(No Model.) 2 Sheets—Sheet 1.

W. D. & U. C. GEIGER.

COMBINED STALK PULLER AND CUTTER.

No. 453,634. Patented June 9, 1891.

FIG. 1.

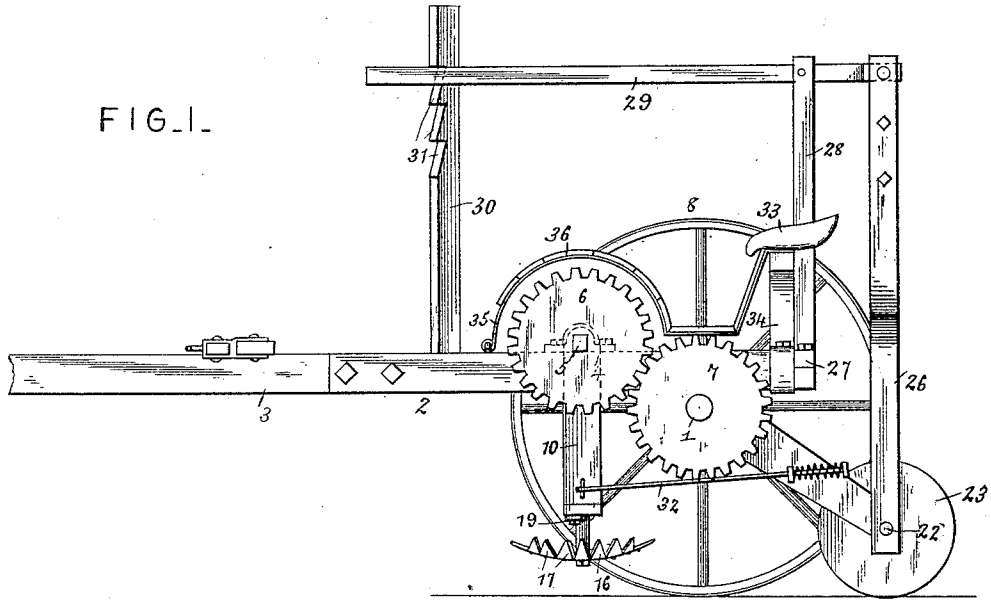
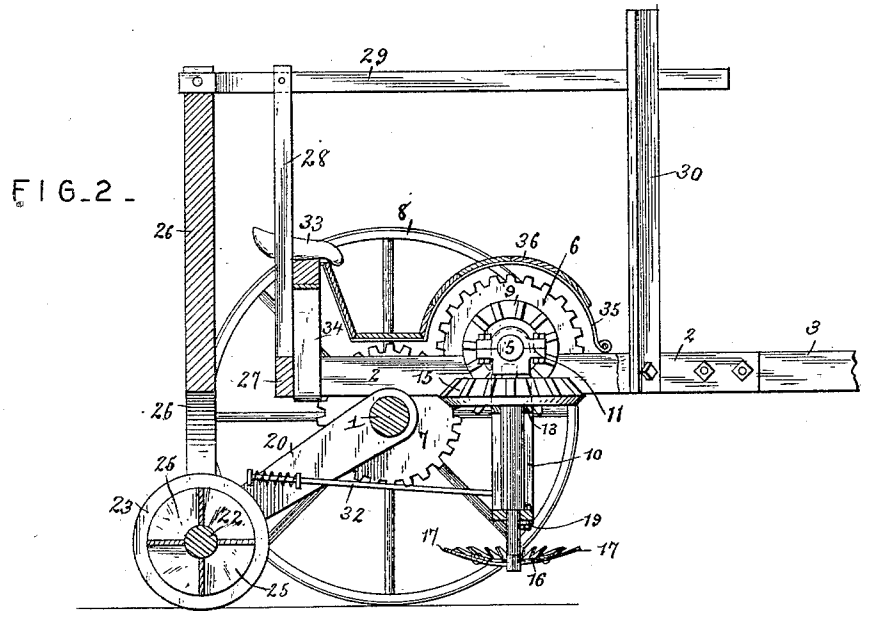


FIG. 2.



Witnesses

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(No Model.) 2 Sheets—Sheet 2.

