

(No Model.)

C. A. DENISON.

POTATO DIGGER.

No. 308,346.

Patented Nov. 25, 1884.

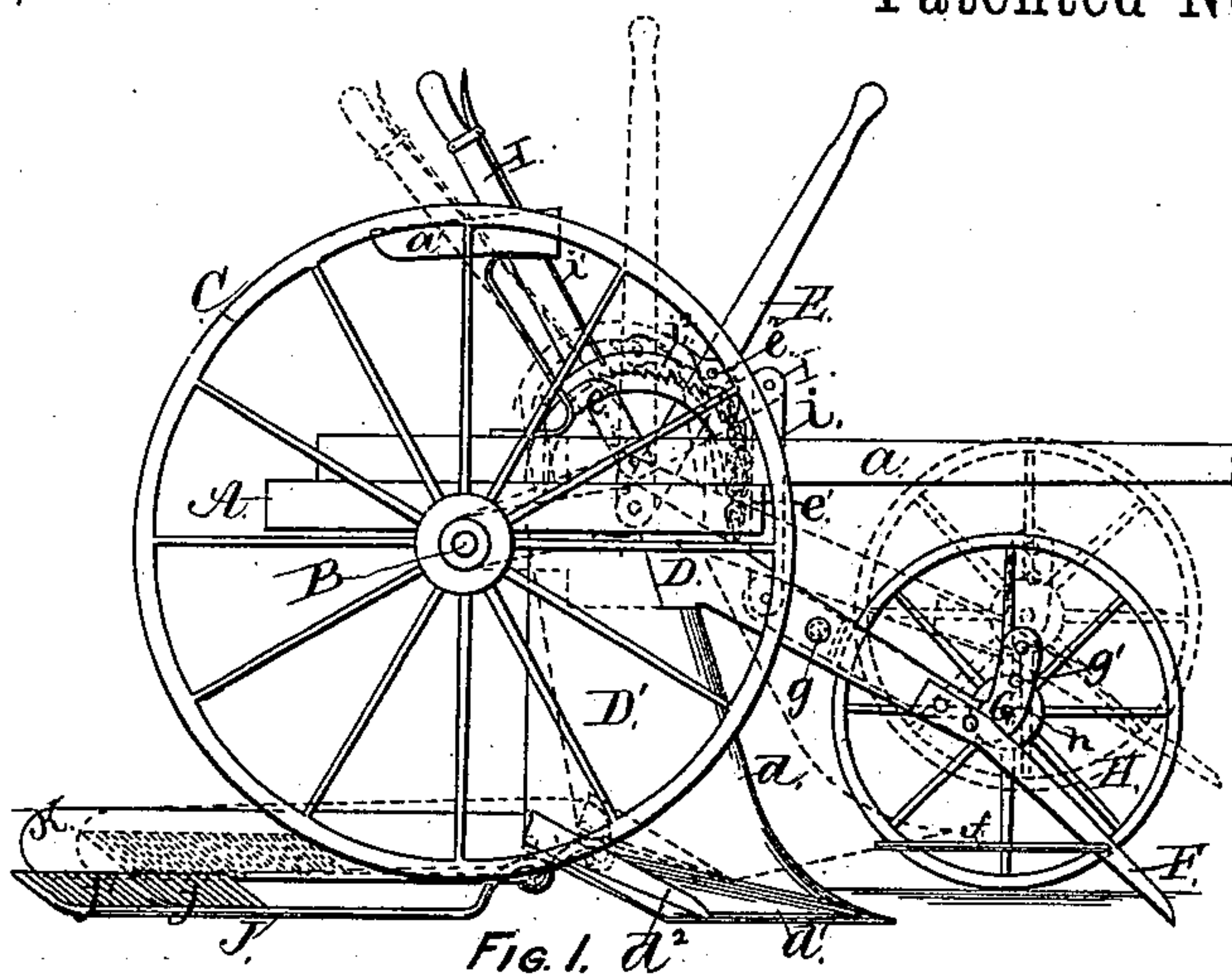


Fig. 1. *a*<sup>2</sup> *a*.

