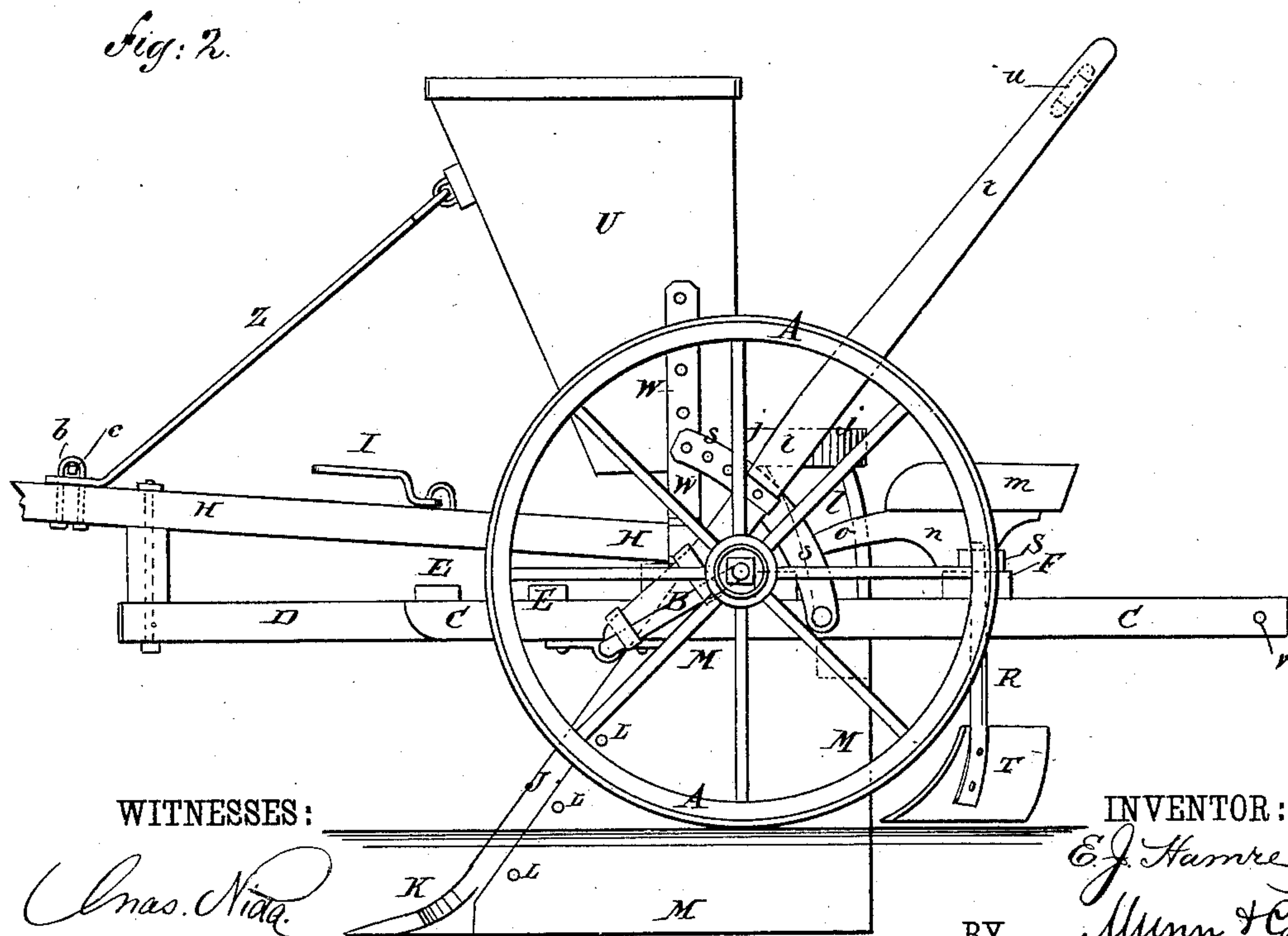
