

(No Model.)

L. W. HUGELMEIER.
POTATO DIGGER.

3 Sheets—Sheet 1.

No. 509,378.

Patented Nov. 28, 1893.

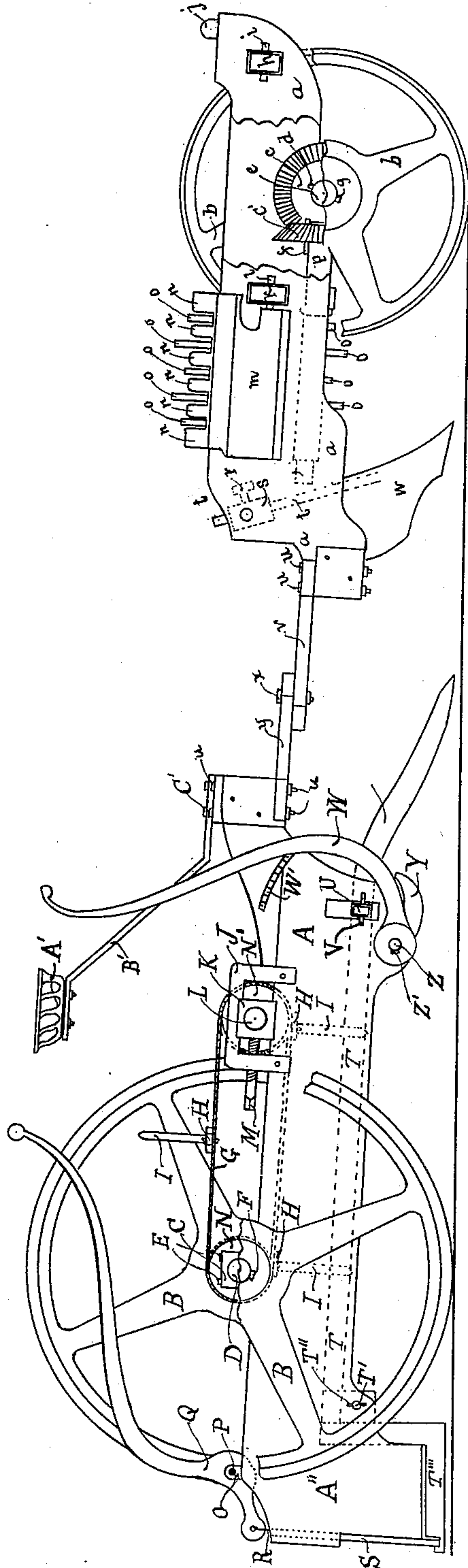


Fig 1

WITNESSES,

W. C. Lyon.
Jos. Borgmeyer

INVENTOR
Louis W. Hugelmeier
BY J. M. Libby
ATTORNEY

