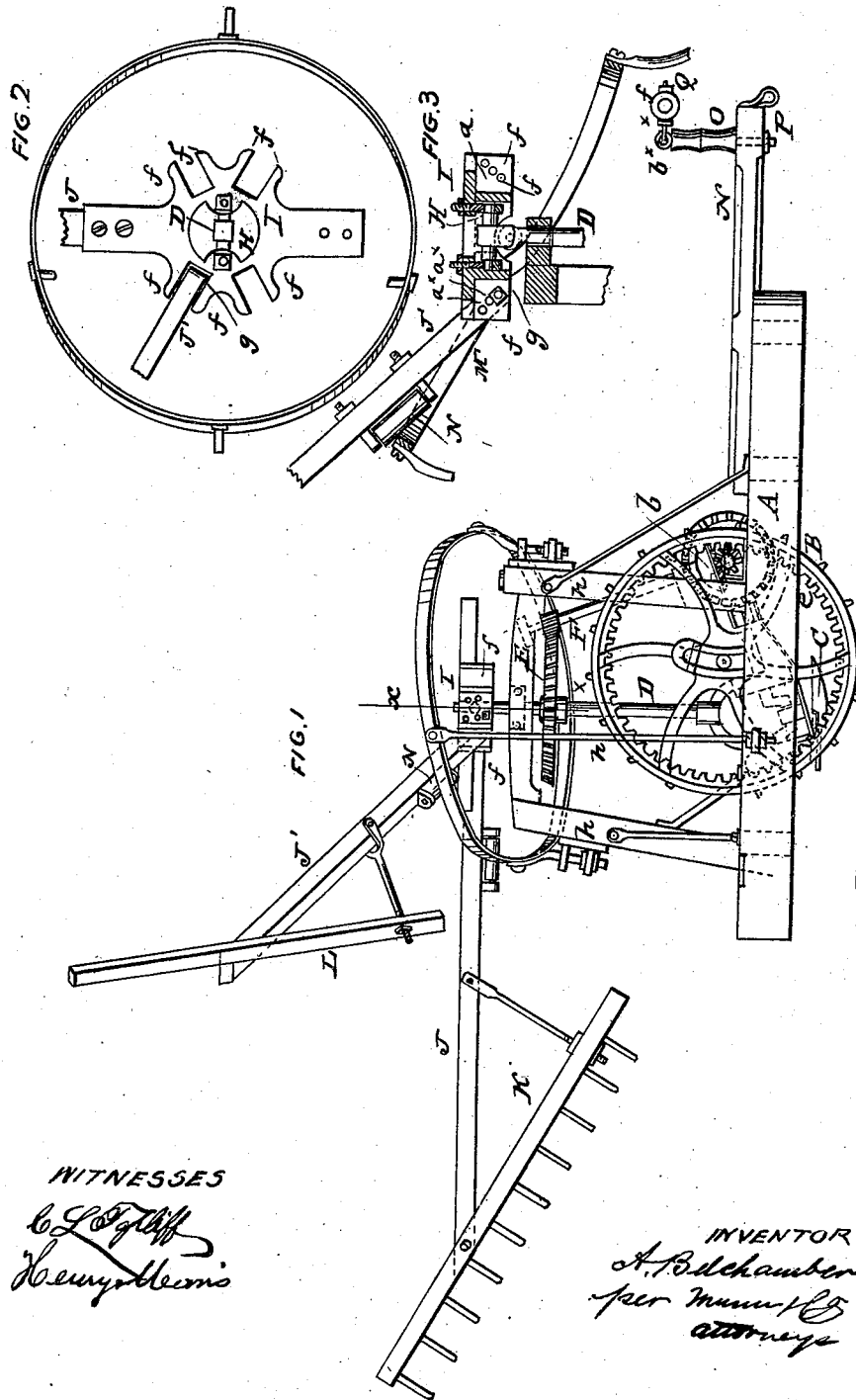


A. BELCHAMBER.

Harvester.

No. 46,628.

Patented March 7, 1865.



WITNESSES

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UNITED STATES PATENT OFFICE.

A. BELCHAMBERS, OF RIPLEY, OHIO.

IMPROVEMENT IN HARVESTING-MACHINES.

