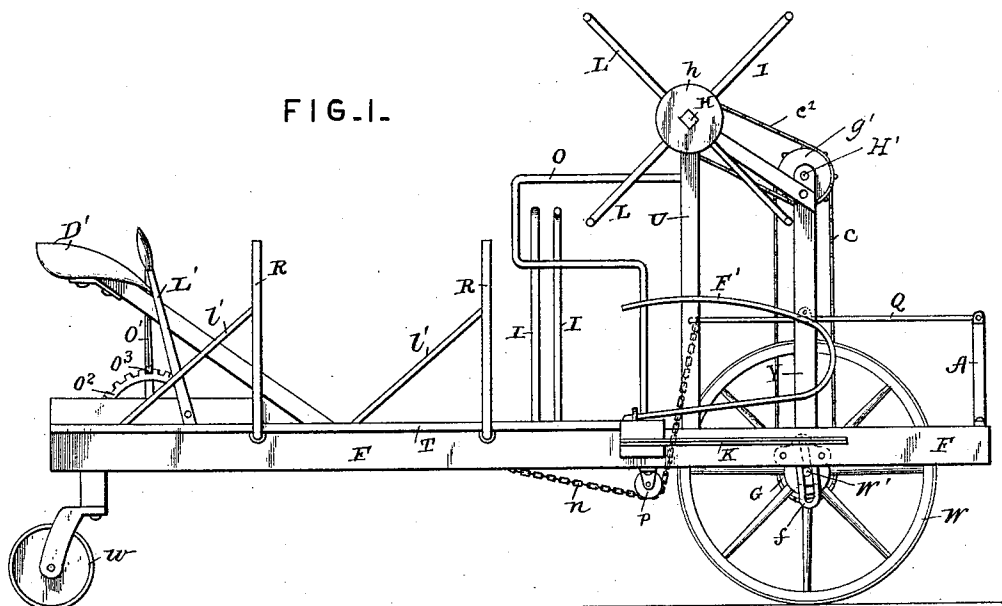


2 Sheets—Sheet 1.

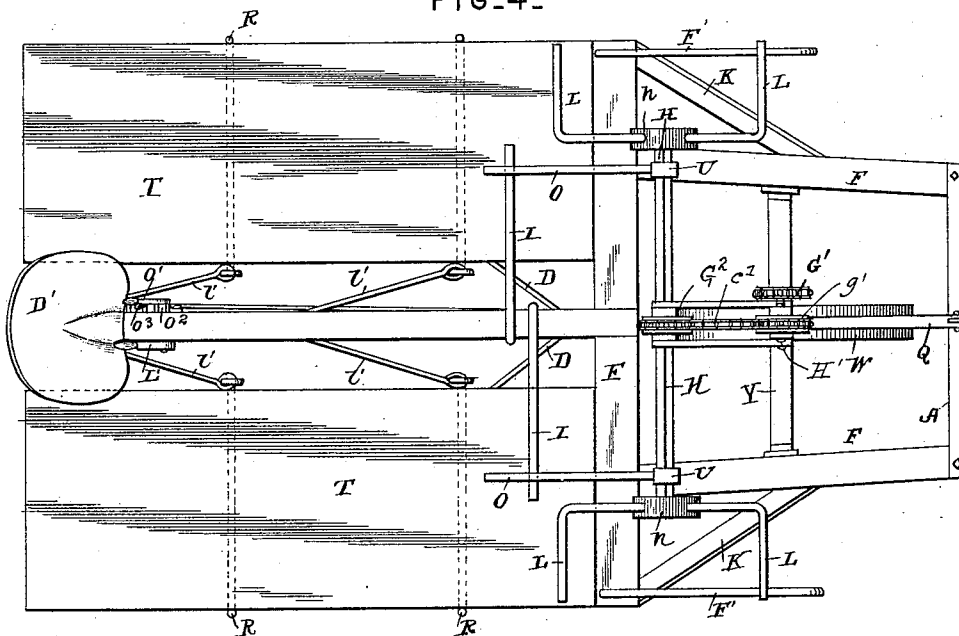
No. 471,250.

Patented Mar. 22, 1892.

FIG. 1.



FIG_4_



Witnesses

Inventor

Jas. K. McLaughlin

William F. Bates

By *his* Attorneys,

N. L. Collamer,

Chas. Snow & Co.

(No Model.)

2 Sheets—Sheet 2.

W. F. BATES.
FODDER CUTTER.

No. 471,250.