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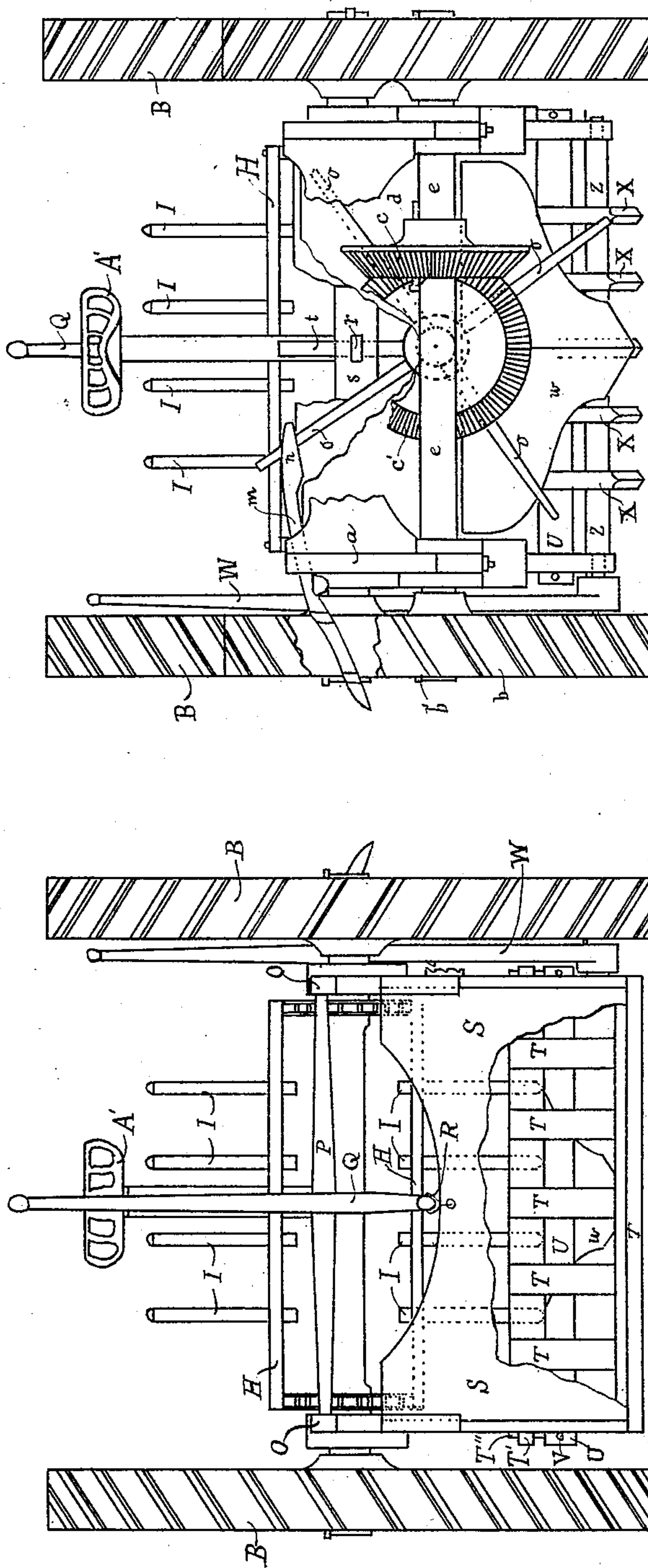


Fig 1

Fig 2

WITNESSES

W. C. Lyon
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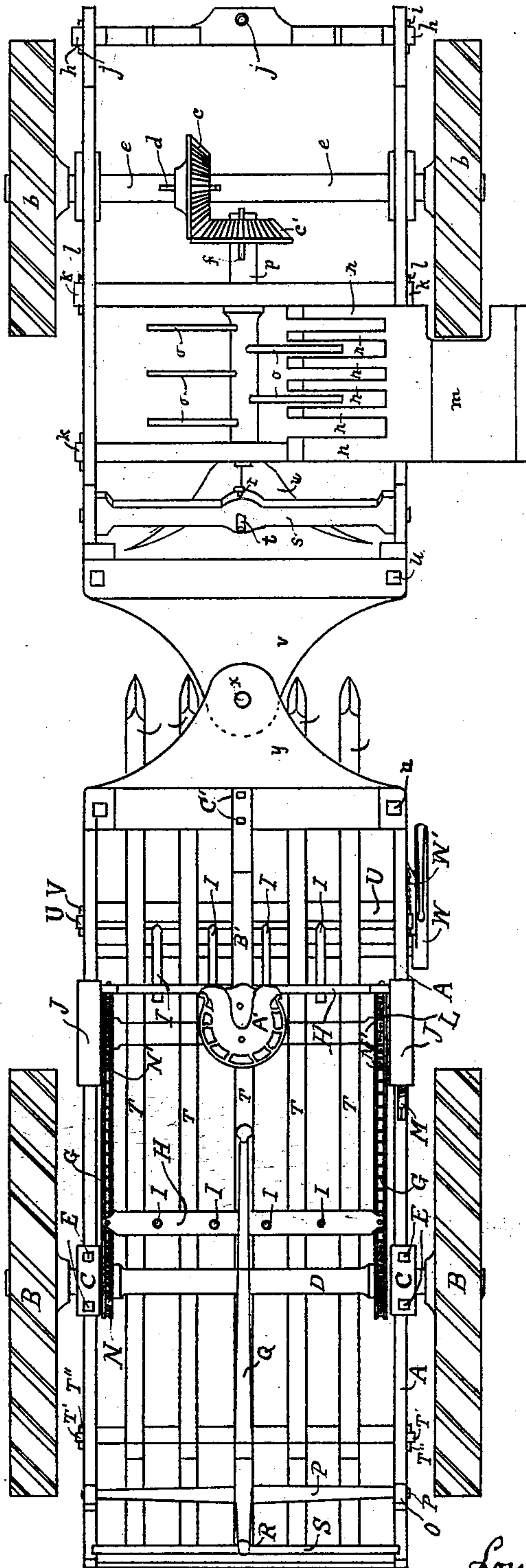
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WITNESSES