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FIG-3-

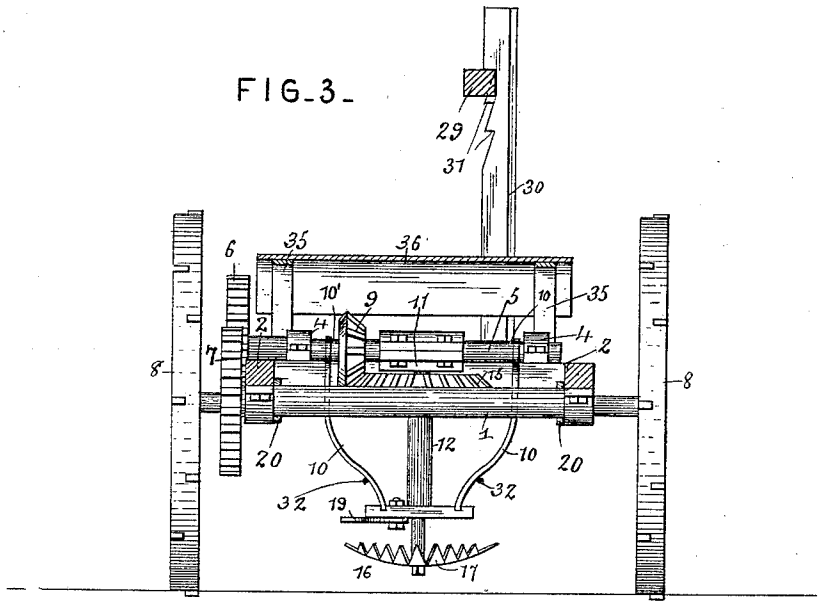


FIG-4-

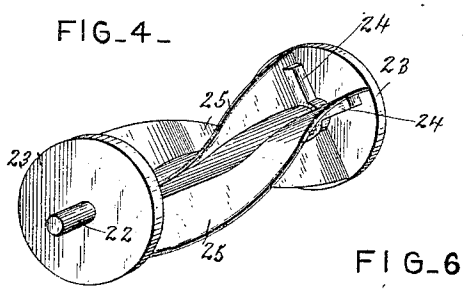


FIG-5-

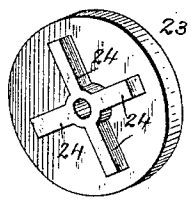
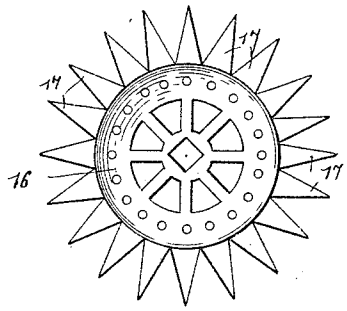


FIG-6-



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM D. GEIGER AND URIAH C. GEIGER, OF VALDOSTA, GEORGIA.

COMBINED STALK PULLER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 453,634, dated June 9, 1891.

Application filed June 30, 1890. Serial No. 357,266. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM D. GEIGER and URIAH C. GEIGER, citizens of the United States, residing at Valdosta, in the county of Lowndes and State of Georgia, have invented a new and useful Combined Stalk-Puller and Stalk-Cutter, of which the following is a specification.

The invention relates to combined stalk-pullers and stalk-cutters; and it has for its object to construct a machine which shall serve to first pull the stalks out of the ground and afterward to cut or chop them into suitable lengths, so that they may be readily plowed under.

The invention consists in the improved construction, arrangement, and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side view of a machine embodying our improvements, with the near wheel removed. Fig. 2 is a longitudinal vertical sectional view. Fig. 3 is a vertical transverse sectional view taken through the main shaft, from which the stalk-puller is driven. Fig. 4 is a perspective view of the stalk-chopper detached. Fig. 5 is a detail view of one of the end disks of the stalk-chopper. Fig. 6 is a detal view of the stalk-puller.

Like numerals of reference indicate like parts in all the figures.

1 designates the axle, upon which is supported the hound-frame 2, from which the tongue 3 projects forwardly. The hounds are provided on their upper sides with boxes 4, affording bearings for a transverse shaft 5, having at one end a pinion 6, which meshes with a spur-wheel 7 upon the inner side of one of the transporting-wheels 8 of the machine, and from which motion is thus communicated to the shaft 5. The latter is provided with a bevel-gear 9.

10 designates a frame, the sides of which are provided at their upper ends with perforations 10, by which they are journaled upon the shaft 5. Loosely journaled upon the latter is a box 11, which forms a bearing for the upper end of a shaft 12, which is also journaled in the bottom piece of the frame 10. The latter is furthermore provided with a cross-piece 13, through which the shaft 12 also extends. Said shaft 12 carries at its upper end a bevel-gear 15, that meshes with the bevel-gear 9 upon the shaft 5. At its lower end the shaft 12 carries the stalk-puller, which consists of a circular disk 16, armed at its periphery with outwardly-extending teeth 17, which may be riveted or otherwise secured to the said disk or formed integrally with the latter. The disk and teeth are made dishing or slightly concaved on the upper side, we having found by experiment that this construction is preferable.

