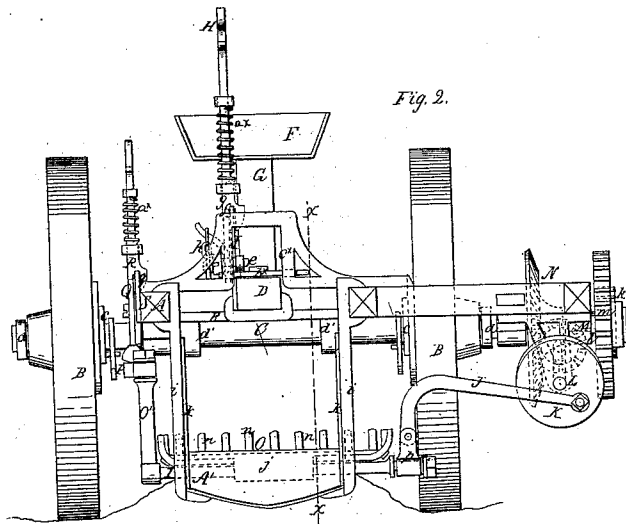
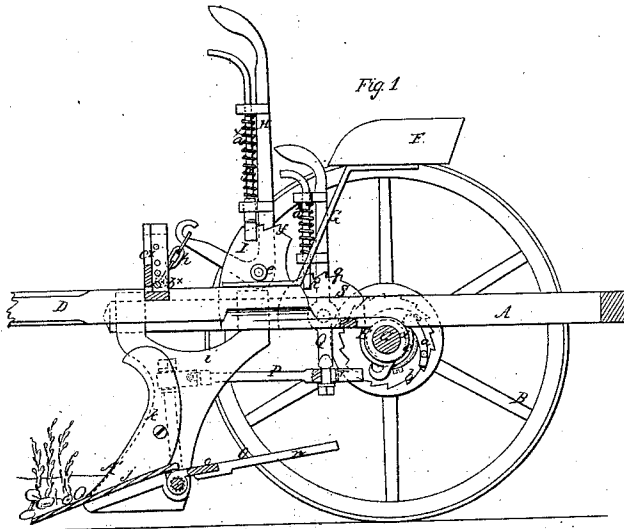


Clint & Lynd.

Potato Digger.

Patented Feb. 5, 1861.

*N^o 295.
31,299.*



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UNITED STATES PATENT OFFICE.

DE WITT CLINT AND IVES LYND, OF POESTENKILL, NEW YORK.

IMPROVEMENT IN MACHINES FOR DIGGING POTATOES.

Specification forming part of Letters Patent No. 31,299, dated February 5, 1861.

To all whom it may concern:

Be it known that we, DE WITT CLINT and IVES LYND, of Poestenkill, in the county of Rensselaer and State of New York, have invented a new and Improved Potato-Digging Machine; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of our invention, taken in the line *x x*, Fig. 2; Fig. 2, a front elevation of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in the employment or use of an adjustable scoop in connection with an adjustable reciprocating screen, the above parts being placed on a mounted frame and arranged substantially as hereinafter described, whereby the potatoes, as the machine is drawn along, are dug from the hills or drills, separated from the earth, and deposited on the top of the ground, the work being performed in an expeditious and perfect manner.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A represents a rectangular frame, which is mounted on two wheels, B B, the axle C of which is at the center of the frame. The wheels are placed loosely on the axle, and are connected thereto when the machine is drawn forward by means of pawls *a* engaging with ratchets *b* in the wheel-hubs, the pawls being attached to hubs *c*, which are secured on the axle.

On the axle, at the outer sides of the wheels, there are placed and secured bosses *d*, the bosses as well as the hubs *c* being secured to the axle by means of set-screws and by being shifted in position admitting of the wheels B B being secured on their axle at a greater or less distance apart, as may be desired.