W. C. Lyon
Jas. B. Meyer

INVENTOR

Louis W. Hugelmeier
BY J. H. Little ATTORNEY.

UNITED STATES PATENT OFFICE.

LOUIS W. HUGELMEIER, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-
THIRD TO JOSEPH BORGMAYER, OF SAME PLACE.

POTATO-DIGGER.

SPECIFICATION forming part of Letters Patent No. 509,378, dated November 28, 1893.

Application filed April 5, 1893. Serial No. 469,240. (No model.)

To all whom it may concern:

Be it known that I, LOUIS W. HUGELMEIER, of Louisville, in the county of Jefferson and State of Kentucky, have invented new and
5 useful Improvements in Potato-Diggers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to potato diggers
10 and consists in certain details of construction and operation of parts, all as hereinafter more fully pointed out and specifically referred to in the claim.

In the annexed drawings similar letters of
15 reference indicate corresponding parts in all views, in which—

Figure 1 is a side elevation of the machine. Fig. 2 is a rear end view. Fig. 3 is a front end view and Fig. 4 is a top plan view of the
20 same.

—*a*— is the side frame of the forward section of the machine, intended to be used as a support for the operative parts thereof.

—*b*—*b*— are the forward carrying wheels;
25 —*e*— is the axle of said wheels to which is secured the bevel gear —*c*—, held to said axle by the pin —*d*—.

—*c'*— is another bevel gear, meshing with
—*c*—, which is pinned to the shaft —*p*—
30 by the key or pin —*f*— while the radial arms —*o*—*o*— project from said shaft —*p*—, the purpose of said arms being to brush aside or raise weeds and vegetation growing above the ground, said vegetation
35 being raised and carried by the arms —*o*— onto the arms —*n*—*n*— of the sloping platform —*m*— from whence they fall over the platform to the ground at the side of the machine.

40 —*s*— is a bearing block through which passes the standard —*t*— onto which the plow —*w*— is secured so as to break the top surface of the ground preparatory to digging the potatoes and said standard —*t*— is adjustable vertically in the block, or cross-piece
45 —*s*—, being held in place by the set-screw —*r*— bearing on the standard —*t*—.

—*u*—*u*— are bolts to connect the union couplings —*v*— and —*y*— respectively to
50 the front and rear frames —*a*— and —*A*— of

the machine, while —*x*— is the king bolt which connects the couplings —*v*— and —*y*— and upon which they turn.

A— is the side piece or frame of the rear section or digger proper.

B—*B*— are the supporting wheels keyed
55 onto the axle —*D*— by the key —*F*—. *C*— is the journal box in which said axle revolves and —*N*— is a sprocket wheel fixed on said axle —*D*— to revolve therewith; *N'*— being
60 another sprocket wheel on the axle —*L*— which latter is revoluble in the journal —*K*— being held adjustably in the yoke —*J*— by the adjusting screw —*M*— so as to be used to adjust the tension of the chains —*G*—*G*—
65 secured to which are the bars —*H*— carrying the rake teeth —*I*—*I*—.

