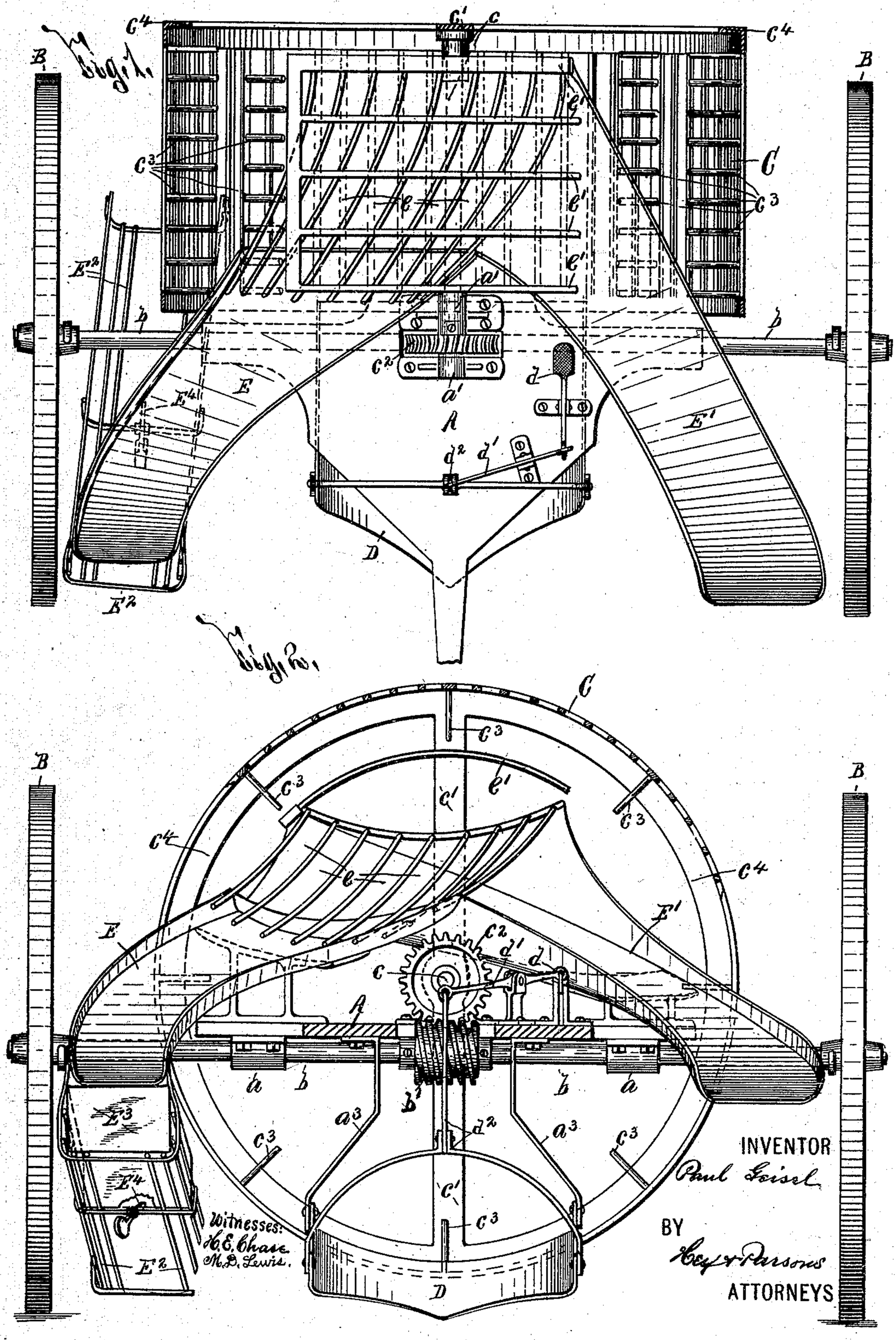
No. 681,051. Patented Aug. 20, 1901.

P. GEISEL.

POTATO DIGGER.

(Application filed Aug. 9, 1898.)

(No Model.)



UNITED STATES PATENT OFFICE.

PAUL GEISEL, OF ROCHESTER, NEW YORK, ASSIGNOR TO CHARLES CHAVERIAT, OF CHICAGO, ILLINOIS.

POTATO-DIGGER.

SPECIFICATION forming part of Letters Patent No. 681,051, dated August 20, 1901.

Application filed August 9, 1898. Serial No. 688,180. (No model.)

