

E. A. PECK.
MOWING-MACHINE.

No. 175,149.

Patented March 21, 1876.

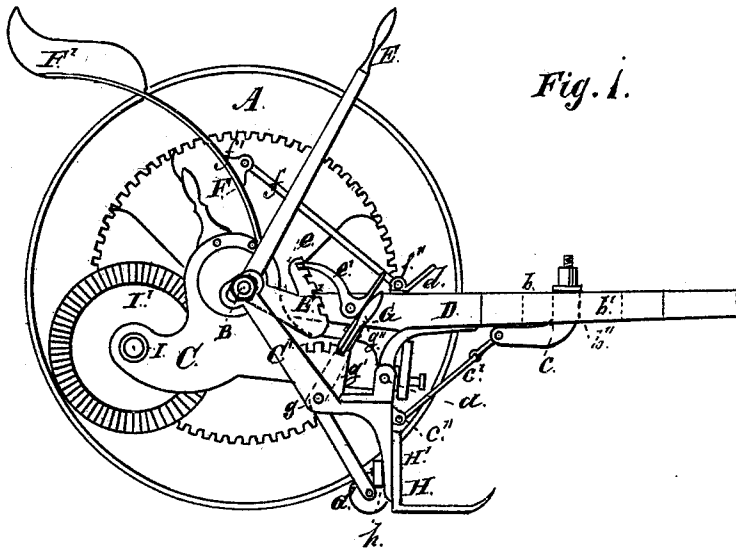


Fig. 1.

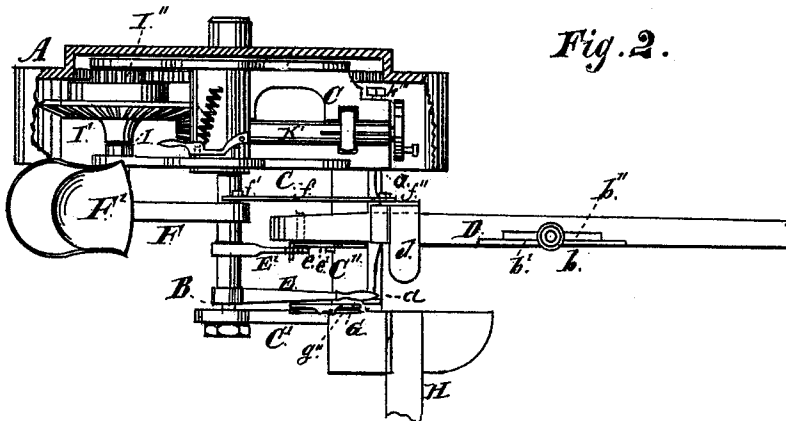


Fig. 2.

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Fig. 3.

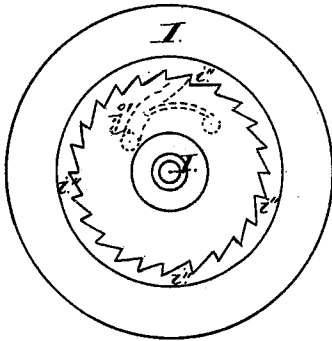


Fig. 4.

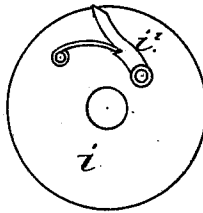


Fig. 5.

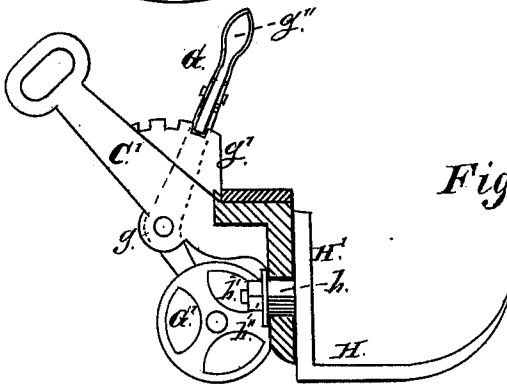
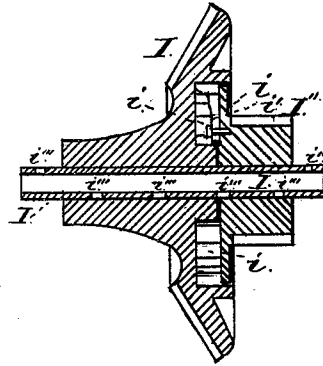


Fig. 6.

