

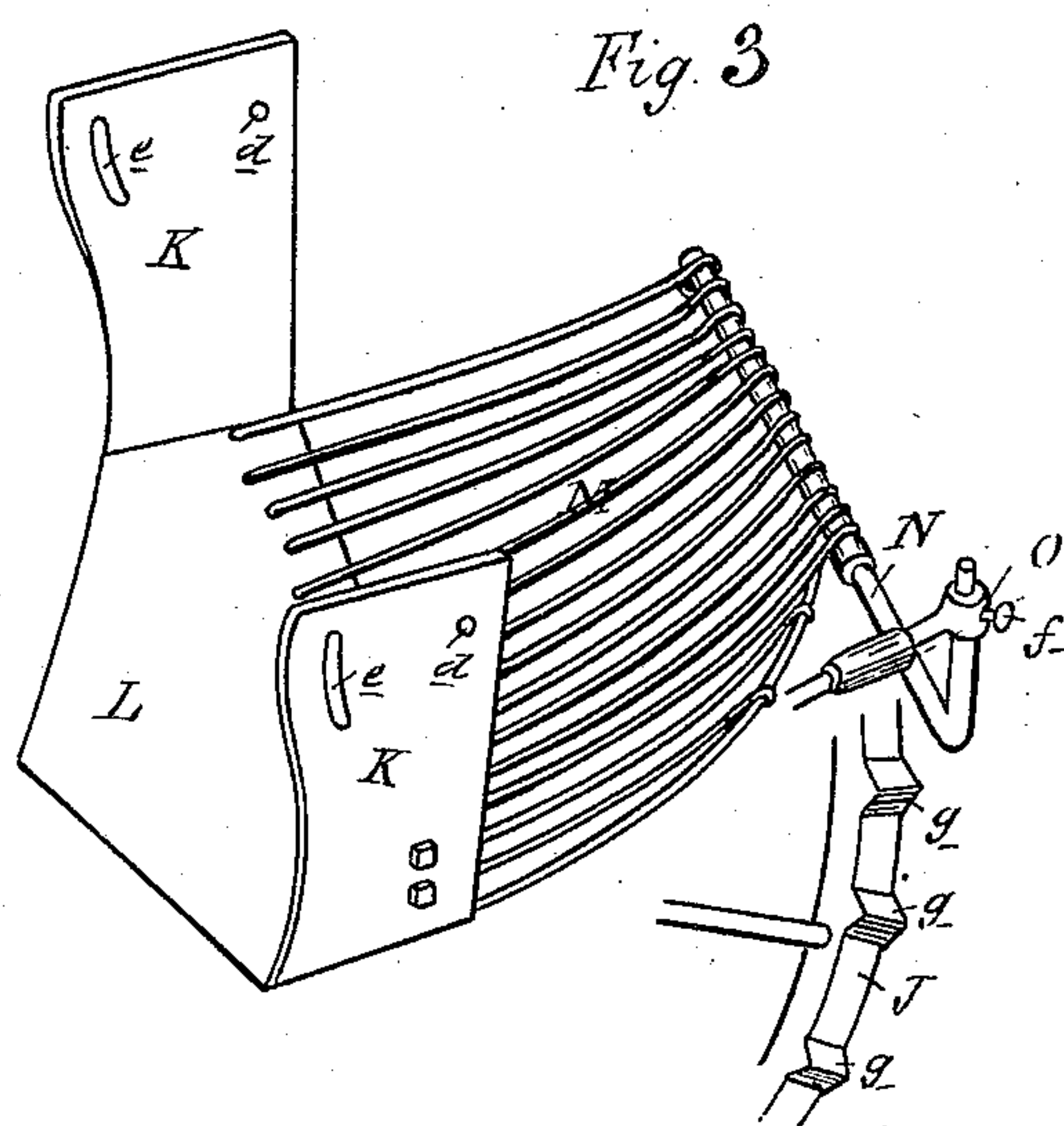
