

W. STOKER.
CELERY DIGGER.
APPLICATION FILED FEB. 15, 1909.

968,432.

Patented Aug. 23, 1910.

3 SHEETS—SHEET 1.

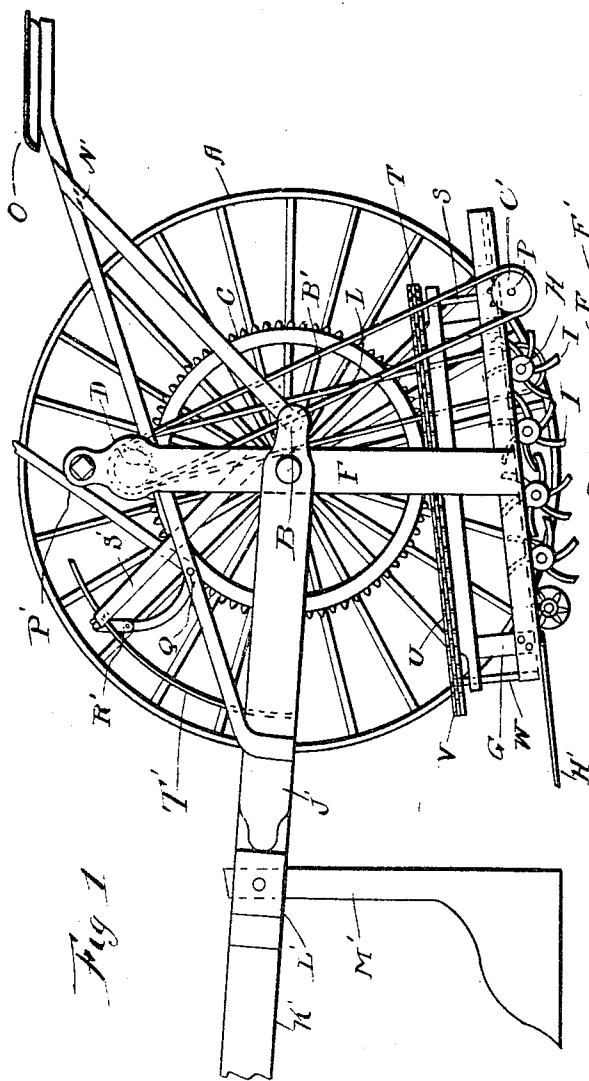


Fig. 1

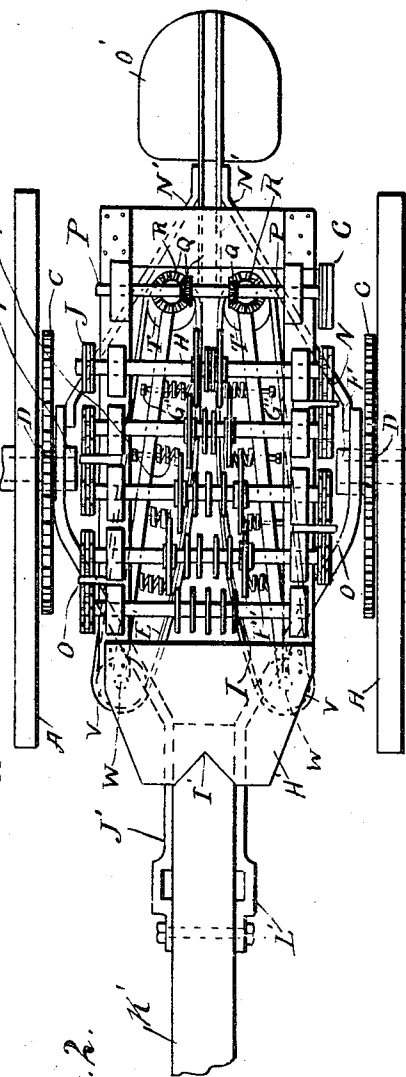


Fig. 2.

WITNESSES

S. M. Gallagher
Francis W. Pooch

INVENTOR

William Stoker

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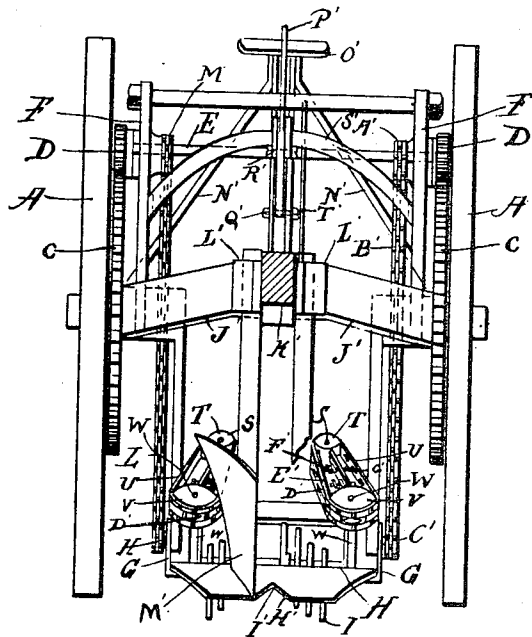
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3 SHEETS—SHEET 2.