Fig. 7.

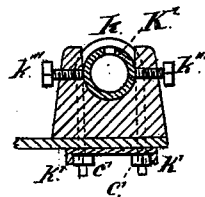
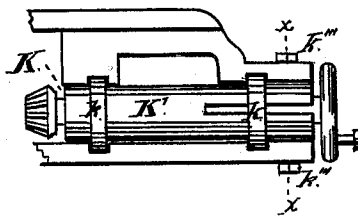


Fig. 8.

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UNITED STATES PATENT OFFICE

EZRA A. PECK, OF SYCAMORE, ILLINOIS.

IMPROVEMENT IN MOWING-MACHINES.

Specification forming part of Letters Patent No. **175,149**, dated March 21, 1876; application filed November 8, 1875.

To all whom it may concern:

Be it known that I, EZRA A. PECK, of Sycamore, in the county of De Kalb and State of Illinois, have invented an Improvement in Mowing-Machines, of which the following is a specification:

My invention relates to that class of machines having but one drive-wheel, a vibrating gear-frame, to which the finger-bar is hinged, and a hinged tongue.

The invention consists in several improvements in the details of construction in this class of machines, as will be fully set forth in the description following; reference being had to the accompanying drawings, in which—

Figure 1 is a side view of the machine from the inner side thereof; Fig. 2, a plan view of the same; Figs. 3, 4, and 5, enlarged views of the bevel-wheel and driving-pinion, showing the means of coupling the two; Fig. 6, a view of the outer portion of the main or gearing frame, with the lifting-lever pivoted thereto; Fig. 7, the inner portion of the main or gearing frame, showing the location and construction of the crank-shaft and its journal; and Fig. 8, a cross-section of the same, taken from the line *x x*, Fig. 7.

The main or driving wheel A is supported upon the main axle B in the usual manner. Upon the main axle is hung the main or gearing frame, which is constructed of three parts—an inner side piece, C, cast in one piece and furnishing bearings for the gearing, an outer side piece or arm, C', and a bar, C'', rigidly connecting the two former at their forward and drooping ends. C and C' are loosely journaled to the main axle, so that the entire frame may vibrate freely in a vertical direction, thus enabling the drooping main frame and cutting apparatus, which is hinged thereto, to readily pass over obstructions, or to be raised and lowered at will, for any purpose whatever. The draft-pole D is hinged to the lower end of the gearing-frame at *a*. This pole or tongue is cut away, as seen at *b*, and a plate, *b'*, is placed over this portion of the tongue, and rigidly attached to the latter, so as to form an opening or slot, *b''*. In this slot is placed the bell-cranked arm *c*, the upper end of which projects above the tongue, and is prevented from slipping down through the

slot by shoulders thereon. To this projection, extending above the tongue, the double-tree is attached, and to the lower end of the arm is attached, by any suitable means, a link, *c'*, which, in turn, is attached to the lower end of the main frame at *c''*. By this means a draft attachment is made directly with the drooping main frame at its lower end, and, as the draft-iron *c* is permitted to move freely back and forth in the slot *b''*, the force of the draft-power will operate to raise the lower end of the main frame from the ground, and thereby relieve the great friction which exists in this class of machines when in operation. To the outer end of the main axle is pivoted a hand-lever, E E', which is also bell-cranked in form, the lower arm E' projecting forward from the main axle, and carrying upon its outer end a pin, which extends under the rear end of the tongue, back of its hinge. To the outer end of the arm E' is also attached a toothed segment, *e*; and to the tongue is pivoted a dog, *e'*, the rear end of the dog being provided with a small projection or pin, which fits the notches in the segment *e*.

When the arm E of the hand-lever is drawn back by the attendant the pin on the arm E' is brought to bear underneath the rear end of the hinged tongue, and thus, the forward end of the tongue being held by the neck-yoke, the rear end is raised, and with it the forward or drooping end of the main frame, and the cutting apparatus attached thereto, to enable the frame and cutting apparatus, either or both, to pass over obstacles.