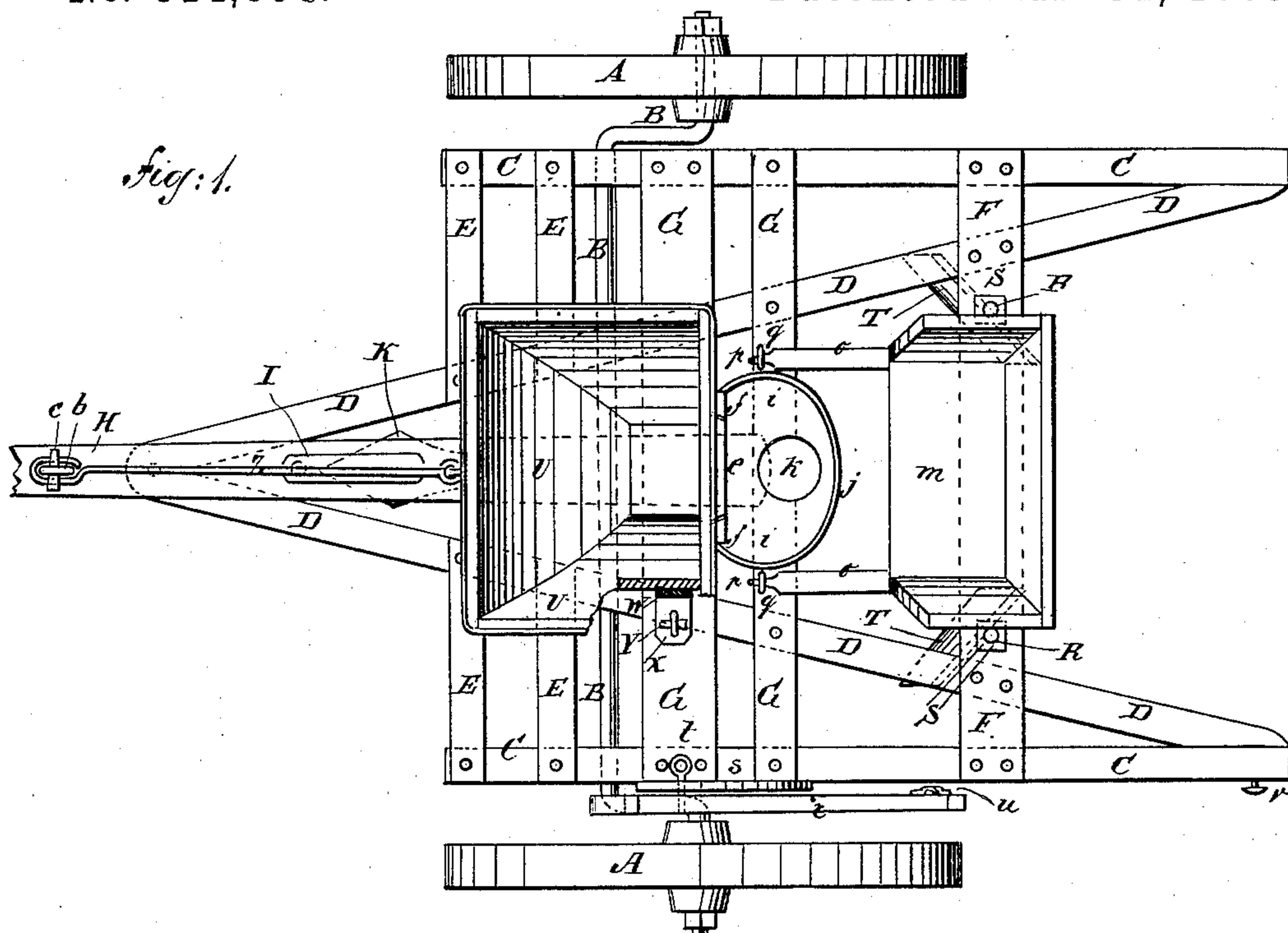