Fig. 3.



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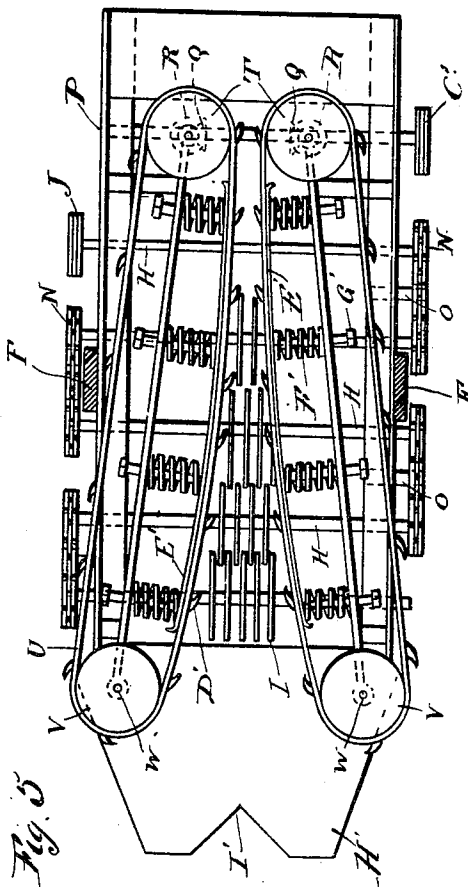
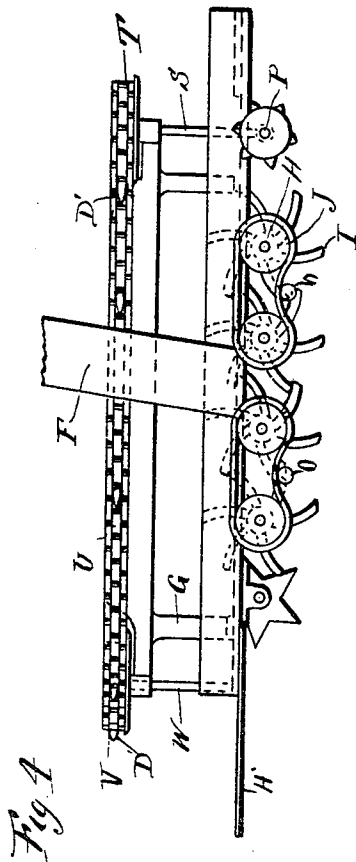
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

WILLIAM STOKER, OF SOMERTON, PENNSYLVANIA.

CELERY-DIGGER.

968,432.

Specification of Letters Patent. Patented Aug. 23, 1910.

Application filed February 15, 1909. Serial No. 477,834.

To all whom it may concern:

Be it known that I, WILLIAM STOKER, a citizen of the United States, residing at Somerton, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Celery-Diggers, of which the following is a specification.

My invention relates to a new and useful improvement in celery diggers, and has for its object to provide an exceedingly simple and effective device of this character, whereby the celery may be taken from the ground, carried to the rear of the digger and dropped off.

Another object of my invention is to provide a device of the character described which will remove the earth from the celery while it is being conveyed to the rear of the machine.

Another object of my invention is to provide a celery digger, the forward end of which may be depressed so that it will be placed in a position to cut the roots when they have been planted extra deep.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a side elevation of my improved celery digger, one of the wheels being removed. Fig. 2, a bottom view thereof. Fig. 3, a front view, one of the plows being removed to more clearly show the conveying mechanism. Fig. 4, an enlarged side elevation of the lower or movable frame showing the knockers and conveyer chains, and Fig. 5, a plan view thereof.

In carrying out my invention as here embodied, A represents the running wheels of the machine, which are journaled on the axle B, said axle being provided with an ordinary ratchet so that the wheels may readily pass around a curve.