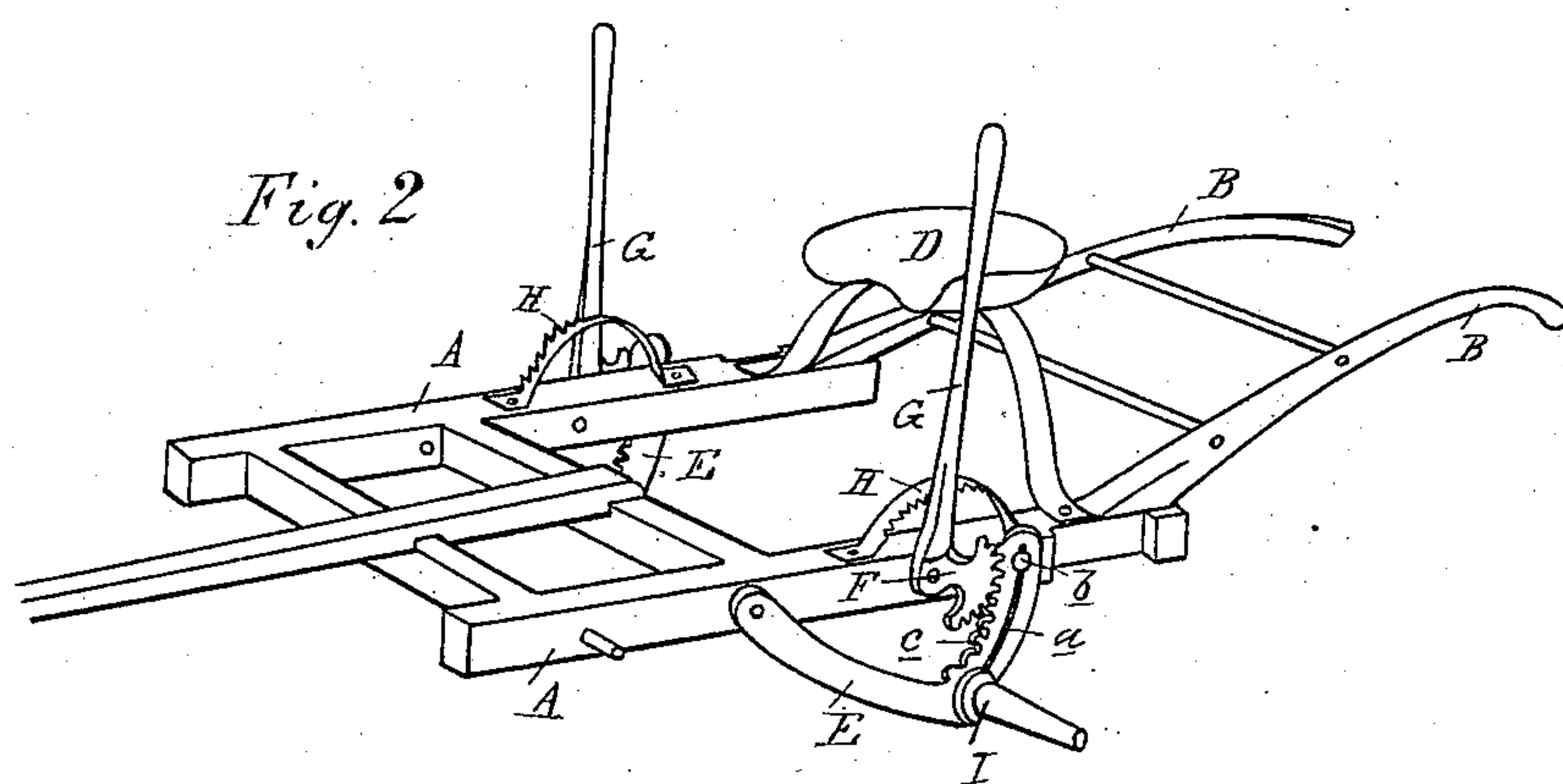
