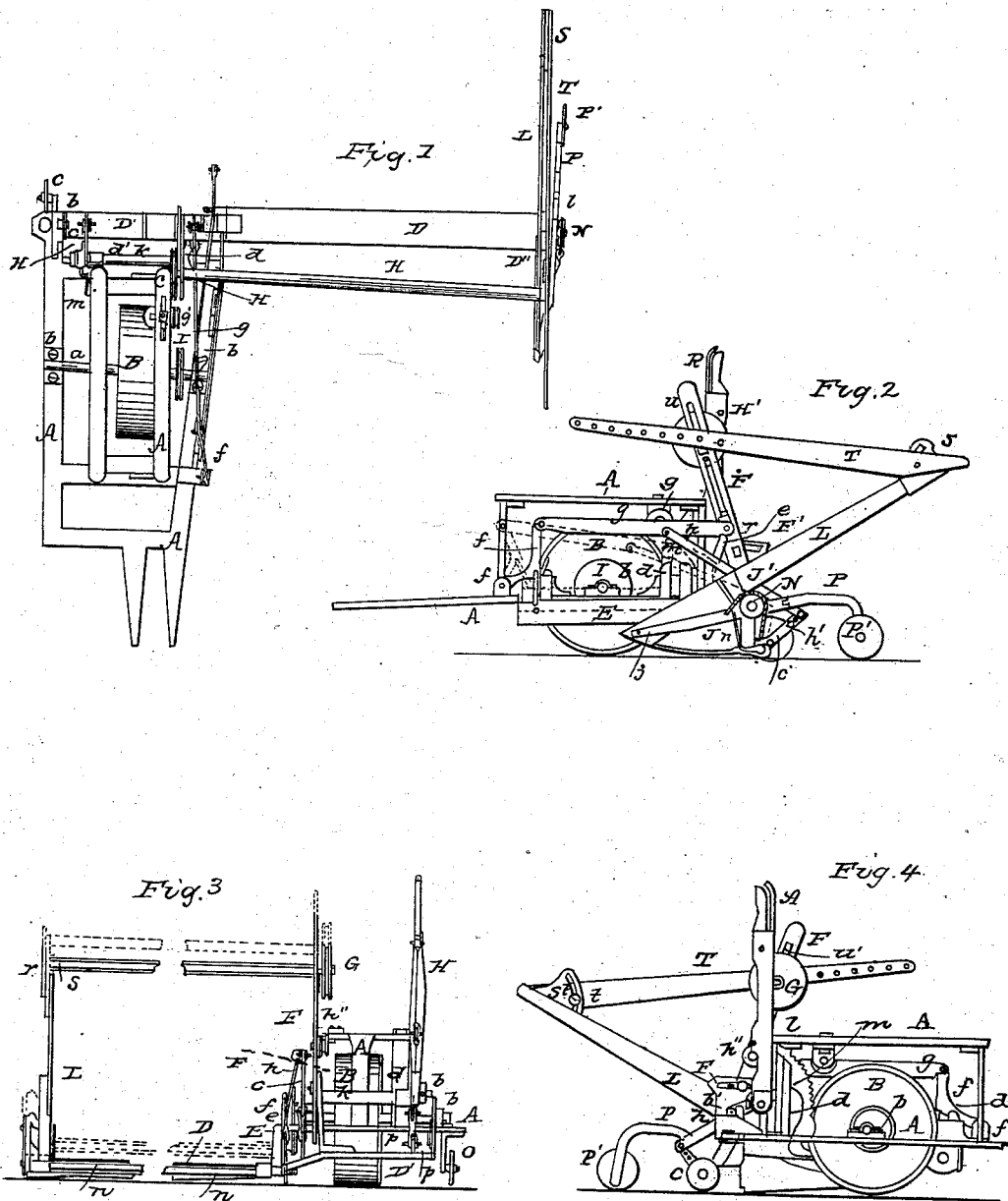


J. L. FOUNTAIN.
Harvesting Machine.

No. 48,335.

Patented June 20, 1865.



