Ray & Shalters.

Mower.

No. 27869 Patented Apr. 10, 1860

Fig. 1.

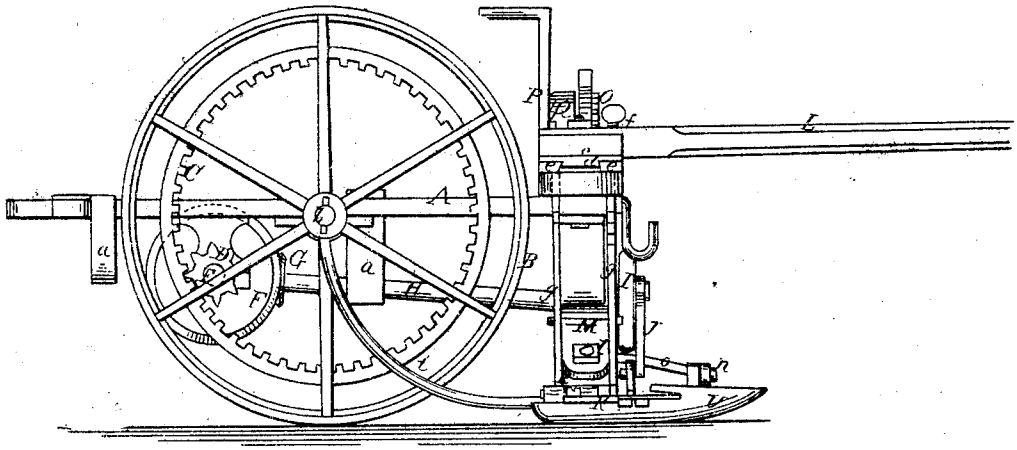


Fig. 4.

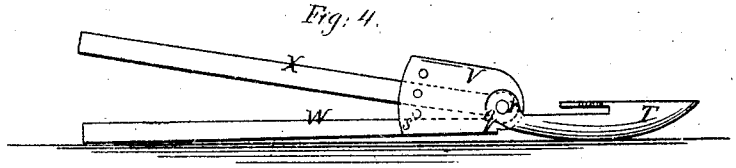
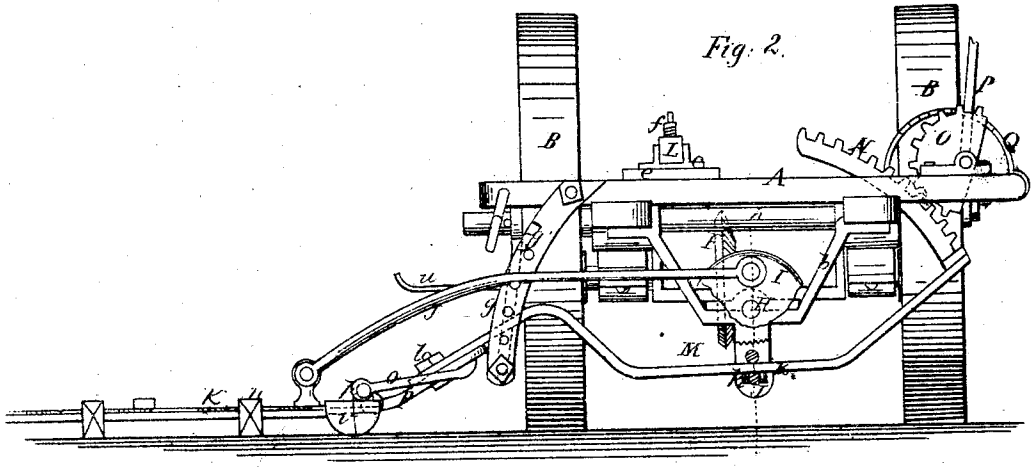


Fig. 2.



Witnesses:

C B Peirce

A. K. Maloney

Inventors:

Samuel Ray.