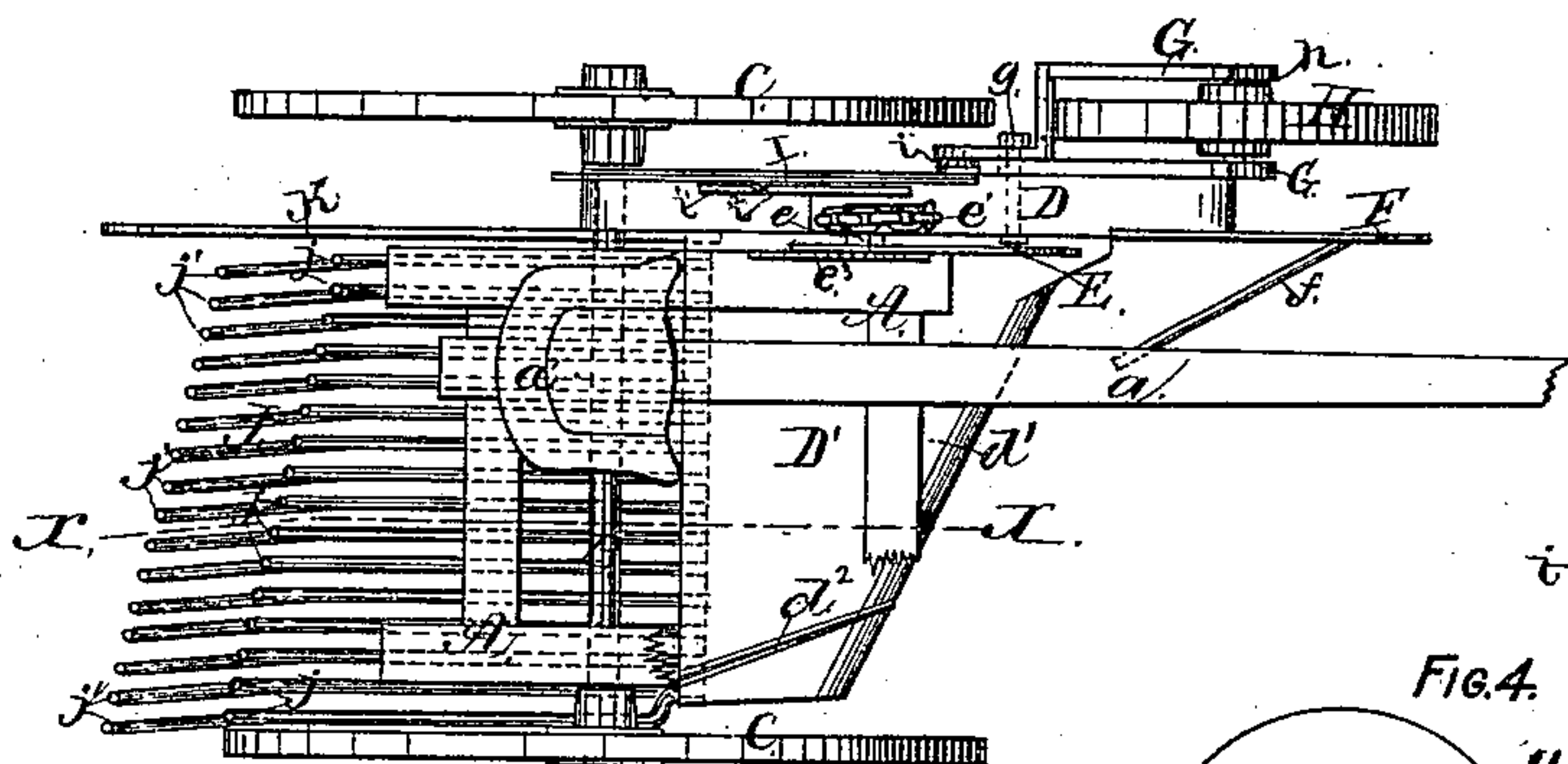


Fig. 2.