To all whom it may concern:

Be it known that I, PAUL GEISEL, of Rochester, in the county of Monroe, in the State of New York, have invented new and useful Improvements in Potato-Diggers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention has for its object the production of a potato-digger which is particularly simple in construction and highly effective in operation; and to this end it consists in the combination, construction, and arrangement of the component parts of a potato-digger, as hereinafter fully described, and pointed out in the claims.

In describing this invention reference is had to the accompanying drawings, forming part of this specification, in which like letters indicate corresponding parts in both views.

Figures 1 and 2 are respectively a top plan and a front elevation, partly broken away and in section, of my improved potato-digger, the receptacle for receiving the potatoes being shown only in Fig. 2.

As preferably constructed my improved potato-digger consists of a frame A, supporting-wheels B B, a movable screen C, a plow D, and chutes E E′ E². The frame A is of any desirable form, size, and construction capable of supporting the remaining parts of my invention. The wheels B are usually mounted upon a revoluble axle *b*, journaled in suitable bearings *a*, provided upon the frame A. The screen C is preferably formed substantially cylindrical, is arranged between the rear portions of the wheels B B at the rear of the axle *b*, with its axis substantially parallel with the line of draft, and is actuated by the supporting-wheels B B. Said screen is generally supported in position by a spindle *c*, which is journaled in suitable bearings *a′*, provided upon the frame A, is arranged substantially parallel with the line of draft, and is fixed to the screen C by any suitable means, as a cross-bar *c′*. The spindle *c* may be connected to the axle *b* by any desirable power-transmitting mechanism, as a worm-wheel and worm c^2 *b′*. The screen C is usually formed with suitable perforations in its periphery. Its inner face is provided with substantially crosswise series of teeth c^3, and the rear end thereof is generally formed with an inwardly-extending flange c^4.

The plow D is suitably supported by the frame A, is arranged in advance of the screen C, and discharges into the front end of said screen. The rear end of said plow is preferably pivotally connected to arms a^3, depending from the frame A, and its front end is raised and lowered by a suitable operating member *d*, as a foot-lever, pivoted to the frame A and connected to said plow by any desirable means, as a lever *d′* and a link d^2.

The chutes E E′ are usually supported by the frame A, with corresponding extremities arranged within the screen C and their other extremities extended downwardly in opposite directions through the front end of the screen C and laterally beyond opposite portions of the periphery of said screen, as best seen in Fig. 2. The extremity of the chute E within the screen C is generally formed with lengthwise perforations *e* and supports a series of spring-arms *e′*, which are arranged at substantially right angles with the perforations *e*, are separated a greater distance than the adjacent sides of the perforations *e*, and are supported above said perforations and in close proximity to the path of the teeth c^3 in a plane substantially concentric with the overlying portion of the periphery of the screen C. The extremity of the chute E′ within the screen C is preferably arranged beneath the perforations *e* of the chute E.

The chute E^2 is usually supported at one side of the adjacent portion of the periphery of the screen C and extends in a downwardly-inclined plane from front to rear of my potato-digger. Said chute is preferably supported at its upper front extremity by the outer end of the chute E, but may be otherwise supported, if desired. The upper end of the chute E^2 generally supports a suitable receptacle E^3, which is held in position by a catch E^4, of such construction that when the desired amount of potatoes are within the receptacle E^3 the catch is automatically forced from its operative position to permit the automatic rearward discharge of said receptacle along the chute E^2. The catch E^4 may be of any desirable form, size, and construction

and is here illustrated as consisting of a lever pivoted to the bottom of the chute E^2 and having its upper end movable into engagement with the rear side of the receptacle E^3 and its lower end provided with a suitable weight. As soon as the receptacle E^3 is filled with potatoes the weight of said receptacle and potatoes forces the upper end of the catch E^4 from its operative position against the action of the weighted end of said catch. The chute E^2 and the receptacle E^3 are particularly applicable for my improved potato-digger but may obviously be dispensed with, if desired.

In the operation of my invention the plow D discharges the dirt and potatoes within the screen C. The small particles of dirt readily pass through the perforations of said screen, and potatoes, grass, and lumps of dirt are elevated by the teeth c^3 and passed over the spring-arms e'. The potatoes pass between the arms e' to the inner extremity of the chute E and are discharged at one side of the potato-digger into the receptacle E^3. The smaller lumps of dirt pass between the arms e' and through the perforations e in the chute E to the inner extremity of the chute E′ and are discharged at the opposite side of the potato-digger. The grass and larger lumps of dirt are fed over the arms e' by the teeth c^3 of the screen C and are discharged into the chute E′.

The construction and operation of my invention will now be readily understood upon reference to the foregoing description and the accompanying drawings.