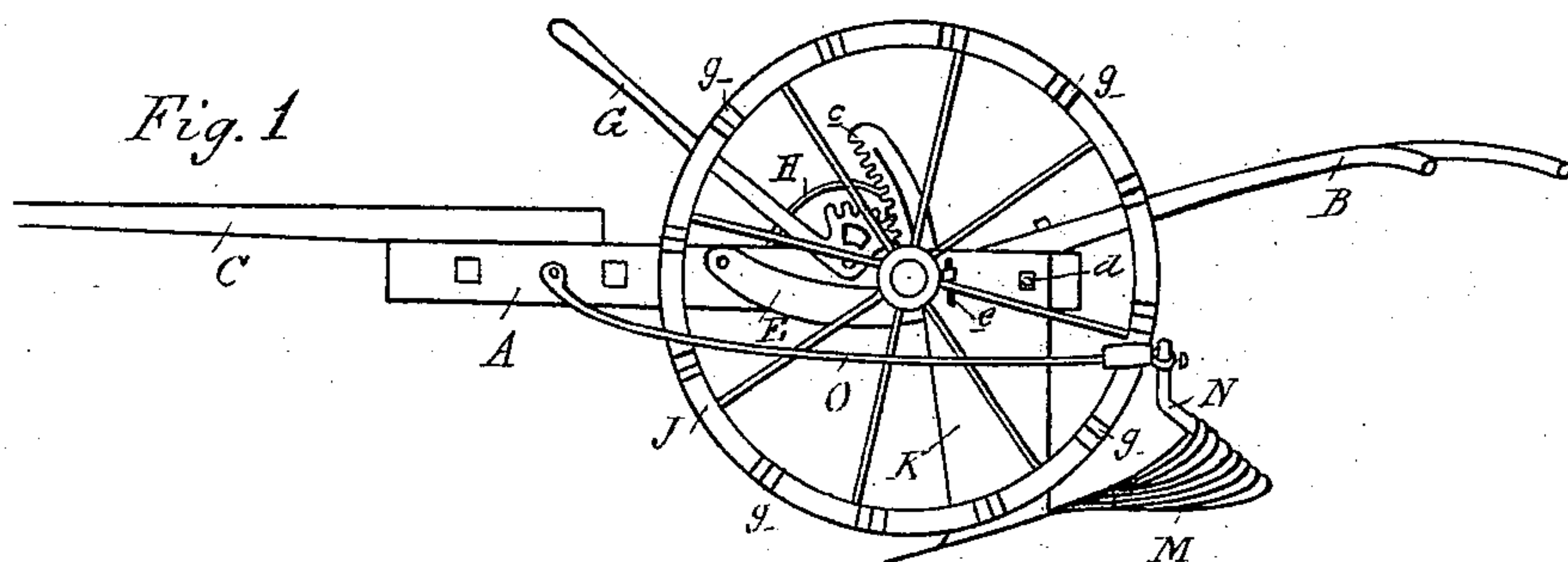
(No Model.)

