

J. FORLOW.
Machine for Cutting up Corn-Stalks.

No. 202,531.

Patented April 16, 1878.

Fig. 1.

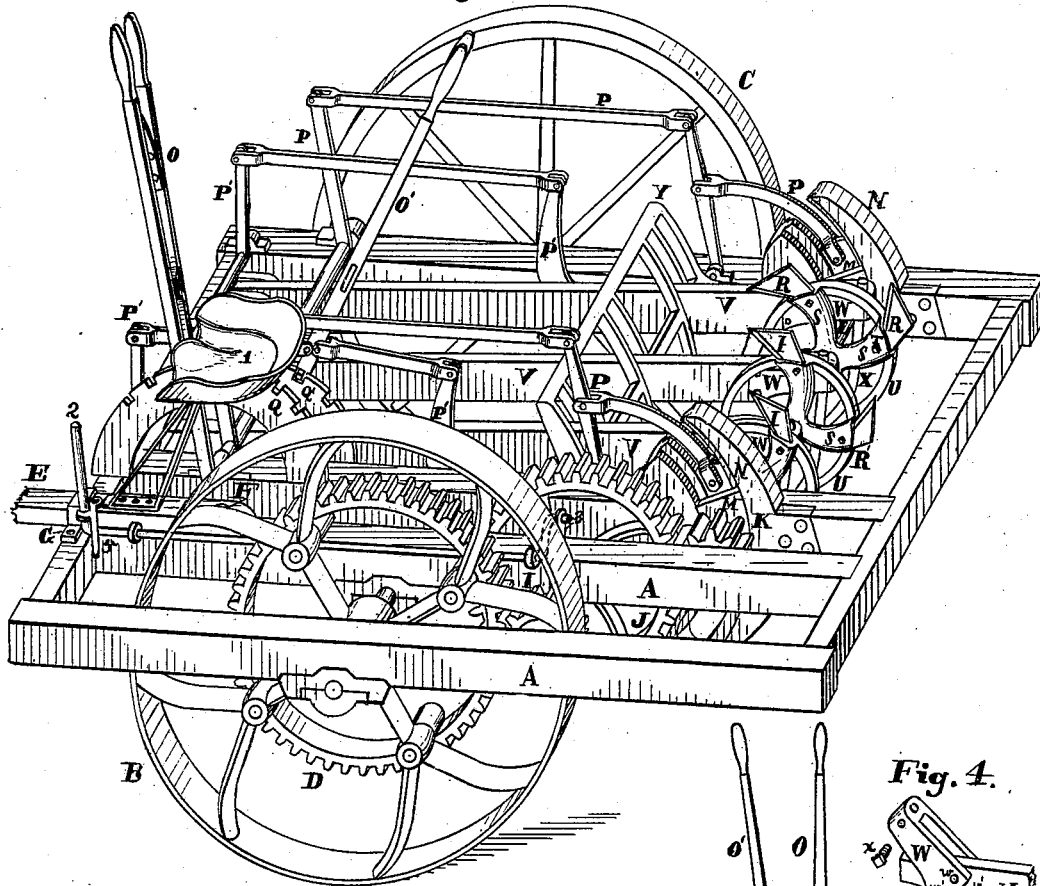


Fig. 3.

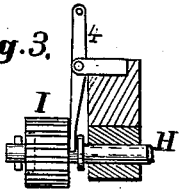


Fig. 2.

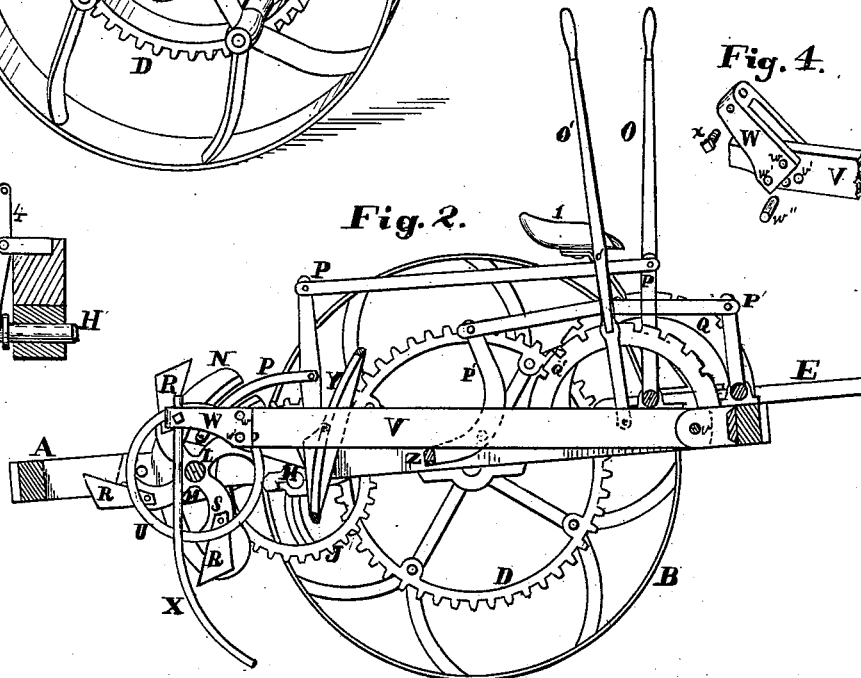
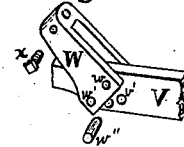


Fig. 4.