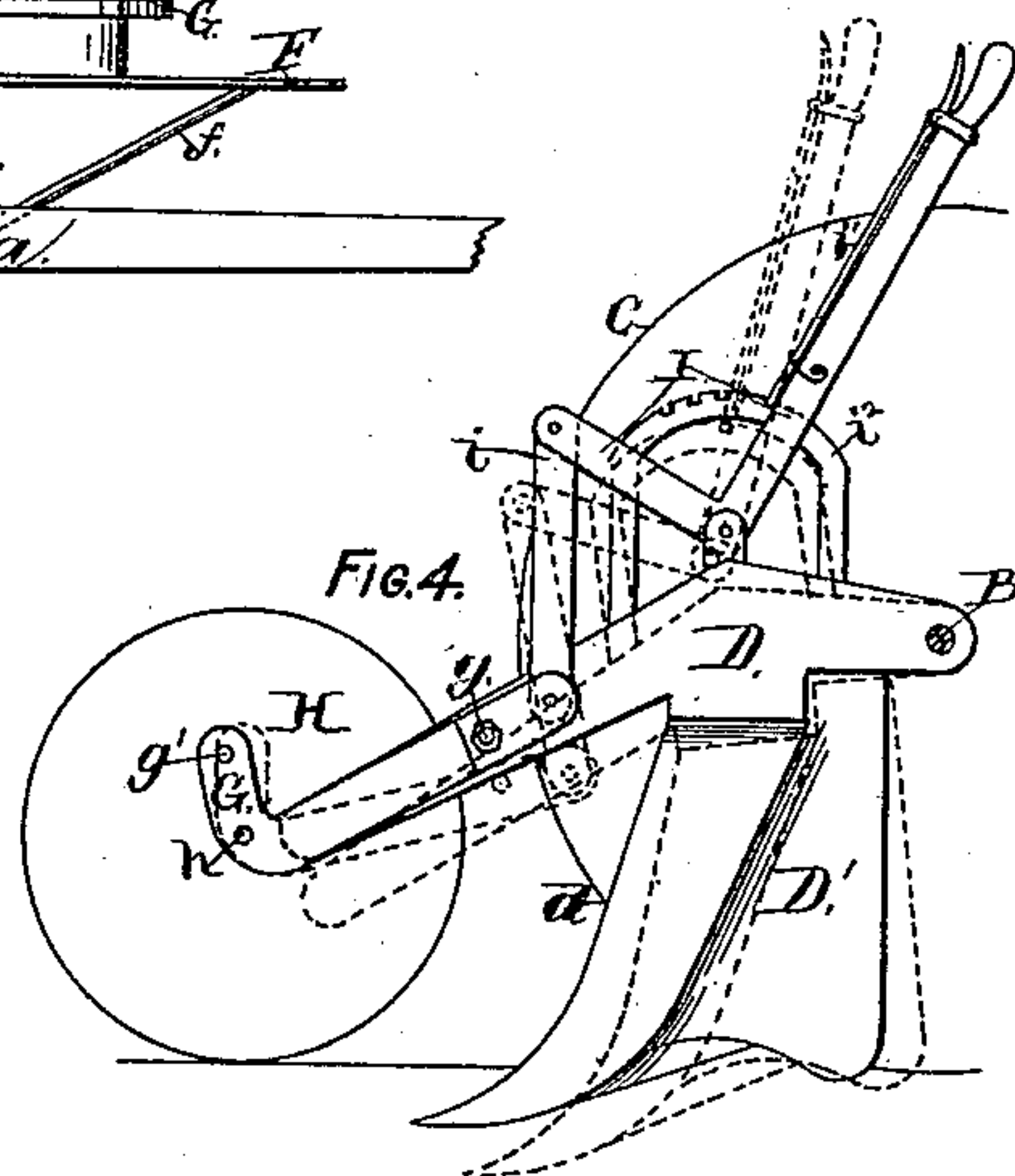


Fig. 4.