Patented Mar. 22, 1892.

FIG. 3.

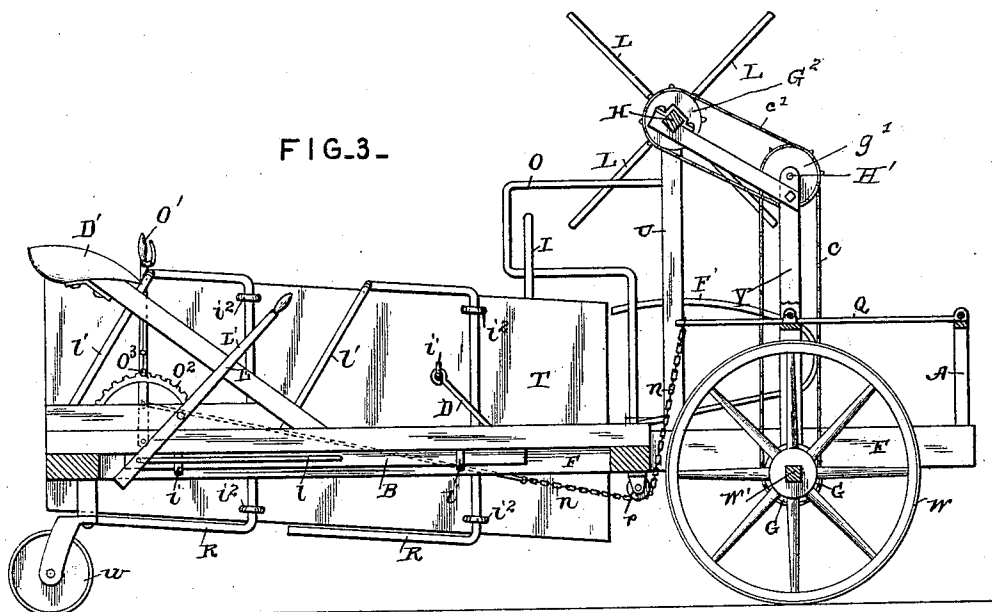


FIG. 5.

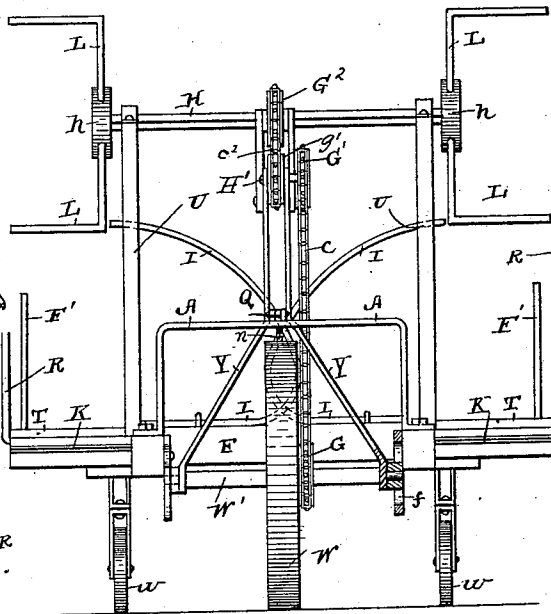
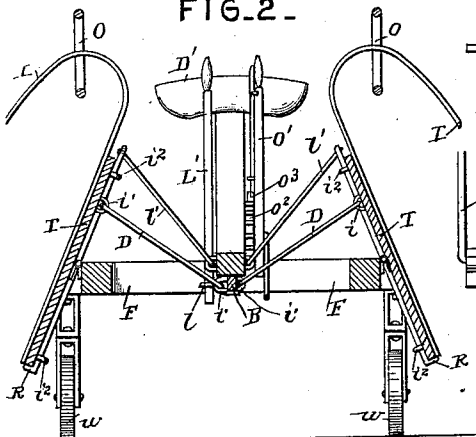


FIG. 2.



Witnesses

Jas. H. McEachran

N. J. Hollauer

By his Attorneys,

Wm. F. Bates
C. A. Snow & Co.

Inventor

UNITED STATES PATENT OFFICE.

WILLIAM F. BATES, OF DAVENPORT, NEBRASKA.

FODDER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 471,250, dated March 22, 1892.

Application filed June 9, 1891. Serial No. 395,681. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. BATES, a citizen of the United States, residing at Davenport, in the county of Thayer and State of Nebraska, have invented a new and useful Fodder-Cutter, of which the following is a specification.