Attest.

Walter Knight.
Percy Knight

Jacob Forlow
By Knight Bros.
Atty's.

UNITED STATES PATENT OFFICE

JACOB FORLOW, OF EATON, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO LEVI BARNHART, OF SAME PLACE, AND WILLIAM LANTIS, OF WINCHESTER, OHIO.

IMPROVEMENT IN MACHINES FOR CUTTING UP CORN-STALKS.

Specification forming part of Letters Patent No. 202,531, dated April 16, 1878; application filed February 28, 1878.

To all whom it may concern:

Be it known that I, JACOB FORLOW, of Eaton, Preble county, Ohio, have invented a new and useful Machine for Cutting up Corn-Stalks, of which the following is a specification:

My invention relates to certain improvements in the class of machines designed to be drawn over the ground, and, in so doing, to gather and reduce to short fragments whatever corn-stalks or other trash or stubble may be lying thereupon; and my improvements comprise a series of rotary knives, adjustable as to height, which coact with a series of steel gathering-fingers, also adjustable, the rotation of said knives being secured by means of suitable geared connection with one of the ground-wheels.

In the accompanying drawings, Figure 1 is a perspective view of a corn-stalk cutter embodying my invention. Fig. 2 is a vertical section of the same in the line of draft. Fig. 3 is a rear elevation of the pinion and pinion-shifter. Fig. 4 represents the rear portion of arm and the finger-socket, partially detached.

A may represent a suitable rectangular frame, constituting the bed of a vehicle, supported upon two ground-wheels, B C, of unequal diameter, and of which the smaller wheel, B, has cast or otherwise connected to its inner side a spur-wheel, D. The pole E of the vehicle is secured by bolt F and staple G to that part of the bed A which is near the smaller wheel B.

A counter-shaft, H, suitably journaled in the bed, has a feathered portion for a sliding pinion, I, which, in one of its positions, gears with the spur-wheel D. The counter-shaft H has firmly keyed to it a spur-wheel, J, into which meshes a pinion, K, upon a shaft, L, that is journaled in boxes M, which occupy curved guide-yokes N, having the form of arcs of circles concentric with said shaft H.

A hand-lever, O, having suitable mechanical connection, P, with the boxes M, enables the operator to elevate or depress the boxes M, and consequently also the shaft L, while a spring-catch, O, on the said lever, engaging in a notched rack, Q, enables the said mem-

bers to be retained at whatever elevation they may be adjusted.

The shaft L is armed with several whirls of revolving knives R, whose blades are, preferably, of the hook form represented, and, being secured in sockets S by means of bolts T, are capable of being removed at any time for sharpening or replacement by new ones. The sockets of each whirl of knives are lateral projections from wheels U attached to the shaft L.

Arms V, which are hinged at *v* to the bed-front, extend rearward, as shown, and have pivoted, *w*, to their rear ends the sockets W of steel gathering-fingers X, of which there is one finger for each knife-whirl, and of which each finger is located on that side of its coacting knife-whirl which is next the annular guard and carrier U, and consequently on the side remote from the sockets S. Each knife-whirl having thus interposed the said annular guard between said whirl and the finger that operates with it, prevents the possibility of collision of said knives and their coacting fingers, which would otherwise be liable to take place when striking a root or other large object.

Each socket W has an orifice, *w'*, for a wooden pin, *w''*, which, being caused to enter said orifice *w'*, and one of a series of orifices, *v'*, in the arm, hold the finger to the desired angle relatively to said arm. Should the finger engage with some obstruction that would be liable to break it, the fracture of the wooden pin *w''* permits the finger to yield, and in this manner saves it from destruction.

Each finger, being secured in its socket by means of a screw, *x*, can be readily removed for repair or renewal whenever necessary.

The several arms V are secured against lateral displacement by guides Y, and the entire gang of arms, with their attached fingers, are capable of being any moment elevated, so as to run clear of impediments, by means of a hand-lever, O', having suitable mechanical connection P', with a bar, Z, which extends athwart the bed underneath the said arms V. A spring-catch, o', and notched rack Q' enable the said members to be retained at whatever elevation they may be adjusted.

The driver's seat 1 is secured to the draft-pole in the manner represented, in convenient proximity to the levers O and O', and to a lever, 2, having suitable mechanical connection, 3, with shifting-bar 4, by which the pinion I is put in or out of gear with the spur-wheel D, so as to connect or disconnect the drive-wheel B with the knife-whirls. A catch, 5, serves to hold the lever 2 to either position at which it may be placed.

The operation of my machine is as follows: When required to be taken to the field, the levers O, O', and 2 are so placed as to completely elevate the rotary knives and the gathering-fingers and to disengage the gearing. Having arrived at the place of work, these levers are so placed as to put the operative parts into their effective positions, the operator adjusting the fingers and knives to the position deemed most favorable for usefulness.

The fingers then, on the machine being drawn forward, gather the stalks, and hold them in convenient position and body for the action of the sharp and rapidly-revolving knives, which, having severed the stalks, leave them upon the surface of the ground in convenient condition for plowing under, thus utilizing a valuable fertilizer, which is commonly burned.

I claim as new and of my invention—

In the described combination with the series of knife-whirls R, the vertically-adjustable fingers X on the ends of arms V, hinged to the bed-front, in the manner set forth.

In testimony of which invention I hereunto set my hand.

JACOB FORLOW.

Attest:

GEO. H. KNIGHT,
L. H. BOND.