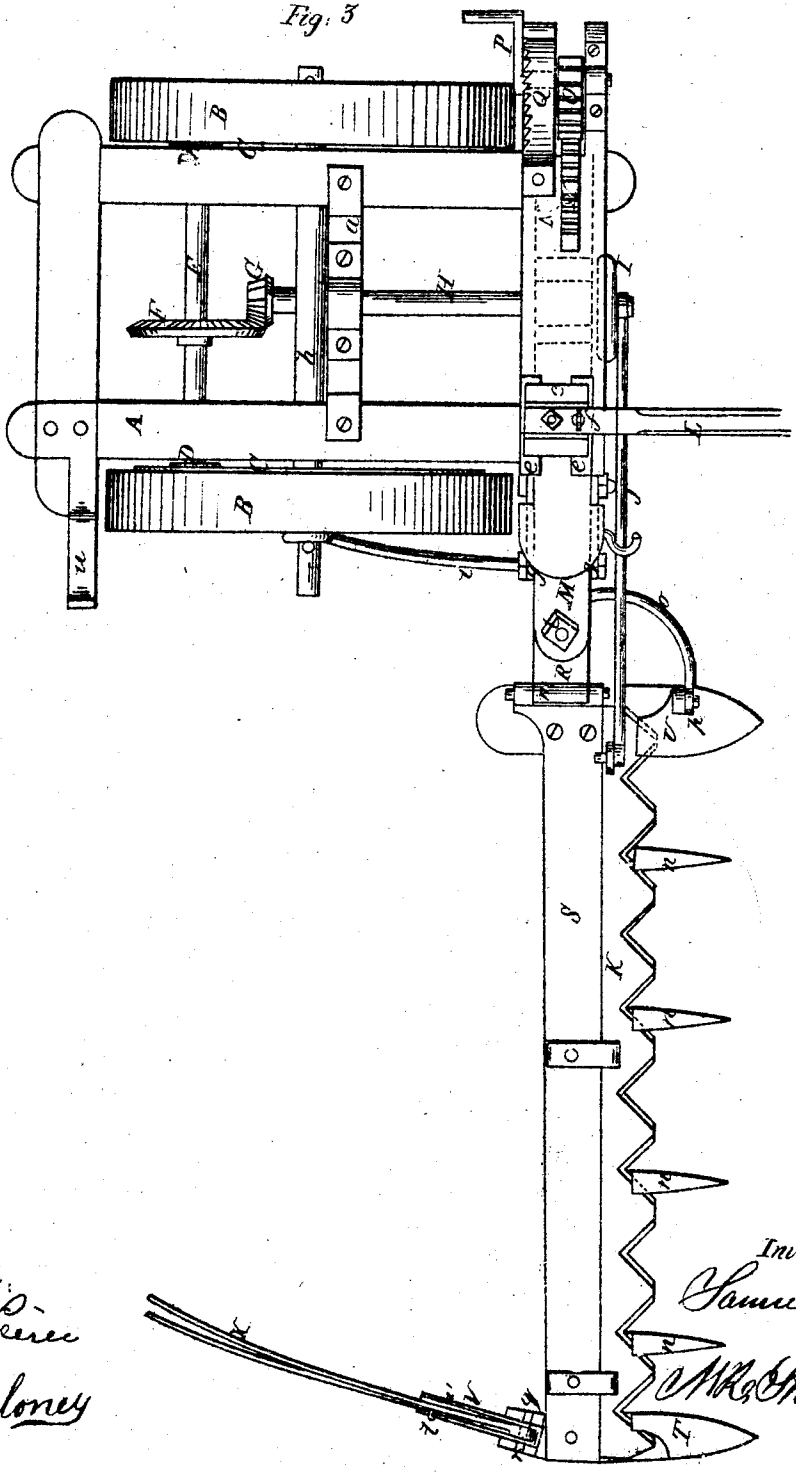
M. R. Shalters.

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Fig. 3



Witnesses:
C B Peirce
A. K. Meloney

Inventors:
Samuel Ray
M R Shalters

UNITED STATES PATENT OFFICE.

SAMUEL RAY AND M. R. SHALTERS, OF ALLIANCE, OHIO, ASSIGNORS TO FISHER, SHALTERS & CO.

IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. **27,869**, dated April 10, 1860.

To all whom it may concern:

Be it known that we, SAMUEL RAY and M. R. SHALTERS, of Alliance, in the county of Stark and State of Ohio, have invented a new and Improved Mowing-Machine; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of our invention, the cutting device being bisected as indicated by the line *x x*. Fig. 2. Fig. 2 is a front view of the same. Fig. 3 is a plan or top view of the same. Fig. 4 is a detached side view of the track-clearer, which forms a part of the invention.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents the main frame of the machine, which is mounted on wheels B B, both of which have a concentric geared rim, C, attached, said rims meshing into pinions D D on a shaft, E, underneath the frame A. The shaft E has a bevel-wheel, F, placed on it, and this wheel gears into a bevel-pinion, G, on the back end of a longitudinal shaft, H, underneath the frame, the front end of said shaft H having a crank-wheel, I, attached, to which a pitman, J, is connected, that drives the sickle K. The shaft H has its bearings in hangers *a b*, attached to the under side of the main frame A.

L is the draft-pole, which is attached to the front end of the main frame by having a plate, *c*, attached to its inner end, said plate being provided with a dovetail flange, *d*, which is fitted between guides *e e*, secured transversely on the front part of the main frame, the flange being secured at any point between the guides by means of a set-screw, *f*.