E. J. HAMRE.

COMBINED POTATO AND TREE PLANTER.

No. 314,830.

Patented Mar. 31, 1885.



WITNESSES:

Chas. Nida
C. Sedgwick

INVENTOR:

E. J. Hamre
Munn & Co
ATTORNEYS.

BY

(No Model.)

2 Sheets—Sheet 2.

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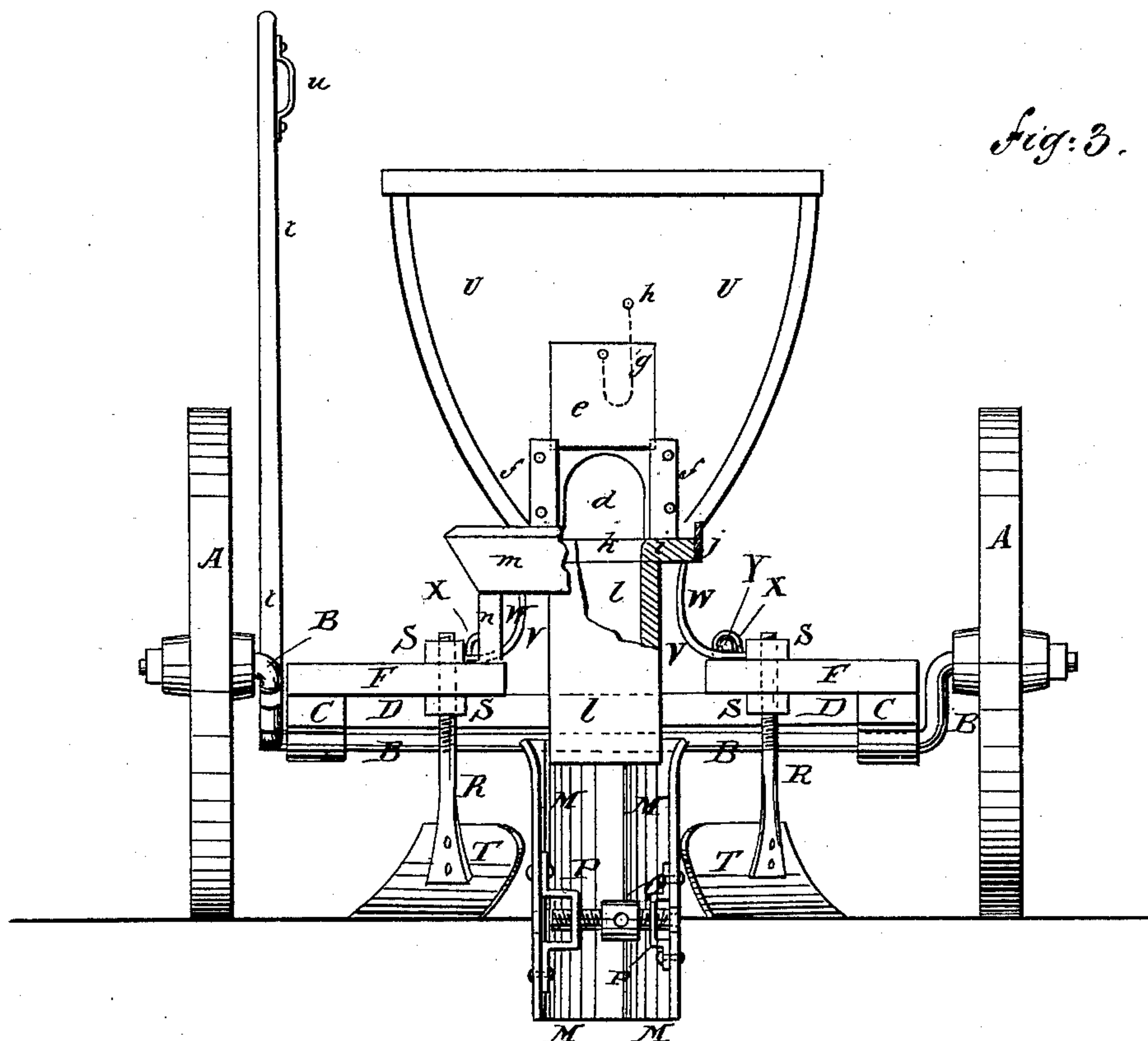
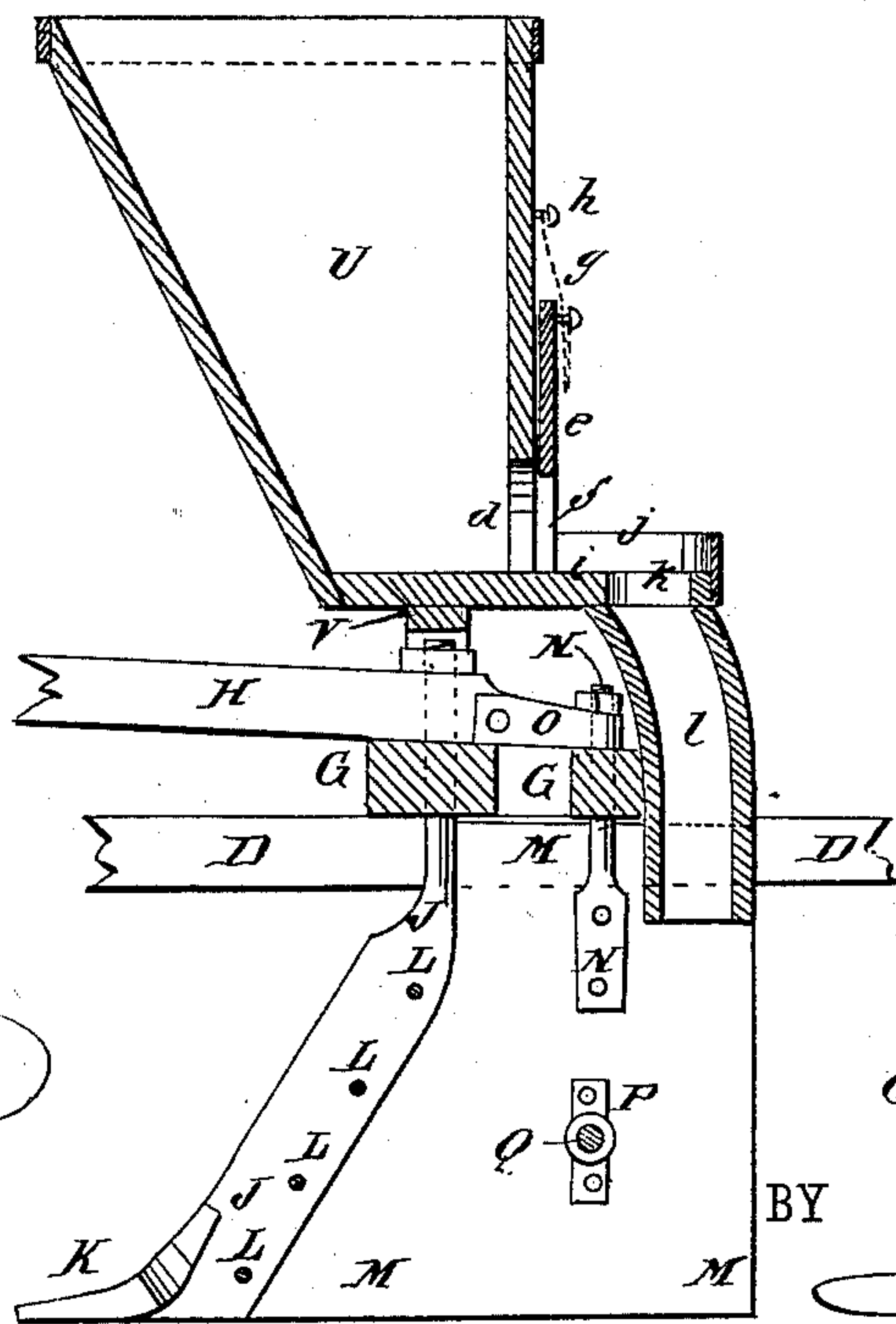


Fig: 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EVEN J. HAMRE, OF ST. PAUL, MINNESOTA, ASSIGNOR TO HIMSELF, JOHN G. RIHELDAFFER, AND JAMES W. BROWN, ALL OF SAME PLACE.

