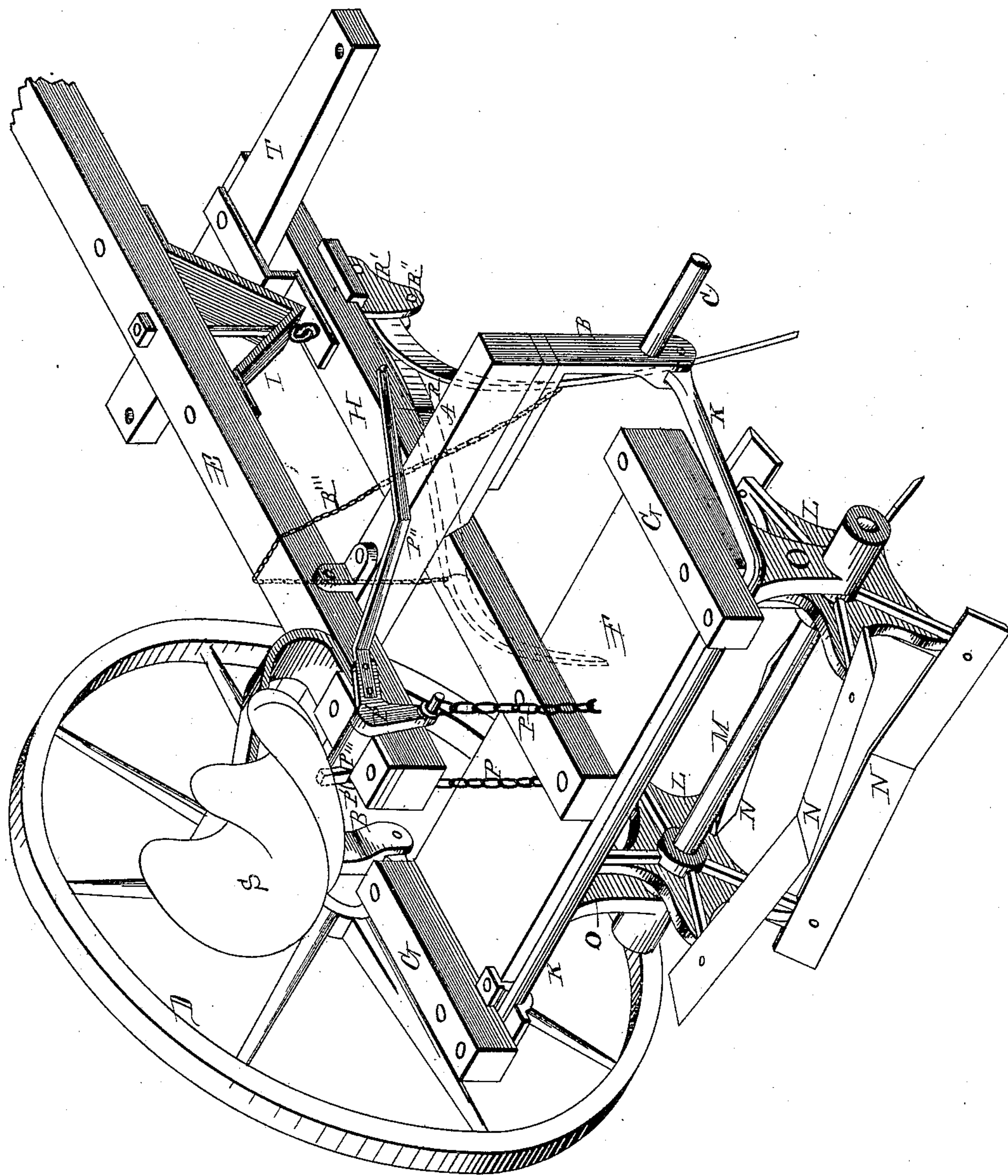


(No Model.)

J. H. JONES.  
STALK CUTTER.

No. 337,335.

Patented Mar. 2, 1886.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## STALK-CUTTER.

SPECIFICATION forming part of Letters Patent No. 337,335, dated March 2, 1886.

Application filed August 6, 1885. Serial No. 173,754. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES HERVA JONES, a citizen of the United States, residing in the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Stalk-Cutter, of which the following is a specification.

This invention relates to machines employed to cut cornstalks on the ground on which they were grown preparatory to plowing the ground for another crop. Its object is to produce a more efficient machine of its class than heretofore in use, and the machine represented in isometrical in the accompanying drawing in a single figure embodies my invention, and will be hereinafter more fully described.

In the figure I have omitted one of the carrying-wheels for the purpose of greater clearness.

The carrying frame of my improved stalk-cutter consists, essentially, of an axle-tree, A, with bracket-support B, of the axle-arms C, fixed to the under face of its end portions, and depending therefrom, carrying-wheels D, mounted to revolve on the axle-arms, and a tongue, E, having its rear end portion centrally pivoted to the axle-tree, in this instance by means of a bracket fixed to the upper face of the axle-tree, and having uprising ears to embrace the tongue pivoted thereto by a transverse pin passed through the parts.

The cutter-frame consists, essentially, of a rear cross-bar, F, with end battens, G, fixed to its upper face, and a central draft-tongue, H, having its rear end fixed centrally to the upper face of the cross-bar, F, from which it extends forward.

The draft-tongue H, from its rear end connection, extends forward under the axle-tree in the same vertical plane of the tongue F, and its forward end portion is hinge-jointed to a draft-bracket, I, depending from the tongue of the carrying-frame.

A bail, K, forming three sides of a rectangle, is hinge-jointed at its ends to the depending ends of the bracket-support B of the axle-arms, and from its connection therewith extends rearward, having its rear central portion supported in box-bearings fixed to the rear end portion of the cutter-frame, forming

side connections of the two frames; but instead of the bail independent side connections of rectangular semi-bail form, with additional central or end bearings, may be employed.