To the wheels A are secured the gear wheels C, which mesh with the pinions D secured to the shaft E, which are journaled in the vertical side pieces F, the lower ends of said side pieces carrying the lower frame G, to which are journaled a number of

shafts H, to each of which are secured a plurality of knockers I. On the end of each of these shafts is placed a sprocket wheel J, and over one of these runs a chain L, which passes upward and over a sprocket wheel M secured to the shaft E. Running over the sprocket wheel on the opposite end of the shaft H is a chain N, which runs over the sprocket wheel J on the shaft H. Next to it and on the opposite end of the last named shaft is another one of the sprocket wheels, over which a chain runs which engages with the sprocket wheel on the shaft next to it and so on until all of the shafts H are revolved through the medium of the chain L. Each of the short chains N is provided with a tightener O, so that said chains may be prevented from slipping. To the rear of the shafts H is journaled another shaft P, having secured thereto the bevel gears Q, which mesh with the bevel gears R secured to the upright shafts S, said shafts being journaled to the lower frame G, and to their upper ends are secured the sprocket wheels T, around which pass the endless conveyer chains U, said chains passing around other sprocket wheels V secured to shafts W journaled to the forward end of the frame G. To the shaft E is secured another sprocket wheel A', over which runs a chain B', which passes around a sprocket wheel C' secured to the shaft P, thus driving the bevel gears Q, which will revolve the bevel gears R, doing likewise with the sprocket wheels T through the medium of the shafts S, which will cause the inner portion of the conveyer chains U to move toward the rear of the digger. On said chains are placed a number of fingers D' which will take hold of the celery and compel it to move along with the conveyer chains. The conveyer chains may be pressed toward one another by the compression shoes E', which are forced inward by the coil springs F' and which may be regulated by screws G'.

To the forward end of the frame G is secured the cutter H', the center portion of which has a V-shaped notch I' cut therein so that it will readily cut the roots of the celery and at the same time have a tendency to draw the stalks toward the center of the digger.

To the axle B are attached the brackets J', between which is fastened the tongue K', and the forward ends of said brackets

may be so bent as to produce the attaching members L', in which are adjustably fastened the right and left hand plows M'. To these brackets is attached the seat frame N', on which is placed the seat O', and to a portion of this seat frame is pivoted the virtually L shaped lever P', as indicated at Q'. To the short end of this lever is attached one end of the link R', the opposite end being fastened to the bow S', the ends of which are securely fastened to the vertical side pieces F, said bow running on an adjusting segment T'. From this it will be seen that when the long end of the lever P' is moved forward, the short end of said lever will be moved downward, drawing the outer end of the bow S' downward, and as this bow is securely fastened to the side pieces F, their upper ends will be drawn forward, drawing the lower ends rearward, which would depress the front end of the lower frame G, thus causing the cutter H' to dig deeper into the ground, and when it is desired to have the cutter go less deep into the ground the opposite movement is given the long end of the lever P'.

In practice the digger is drawn along a row of celery so that one of the plows M' will remove the dirt from either side of the celery above the roots thereof, then directly behind this follows the cutter H' which travels beneath the celery stalks and through a portion of the roots, cutting them away from the earth. This will cause the upper ends of the celery stalks to fall to the rear where they will be caught by the conveyer chains U and the fingers thereon, which will carry the celery rearward, at the same time the knockers I will revolve knocking the earth from the stalks, and when the celery has reached the rear of the machine it will drop off on to the ground, where it may be picked up and placed in some receptacle.

Having thus fully described my invention, what I claim as new and useful, is—

1. In a celery digger, an axle, running wheels journaled thereon, vertical side pieces secured to the axle, a tongue, brackets secured to the axle and to the tongue, a right and left hand plow adjustably mounted upon the tongue, a lower frame carried by the lower end of the vertical side pieces, a cutter carried by said lower frame to the rear of the plows for cutting the celery roots, means for conveying the celery rearwardly from the cutter over the frame to which it is attached, and a seat carrying frame connected to the brackets.

2. In a celery digger, an axle, running wheels journaled thereon, vertical side pieces secured to the axle, a tongue, brackets secured to the axle and to the tongue, a right and left hand plow adjustably mounted upon the tongue, a lower frame carried by the lower end of the vertical side pieces, a cut-

ter carried by said lower frame to the rear of the plows for cutting the celery roots, means for conveying the celery rearwardly from the cutter over the frame to which it is attached, and means for removing the dirt from the celery as it passes over the frame, and a seat carrying frame connected to the brackets.