COMBINED POTATO AND TREE PLANTER.

SPECIFICATION forming part of Letters Patent No. 314,830, dated March 31, 1885.

Application filed May 27, 1884. (No model.)

To all whom it may concern:

Be it known that I, EVEN J. HAMRE, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Combined Potato and Tree Planters, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1, Sheet 1, is a plan view of my improvement arranged as a potato-planter. Fig. 2, Sheet 1, is a side elevation of the same. Fig. 3, Sheet 2, is a rear elevation of the same, part being broken away. Fig. 4, Sheet 2, is a sectional side elevation of a part of the same.

The object of this invention is to facilitate the planting of potatoes and small trees and promote accuracy in such planting.

The invention consists of the combination of parts and their construction, substantially as hereinafter fully set forth and claimed.

A represents the wheels, the axle B of which is bent twice at right angles at the inner side of each wheel in such directions that the crank-arms thus formed will be upon the same side of the said axle and parallel with each other. The straight middle part of the axle B rocks in bearings attached to the side bars, C, of the frame of the machine at a little distance from the forward ends of the said side bars. To the inner sides of the rear ends of the side bars, C, are secured the beveled rear ends of two bars, D. The bars D incline toward each other, and their forward ends meet, are beveled upon the inner sides, and are secured to each other in the central line of the machine. The forward parts of the side bars, C, are connected with the inclined bars D by short cross-bars E. The side bars, C, at a little distance from their rear ends are connected with the inclined bars D by short cross-bars F, the inner ends of which project to serve as supports to the standards of the covering-plows, hereinafter described.

To the side bars, C, and the inclined bars D, a little in the rear of the straight middle part of the axle B, are attached long cross-bars G, to the centers of which is secured the

rear end of the tongue H. The draft is applied to the tongue H, as indicated by the hammer-strap I.

J is a plow-standard, which is inclined forward and has a plow, K, formed upon or attached to its lower end. The forward edge of the standard J is made sharp to adapt it to serve as a colter for cutting roots and vines. The upper end of the standard J passes through the forward cross-bar G and the tongue, so that it will also serve as a bolt for securing the said tongue in place.

To the opposite sides of the rear part of the standard J are secured, by rivets L, the inclined forward edges of the plates M.

To the middle parts of the upper ends of the plates M are secured, by rivets or other suitable means, the flattened lower ends of the bolts N, which pass up through the rear cross-bar G and through a keeper or band, O, attached to the rear end of the tongue H, so as to serve as fastening-bolts for the said tongue.

To the inner sides of the lower middle parts of the plates M are attached U-shaped keepers or long nuts P, having right and left screw-threads to receive the threads of the right and left screw Q, which has holes in its enlarged middle part to receive a lever-pin for convenience in turning the said screw to adjust the lower rear parts of the plates M wider apart or closer together, according as a wider or narrower channel may be required.

To the projecting inner ends of the short cross-bars F are secured the upper ends of the standards R by nuts S, screwed upon the said standards above and below the said cross-bars, as shown in Fig. 3, so that the covering-plows can be adjusted to work deeper or shallower in the ground by adjusting the said nuts. To the lower ends of the standards R are attached the covering-plows T, which may be made in the form of mold-boards, arranged with their forward ends inclined outward, as shown in Figs. 1, 2, and 3, or of other suitable form.

