(No Model.)

# J. McKENNA.

## FEED CUTTER.

No. 456,425. Patented July 21, 1891.

Fig. 1.

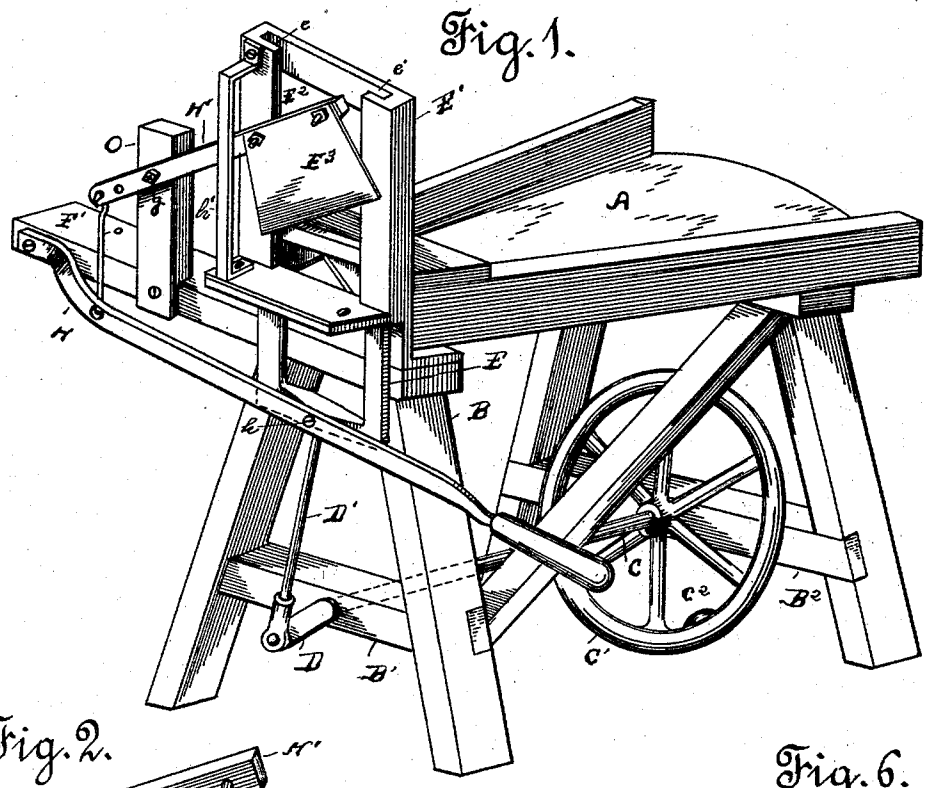



Fig. 2.

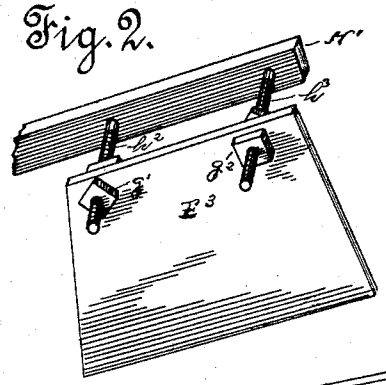



Fig. 3.

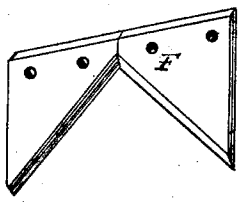



Fig. 4.

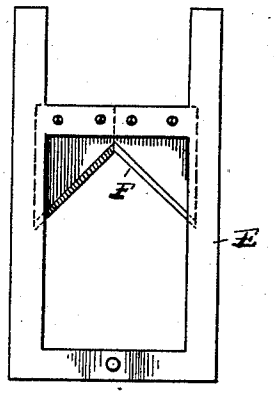



Fig. 5.

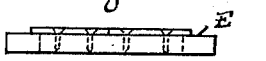



Fig. 6.

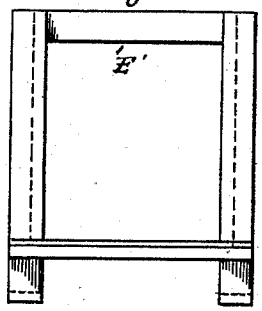
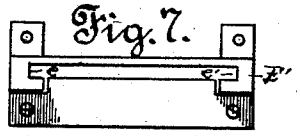



Fig. 7.




Witnesses.
Fallontenerde.
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per A. Acker
atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

JAMES McKENNA, OF MARTINEZ, CALIFORNIA.

## FEED-CUTTER.

SPECIFICATION forming part of Letters Patent No. 456,425, dated July 21, 1891.

Application filed April 4, 1891. Serial No. 387,636. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES McKENNA, a citizen of the United States, residing at Martinez, in the county of Contra Costa and State of California, have invented certain new and useful Improvements in Feed-Cutters; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

My invention has relation to certain new and useful improvements in feed-cutters, which consist in the arrangement of parts and details of construction, as will be hereinafter more fully set forth in the drawings, described, and pointed out in the specification.

The object of my invention is to provide a cutter wherein a uniform cut or length may be given to the feed, which shall be simpler in its construction, easier in its working, more effectual in operation, and less expensive than any machine of a similar nature heretofore known to me.

