(Model.)

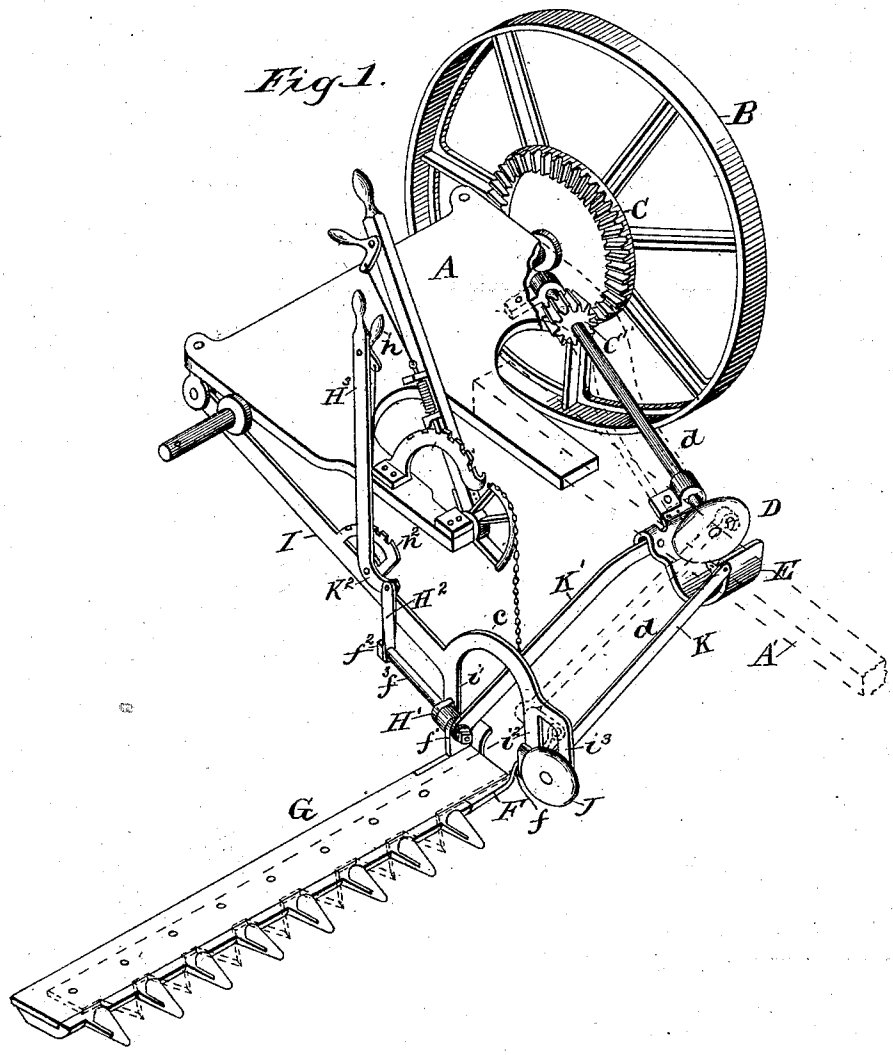
2 Sheets—Sheet 1.

E. PRIDMORE.

MOWING MACHINE.

No. 314,541. Patented Mar. 24, 1885.

Fig 1.



Witnesses:

O. F. Woodward.

E. K. Halbert.

Inventor.

Edward Pridmore

By J. W. Ford

Atty.

(Model.) 2 Sheets—Sheet 2.

E. PRIDMORE.

MOWING MACHINE.

No. 314,541. Patented Mar. 24, 1885.

Fig. 2.

