main axle, and then be keyed or otherwise fastened to such an axle, and serve the same purpose, as hereinabove described.

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

1. In combination with a hinged finger-bar, the lifting and latching-lever *Q*, linked thereto, so that said finger-bar and its connected parts may be raised and held up by said lever for transportation or otherwise, substantially as described.

I also claim the combination of the shield and coupling-bar, when united to the same lugs by the same bolt or pin, so that the shield shall be rigid and the coupling-bar capable not only of freely moving up and down, but have a slight rolling motion, as and for the purpose described and represented.

I also claim, in combination with the lever *P* and its spring-bolt *l*, and through pin or cross-head *k*, the arm *n* supporting the lifting-lever, the notched down-hanger *N'*, and projection *O* with their grooves for said cross-head to move in, and with their lower ends abutting against or overlapping each other, as and for the purpose described.

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Witnesses:

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