This invention relates to harvesters, and more especially to that class thereof which are adapted for use in cutting fodder, although the same may be employed for other purposes, if desired.

The object of the invention is to produce certain improvements in devices of this character.

To this end the invention consists in the details of construction hereinafter more fully described and claimed, and as illustrated on the sheet of drawings, wherein—

Figure 1 is a side elevation of this improved machine. Fig. 2 is a cross-section with the tables dumped. Fig. 3 is a central vertical longitudinal section with the tables dumped. Fig. 4 is a plan view of Fig. 1. Fig. 5 is a front elevation.

Referring to the said drawings, the letter F designates the frame-work supported at its front end by a large wheel W and at its rear end by wheels *w*, mounted in swiveled frames, as shown in Fig. 1. The power to draw this device, it will be understood, is provided by means of horses hitched to the frame-work and traveling in front of the same, as usual.

U U are uprights rising from the frame, and journaled in their upper ends is a horizontal shaft H, having disks or hubs *h* on its outer ends, in which are secured radially-projecting L-shaped arms L, forming the reel.

G G² are sprocket-wheels secured, respectively, to the axle of the front supporting-wheel W and mounted on the shaft H', and these wheels are connected by a chain belt *c*, leading over a sprocket-wheel G', keyed on a shaft H', journaled in the upper end of the yoke Y and by another belt *c'*, leading from another wheel *g'* on said shaft to the wheel G² on the shaft H. By this means the forward motion of the machine drives the reel in the proper direction, as will be understood.

K K are the knives set at oblique angles in the frame-work and F' F' are fingers mounted on said frame-work and extending forward

from the outer ends of the knives, whereby the fodder is directed against the cutting-edges of the knives at the same time that it is caused to fall to the rear by the reel.

For the purpose of adjusting the height from the ground at which the knives shall cut the fodder I employ the following devices: *f* designates slots in the side bars of the frame-work F, which slots are struck on curves around the axles of the rear wheels *w* as a center, and in these slots the ends of the axles W' of the large front wheel W move up and down. A is an arch mounted on the front end of the frame-work and connecting the side bars thereof, and Q is a lever pivotally connected at its front end to the center of this arch. Y is a yoke whose ends are connected to the front axle W', and whose center, where it curves over the wheel W, is pivotally connected with the lever Q. By this means, when the lever Q is operated, the yoke Y acts as a fulcrum, because it is supported by the axle of the wheel W from the ground and the front end of the lever raises and lowers the arch A, and with it the frame-work F and the knives K. The means I preferably employ for operating this lever is a chain *n*, leading downward from the rear end of the lever over a pulley *p*, mounted in the frame-work F, and rearward to an operating-lever O', located adjacent the seat D' and preferably on the other side thereof from the lever L', to which reference is hereinafter made. This lever O' moves over a toothed arc O² and has the usual hand-pawl O³ engaging the teeth of said arc, whereby after the lever is adjusted to raise the front end of the frame to the desired height the pawl O³ is engaged with the arc to hold the lever, and hence the frame, at its height. The weight of the frame causes its descent when permitted.

The letters T T designate tables hinged to the frame-work F at or near their transverse centers, and these tables stand at each side of the center of the frame and in rear of the knives and reel, so that as the stalks of fodder are cut and knocked over to the rear they will fall upon the tables in an obvious manner.

O O are open frames rising from the frame-work F and attached at their upper ends to the uprights U, and through these frames project the upper ends of inclined guiding-arms

or cut-offs I, which are connected to the tables. These cut-offs are retracted when the tables are down, so that their extremities stand inside the frames O, as seen in Fig. 5; but when the tables are dumped, as seen in Fig. 2, the cut-offs are projected outward through the frames, so as to prevent the stalks which are then cut—that is, while the tables are dumped—from falling over to the rear, although as soon as the tables resume their horizontal positions and the arms I are thereby withdrawn what stalks have accumulated will be allowed to fall upon the then horizontal tables.

The letter B designates a bar sliding in eyes *i* longitudinally beneath the frame-work F, and L' is a lever pivoted between its ends to said frame-work, its lower end being connected by a link *l* with the bar B and its upper end rising alongside the driver's seat D'. This bar is connected by outwardly-divergent links D with the tables T near their inner edges, said links being linked into eyes *i'* at their ends and being of such length that when the bar is drawn to the rear the tables will be tilted outward, so as to dump the stalks to the sides of the machine; but when the bar B is moved forward the links D will draw the tables back to a horizontal position. In this manner the stalks as they are cut and fall upon the tables may be dumped to the sides of the machine at occasional intervals, it being understood, as above described, that while the tables are in dumped position no additional stalks will be thrown by the reel backward onto said tables.