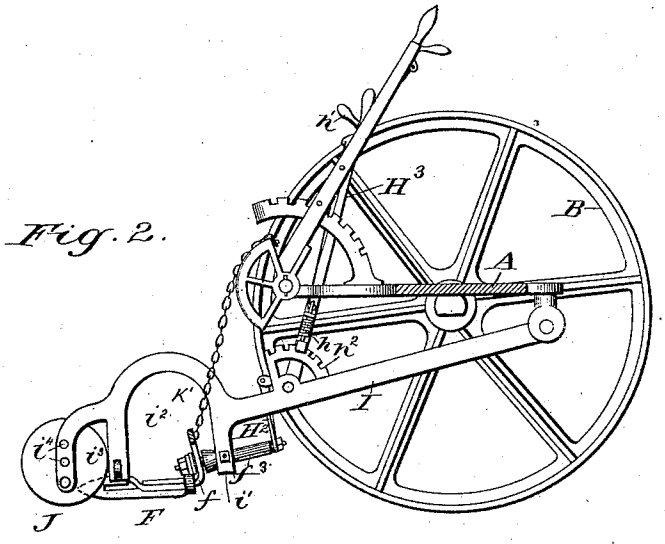


Fig. 3.

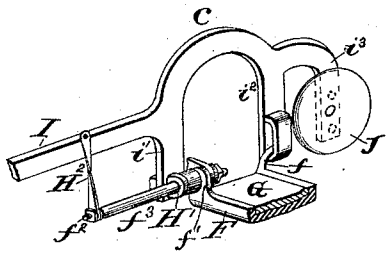
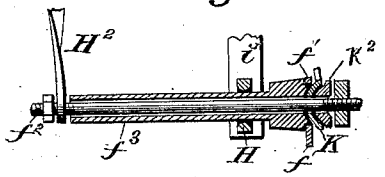


Fig 4



Witnesses:

O. F. Woodward.

E. P. Talbert

Inventor

Edward Pridmore

By G. W. Ford Atty.

UNITED STATES PATENT OFFICE.

EDWARD PRIDMORE, OF BATAVIA, NEW YORK, ASSIGNOR TO THE JOHNSTON HARVESTER COMPANY, OF SAME PLACE.

MOWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 314,541, dated March 24, 1885.

Application filed February 13, 1884. (Model.)

To all whom it may concern:

Be it known that I, EDWARD PRIDMORE, a citizen of the United States, residing at Batavia, in the county of Genesee and State of New York, have invented a new and useful Improvement in Mowing-Machines, of which the following is a specification.

My invention relates to improvements in mowing-machines of that class in which the cutting apparatus is located forward of the actuating mechanism; and the objects of my improvement are, first, to provide an easy method of tilting the cutter-bar by the driver from his seat upon the machine, and enable him, without stopping his team, to raise the point of the sickle-guards with the cutting-knives, so that the cutters will readily pass over stones or other obstructions without injury to the parts; also to be able, when desired, to run underneath and cut any lodged grass that may be met with; second, to provide a flexible connection between the adjustable cutting-bar and the stationary part of the machine, so as to prevent cramping or straining the coupling-bolts when in the act of raising or lowering the said cutter-bar. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the machine, with part of the frame broken away to show the crank-shaft. Fig. 2 is a cross-section of the same. Figs. 3 and 4 are detail views.

Similar letters refer to similar parts throughout the several views.

The main frame A, with the tongue A′, carrying-wheels B, gear-wheel C, pinion C′, crank-shaft *d*, and crank-wheel D, may be constructed in the usual and well-known manner, as these parts do not constitute any portion of my invention.

E is a shield secured in any suitable manner to that portion of the main frame which carries the crank-shaft, and curved up to protect the crank-wheel.

F is the inner shoe, to which is bolted or otherwise secured the finger-bar G. This shoe has upon its front end a pin or spur, *f*, and at the rear a lug, *f′*, to which is secured a tubular bearing, f^3, through which passes a securing-bolt, f^2, screw-threaded at its rear end to receive the nut by which the connecting-link H^2 is securely fastened against the end of the said tubular bearing. The forward end of this securing bolt also has a screw thread and nut, so that the coupling-arm K′ and convex-faced washer K^2 may be held in true working position, as hereinafter more fully explained. This tubular bearing f^3 passes through an opening in the swivel-block H′, so that the finger-bar may be tilted forward or back, as well as folded up for transportation.

The vertical connecting-rod H^2 is pivoted at its upper end to the short arm of the tilting-lever H^3. This tilting-lever is provided with a spring-bolt, *h*, having a rod connecting it to the bell-crank lever *h′*, by means of which the bolt is withdrawn from the notches in the locking-plate h^2, formed in the arc of a circle, at whose center the tilting-lever is fulcrumed.