D is the draft-pole, the back end of which has a metal fork, E, attached, the ends of which are fitted loosely on the axle C, as shown at *d' d'* in Fig. 2. To the back end of the draft-pole the driver's seat F is attached by an elastic bar, G, and there is also attached to the back part of the draft-pole a bent lever,

H, the fulcrum-pin *e* of which passes through a sector-plate, I, provided with ratchet-shaped teeth *f* at its upper part. The lever H has a spring-pawl, *g*, attached to it, said pawl engaging with the ratchet-teeth *f*. The front end of the lever H is connected by links *h* to the front part of the frame A, and it will be seen that by drawing back the upper part of lever H the front part of the frame A will be elevated and retained at any desired height by the pawl *g* and ratchet-teeth *f*.

To the front end of the frame A there are attached two pendants, *i i*, which are flat plates forked at their upper ends to admit of a secure attachment of them to the frame A.

Between the lower parts of the plates *i i* there is secured a metal plate, *j*, having a rounded and slightly pointed front edge, as shown in Fig. 2. The plate *j* is slightly inclined, and to the inner side of each plate *i* there is attached a cutter, *k*, the edges of which project a trifle in front of the front edges of plates *j*. The plate *j*, in connection with the plates or pendants *i i* and cutters *k*, form a scoop A'.

Through the lower parts of the plates *i i* a shaft, I, passes, and one end of this shaft is connected by a pitman, J, to a crank-pulley, K, at the front end of a shaft, L, at one side of the frame A. At the back end of shaft L there is a bevel-pinion, M, which gears into a bevel-wheel, N. The shaft of the bevel-wheel N has a pinion, *k*, on its outer end, and the pinion *k* gears into a wheel, *m*, on the axle C. By this arrangement a reciprocating movement is given the shaft I as the machine is drawn along.

To the shaft I a screen, O, is attached. This screen may be constructed of teeth *n*, attached at right angles to a bar or head, *o*, the latter being connected to the shaft I directly back of the plate *j* of the scoop. The shaft I is allowed to turn in its bearings, and the pitman J is connected to said shaft by a socket, *p*, which admits of the shaft turning without affecting the pitman. The end of the shaft I opposite to that where the pitman J is connected has an arm, O', attached to it, and the upper end of this arm is connected by a rod, P, with the lower end of a lever, Q, which is attached to the frame A, and has a pawl, R, secured to it. The lower end of pawl R en-

gages with ratchet-teeth *g* on a plate, *S*, attached to the frame. The pawl *R* of lever *Q*, as well as the pawl *g* of lever *H*, have spiral springs *a*^x on them, which springs have a tendency to keep the pawls in their respective ratchet-teeth *f g*.

The operation is as follows: As the machine is drawn along the scoop *A'* plows up the potatoes from the drills or hills, the depth of the penetration of the scoop being regulated by adjusting the front part of the frame *A* by means of a pin, *b*^x, passing through a yoke, *c*^x. The potatoes and earth pass up the inclined plate *j* and upon the screen *O*, the latter being more or less inclined, as may be required, by adjusting the lever *Q*. This varying of the inclination of the screen is essential in order to effect a perfect separation of the potatoes from the earth, for if the earth be light and loose a considerable inclination may be given the screen as the earth will quickly pass through the screen; but if the soil be heavy and moist the screen will require to be adjusted in a less inclined position to prevent the earth passing off the end of the screen with the potatoes.

The back end of the rod *P* is connected to the lower end of lever *Q* by means of a loop or link, *r*, as shown in Fig. 1, the lower end of lever *Q* fitting in said loop or link. This

arrangement admits of a certain degree of play or rising and falling movement of the screen, so that it may conform to the inequalities of the surface of the ground and pass over obstructions.

In moving the machine from place to place the scoop is elevated above the surface of the ground by actuating lever *H*, as previously described.

We do not claim any of the parts separately and irrespective of the arrangement herein shown; but

We do claim as new and desire to secure by Letters Patent—

1. The combination of the scoop *A'* with the adjustable reciprocating screen *O*, the above parts being applied to a mounted frame, *A*, and all arranged for joint operation, as and for the purpose set forth.

2. The connecting of the rod *P* to the lever *Q* by means of the link or loop *r*, as shown, in combination with the screen *O*, and in the manner and for the purpose specified.

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Witnesses:

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