Referring to the drawings forming a part of this application, wherein similar letters of reference are used to denote corresponding parts throughout the entire specification, Figure 1 is a perspective view showing the entire machine; Fig. 2, a detail view of the adjustable feed-cut-regulating plate; Fig. 3, a similar view of the cutting-blade; Figs. 4 and 5, elevation and sectional plan details of the operating-shuttle, showing cutting-blade secured thereto; and Figs. 6 and 7, similar views of the front plate or frame.

The letter A is used to indicate the feed-trough or body of the cutter, which is supported by legs B, united by means of cross-pieces $B'$ $B^2$. Passing through or working within bearings formed in said cross-pieces is the drive-shaft C, which has mounted thereon the fly or power wheel $C'$. The front end of said shaft passes through and extends beyond cross-piece $B'$ and has secured thereon crank-arm D, to which is secured lower end of connecting-rod $D'$, the upper end of which is secured to lower end of the knife-operating shuttle E.

To the front or throat of the feed-trough is bolted or otherwise secured the open metallic frame $E'$, which is provided with guideways $e$ $e'$, within which works the shuttle E. To the upper end of said shuttle is fastened the feed-cutting knife F, which preferably is formed wedge-shaped.

Extending laterally from the front portion of the cutter-frame is the arm $F'$, to the outer end of which is pivotally secured the end of handle H, which is also fulcrumed by means of pin $h$ to lower end of shuttle E, and with movement thereof is adapted to raise or lower said shuttle. To the front of the shuttle-frame I attach the guide $h'$, through which rod $H'$ works, which rod is pivoted by means of bolt or pin $g$ to upright O and connected by means of rod $o$ to handle H, as clearly shown. It is obvious, therefore, as said handle moves up or down rod $H'$ is given an opposite movement. The rod $H'$ is provided with the threaded rods $h^3$ $h^2$, on which works the adjustable feed-cut regulator $E^3$, which, by means of nuts $g'$ $g^2$, may be moved forward or backward. Said regulating-plate moves in front of the feed-opening $E^2$, and, inasmuch as its movement is reverse to that of the cutting-blade, it is obvious that as said blade moves upward the regulating-plate moves downward, so as to close the feed-opening and prevent the hay, straw, &c., moving beyond a certain distance, thus allowing the cut thereof to be uniform. By adjusting said plate forward or backward upon threaded rods $h^3$ $h^2$ the length or cut of the feed is increased or decreased.

In order to overcome liability of the fly or power wheel resting on dead-center, I locate thereon the weight $C^2$, as shown clearly in Fig. 1 of the drawings. The rotation of power-wheel transmits its motion direct to the cutting-knife through the medium of connecting-rod $D'$, which operates the knife-carrying shuttle E, while the regulating-plate is operated through the medium of operating-handle H. Inasmuch, however, as said handle is secured to the lower end of the shuttle, it is obvious that motion being imparted to the fly-wheel the same is easily maintained by the working of said handle with the least possible application of power. The same may be operated by hand, foot, or otherwise.

My machine will be found of great use in

the cutting of cornstalks, grape-vine cuttings, carrots, or the like, which may be operated with the least possible expenditure of driving-power. By the use of said machine I am enabled to accomplish the cutting of a greater amount of feed in less time than with any cutter now known to me.

Having thus described my invention, what I claim as new, and desire to secure protection in by Letters Patent of the United States, is—

1. In a feed-cutter, the combination of a main frame having a supplemental vertical frame arranged at one end thereof, said frame having guideways therein, a shuttle working in the guideways and carrying the cutting-knife, a beam extending laterally from the main frame, an operating-lever having one end pivoted to said frame and also having pivotal connection at or near its center with the shuttle, an upright extending from the laterally-extending beam, and an arm pivoted to said upright, having one end secured to the operating-handle by means of link connection and its opposite end carrying a gage-plate, substantially as set forth.

2. In a feed-cutter, the combination, with the cutting-knife, of the operating-shuttle, drive-shaft connected to said shuttle by means of connecting-rod, weighted fly or power wheel located on said shaft, adjustable regulating-plate secured to operating-rod, and the operating-handle connected to said rod and adapted to impart to the regulating-plate an opposite movement to that imparted to the cutting-knife, as and for the purpose set forth.

3. In a feed-cutter, the combination of a main frame having a supplemental vertical frame arranged at one end thereof, said frame having guideways therein, a shuttle working in said guideways and carrying the cutting-knife, a beam extending laterally from the main frames, an operating-lever having one end pivoted to said frame and also having pivotal connection at or near its center with the shuttle, an upright extending from the lateral beam, an arm pivoted to said upright, having one end secured to the operating-handle by means of link connection and its opposite end having screw-bolts projecting therefrom, a regulating-plate carried by said bolts, nuts bearing against the plate and adapted to adjust the same with reference to the cutting end of the machine, a drive-shaft carrying upon one end a fly-wheel and upon its opposite end a crank, and a rod connecting said crank with the lower end of the shuttle, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES McKENNA.

Witnesses:
CHARLES EDWARD MILLER,
IANTHUS EINLEN MARSHALL.