

J. W. Thompson.

Harvester.

N^o 74016

Patented Feb. 4, 1868.

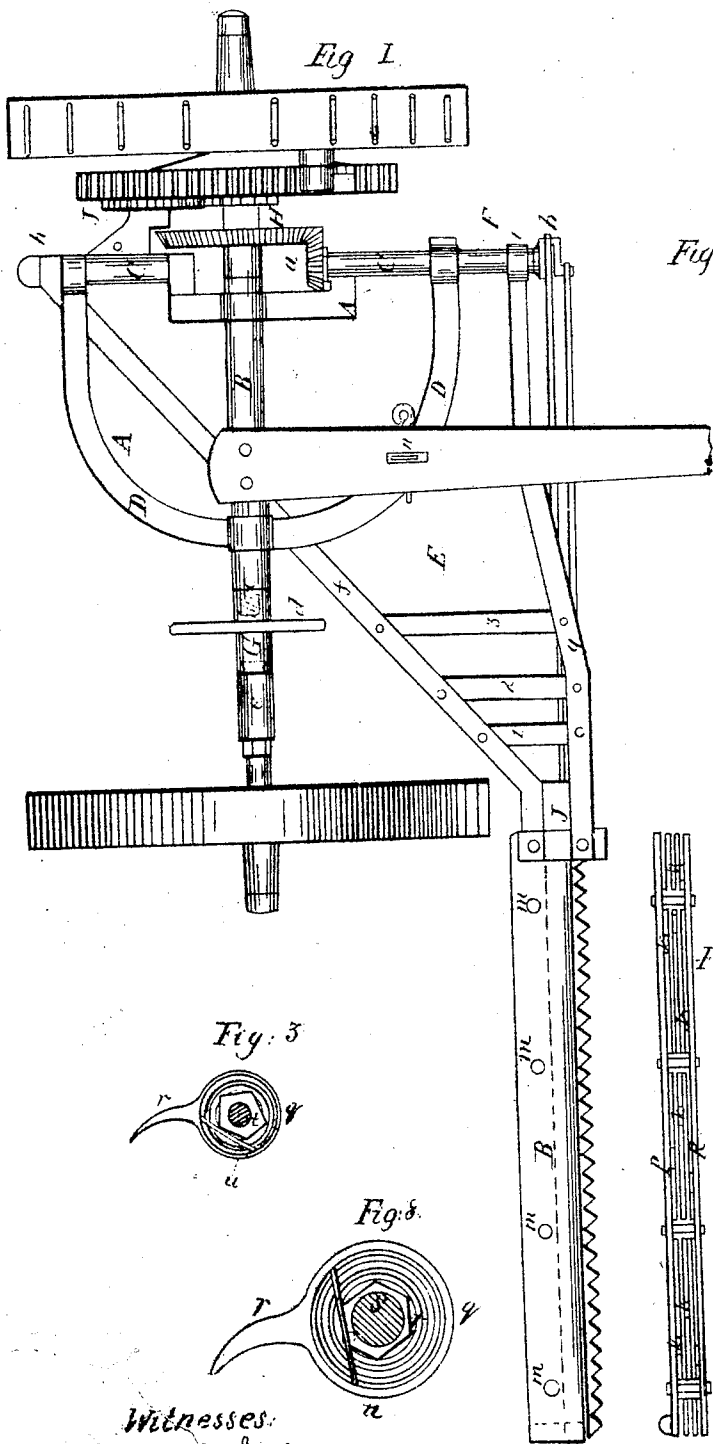


Fig. 4

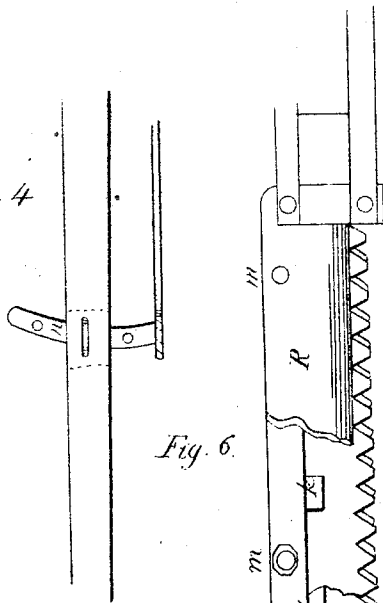


Fig. 6

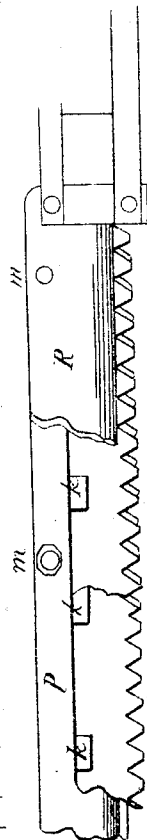


Fig. 5

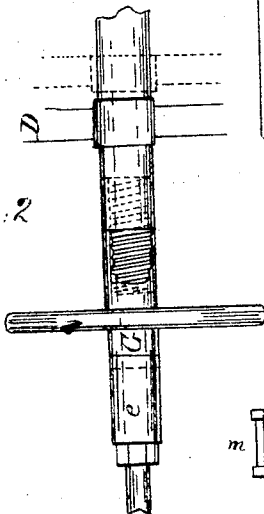


Fig. 2



Fig. 7



Fig. 3

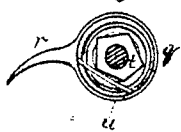
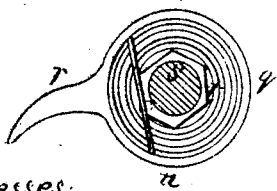


Fig. 8



Witnesses:

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Inventor:

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United States Patent Office.