If it is desired to hold the main frame up for any length of time, the pin on the dog *e'* is permitted to engage with one of the notches in the segment *e* on the arm E', and thus the main frame may be held at any desired height for any length of time—as, for instance, in passing on the road or from field to field.

Whenever it is desired to lower the frame the attendant presses his foot against the forward end of the dog, when the pin is released from the segment *e*, and the arm E' no longer acts upon the rear end of the tongue.

F is a seat-standard, which is also pivoted to the main axle, and carries upon its upper end the driver's seat F'. To this standard the link *f* is pivoted at *f'*, the link being also at-

tached at its lower end by a pivot, f'' , to the foot-rest d , which is rigidly fastened to the tongue. By this means the seat-standard is firmly supported, and at the same time is maintained in nearly the same position, however much the main frame may be raised for the four joints formed by the hinge of the tongue on the main frame. The bearing of the seat-standard on the main axle and the two pivots of the link f are arranged very nearly like a parallel rule. To the arm C' is pivoted a lever, G , at g , the lower end of which is bent downward and forward, and carries a small wheel, G' . A notched segment, g' , is also attached to the arm C' , with which engages a catch-lever, g'' , pivoted to the upper end of the hand-lever G .

By moving the hand-lever G back and forth it will be seen that the main frame and cutting apparatus may be raised or held in any position desired by engaging the catch-lever g'' with the rack g' .

The finger-bar H is hinged to the lower end of the arm C' in the following manner: The rear end of the inner shoe H' is bent upward, so as to form a broad bearing-surface, and upon its rear side is constructed a tubular projection or stud, h . This projection forms the journal of the finger-beam and shoe, and has its bearing in the arm C' , being inserted in a suitable hole therein, and held in place by a bolt, h' , passing through the shoe and arm, and secured by means of a nut and washer, h'' . In the rear end of the side piece C of the main frame is a journal, I , upon which is loosely fitted a bevel wheel, I' , which meshes with the pinion on the upper end of the crank-shaft. On the same journal I is a pinion, I'' , which is driven by an internal gear on the main drive-wheel. The inner face of the bevel-wheel is recessed to receive the plate i of the pinion I'' , and to this plate are pivoted pawls i' , which engage with ratchet-teeth i'' around the periphery of the recess in the bevel-wheel, so that when the machine moves forward the bevel-wheel is driven on the shaft; but when the machine is backed no motion is communicated to it. The shaft I is provided with a suitable number of small holes, i''' , for the purpose of lubricating the bearings of the bevel-wheel and pinion. The crank-shaft K is supported in the side piece C , which is made with a concave recess in its upper face for this purpose. In this con-

cavity is placed a tubular journal-box, K' , which is slotted at either or both ends, and is held in place by means of clips or straps k passing over it down through the side piece, and secured by nuts k' , held in position by the ends of the washers k'' being bent against them. Within the tubular journal-box is placed the crank-shaft K , and through the sides of the piece C are placed set-screws k''' , which act upon the sides of the tubular journal-box opposite the slot, and are turned down to tighten said box at its slotted portion about the shaft whenever it has become loose by wear.

I claim—

1. The combination, substantially as described, of the catch e' , toothed segment e on the arm E' , and draft-pole hinged to the main frame.

2. The bell-crank shaft-iron c , held loosely in a slot in the draft-pole, within which it freely slides, substantially as and for the purpose set forth.

3. The combination, substantially as described, of the slotted draft-pole, draft-iron c , and vibrating main frame, the draft-iron being connected to the main frame by any suitable means, for the purposes set forth.

4. The combination, substantially as described, of the side piece C' , the bent lever G , provided with a wheel at its lower end, and a locking-lever on its upper arm, and the toothed segment g' , for the purposes set forth.

5. The shoe H' , having its projecting rear end bent up and provided with a stud, h , substantially as and for the purposes set forth.

6. The combination of the shoe H' , constructed as described, the side piece C' , provided with a hole for the insertion of the stud h , and the bolt h' , substantially as and for the purpose set forth.

7. The combination, substantially as described, of the tubular journal-box, slotted at one or both ends, crank-shaft K , and set-screws k''' , for the purpose set forth.

8. The combination, substantially as described, of the crank-shaft, tubular journal-box, recessed side piece C , and clips k , for the purpose set forth.

EZRA A. PECK.

In presence of—

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