3. In a celery digger, an axle, running wheels journaled thereon, vertical side pieces secured to the axle, a tongue, brackets secured to the axle and to the tongue, a right and left hand plow adjustably mounted upon the tongue, a lower frame carried by the lower end of the vertical side pieces, means mounted on the forward end of the frame at the rear of the plows for cutting the roots of the celery, and conveyer chains having fingers formed therewith for conveying the celery over the frame to the rear thereof.

4. In a celery digger, an axle, running wheels journaled thereon, vertical side pieces secured to the axle, a tongue, brackets secured to the axle and to the tongue, a right and left hand plow adjustably mounted upon the tongue, a lower frame carried by the lower end of the vertical side pieces, means mounted on the forward end of the frame at the rear of the plows for cutting the roots of the celery, conveyer chains having fingers formed therewith for conveying the celery over the frame to the rear thereof, and compression shoes resting against the inner surfaces of the chains, and means for forcing the compression shoes toward one another.

5. In a celery digger, an axle, running wheels journaled thereon, vertical side pieces secured to the axle, a tongue, brackets secured to the axle and to the tongue, a right and left hand plow adjustably mounted upon the tongue, a lower frame carried by the lower end of the vertical side pieces, means mounted on the forward end of the frame at the rear of the plows for cutting the roots of the celery, a pair of conveyer chains, the inner strands of which operate rearwardly over the frame, fingers formed with said chains, and compression shoes for normally holding the inner strands of these chains in proximity to one another.

6. In a celery digger, an axle, running wheels journaled thereon, vertical side pieces secured to the axle, a tongue, brackets secured to the axle and to the tongue, a right and left hand plow adjustably mounted upon the tongue, a lower frame carried by the lower end of the vertical side pieces, means mounted on the forward end of the frame at the rear of the plows for cutting the roots of the celery, a pair of conveyer chains, the inner strands of which operate rearwardly over the frame, fingers formed with said chains, compression shoes resting against the inner surface of the inner strands of the conveyer chains approxi-

mately throughout their entire length, and a plurality of coil springs engaging each of the compression shoes for normally pressing them toward one another.

5 7. In a celery digger, an axle, running wheels journaled thereon, vertical side pieces secured to the axle, a tongue, brackets secured to the axle and to the tongue, a right and left hand plow adjustably mounted upon the tongue, a lower frame carried by 10 the lower end of the vertical side pieces, means mounted on the forward end of the frame at the rear of the plows for cutting the roots of the celery, a pair of conveyer chains, the inner strands of which operate 15 rearwardly over the frame, fingers formed with said chains, compression shoes resting against the inner surface of the inner strands of the conveyer chains approximately throughout their entire length, a plurality of coil springs engaging each of the compression shoes for normally pressing them toward one another, means for operating the conveyer chains, and means for removing the dirt from the celery as it passes over the frame. 25

8. In a celery digger, an axle, running wheels journaled thereon, vertical side pieces secured to the axle, a tongue, brackets 30 secured to the axle and to the tongue, a right and left hand plow adjustably mounted upon the tongue, a lower frame carried by the lower end of the vertical side pieces, means mounted on the forward end of the frame at the rear of the plows for cutting the roots of the celery, a pair of conveyer chains, the inner strands of which operate rearwardly over the frame, fingers formed with said chains, compression shoes resting 35 against the inner surface of the inner strands of the conveyer chains approximately throughout their entire length, a plu-

45 rality of coil springs engaging each of the compression shoes for normally pressing them toward one another, means for operating the conveyer chains, and revoluble knockers for removing the dirt from the celery as it passes rearward.

9. In a celery digger comprising dirt removing members, a cutting member, conveying chains for grasping the celery, and carrying it rearwardly, and knockers operated independently for removing the dirt from the celery as it is conveyed rearwardly. 50

10. In a celery digger, the combination 55 with a main frame, of a lower frame having conveyer chains for grasping the celery and knockers mounted thereon, and a cutter for cutting the roots of the celery so that it may be readily grasped and moved rearwardly by the conveyer chains. 60

11. In a celery digger, the combination with a main frame, of a lower frame adjustably mounted in relation thereto, conveyer chains mounted thereon, compression shoes resting against the inner strands of said chains, means for normally pressing said shoes toward one another, knockers mounted below the conveyer chains, the upper portions of which operate in the opposite direction to the inner strands of the conveyer chains, and means mounted on the forward end of the frame for cutting the roots of the celery so that it may be grasped and carried rearwardly by the conveyer chains. 70 75

In testimony whereof, I have hereunto affixed my signature in the presence of two subscribing witnesses.

WILLIAM STOKER.

Witnesses:

EDW. W. ANSTICE,
S. M. GALLAGHER.