Specification forming part of Letters Patent No. 46,628, dated March 7, 1865.

To all whom it may concern:

Be it known that I, A. BELCHAMBERS, of Ripley, in the county of Brown and State of Ohio, have invented a new and Improved Reaping and Mowing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my invention; Fig. 2, a plan or top view of the same; Fig. 3, a vertical section of a portion of the same, taken in the line *x x*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a new and improved reaping and mowing machine of that class in which horizontal rakes and reel-arms are employed; and it consists in a novel manner of arranging the same, whereby machines of this class are not only much simplified, but much friction also avoided.

A represents the main frame of a reaping-machine; and B is a driving-wheel fitted therein, and C the finger-bar, attached to the main frame in the usual or in any proper manner.

D is an upright shaft fitted in the main frame A, and having a bevel-wheel, E, on its upper end, into which a pinion, *a*, gears, said pinion being on the upper end of a shaft, F, the lower end of which has a bevel-wheel, *b*, upon it, the latter gearing into a bevel-pinion, *c*, on a horizontal shaft, G, which has a pinion, *d*, on its outer end, said pinion gearing into the teeth *e* on the inner surface of the rim of the driving-wheel B. Through the upper end of the shaft D there passes at right angles a rod, H, the ends of which are fitted in bearings attached to a circular or annular flange, I. This flange is provided with plates *f* to form sockets to receive the ends of the rake-bars and reel-arms J J'. The rake-bars J are permanently secured in the sockets of the flange I; but the reel-arms J' are secured in the sockets by pins *g*, which serve as pivots for the arms to work upon.

K is a rake, which is secured to the outer ends of the bars J. One of the latter only is shown, and only one reel-arm. To the outer end of each reel-arm a bar, L, is attached. This bar L and the rake K are attached to their respective bars in an oblique position, so that

they will sweep properly over the platform as the shaft D rotates.

M is an inclined camway, which is attached to the upper ends of standards *n* on the main frame A.

The bars J and arms J' have friction-rollers N attached to their under sides, and these rollers rest on the camway, the latter serving, as the shaft D rotates, to raise and lower the bars and arms, causing the rakes and reels to sweep over the platform of the reaper when the bars and arms pass over the depressed portion of the camway, and elevating the rakes and reels after they have passed over the platform. The flange I is turned or adjusted on its rod H by the rake-bars J, as the latter are permanently attached to the flange I; but the reel-arms J, being pivoted in the sockets of the flange I, are allowed to rise and fall independently of the movement of the flange. This movement of the flange I on its rod H and the independent movement of the reel-arms J' in the sockets of the flange admit of the bars and arms J J' working with but little friction, and the arrangement is much more simple than that employed in reaping-machines of this class, for when the reel-arms J' pass up the abrupt part of the camway the arms will rise in a plane nearly at right angles with the line of ascent and parallel with the sides of their socket; and hence the arms J' will be allowed to work more freely in their sockets than if the flange I were rigidly secured to upright shaft D. The sockets in which the arms J' are pivoted are provided with a plurality of holes, *a'*, in order that the pins *g* may be fitted higher or lower in the sockets to cause the bars L to sweep over the platform nearer to or farther from it. (See more particularly Fig. 3.)

N is the draft-pole, having an upright, O, at its front end, the upright being secured to the draft-pole by a bolt, P, having an eye, *b'*, at its upper end, in which a hook, *c'*, at the inner end of a bolt, Q, is fitted. This bolt Q passes through the neck-yoke S, as shown clearly in Fig. 1. By this arrangement it will be seen that the draft-pole is permitted to be quite low, and the necks of the rear horses will not be chafed, while the horses at the lead will have better control over the machine in turning, and there will be less side draft than when the leading horses are attached by a chain to the mid-

dle of the draft-pole. My improvement also, in consequence of the draft-pole being low, causes the leading horses to pull at an inclination upward, thereby relieving the rear horses from the weight on the neck.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The flange I, attached to a rod, H, at the upper end of the rotating shaft D, and provided

with sockets in which the rake-bars J are permanently secured, and the reel-arms J', secured by pivots or pins g, in connection with the cam-way M, all arranged to operate substantially as and for the purpose herein set forth.

A. BELCHAMBERS.

Witnesses:

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