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

1. In a potato-digger, the combination of a revoluble substantially cylindrical screen, a plow discharging into the screen, a chute having one extremity arranged within the screen and formed with perforations and its opposite extremity discharging beyond the screen, and spring-arms arranged above the perforations of the chute, substantially as and for the purpose described.

2. In a potato-digger, the combination of a revoluble substantially cylindrical screen, a plow discharging into the screen, a chute having one extremity arranged within the screen and formed with perforations and its opposite extremity discharging beyond the screen, and a second chute having one extreximity supported beneath the perforations of the first chute and its opposite extremity arranged at an angle with the first chute and discharging beyond the screen, substantially as and for the purpose set forth.

3. In a potato-digger, the combination of a revoluble substantially cylindrical screen, a plow discharging into the screen, a chute having one extremity arranged within the screen and its opposite extremity discharging beyond the screen, and a chute extending from front to rear for receiving the discharge from the first chute, substantially as and for the purpose described.

4. In a potato-digger, the combination of a revoluble substantially cylindrical screen, a plow discharging into the screen, a chute having one extremity arranged within the screen and formed with perforations and its opposite extremity discharging beyond the screen, spring-arms arranged above the perforations of the chute, and a second chute having one extremity arranged beneath the perforations of the first chute and discharging beyond the screen, substantially as and for the purpose specified.

5. In a potato-digger, the combination of a revoluble substantially cylindrical screen, a plow discharging into the screen, a chute having one extremity arranged within the screen and formed with perforations and its opposite extremity discharging beyond the screen, a second chute having one extremity arranged beneath the perforations of the first chute and discharging beyond the screen, and a third chute extending from front to rear and arranged at one side of the screen for receiving the discharge from the first chute, substantially as and for the purpose set forth.

6. In a potato-digger, the combination of a revoluble substantially cylindrical screen, a plow discharging into the screen, a chute having one extremity arranged within the screen and formed with perforations and its opposite extremity discharging beyond the screen, spring-arms arranged above the perforations of the chute, a second chute having one extremity arranged beneath the perforations of the first chute and discharging beyond the screen, and a third chute extending from front to rear and arranged at one side of the screen for receiving the discharge from the first chute, substantially as and for the purpose described.

7. In a potato-digger, the combination of a revoluble substantially cylindrical screen provided with teeth projecting from its inner face, a plow discharging into the screen, a chute having one extremity arranged within the screen and its opposite extremity discharging beyond the screen, and spring-arms arranged above the first extremity of the chute in proximity to the teeth of the screen, substantially as and for the purpose set forth.

8. In a potato-digger, the combination of a revoluble substantially cylindrical screen, a plow discharging into the screen, a chute extending from front to rear, a receptacle movable along said chute, and a second chute having one extremity arranged within the screen and its opposite extremity discharging beyond the screen into the receptacle, substantially as and for the purpose described.

9. In a potato-digger, the combination of a frame, a supporting-wheel, a revoluble screen actuated by the supporting-wheel and having its axis arranged substantially parallel with the line of draft, a plow discharging into the screen, and diverging chutes having their ad-

jacent extremities arranged within the screen and their opposite extremities discharging beyond opposite sides of the screen, substantially as described.

10. In a potato-digger, the combination of a revoluble substantially cylindrical screen, a plow discharging into the screen, a chute extending from front to rear, a receptacle movable along said chute, a second chute having one extremity arranged within the screen and formed with perforations, and its opposite extremity discharging beyond the screen into the receptacle, and a third chute having one extremity arranged beneath the perforations of the first chute and discharging beyond the screen, substantially as and for the purpose specified.

11. In a potato-digger, the combination of a frame, a revoluble substantially cylindrical screen supported by the frame, a plow discharging into the screen, a receptacle detachably supported by the frame means for conducting the potatoes from the screen to the receptacle, and a catch for normally holding the receptacle in position, said catch being automatically forced from its operative position when the predetermined amount of potatoes is within the receptacle, substantially as and for the purpose set forth.

12. In a potato-digger, the combination of a frame, a revoluble substantially cylindrical screen supported by the frame, a plow discharging into the screen, a chute extending from front to rear and arranged at one side of the screen, a receptacle detachably supported by said chute, means for conducting the potatoes from the screen to the receptacle, and a catch for normally holding the receptacle in position, said catch being automatically forced from its operative position when the predetermined amount of potatoes is within the receptacle, substantially as and for the purpose set forth.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Rochester, in the county of Monroe, in the State of New York, this 5th day of August, 1898.

PAUL GEISEL.

Witnesses:
HARRY OTIS POOLE,
MARY R. ORWEN.