I is a thrust-bar, upon which is mounted the quadrant locking-plate h^2, and which is pivoted to the main frame upon the under side at a point near the rear inner corner. This thrust-bar has depending arms i' i^2 i^3, the rear one, i', supporting the swivel-block H′.

The central arm, i^2, is recessed at its lower end, and within the recess the shoe-spur *f* plays, thus permitting the tilting of the finger-bar.

The arm i^3, extending from the forward end of the bar I, is provided with adjusting-holes i^4, for the reception of the arbor upon which the ground-wheel J is mounted.

The thrust-bar I is arched at *e*, for the purpose of allowing the play of the pitman (shown in dotted lines) while operating the sickle, also shown in dotted lines.

K is a coupling-bar pivotally connecting the arm i^2 of the thrust-bar with the shield E, and K′ is another coupling-bar pivotally connecting the shoe with said shield. This bar K′ has a cup-shaped end next to the shoe, the convex portion of which enters the opening in the lug *f′* of the shoe and a concave socket in the end of the tubular bearing f^3. Into the concavity of said cupped end of the bar K′ is inserted a convex-faced washer, through which passes the securing-bolt f^2, and firmly unites all the parts in such a manner that the requisite flexibility is given the finger-bar vertically, while the same is held in a rigid position laterally. The object of this concavo-

convex coupling is to provide a joint that shall be universal to a limited extent, and permit the finger-bar to be readily raised and lowered, (which necessitates a change in the relative position of the bar and the main frame,) and not cause undue strain upon the securing-bolt.

The finger-bar may be raised and lowered by the segment lifting-lever, as shown, or any other well-known device may be adopted, as my invention consists only in the manner of constructing the operating devices for tilting the said bar and holding the same in true position. It is well known that in the practical operation of mowing-machines small stones or other obstructions often lie in the path of the cutters, visible to the operator, who is mounted upon the machine, which, unless avoided, will seriously damage these delicate parts.

In the use of my device, when the cutter-bar is in the normal position and such damaging obstructions are met, the operator grasps the tilting-lever with one hand, and, disengaging the spring-bolt from the locking-notch, gives the required movement to the lever, which, through the jointed connection with the finger-bar, raises the points of the guard-fingers, and on account of the flexible raising device the finger-bar is allowed to rise and ride over obstructions of considerable magnitude without injury to the cutters. When the obstruction is passed, the tilting-lever and the finger-bar can be restored to their former positions without the delay incident to stopping the team, and without the expenditure of so much force as is requisite in raising the finger-bar bodily, as is usually done. Should lodged or tangled grass be met, the operator can, by the use of the tilting-lever, throw the points of the guard-fingers down and under the matted portion, and thus cut the same without difficulty.

It will be observed that the cutter-bar in the tilting operation does not turn upon its longitudinal center, but as the hinge is in the rear of the bar the points of the guards are raised or lowered without giving the reverse motion to the rear of said bar, as is usually done.

The ground-wheel located in front of the cutter-bar is not a necessary appendage in the successful tilting of the bar, as the operation is easily performed without it; yet by preference the wheel is used to lighten the draft.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is--

1. The combination of the finger-bar, the shoe having the forwardly-projecting spur, the thrust-bar having the depending arm provided with a recess within which said spur plays, and coupling-bars K K′, all arranged and operating substantially as described.

2. The combination of the finger-bar, the shoe, the rear extension of said shoe, the thrust-bar provided with the notched quadrant-plate, the bent tilting-lever, the means, as described, for connecting said lever with the finger-bar, and the ground-wheel, all arranged and operating substantially as described.

3. The combination of the finger-bar, the shoe having the front and rear extensions, the thrust-bar having the recess for the reception of the front extension of said shoe, the swivel-block forming the hinge in rear of the finger-bar, the connecting-rod H^2, and the tilting-lever, all arranged and operating substantially as described.

EDWARD PRIDMORE.

Witnesses:
C. A. SHERWOOD,
E. J. MOCKFORD.