3 Sheets—Sheet 1.

E. DOMINY.

Stalk-Cutter.

No. 203,010. Patented April 30, 1878.

Fig. 1.

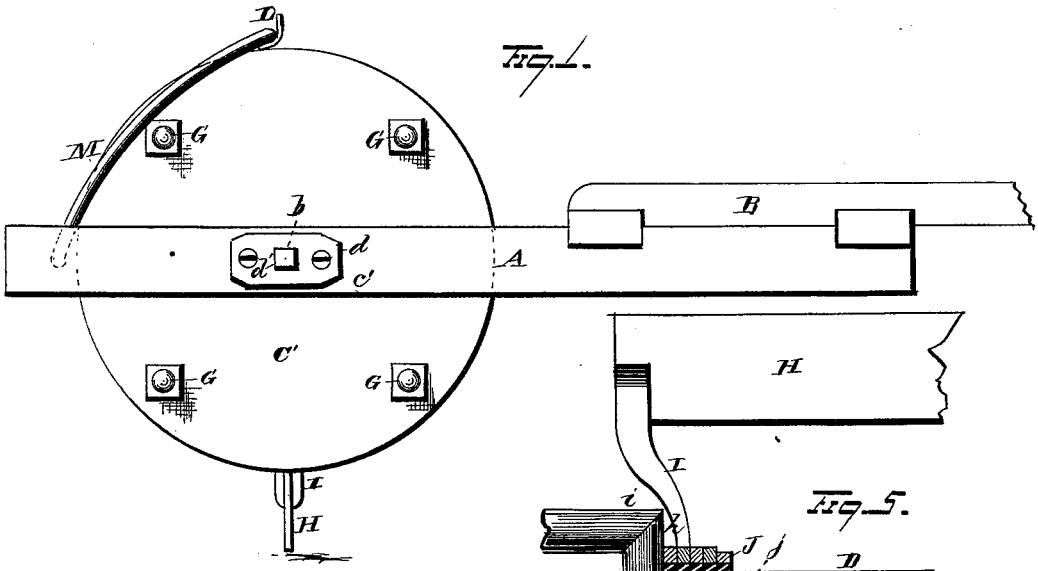

Fig. 5.

Fig. 2.

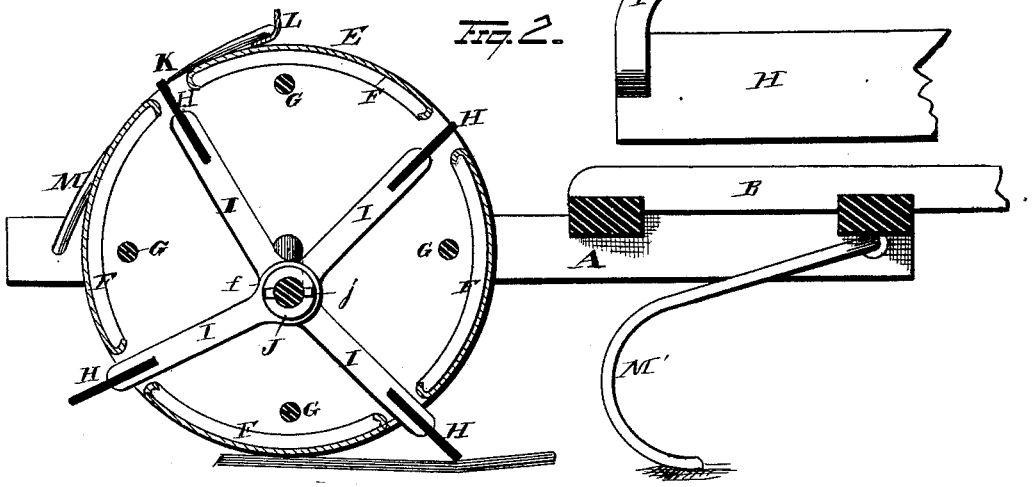

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Fig. 3.