JOHN W. THOMPSON, OF GREENFIELD, MASSACHUSETTS, ASSIGNOR TO
ELVIRA A. THOMPSON, OF THE SAME PLACE.

Letters Patent No. 74,016, dated February 4, 1868.

IMPROVEMENT IN HARVESTERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN W. THOMPSON, of Greenfield, Franklin county, Commonwealth of Massachusetts, have invented certain new and useful Improvements in Mowing-Machines; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon. In the drawings—

Figure 1 is a plan view, and

Figures 2, 3, 4, 5, 6, 7, and 8, detailed views of my invention.

This invention consists of a new and improved arrangement and construction of a mowing-machine, whereby it is rendered more perfect in operation and simpler in its gear.

In order to simplify the description of these improvements, I will refer directly to the drawings.

In these, A A is the frame of the machine, and consists of a sleeve, B, over the axle, and a bar, C, attached to the sleeve, and braced by the curved piece D, also attached to the other end of the sleeve from the bar. To this bar C is attached the swinging frame E, (carrying the knife-bar,) and also having the gear for immediately operating the blades or cutters. This gear consists of a shaft, F, passing through the front portion of the bar C, which is hollow, and a small gear-wheel, *a*, upon the rear end of the shaft F, a double crank, *b*, being at the other. The sleeve B around the axle is loose upon the latter, and is operated laterally by the shipper, so as to throw the machine out of gear and allow the wheels to pass around freely without working the cutters. This shipper is arranged as follows: On one end of the sleeve B, at *c*, are threads cut on the outside. These mesh with corresponding threads cut upon the inside of a sleeve, G, having a hand-wheel, *d*. This also turns on the axle, but is confined by a shoulder, *e*, (attached to the axle by a set-nut,) so that it has no lateral play. Now, by turning the hand-wheel, and with it the sleeve G, the frame A is either thrown away from it or drawn back by the screw; in the former case, throwing the pinion *a* in gear with an operating gear-wheel, H, and in the latter case throwing it out. The swinging frame E is hinged at each end of the cross-bar C, and is formed of two bars, *f* and *g*, which converge from the hinges *h* and *i* at their ends to the joint base *j*, where the cutter-bar is hinged. Braces, 1, 2, 3, &c., are stretched across from the bar *f* to *g*, strengthening them, and forming a light frame very suitable to the purpose.

The cutter-bar of this machine, in connection with a peculiarly-shaped cutter, is also a point of improvement in my mower. The object of my improved arrangement in this respect is to prevent the cutters from being clogged by trash and grass. In order to accomplish this, I form them of a peculiar shape, so that only their teeth come together, the main blades being separated and guided separately by projections *k k k*, and upon them, which also guide them between the two plates P and R, forming the cutter-bar. These plates are separate from each other, being curved over in front so as to close towards the blades, but leaving a clear space between them behind. They are regulated and held in position by right-and-left nuts *m m m*, &c., which may, however, be riveted and headed on one plate, having the screw on the other. In this way the blades of the cutters are open, and not liable to clog, and the trash can easily pass out behind the cutter-bar.

To the frame A is attached a regulator, consisting of an upright piece, *n*, having holes cut through it at different points. This passes up through a slot in the tongue of the mower, and is fastened by a pin which passes through the pole and it. By this arrangement the frame can be elevated or depressed in front, throwing up or down the points of the cutter-teeth.

The pawls which connect the wheels of the machine when in gear to the large gear-wheels, are constructed so as to remain stationary at any position, either open or shut. These are constructed as follows, (fig. 3:) A cup, *q*, is attached to the rear part of the pawl *r*, and has the pin *s* passing through its centre and fastened to the wheel. Upon this pin the pawl works. Upon the pin is also a nut, *t*, rigidly attached, and having corners like an ordinary nut on its outside circumference, the number of these corners varying to suit the size or strength of the spring *u*, which is stretched across the cup on the concave side, so as to produce a friction upon the corners of the nut *t*, which holds the cup in any relative position to the nut that it may be left in, and with it the pawl.

In fig. 1 it is shown that the gear of the machine which operates the cutters is arranged so as not to throw

the frame out of balance either way, but the latter is equalized. This is accomplished by the bar C having both the gear-wheel that receives the motion from the turning of the carriage-wheel, and the gear-wheel that imparts the motion to the cutters. These are placed, one on each side of the axle, and both receive their motion upwards, so that the carriage is not affected by either.

I form my cutter-bar without any point projecting in front at the end, as is usual, but allow the knives to be met all along their length by the grass or grain. This is shown in figs. 1 and 2, where the shoe L does not extend beyond the front of the cutter-bar, thus preventing the grass from being crowded upon the cutters at this point.

By means of my improvements, I form a machine which is much more perfect in construction and operation than the ordinary machines of this kind, being simply made, not liable to get out of order, and also well balanced, making it, therefore, much less labor to handle it, and less burden to the animal pulling it.

Now, having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the shipper, consisting of the sleeve G, having the hand-wheel *d*, and threads upon it, with the frame A A, arranged so as to slide upon the carriage-axle, substantially in the manner and for the purpose shown.
2. The pawl having the cup *g*, with spring *u* and nut *t*, arranged and constructed substantially as shown.
3. The cutter-bar frame E, consisting of the pieces *f* and *g*, with cross-strips 1, 2, 3, &c., formed as shown.
4. The arrangement of the gear-wheels *a* and J upon the bar C, so that the pressure upon the latter is equalized, substantially as shown.
5. The peculiarly-shaped cutters, having the projections *k k k*, &c., in combination with the cutter-bar, consisting of the two plates P and R, and adjusted by the nuts *m m*, &c., substantially as and for the purpose described.

JOHN W. THOMPSON.

Witnesses:

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R. S. HYDE.