Secured to the under side of the frame 10 is a laterally-extending arm 19, which is slightly curved, as shown, so as to form a sweep which in practice serves to disengage stalks and rubbish from the teeth of the disk 16. The action of the arm or sweep 19 serves to dispose the stalks lengthwise upon the ground in the position in which they are most effectually acted upon by the chopping device, which is to be hereinafter described.

Suitably mounted or journaled upon the axle of the machine are the rearwardly-extending arms or brackets 20, the lower ends of which have bearings for a transverse shaft 22. Upon the ends of said shaft are mounted the disks 23, each of which is provided on its inner side with radial flanges 24. To said flanges are secured the spiral knives or cutters 25. To the ends of the shaft 22, which project beyond the brackets 20, are journaled the arms of a bifurcated bracket or yoke 26. To a cross-bar 27, which connects the rear ends of the hounds, is secured an upwardly-extending bracket 28, at the upper end of which is pivoted a lever 29, the rear end of which has pivotal connection with the upper end of the yoke 26. To the front end of the hound-frame is secured an upright 30, having a series of notches 31, any one of which may be engaged by the front end of the lever 29, which may thus be retained in any position to which it may be adjusted.

The arms or brackets 20, journaled upon the axle of the machine, are connected by means of rods 32 with the side of the frame 10, carrying the stalk-puller. The said rods are connected adjustably with the sides of the frame, in order that the latter may be ar-

ranged in any desired position with relation to the chopping device.

33 designates the driver's seat, which is mounted upon a spring-support 34, the ends of which are attached to the sides of the hound-frame. Arched supports 35 are provided, upon which is mounted a shield or cover 36 to protect the gearing of the machine.

The operation and advantages of our invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. When the machine progresses over the field, the stalks are engaged by the sharp teeth of the approximately horizontal revolving disk 16 and torn from the ground, being delivered lengthwise when they come in contact with the arm or sweep 19. The chopper, which follows in rear of the pulling device, serves to cut the stalks into pieces of suitable length, the spiral arrangement of the knives causing them to cut with a sliding instead of a pressing movement, which is obviously more effectual. By properly manipulating the lever 29 the machine may, whenever desired, be thrown out of operation, or the chopping device may be adjusted to any desired elevation, so as to bear against the stalks with any deisired pressure.

Having thus described our invention, we claim and desire to secure by Letters Patent—

1. The combination, with a frame mounted upon an axle, of a supplementary frame carrying an approximately vertical shaft having at its lower end a disk provided with sharp-pointed teeth, and arms or brackets journaled upon the axle and provided at their lower ends with a shaft carrying a revolving stalk-cutting device, substantially as set forth.

2. In a machine of the class described, the herein-described stalk-pulling device, consisting of a disk having a peripheral series of sharp-pointed teeth, said disk and teeth being dished or concaved, substantially as set forth.

3. In a machine of the class described, the combination, with the stalk-pulling device consisting of a dishing or concave disk mounted at the lower end of a revolving shaft and armed with a circumferential series of sharp-pointed teeth or cutters, of an arm or sweep secured to the lower end of the frame in which said shaft is journaled and extending laterally from the same, substantially as and for the purpose set forth.

4. In a machine of the class described, the combination of a frame journaled or pivoted to the hound-frame and carrying the stalk-pulling device, the arms or brackets journaled upon the axle of the machine and carrying the stalk-chopping device, the links or rods connecting said arms with the sides of the pivoted frame, and mechanism for adjusting said arms, substantially as set forth.

5. The combination of the hound-frame having a transverse shaft, the frame mounted pivotally upon the latter and carrying the stalk-pulling device, the arms journaled upon the axle and carrying the stalk-chopping device, the links secured to said arms and connected adjustably with the frame having the stalk-pulling device, a yoke mounted pivotally upon the shaft carrying the stalk-chopper, a lever fulcrumed to an upright mounted upon the main frame, said lever having pivotal connection with the yoke, and a notched arm engaging the front end of said lever, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

WILLIAM D. GEIGER.
URIAH C. GEIGER.

Witnesses:
WM. A. PARDEE,
R. T. MYDDELTON.