U is the seed-hopper, which is made with inclined front and sides and vertical back. The bottom of the hopper is secured to the top of a pedestal, V, the lower end of which

rests upon the forward cross-bar G, and is recessed to receive the tongue H. To the sides of the hopper U and to the side edges of the pedestal V are attached metal straps W, the lower ends of which are bent outward to rest upon the cross-bar G, and are slotted to receive the staples X, attached to the said cross-bars. The slotted ends of the straps W are secured in place upon the staples X by keys Y, passed through the said staples above the said straps. The hopper U is further secured in place by the inclined brace Z, the rear end of which is secured to the upper part of the front of the hopper U, or to a cross-bar, a, attached to the said front. The forward end of the brace Z is bent forward to fit upon the upper side of the tongue H, and is slotted to receive the staple b, attached to the said tongue. The end of the brace Z is secured in place upon the staple b by a key, c, passed through the said staple above the said end. With this construction by removing the keys Y c the hopper U and its attachments can be detached from the frame of the machine.

In the lower edge of the back of the hopper U is formed the discharge-opening d, which is provided with a gate, e, sliding in rabbeted cleats f, attached to the back of the said hopper at the opposite sides of the said opening. To the upper end of the sliding gate e is attached the end of a cord, g, the other end of which is attached to a pin, h, inserted in a hole in the said back of the hopper, so that the said gate e can be supported by winding the said cord around the said pin at any desired height to regulate the discharge of seed. The bottom of the hopper U is extended to the rearward to form a feed-platform, i. The edge of the platform i is rounded into circular form, and has a flange, j, attached to it to prevent the potatoes from rolling off.

In the outer part of the platform i is formed a discharge-opening, k, leading into a spout, l, attached to the lower side of the platform i, and made of such a length that its lower end will enter the space between the rear upper parts of the plates M.

m is the dropper's seat, the standards n of which rest upon the upper sides of the inner ends of the short cross-bars F, and have forwardly-projecting arms o, formed upon or rigidly attached to them.

Upon the forward ends of the arms o are formed or to them are attached hooks p, to hook into staples q or other supports attached to the rear cross-bar G, so that the seat m will be held securely in place, and can be readily detached when required.

To one of the crank-arms of the axle B is rigidly attached the end of a lever, r, so that the machine can be readily adjusted to open

a channel of the required depth and to raise the plows from the ground for convenience in turning around and passing from place to place. The lever r moves along a curved catch-bar, s, which is pivoted at its lower end to the side bar, C, of the machine-frame. The lever r is locked in position by a pin, t, passed through holes in the said lever and the catch-bar s. Several holes are formed in the catch-bar s to receive the pin t, so that the lever can be locked in any position into which it may be adjusted.

To the inner side of the outer part of the lever r is attached a keeper or strap, u, to engage with a headed pin, v, or other catch attached to the outer side of the side bar, C, of the machine-frame to lock the said lever in position when lowered to raise the plow from the ground for turning or passing from place to place.

When the machine is to be used for planting trees, the hopper U and its attachments and the seat m are detached and the seedlings or young trees are placed upon the machine-frame or in a box placed upon the said frame. Then as the machine is drawn forward an attendant places the seedlings singly and in the proper places in the furrow between the plates M. and soil is thrown around them by the plows T.

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

1. In a combined potato and tree planter, the frame having the parallel side bars, C, and the intermediate oblique bars, D, with their rear ends connected to the same ends of bars C, and their forward convergent portions connected to short front bars, E, of said frame, in combination with the tongue H, secured upon bars D and G, and hopper U, having the spout l, said frame being supported near its forward end upon an axle bearing wheels, substantially as shown and described, and for the purpose set forth.

2. In a combined potato and tree planter, the hopper U, secured to straps or plates W, with their lower laterally-projecting slotted ends receiving staples X of the carrying-frame and keyed to said staples, in combination with the slotted pedestal V, through which the tongue H passes, said tongue being strapped to a bolt, N, of a cross-bar of the said frame, and the spout l, depending from the rearwardly-projecting platform i of the hopper, substantially as and for the purpose set forth.

EVEN J. HAMRE.

Witnesses:

FINDLEY McCORMICK,
EDWARD K. WHEELLOCK.