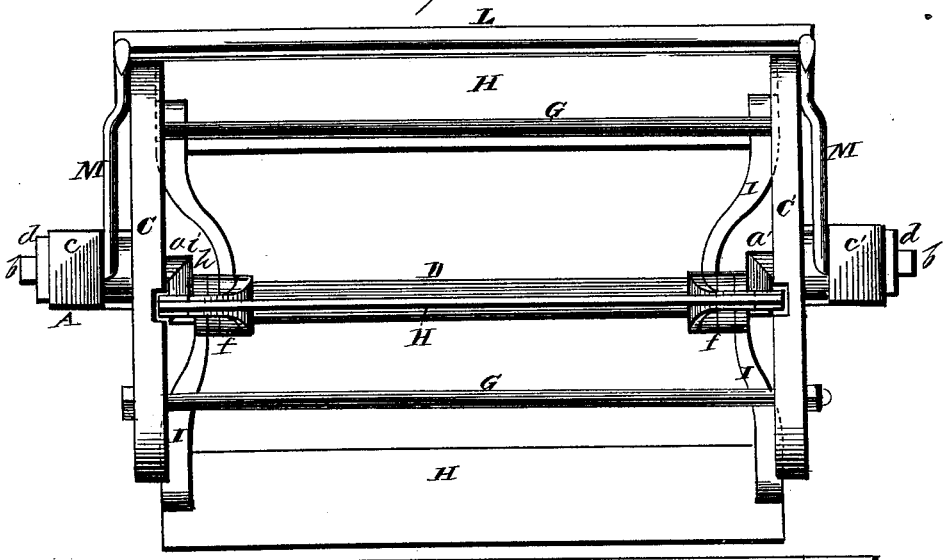

Fig. 4.