Pivoted at —*T'*—*T''*— are the riddle-bars —*T*—*T*— which extend from thence forward beyond the end of the frame —*A*— and are
70 projected below a horizontal plane on a gradual incline so as to be capable of penetrating the soil after it has been relieved of its top crust by the plow —*W*—, said riddle bars lying normally in position to enter the ground,
75 but being controlled in the elevation of their forward ends by the rocking cams —*Y*— secured rigidly on the shaft —*Z*—, the position of said cams —*Y*— being controlled through the medium of the lever —*W*— fastened to
80 said shaft —*Z*— by the key —*Z'*— so that when said lever —*W*— is in its forward position, as shown in Fig. 1 the cams —*Y*— and bars —*T*— will be at their lower position, but upon carrying the free end of the lever —*W*—
85 back and engaging it with the rack —*W'*— said cams —*Y*— will be elevated at their free ends, thus causing corresponding elevation of the forward ends of said riddle bars —*T*— so as to pass freely over the ground.

The frame —*A*— has a rearward extension
90 *A''* which, with the bottom bars *T'''* and sliding end gate —*S*—, constitute a reservoir or receptacle into which the potatoes pass after passing over the lengths of the riddle bars
95 —*T*— and they are retained in said receptacle until a sufficient quantity has accumulated therein, whereupon the end gate may be raised by depression of the forward end of the lever —*Q*— which is connected by the
100

link —R— with said end gate —S—, the lever —Q— being pivoted at —P— in the bearing —O— rising from said frame —A—.

A' is a seat supported above the rear portion of the machine in convenient proximity to the levers —W— and —Q— so as to enable the driver to operate said levers from said seat.

The operation of the device is as follows:

10 Horses being hitched to the cross bar —h— the machine is drawn over the ground resting on the traction wheels —b—B—; the plow —W— is lowered into position as are also the riddle bars T. Progression of the device will
15 cause the rake arms —o—o— to revolve with the shaft —p— thus clearing away weeds, &c., from before the plow —W—, which enters the soil sufficiently far to remove the top crust, leaving the points of the riddle bars
20 —T—T— to enter below and raise upon them the potatoes in the ground. The gradual inclination of the forward end of the bars —T— will permit the potatoes to pass up such incline onto the horizontal portion of the riddle-bars, where they are met by the rake teeth
25 —I—I—. Said rake teeth being secured to the cross pieces —H— and the latter being connected to the chains —G— said rake teeth will pass forward with the upper section of
30 said chains —G— and said teeth will pass between the bars —T— and crowd the potatoes back into the receptacle —A''— until a sufficient quantity have accumulated therein when the lever —Q— may be depressed to
35 raise the end gate —S— and permit the potatoes therein to fall off onto the ground from whence they may be gathered at leisure. It will be apparent that the carrying wheels may be set farther back if desired in the front section or frame —a— in which case the rake

may precede such wheels and such form will give some additional support for the plow as the wheels will then be nearer the straining point. So, also, may the rear wheels be set forward upon the shaft —N'— if desired and
45 be within the spirit of the present invention but for clearness of illustration the present style of construction is shown. Additional braces may be connected at the point of union between the forward and rear sections
50 of the device if desired though it is desirable that the machine may turn around in a short circle if possible.

Having described my invention, what I claim is—

55 In a potato-digger a revoluble rake in connection with the forward driving or supporting wheel, an adjustable plow at the rear of said rake, a set of adjustable riddle bars ending at their free ends in digging points, a lever and a series of cams lying below the forward end of said riddle bars adapted to control the elevation of the free ends thereof, a reservoir at the rear end of said riddle bars,
60 a rear supporting axle, a series of sprocket-wheels and chains connected in their movement with said rear axle, a series of rake-teeth carried by said chains over and between said riddle bars and a movable gate closing the reservoir in combination with a pivoted lever
70 connected to said gate at one end and adapted to control the movement thereof, all in combination substantially as specified.

In testimony whereof I have hereunto set my hand this 15th day of February, 1893.

LOUIS W. HUGELMEIER.

Witnesses:

FREDERICK H. GIBBS,
JOS. BORGMAYER.