To the inner end of the front cross-bar of the main frame two curved pendants, *g g*, are attached. These pendants have holes in them, and they are braced at their lower ends from the axle *h* of the wheels B by a curved rod, *i*, which is shown more particularly in Fig. 1. The front pendant, *g*, also has notches *g'* made in its outer edge. The pendants *g g* serve as guides for a lever, M, which is under the front part of the main frame, and has its fulcrum on a pin, *j*, which passes through pendants at the bottom of the front hanger, *b*, said pin being between projections *k* on the under side of the lever, as shown clearly in Fig. 2. The outer end of the lever M has a curved or segment rack, N, permanently attached to it, and into this rack a toothed sector, O, gears, the axis of said sector being on the front part of the main frame, and having a crank, P, attached to one end of it, which crank traverses over a semicircular rack, Q, attached to the main frame A. The inner end of the lever M has a plate, R, attached to it by a bolt, *l*. One end of this plate projects between the pendants *g g*, which prevent it from turning on the bolt when the machine is in operation. The opposite end of this plate R is attached by a joint, *m*, to a finger-bar, S, which may be provided with the usual or any proper fingers, *n*, in or through which the sickle K works, as usual.

To the outer end of the finger-bar S a shoe, T, is attached, and a shoe, U, is attached to its inner end.

To the upper surface of the shoe U, and near its outer end, a curved rod, *o*, is attached by a joint, *p*, the opposite end of said rod being attached to the under side of the plate R.

To the back end of the shoe T a metal socket, V, is attached by a joint, *q*. In the lower part of this socket the front end of a metal bar, W, is permanently attached, said bar being curved so as to extend in a certain degree inward toward the main frame, as shown clearly in Fig. 3. In the socket V there is also secured a curved bar, X. This bar is attached in the socket by the pivot or pin *r* of the joint *q*, and the bar X is allowed to work freely on said pin. The outer side of the socket V at its back part is perforated with holes, as shown at *s*, Fig. 3, and to the outer side of the bar X, and within the socket, a pin, *t*, is attached, said pin fitting in either of the holes *s*, so as to retain the bar X in a more or less elevated position, a spring, *t'*, which bears against the inner side of bar X, having a tendency to push the pin in either of the holes.

To the back part of the main frame A a bar, *u*, is attached, the use of which will be presently shown.

From the above description it will be seen

that by actuating the sector O the finger-bar and sickle may be raised, so as to pass over any obstructions that may be in their path in consequence of said sector gearing into the segment-rack N of lever M, and it will also be seen that by means of a pin fitted in the holes of the pendants or guides *g* the finger-bar and sickle may be supported at any desired height. The joint *m* permits the finger-bar to rise and fall to conform to the inequalities of the surface of the ground, and in case of transportation or while the machine is being drawn from place to place the finger-bar may be turned back on the bolt *l* and parallel with the side of the main frame by elevating the bar so that the end of the plate R will come in line with a notch, *g'*, so that the end of the plate may pass out from between the pendants *g*, and thereby admit of the turning of the finger-bar, the finger-bar, when turned back, resting on the bar *u*.

By having the shaft H placed below the main frame A the pitman J is made to work in line, or nearly so, with the sickle, and all undue friction avoided, and the pitman prevented from being subjected to any undue strain.

The brace *i* firmly supports the pendants *g g*, and the curved rod *o* prevents the cut grass from coming in contact with the heel of the sickle K, and the clogging and choking of the same prevented.

By raising or lowering the bar X its position may be adjusted according to the height of the grass to be cut, so that the latter may be thrown inward to leave a clear unobstructed track for the team at the succeeding cut.

The rock Q retains the crank P at any desired point and prevents the casual movement or descent of the finger-bar when raised to pass over obstructions.

By having the draft-pole attached to the machine, as shown, it may be adjusted laterally to a proper point to obviate side draft, the pole being adjusted according to the resistance offered to the sickle by the grass.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The arrangement of the hinged bent lever M, segment-rack N, sector O, curved rack Q, crank P, perforated pendants or guides *g g*, brace *i*, and finger-bar S, the several parts constructed and combined in the manner and for the purposes described.

2. The arrangement of the plate R, with the pendants or guides *g g*, provided with notches *g'*, finger-bar S, and lever M, so as to admit of the turning back of the finger-bar and sickle parallel with the frame A by raising the finger-bar and sickle, and at the same time admit of the finger-bar and sickle being returned rigidly at right angles with the line of draft when the machine is at work, substantially as set forth.

3. The arrangement of the spring *t'* with the yielding movable bar X, furnished with a pin, *t*, in combination with the hollow perforated socket V *s* and stationary bar W, in the manner herein described, so that the track-clearer is capable of vibrating or yielding, and also may be easily adjusted without stopping the team, as herein set forth.

SAMUEL RAY.
M. R. SHALTERS.

Witnesses:
ELI GRANT,
J. J. FAST.