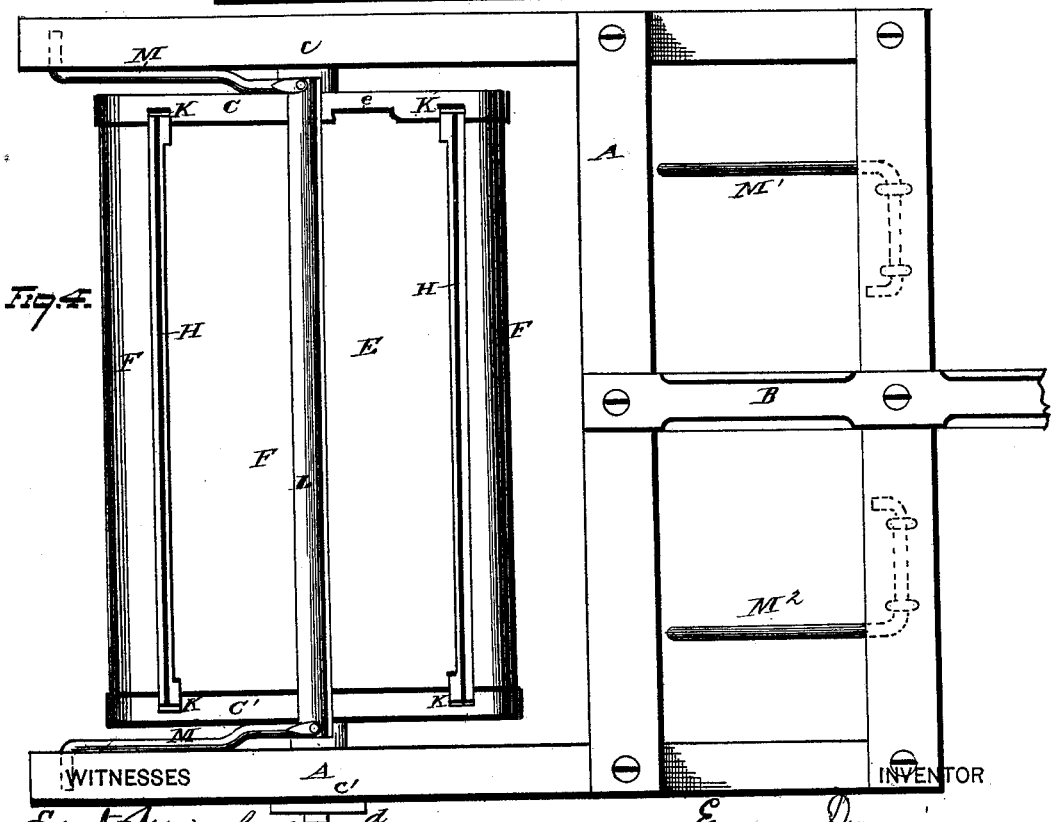

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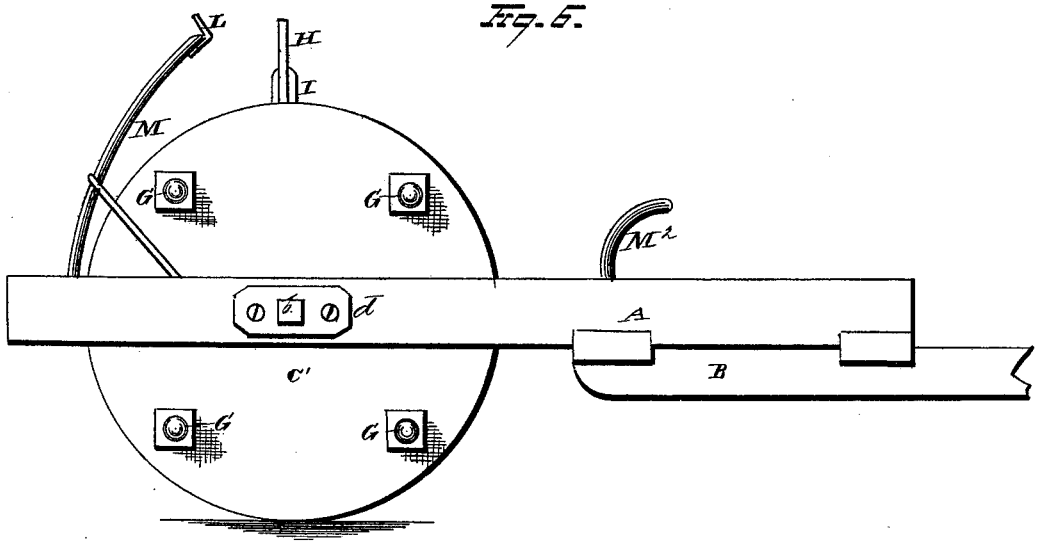
Fig. 6.



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UNITED STATES PATENT OFFICE.

EZRA DOMINY, OF FREEDOM, ILLINOIS, ASSIGNOR TO HIMSELF AND MILTON DAVIS, OF SAME PLACE.

IMPROVEMENT IN STALK-CUTTERS.

Specification forming part of Letters Patent No. **203,010**, dated April 30, 1878; application filed May 28, 1877.

To all whom it may concern:

Be it known that I, EZRA DOMINY, of Freedom, in the county of La Salle and State of Illinois, have invented a new and useful Improvement in Stalk-Cutters, of which the following is a specification:

My invention relates to an improvement in stalk-cutters.

Heretofore stalk-cutters have been provided with reciprocating knives or cutters adapted to sever the stalks. Several forms of construction have heretofore been adopted in stalk-cutters of the character above noted.

The object of my invention is to provide a stalk-cutter of such construction that it shall be of simple and durable structure, economical in manufacture, and easy of operation; and to that end my invention consists of a combination, in a stalk-cutter, of a crank-axle having a number of outwardly-curved arms journaled thereon, with a slotted cylinder secured between two ground or supporting wheels of practically the same diameter as the slotted cylinder, said ground or supporting wheels provided with radial grooves on their inner sides, for retaining the several curved arms in proper relative position.

