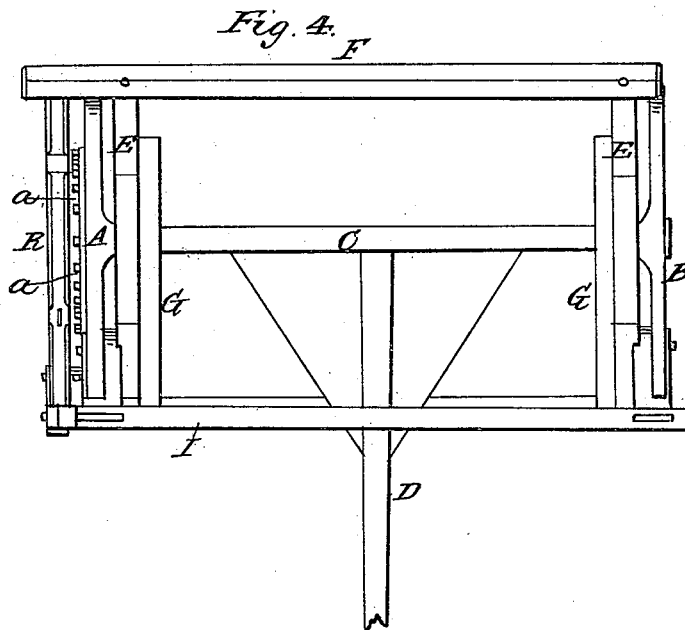
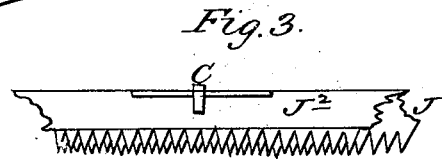
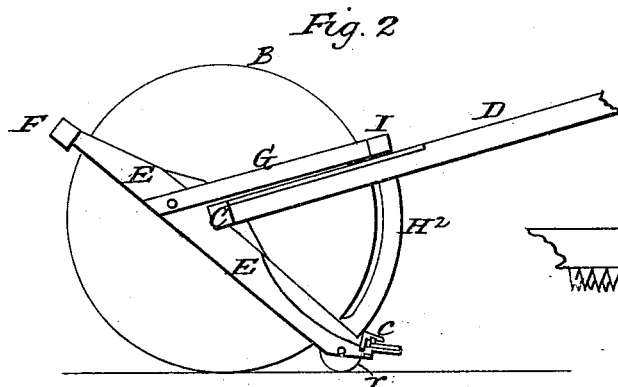
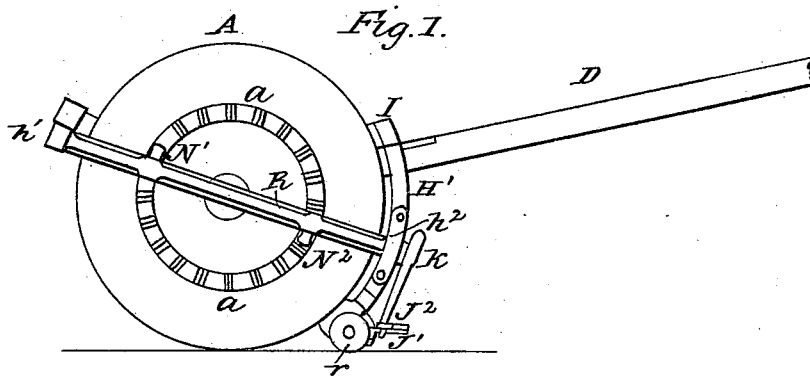


H. ADKINS.

Mower.

No. 7,012.

Patented Jan'y 15, 1850.



# UNITED STATES PATENT OFFICE.

HOMER ADKINS, OF ROUND PRAIRIE, ILLINOIS.

## IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. 7,012, dated January 15, 1850.

*To all whom it may concern:*

Be it known that I, HOMER ADKINS, of Round Prairie, in McDonough county, and State of Illinois, have invented a new and useful Improvement on a Machine for Cutting Grass, &c.; and I do hereby declare that the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation, showing the face of the master-wheel. Fig. 2 is a side elevation, showing the opposite side of the wagon or cart from Fig. 1. Fig. 3 is a view of the cutters in section, showing the same in motion. Fig. 4 is a top or plan view.

The same letters of reference indicate like parts.

First. The nature of my invention consists in providing one wheel of the wagon with cogs on its face, and combining it with a rocking shaft on which are placed two cams arranged in such a manner with the cogs of the master-wheel that when the said wheel revolves one cog of it will act upon the cam on the rocking shaft at one side and downward, and another on the other side upward, and thus alternately to move the shaft in a rocking manner, to give a reciprocating motion to whatever machinery it may be connected with.