In order to prevent the stalks from falling or rolling off the tables, I provide retaining-arms R. These are of approximate U shape, their ends rising from the edges of the tables and above the upper faces thereof and their bodies being pivoted in eyes *i''* across the lower faces of the tables. The outer ends of these arms rise to a considerable height, and the inner ends are connected by links *l'* with the central longitudinal bar of the frame-work F. These links are of such length that when the tables T are horizontal the ends of the retaining-arms R will be upright; but when the tables are dumped by the mechanism above described and their inner edges rise from a horizontal plane these links will swing about their rear ends, which are connected with the frame-work F and will draw downward upon the inner ends of the arms R. The result will be that said arms will be rocked in their eyes *i''* to such positions that their ends will stand alongside the edges of the tables T and completely out of the way of the stalks, which are then sliding outward off the inclined tables. Thus it will be seen that while these retaining-arms are useful for holding the stalks upon the tables while the latter are in horizontal position, as soon as they are dumped to throw the stalks off the tables the hitherto upright ends of the arms are turned to positions alongside the edges of the tables

just in time to permit the stalks to slide off the same.

Considerable change may be made in the details of construction without departing from the spirit of my invention, and several of the parts of the machine may be used without the other parts.

What is claimed as new is—

1. In a fodder-cutter, the combination, with the frame-work mounted upon supporting-wheels and inclined knives at the front corners of said frame-work, of tables mounted on longitudinal hinges on the frame-work in rear of said knives, a bar sliding longitudinally in eyes beneath the frame, an operating-lever connected to said bar, and divergent arms linked at their front ends to said bar and at their rear ends to the tables inside the hinges of the latter, substantially as described.

2. In a fodder-cutter, the combination, with the frame-work mounted upon supporting-wheels and knives at the front corners of said frame-work, of tables hinged longitudinally on the frame-work in rear of the said knives, means for tilting said tables outward, U-shaped retaining-arms whose bodies are pivoted in eyes across and beneath the tables and whose ends extend upward when the tables are horizontal, and links connecting the inner ends of said arms with the frame-work, as and for the purpose set forth.

3. In a fodder-cutter, the combination, with the frame-work, knives at the front corners thereof, fingers adjacent said knives, tables hinged longitudinally on said frame-work in rear of the knives, outwardly-inclined cut-offs rising from the inner edges of said tables, and means for tilting the latter outward, of a rotating reel journaled in uprights forward of said tables, and rearwardly-extending open frames connected to said uprights and in which the tips of said cut-offs stand when the tables are horizontal, but through which said arms project when the tables are tilted, as and for the purpose set forth.

4. In a fodder-cutter, the combination, with the frame-work, knives at the front thereof, and fingers adjacent said knives, of tables hinged longitudinally on the frame-work, means for tilting them outward, U-shaped retaining-arms whose bodies are pivoted in the eyes across and beneath the tables, and means for folding the ends of said arms alongside the edges of the tables simultaneously with the tilting of the latter, as and for the purpose hereinbefore set forth.

5. In a fodder-cutter, the combination, with the frame-work having slots in its side bars near their front ends, supporting-wheels at the rear ends thereof, a front axle passing through said slots and having a front supporting-wheel, and a yoke mounted on said axle and extending over the wheel, of an arch on the front of the frame-work, a lever pivotally connected to said arch and to the yoke, knives on the frame-work, and means for operating said lever, substantially as described.

6. In a fodder-cutter, the combination, with
the frame-work having slots in its side bars
near their front ends, a front axle passing
through said slots and having a front sup-
5 porting-wheel, a yoke on said axle over the
wheel, knives on the frame-work near its
front end, and wheels supporting the rear
end of the frame-work, of an arch on the front
end of the frame-work, a lever pivotally con-
10 nected to the arch and to the yoke, a chain
leading from said lever downward over a

pulley on the frame-work and rearward to
the driver's seat, and an operating-lever at
that point to which the chain is connected,
substantially as hereinbefore described. 15

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
presence of two witnesses.

WM. F. BATES.

Witnesses:

W. H. JENNINGS,
M. BOLTON.