In the accompanying drawings, Figure 1 is a side elevation of my improved machine. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a rear elevation with a portion of the slotted cylinder removed to show the interior of the cylinder. Fig. 4 is a plan view of the machine. Fig. 5 is a detached view of the crank-axle and reciprocating knives. Fig. 6 is a view of the machine as arranged for transportation.

A represents the frame of the machine, and B is the pole for the attachment of the team. C C′ are ground or supporting wheels of any desired size and material, and are journaled upon the bearings *a a′* of the crank-axle D. The ends *b* of crank-axle D are made square or of other angular shape, and firmly secured to the side pieces *c c′* of frame A, and prevented from turning by means of metallic plates *d*, provided with openings *d′*, corresponding in size and shape to the angular ends *b* of the crank-axle D. A slotted cylinder, E, is secured between the wheels C. The cylinder is composed of segmental sections F, the ends of which are retained in place by means of grooves *e*, formed in the inner sides of the supporting-wheels. The combined cylinder and supporting-wheels are firmly secured together by tie-rods G, of any desired number.

H represents knives, preferably made of steel, each knife being secured at its ends to the outer ends of a pair of curved arms, I. The inner ends of arms I are formed with rings *f*, which surround the crank-axle. Removable bearing-blocks *g* are inserted between the rings *f* and the crank-axle to receive the wear of the parts, and also to insure a larger bearing-surface for the arms. The arms nearest the supporting-wheels rest against the face *h*, formed on the shoulder *i* of the crank-axle, and the remaining knife-arm rings are held against each other, and in a fixed relative position, by means of a collar, J, and pin *j*, or equivalent means. The inner faces of the supporting-wheels are provided with radial grooves K, which serve as guides for the several knife-arms employed in the machine.

It will be observed that the arms are curved more or less, according to their distance from the supporting-wheels, in order that the ends of all the arms may have a full support within the radial grooves in the faces of the supporting-wheels.

L is a scraper located at the top of the slotted cylinder. The ends of the scraper rest upon the periphery of the supporting-wheels, and are held in place by means of the bars M, the lower ends of which are pivoted to the side pieces of the frame A. Scraper L serves to remove dirt from the wheels and cylinder as the machine is in operation.

M^1 M^2 are hooks pivoted to the forward cross-bar of the frame A, and serve the purpose of straightening the stalks, that they may be presented at right angles to the action of the several knives of the cutter.

The operation of my improved stalk-cutter is as follows: As the cylinder, with its supporting wheels of practically the same diameter, is rolled over a row of corn-stalks, the pivoted hooks serve to straighten out such stalks as have beaten down, and thus all the stalks of

the row are presented at right angles to the action of the machine. As the cylinder rolls over the stalks, as illustrated in Fig. 2, it serves to hold them firmly while the reciprocating knives sever them from their roots.

It will be observed that the knives are moved outwardly from the surface of the cylinder nearly their whole width before they touch the ground or the stalks lying on the ground, and thus, as the cylinder continues its onward movement, the stalks beneath the same are firmly held, while the knife is forced out and severs the stalks with which it comes in contact. The crank-axle is held stationary, and the stroke of the knives is equal to the distance of the crank-axle from the center of the ground or supporting wheels.

When the knives become worn or broken, they can be easily repaired or replaced.

The machine is adapted to be readily transported to any locality, without wear on the several knives or cutters, by simply reversing the position of the machine-frame, so that the crank-axle will be located above instead of below the centers of the ground or supporting wheels. The scraper is swung over on the upper side of the wheels and slotted cylinder, and the pivoted hooks are turned back upon the machine, as illustrated in Fig. 6. When the machine is arranged in the manner last described, the knives will not move below the surface of the slotted cylinder, and hence cannot receive injury as the machine is drawn over a roadway.

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

In a stalk-cutter, the combination, with the road-wheels, having radial grooves, of the slotted cylinder, stationary crank-axle, and reciprocating knives attached to outwardly-curved arms that engage in the radial groove in the road-wheels, substantially as set forth.

EZRA DOMINY.

Witnesses:
MILO ALLEN,
W. H. MCCLURE.