Second. I provide two sets of what may be termed "cutters," consisting of two blades, like two large saws, the same arranged one above the other, the lower made fast and the upper one attached to the rocking shaft connected with the master-wheel of the wagon or cart, whereby the upper blade or set of cutters receives a reciprocating motion across the front of the cart, below, cutting the grass, which is held snugly to receive the cut of the same by the blade below, which, like fingers, grasp the grass for that purpose.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the master-wheel of a cart, and B is its fellow. They are secured on an axle in the usual way. The face of the master-wheel is made with cogs *a a* on it, forming a cog-wheel.

C is the axle of the cart, and D is the pole of it. The pole is firmly secured to the axle. I then construct a frame composed of two side pieces, E E, in which are bearings or journal-

boxes for the axle C inside of the wheels. This frame has a transverse beam, F, secured by bolts or by pins to the side pieces or bearings, E E. It has also two angular pieces or bars, G G, inside, as seen in the inside view of the wheel, &c., Fig. 2. These angular bars are connected, by pins or otherwise, to two circular front suspension-bearers, H' H<sup>2</sup>, by the transverse beam I, which extends across, uniting the angular beams or bars and the bearers H' H<sup>2</sup> above. The bearers are united below to the side pieces, E E. These pieces or parts of the frame may be mortised and tenoned together, or united by screw-bolts. On the lower part, at the front ends of the side pieces, E E, are bearings for the axles of a roller, *r r*, each side, in front of the two cart-wheels. The frame thus described is capable of being swung up at one end and tipped down at the other end, and vice versa, swinging on the axle C. The bearings of the small rollers *r r* can be shifted up or down by recesses made in the suspended bearers H' H<sup>2</sup> for that purpose, if desired.

J' J<sup>2</sup> are the holding-fingers and the cutters. They are both made alike, resembling two large rip-saws with very sharp teeth. J' is the lower one. It is firmly secured on the extremities of the side bearing-pieces, E E, always connected with the rollers, to be lifted up and down with them when in action. J<sup>2</sup> are the active cutters. The blade has a projection at one end, with an eye or mortise in it, into which is secured the lower end of an arm, K, which is attached to the front end of the rocking shaft.

*c c* are guides. There may be as many used as desired. They are fastened to the finger-blade J' below, and extend above and partly over the active cutter-blade J<sup>2</sup>. These are to guide the movable cutters and prevent them from being lifted upward.

On one end of the back beam, F, is secured a bearing, *h'*, for the rocking shaft, and on the bearer H' is a bearing, *h*<sup>2</sup>, for the other end of the rocking shaft. R is the rocking shaft. It is made with two knobs or projections, N' N<sup>2</sup>, on it. This rocking shaft is placed in its bearings about such a distance out from the wheel A as to allow the knobs, when projected inward, to touch or nearly touch the face of the wheel between the cogs *a* on it. The knobs, both to form the cogs *a* of the master-wheel A,

and the knobs  $N'$   $N^2$ , may be made of small rollers to lessen friction. The knobs on the rocking shaft are set and arranged in such a manner that when the wheel A is moving, one cog  $a$  at one side acts upon the knob  $N'$ , lifting or turning upward, and the rocking shaft likewise in the same direction, at which time the knob  $N^2$  is being projected below or moved between two of the cogs  $a$   $a$ . Therefore when the cog  $a$  at the other side has passed the knob  $N'$  a cog  $a$  at the other side acts then upon  $N^2$ , turning the rocking shaft in a contrary direction by the cog  $a$  acting upon the knob  $N^2$  in a downward direction. This continual rocking or oscillating of the shaft R is carried on while the wheel A or the cart is kept in motion. The rocking of the shaft R gives a reciprocating motion to the arm K, which, being attached to the cutter-blade  $J^2$ , gives the upper or active cutters a reciprocating motion, making the cutters pass and repass across the spaces between the cutters on  $J'$  below.

The horse or horses are attached to the pole D and driven into the grass, which is grasped and held between the fingers of  $J'$ , which

should project a little (very little) farther forward than the active cutters. The grass is thereby held firm upward to the reciprocating action of the active cutters, which cut in both directions, the grass falling over and behind the same when cut.

The great difficulty experienced in grass-cutting machines heretofore made was the bending or retreating of the grass from the action of the cutters. This evil is completely obviated in this machine, as described, my cutters being arranged and combined to act upon the grass nearly like scissors.

Having thus explained my invention, I claim—

The master-wheel A, constructed with cogs on its face, in combination with the rocking shaft R, constructed with two knobs or projections,  $N'$   $N^2$ , on it to give a rocking motion to the said shaft, in the manner substantially as described.

HOMER ADKINS.

Witnesses:

O. D. MUNN,  
WM. W. THOMPSON.