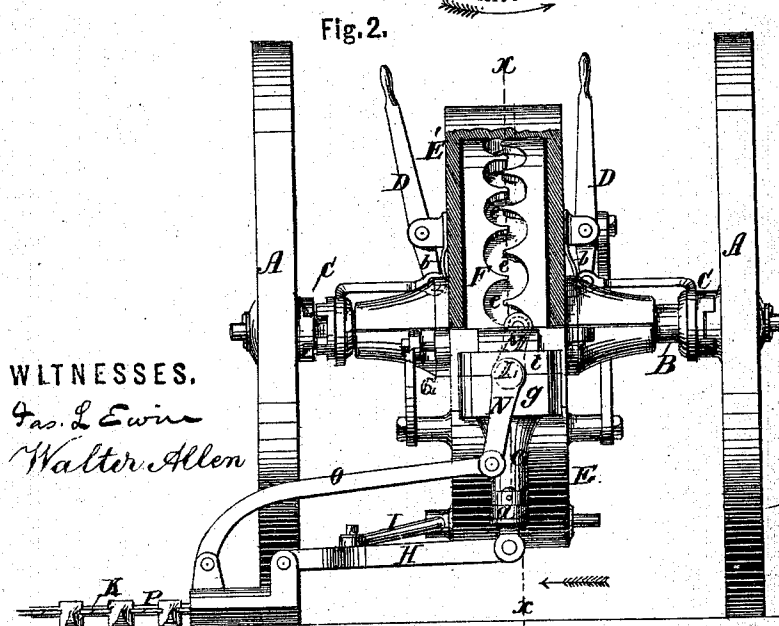
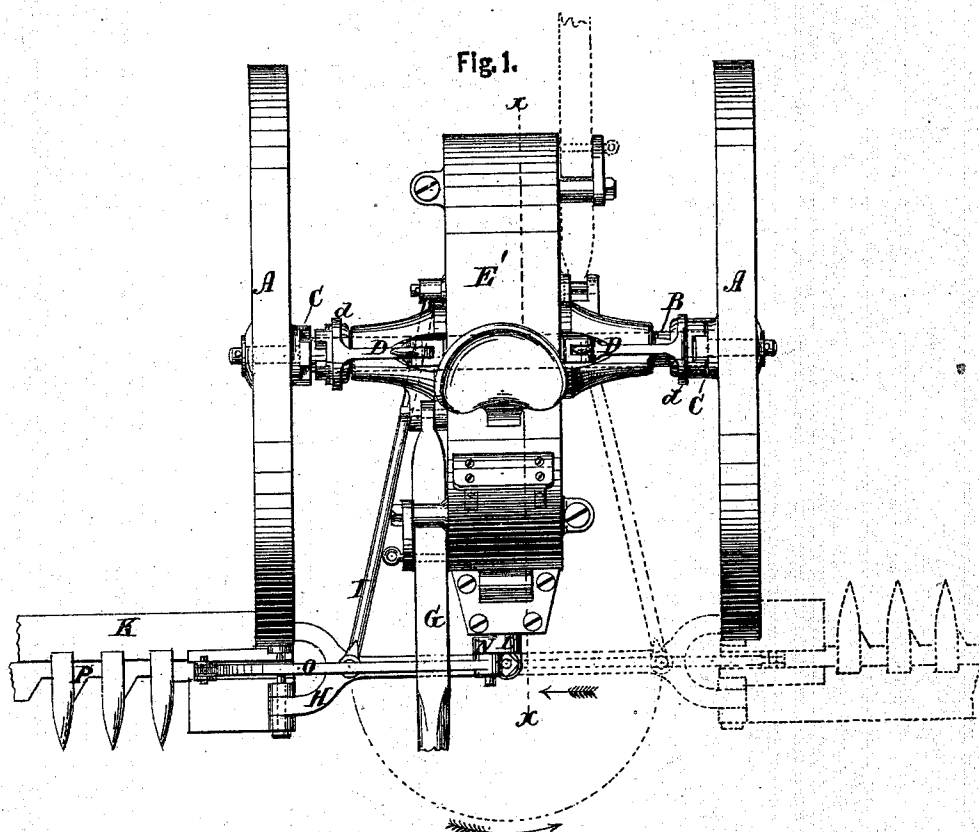


W. H. MADDOCK & G. F. SEISER.
Harvesters.

Patented Jan. 13, 1874.



WITNESSES.

Gas. L Ewin
Walter Allen

INVENTOR.

Wm. H. Maddock
Geo. F. Seiser
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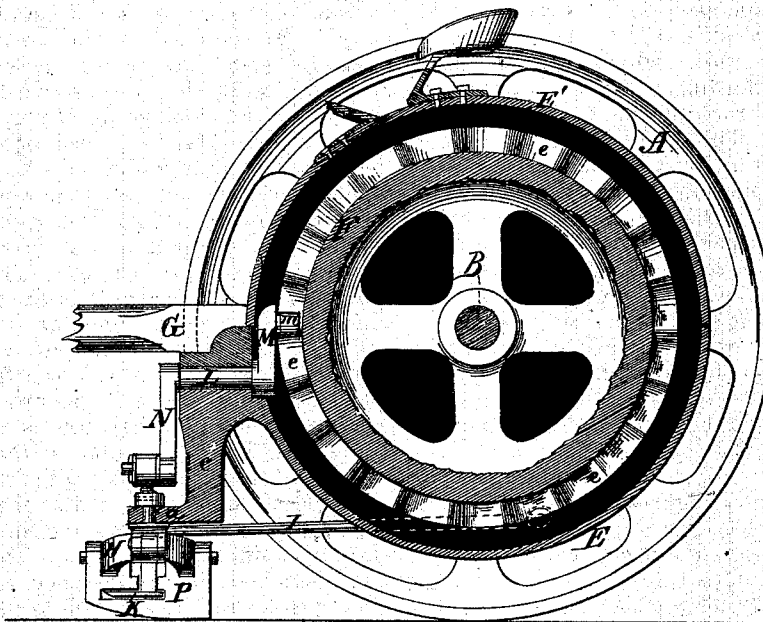
2 Sheets--Sheet 2.