W. H. Burroughs
J. Holmes
WITNESSES

Inventor
J. L. Fountain

UNITED STATES PATENT OFFICE.

J. L. FOUNTAIN, OF NEW MILFORD, ILLINOIS, ASSIGNOR TO HIMSELF AND
A. FOUNTAIN, OF SAME PLACE.

IMPROVEMENT IN HARVESTING-MACHINES.

Specification forming part of Letters Patent No. 48,335, dated June 20, 1865.

To all whom it may concern:

Be it known that I, J. L. FOUNTAIN, of New Milford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in a Combined Reaper and Mower; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view. Fig. 2 is a side elevation. Fig. 3 is a view of the rear end. Fig. 4 is a view of the side opposite from Fig. 2.

Like letters of reference indicate like parts in the different views.

My improvement relates to harvesters, as hereinafter described.

A represents the stationary frame of the machine; B, the driving-wheel, the shaft *a* of which turns in journal-boxes *b* on the frame. The shaft and driving-wheel are inclined forward of a right angle from the outside of the frame, as seen in Fig. 1. The frame A is supported in place by means of the driving-wheel B and a caster, C, connected to an arm extending down from the back end at one corner.

D is the finger-bar, connected at one end to an adjustable frame that consists of a piece, D', which is inclined upward and extends along at the rear end of the frame A and turns up at right angles, where it is attached to a guide, *b'*, secured to the stationary frame by a pin, *c*, with a head on both sides, that keeps it in place as it is moved up or down in the slot in the guide.

At right angles to the piece D', and secured to it, extending along the inner side of the frame A, is a piece, E, that is connected to guides *d d*, secured to the stationary frame, so as to allow it to move vertically. At the front end of this piece is attached a rod, *e*, that connects it with a bent arm, *f*. One end of this arm is pivoted at *f'* to the stationary frame, and the other end is pivoted or hung to a link, *g*. The other end of the link *g* is attached to another bent arm, *e'*, as shown in Fig. 2. This arm is connected by a link, *i*, to a lug, *i'*, extending up from the piece D'. (Seen in Fig. 3.)

h is a connecting-rod, pivoted to the link *g*, as shown at Fig. 2, and the other end is attached to a lever, *h'*, on the end of a shaft or

rod, *n*, extending along in the back part of the finger-bar, as represented in Fig. 3.

k is a shaft, secured at one end to the arm *e'*, and supported in journal-boxes *d'* on the frame A; and to the other end is secured a hand-lever, H, by which the moving frame is operated, elevating or lowering the cutter-bar, as will be described. To the lower end of the hand-lever is secured an arm, *o*, that is connected by a link, *p*, to a lug, *p'*, near the end of the piece D'.

m is a ratchet secured to the frame A, which retains the hand-lever, with the moving frame and cutting apparatus, in any desired position by means of a catch, *l*, which is moved in or out of the notches by the handle R, there being a spring in the lever H to retain the catch in place.

The reel-standard F is connected to an upright piece, F', by a screw-bolt, and it can be set at any inclination by means of a curved slot, *r*, in the piece F'. (Seen in Figs. 2 and 4.) There is a slot in the standard F, as at *w* in Figs. 2 and 4, and there is an adjustable journal-box, *u*, on which the journal of the reel-shaft H and pulley G rests, that can be moved either way in the slot, being secured in any desired position by a screw and bolt, by means of which this end of the reel-shaft can be raised or lowered. On one side of the reel-standard is a pulley, *h''*, which is connected with the pulley G on the end of the reel-shaft H, and with a pulley, *g*, secured to the frame A, and also with a pulley, I, on the shaft of the driving-wheel, by a belt or its equivalent.