Cutter-blade heads L of spider form are fixed at proper intervals on shaft M to rotate therewith. Cutter-blades N, having their outer edge beveled on their back, forming a chisel cutting edge on their forward face side, are bent in the center of their length from their face side rearward, and are fixed to the radial arms of the cutter-heads, forming a cutting-reel, in which the end portions of the cutter-blades will in the rotations of the reel first engage the stalks, and in the onward-rolling movement of the reel will to some extent produce a slipping or drawing cut, which operates with greater certainty to separate or cut the stalks, and in use the angular or oblique position of the cutter-blades relatively with the axis of the reel permits it to conform more nearly to the inequalities of the ground, which adds greatly to the efficiency of the machine.

The shaft of the cutter-reel is supported to revolve in suitable bearings in the depending ends of hangers O, fixed to the cross-bar F of the cutter-frame.

Supporting-chains P, fixed to the cross-bar F of the cutter-frame, rise and connect with the crank-arms P' of the lever P'', supported to oscillate in a box-bearing on the rear end of the tongue. The lever and the crank-arms of which it is a part are capable of an oscillatory movement through an arc of a circle greater than a semicircle, to carry the crank-arms, to which the supporting-chains are connected, over their vertical center, limited by a stop, P''', rising from the box-bearing, to render the lever self-sustaining when in its rearward position to support the cutters, and their supporting-frame elevated for the purpose of transportation or other purposes requiring its elevation.

Branching curved trailing fingers R have a central pivotal connection in a bracket, R', depending from the forward portion of the draft-tongue, and a pin, R'', passed through the ears of the bracket below the trailing fingers, rearward of their pivotal connection therewith, serves to limit their downward movement and



cause them to rise with the cutter-frame when elevated. These trailing fingers from their forward pivotal connection extend rearward, curving outward and downward to engage the ground forward of the cutting-reel to give the stalks an endwise direction relatively with the movement of the machine to be traversed by the cutters.

A chain, R<sup>'''</sup>, having its ends connected with the rear portion of the trailing fingers, over-spans the tongue forward of the seat S, fixed in place thereon, to enable the driver mounted in the seat to lift the fingers to liberate them from accumulations or to pass obstructions, and by changing the position of the chain on the tongue forward or rearward the fingers may be carried at various heights.

The evener T of the whiffletrees employed to connect the team to the machine is pivoted on the forward end of the draft-tongue, by which the force of the team is applied directly on the cutter-frame and indirectly on the carrying-frame, by reason of the bail-connection of the cutting-frame with the carrying-frame.

By this construction the carrying-frame is relieved from the draft force required to operate the cutters, and the force required to move the carrying-frame is applied directly to the support of the axle-arms, and operates to greatly lessen the strain upon the frame and relieve it from the jarring or jumping action of the cutter-frame produced in its stepping movement. In this instance the tongue of the supporting-frame is hinge jointed in its connection with the axle-tree to permit a rocking movement of the axle-tree independent of the tongue in the up-and-down movement of the cutter-frame; but instead thereof the tongue may be rigidly connected with the axle-tree, and the crank-formed axle-arms may be hinge-jointed to its end portions to permit a slight oscillatory movement of the axle-arm in the lengthwise direction of the machine, to permit the cutter-frame to rise and lower without cramping.

I claim as my invention—

1. The combination, with a carrying-frame having a pivotal or loose connection of its tongue with the axle-tree, of a cutter-frame with cutter-reel attached, said cutter-frame having its draft tongue hinge jointed to the carrying-frame, substantially as and for the purpose set forth.

2. The combination, with the depending brackets of the axle, of a cutter-frame provided with a draft-tongue and having a chain-connection with the carrying-frame, and a bail

whose ends are pivoted to the bracket-arms of the axle, while the body portion rests under the end battens of the cutter-frame, substantially as described. 60

3. The combination of a carrying-frame having a pivotal or loose connection of its tongue with the axle-tree, a cutter-frame with cutter-reel attached, having a hinge-connection of its draft-tongue with the tongue of the carrying-frame, and a rear pivotal connection of the cutter-frame with the carrying-frame, substantially as and for the purpose set forth. 65

4. The combination, with the tongue, of the cutter-frame having both a rear and front connection with the carrying-frame, and a draft-tongue arranged below the tongue of the carrying-frame and provided with a draft-evener, substantially as described. 70 75

5. The combination, with the cutters, of branching trailing fingers, said fingers centrally pivoted to the forward portion of the draft-tongue and extending rearward in outward and downward curves, and a cross-pin arranged below the fingers in rear of their pivotal point, substantially as and for the purpose set forth. 80

6. The combination, with the trailing fingers and with the tongue of the carrying-frame, of a chain connected with the trailing fingers and overspanning the tongue of the carrying-frame, substantially as and for the purpose set forth. 85

7. The combination, with the supporting-frame and with the cutter-frame pivotally secured to said supporting-frame both front and rear, of a lifting and holding lever provided with crank-arms, as described, and made self-sustaining in its connection with the supporting-frame, and lifting-chains connecting the cutter-frame with the cranks of said lever, substantially as described. 90 95

8. In a stalk-cutting reel, cutter-blades bent centrally from their cutting-face, substantially as and for the purpose set forth. 100

9. In a stalk-cutting reel, cutter-blades bent centrally from their cutting-face to present oblique cutting-edges, substantially as described. 105

10. The combination, with the heads of the reel, of blades secured thereto and centrally bent across their width to present their cutting-edges obliquely, substantially as described.

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Witnesses:

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