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Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM H. MADDOCK AND GEORGE F. SEISER, OF PORTSMOUTH, OHIO.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **146,465**, dated January 13, 1874; application filed January 19, 1872.

To all whom it may concern:

Be it known that we, WILLIAM H. MADDOCK and GEORGE F. SEISER, both of Portsmouth, in the county of Scioto, State of Ohio, have invented certain Improvements in Harvesters, of which the following is a specification:

The frame of our machine consists of a cylindrical box suspended on the driving-axle, inclosing the said axle, and a wheel having a serpentine cam-groove, which is keyed upon the latter, and affording points of attachment for the arm and brace of the finger-bar, and for the tongue. The said cylindrical frame also affords bearing for a double crank-shaft, which receives motion from the serpentine cam, and imparts motion to the pitman of the cutter-bar. The machine may be converted from a front to a rear cut, or vice versa, by disconnecting the brace, swinging around the cutter bar and arm, and reinstating the parts in position on the other side of the frame, the tongue being also shifted over, so as to point in the opposite direction, and the parts are so arranged that a center draft is secured whichever side of the frame the tongue may be attached to.

In the drawings, Figure 1 is a plan, partly in section, Fig. 2 is a front elevation, partly in section. Fig. 3 is a vertical section on the line *x x*, Figs. 1 and 2.

A A are the driving-wheels of the machine, journaled loosely on the axle B. C C are clutches sliding on the axle B when moved by their levers D, and revolving with the axle by means of the feathers *b b*. The fork *d* of the lever D sits into the slot of the clutch. E E' are two semi-cylinders, which form a boxing for the gear-wheel F, which is keyed fast to the axle B. The cylindrical case E E' is divided on a horizontal line, the respective portions being above and below the axle B, which is journaled in bearings recessed in the edges of the said semi-cylindrical portions. To the side of the lower portion E of the boxing is attached the tongue G by means of lugs and bolts. The boxing E E' forms the frame of the machine, being suspended upon the axle, and it carries the arm H and brace I, by which the finger-bar K is supported and advanced. The frame also carries the crank-axle L, which is journaled in the boxing *l*, and has an upper

and lower crank-arm, M and N, respectively. The crank M has a pin, *m*, on which is a roller, *m'*, projecting into the serpentine slot *e* of the wheel F. As the wheel F rotates, the roller *m'* dodges from side to side, giving a reciprocating rotary motion to the crank-arm M, the axle L, the crank-arm N, and a reciprocating longitudinal movement to the pitman O and knife-bar P. By reference to the elevation, Fig. 2, it will be seen that the axle L is situated below the level of the driving-axle B of the machine. By this disposition of parts the crank-pin *m* is horizontal, is placed on the level of the axle B, and is radial to the wheel. The crank-axle L is journaled in a projection, *g*, attached to or cast with the semi-cylindrical portion E of the boxing, and from the latter depends a post, *c*, to which is attached a bent arm, *a*, to which the arm H of the finger-bar is connected by a joint, which allows the finger-bar to swing around to the rear, when the connection of the brace I with the frame E, and that of the pitman O with the crank N, is temporarily severed. When this is the case, the knife-bar is brought round in the arc shown in dotted lines in the plan, Fig. 1, and in the direction of the arrow, so that it presents the points of its guard-fingers and the edge of the knife in a different direction. The tongue is then detached, and is fastened on the other side of the frame E, and points in the reverse direction, so as to agree with the new presentation of the teeth.

In the former position the cutter was a "front-cut" machine—that is, the cutter-bar was in advance of the wheels. In the changed position the machine is a "rear-cut" machine, the cutter being behind the wheels. In each case the tongue is attached to that side of the box E toward the cutter-bar, and is practically a "center-draft" machine in each case.

Each wheel is furnished with a clutch, and, in the usual run of a swath, both wheels act upon the axle B to rotate it and the impelling-wheel F. In turning, however, it is advisable to throw out of gear the wheel on which the machine turns as on a pivot, or which may actually run backward, if the turn be very short. In this case, the driver pulls the lever-handle D on the side on which the machine is pivoting, and temporarily withdraws the clutch from

the pin on the hub of the wheel A. The turn effected, he releases the lever D, and a spring again throws the clutch into connection with the wheel.

By a simple disconnection at two joints, a whirl of the finger-bar, and a reconnection, the machine is turned from a front-cut to a rear-cut machine, or vice versa. This change is accompanied by a change in the position of the tongue, a center draft being preserved in either case. What we mean by center draft is not that the tongue is attached to the middle of the frame, but that it is so connected to the machine as to meet the center of effort. The finger-bar projects to one side, and so the center of effort is one side of the center of the frame.

We claim as our invention—

The combination of the box-frame E E', arm H, shiftable brace I, and movable tongue G, said parts being arranged, substantially as herein shown and described for the purpose of adapting the machine for either a front or a rear cut, and, in either condition, locating the point of draft at or near the center of resistance.

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GEORGE F. SEISER.

Witnesses:

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