C. S. TORREY.

POTATO DIGGER.

No. 326,461.

Patented Sept. 15, 1885.



Attest  
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Notary Public

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By Thos. S. Sprague, Atty.



# UNITED STATES PATENT OFFICE.

CHARLES S. TORREY, OF DIMONDALE, MICHIGAN.

## POTATO-DIGGER.

SPECIFICATION forming part of Letters Patent No. 326,461, dated September 15, 1885.

Application filed June 20, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES S. TORREY, of Dimondale, in the county of Eaton and State of Michigan, have invented new and useful Improvements in Potato-Diggers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in the construction of that class of agricultural implements known as "root or potato diggers."

The invention consists in the peculiar construction, operation, and combinations of the various parts, as more fully hereinafter described.

Figure 1 is a side elevation of my improved device. Fig. 2 is a perspective view of the same with parts removed, showing the arrangement of supporting-frame, handles, tongue, and devices for elevating or lowering the excavator proper. Fig. 3 is a sectional perspective showing the excavator proper, its supports, spring-riddle, section of the traction-wheel, and device by means of which a vibration is communicated to the spring-riddle by the rotation of the wheel.

In the accompanying drawings, which form a part of this specification, A represents a suitable frame, provided with handles B, tongue C, and elevated seat D. To either side of the frame and at their forward ends are pivotally secured the supports E, made somewhat in the form of a bell-crank, as shown, the opposite end being provided with a slot, *a*, through which passes the bolt *b* into the side of the frame, the inner edge of this part of the support being provided with teeth *c*, which engage with similar teeth upon the segment F, which is pivotally secured also to the side of the frame and provided with a handle, G, which projects upward within easy reach of the occupant of the seat D. Curved ratchets are secured one upon each side of the top of the frame, and the teeth of these ratchets are designed to engage with a feather or stop upon the inner face of the handle G and by this arrangement of parts the frame is elevated or lowered, as may be desired, with relation to the stub-axles I, which carry the traction-

wheels J. Supports K, which carry the double-pointed excavator or plow L, are pivotally secured—one to each side of the frame—by means of the bolts *d*, at or near the upper rear corner of such supports. Near the upper front corner of these supports each is provided with a curved slot, *e*, through which suitable bolts pass to secure such supports to the frame in such a manner that the front side thereof may be elevated or depressed, thereby governing the depth to which the excavator L will work, and also governing its proper pitch. To the rear end of this excavator or double-shovel plow there are secured a series of spring-rods, M, the rear ends of which are so secured to a tie-bar, N, as to hold such rods in their relative position to each other. These rods are curved, such curvatures being larger upon one side of the machine, and successively growing less toward the other side, as shown in Figs. 1 and 3, so that the hill or row being operated upon is carried up upon the excavator, which in its forward passage forces the hill or row back upon its spring-riddle, the curvatures of the rods of which tend to throw off the load at the lowest rear corner, such corner being made by the systems of curvature above referred to. The bar N, upon its upturned end, as shown in Figs. 1 and 3, is provided with an arm, O, sleeved upon such upturned end, and held adjustably in place by means of a set screw, *f*, or a nut and washer upon the end of said upturned end, or by any other analogous device. The front end of this arm O is pivotally secured by means of a suitable bolt to the side of the frame, as shown in Fig. 1. The wheel J upon this side of the device is provided with corrugations or V-shaped teeth *g*, which in the rotation of the wheel strike the arm O, and impart a quick motion to the spring-rods in the opposite direction, and as soon as the arm has passed the obstruction upon the wheel the spring of the rods brings them back to the original position, ready to be operated by the succeeding corrugation upon the wheel. This rapid vibration given to the spring-riddle breaks up to a certain extent the earth-clods and allows the dirt to pass through the riddle, while the potatoes are discharged at the rear and lower corner of such riddle upon the



ground, such discharge being preferable to so constructing the riddle that the roots dug will be thrown off to either side, as in the latter case more or less of them are in danger of being trodden upon by the team in the next bout.

By the use of a device constructed as above described, substantially, a very effective implement is obtained at a comparatively small cost to the agriculturist. The vertical adjustability of the excavator proper, by means of the slots and bolts which support the front sides of the supports, allows the device to be used not only for digging potatoes, but for throwing out of the ground the longer roots, like beets, carrots, &c. It is preferable to make the excavator proper about two feet in width between the standards which support it from the frame, as by this means all the potatoes in the hill which may have been spread are reached, which would not be the case with the narrower construction of the excavator. The adjustability described, by means of which the frame is elevated or depressed with relation to the stub-axles, enables the operator to throw the whole of the working parts of the device up a sufficient distance to drive to and from the field, the excavator being elevated sufficiently to pass over all ordinary obstructions and inequalities of the surface.

I am aware of the Patents No. 40,120 and No. 150,034, and make no claim to the con-

struction shown therein as forming part of my invention.

I am aware of the Patent No. 150,702, and make no claim to the construction shown therein as forming part of my invention.

What I claim as my invention is—

1. In combination with the excavator L, the riddle M, composed of a series of spring-rods the front ends of which are secured to said excavator and their rear ends to a tie-bar, N, the arm O, connecting said tie-bar with the main frame, and the wheel J, having corrugations adapted in the rotation of said wheel to strike said arm O and vibrate said riddle, substantially as and for the purpose specified.

2. In combination with the excavator L of a root-digger, adjustably secured to the carrying-frame, the riddle M, composed of the tie-bar N, and a series of spring-rods the front ends of which are secured to the rear end of said excavator and their rear ends to the tie-bar N, said bar having an upturned end, and the arm O, one end adjustably sleeved on said upturned end and the other end pivotally secured to the frame, substantially as described.

CHARLES S. TORREY.

Witnesses:

H. J. SPRAGUE,  
E. SCULLY.