In the rear side of the finger-bar is a groove, in which is placed a shaft or rod, *n*. (Seen in Fig. 3.) The outer end of this rod is bent round and turned upward, forming a lever, as at *n'* in Fig. 2, which terminates in a hook. To the shaft *n* also is secured a hook, *o'*, to which a cord, *l'*, or its equivalent, is attached, that passes over a pulley, N, onto the hook of the lever *n'*, as represented. The pulley N is hung to an adjustable arm, J, pivoted at *j* to the shoe, and moves in a curved slotted brace, J', secured to the side of the inclined standard L, and also to the rear of the shoe. In the free end of the arm J is joined an arm, P, to which is connected a caster, P'.

At the upper end of the inclined standard L

is a curved brace, S, to which an arm, T, is connected, as represented in Figs. 2 and 4, the arm being pivoted to the end of the standard L. It can be moved up or down and secured in any desired position by means of the slot *t* and screw-bolt *t'*. This arm supports the outer end of the reel-shaft, and there is a series of holes in it, which, together with its being allowed to be set at any inclination, this end of the shaft can be adjusted to suit the position of the shaft at the other end, or at H', Figs. 1 and 3, at whatever inclination or elevation it may be placed.

Having described the different parts of this machine and their connection with each other, I will now proceed to describe their manner of operation, whereby the entire cutter-bar, from end to end, can be raised an equal distance from the ground, elevating with it also the reel.

By moving the hand-lever H' forward, the adjustable frame, with the cutting apparatus, moves simultaneously with it into the position indicated by the dotted lines in Figs. 2 and 3; for as the hand-lever is carried forward the arm *o*, secured to the lower end of the lever and connected to the piece D', as described, draws the piece D' up, being guided vertically by the guide *b'*. At the same time the shaft *k* is turned and moves up the arm *e'*, and as one end of this arm extends out parallel with the arm *o*, and is in a similar manner connected with the piece D' or end of the finger-bar, it moves with the arm *o*, elevating the cutter-bar, while the other end of the bent arm *e'* moves the link *g* forward, and arm *f*, which raises the side piece, E, being kept in place vertically by the guides *d*. As the link *g* is thus forced forward the connecting-rod *h* is moved in a similar manner, and by means of the lever *h'* on the end of the shaft *n* the shaft is turned so as to move the lever *n'* forward, as indicated in Fig. 2, drawing the belt over the pulley N, which holds that end of the cutter-bar firmly in its elevated position, the arm J being adjusted accordingly in the brace J'. The reel is elevated with the cutter-bar, being connected with the moving frame, and the cord or belt that operates the reel passes over the pulley G, under the pulley *h''*, down under the pulley I on the driving-shaft, under the pul-

ley *g'*, connected with the frame. By this arrangement of the pulleys the belt is always kept at a proper tension after being set, without regard to the relative position of the moving frame with the machine.

The driving-shaft and wheel B are inclined forward from a right angle, as before stated, and likewise the finger-bar D is inclined forward in a similar manner toward the end D', Fig. 1. The object of this is to overcome the side draft for the caster or grain wheel P. Being so far from the center of draft, if the cutter-bar and driving-wheel were set straight, the cutter-bar, from the natural swing of the machine, would incline from the grain and the driving-wheel toward the grain, which would greatly increase the side draft; but this difficulty is obviated by setting them both forward, as represented, which always keeps the cutter-bar at right angles to the swath. The crank is so arranged as to operate the cutters and connecting-rod in a straight line with the finger-bar.

In using or operating the machine the natural swing produced causes the driving-wheel to be continually straight, or directly at right angles to the direction in which the horses are traveling.

What I claim as my improvement, and desire to secure by Letters Patent, is—

1. The arrangement of the link *g*, arms *e'* and *f*, links *i* and *p*, in combination with the piece E of the moving frame, and guides *d* and *b*, substantially as and for the purpose described.

2. The rod *n* and lever *h'*, in combination with the lever *n'*, pulley N, and belt *l*, as and for the purpose set forth.

3. The adjustable arm J and guide J', in combination with the pulley N, lever *n'*, and shoe, as and for the purposes described.

4. The peculiar arrangement of the pulleys G, *h''*, *g'*, and I, in combination with the reel-standard F and piece F', when operating conjointly as and for the purpose set forth.

J. L. FOUNTAIN.

Witnesses:

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