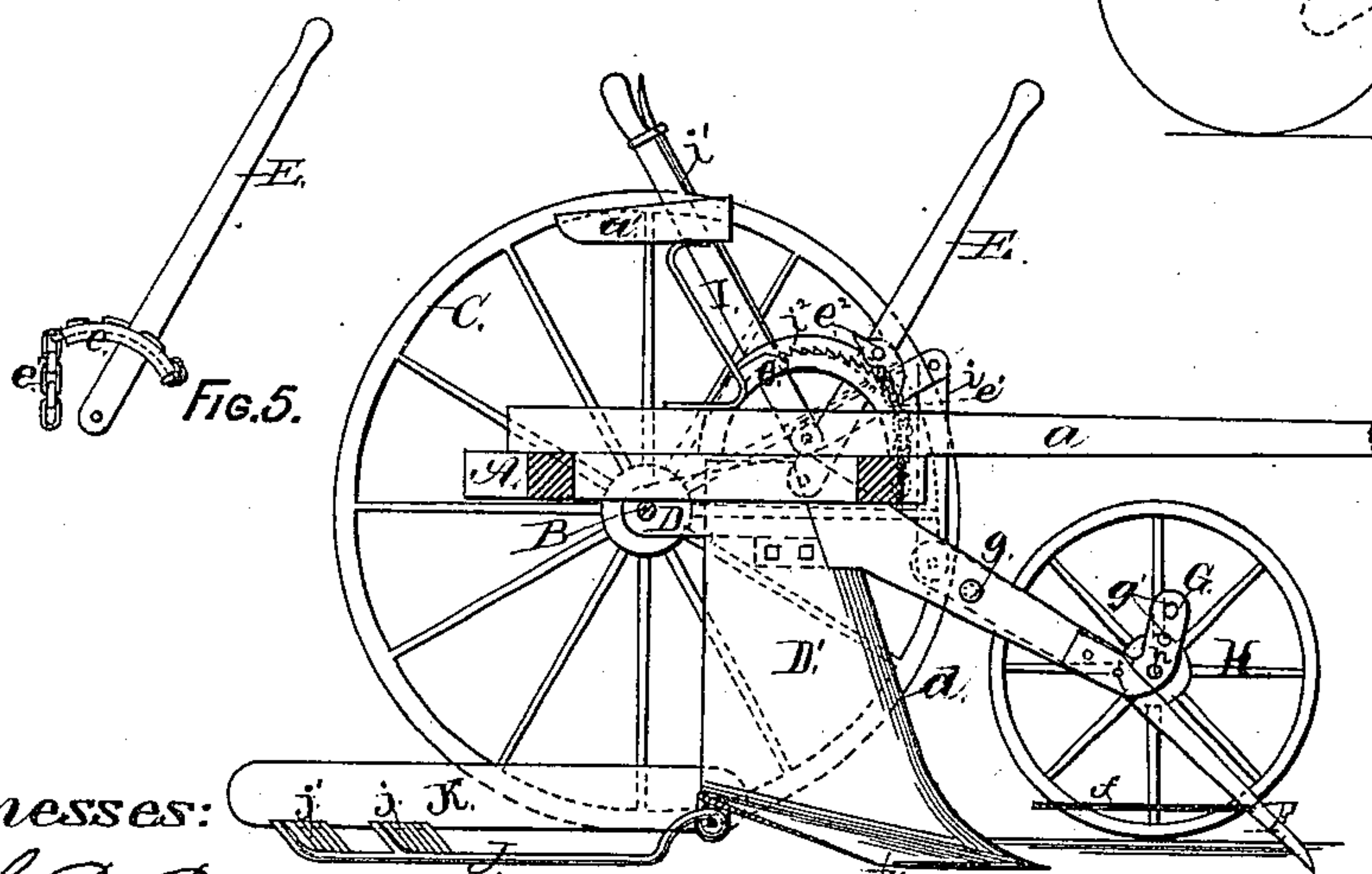


Fig. 3. *a*.

Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES A. DENISON, OF GREENBUSH, NEW YORK.

## POTATO-DIGGER.

SPECIFICATION forming part of Letters Patent No. 308,346, dated November 25, 1884.

Application filed December 12, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES A. DENISON, of Greenbush, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Potato-Diggers, of which the following is a full and exact description, reference being had to the accompanying drawings, which form part of this specification, and in which—

10 Figure 1 is a side elevation of the machine; Fig. 2, a plan view of the same; Fig. 3, a longitudinal section at the line *xx* of Fig. 2; Fig. 4, a partial side elevation of the leading-wheel side of the machine, and Fig. 5 a detached side elevation of one of the operating-levers.

15 As illustrated in the drawings, A is the frame-work of the machine, provided with pole *a*, driver's seat *a'*, and being rigidly attached to the axle B, on which the wheels C are fitted to revolve freely.

20 D is the plow-beam, for which the axle B serves as a pivotal center, and having secured to its under side the plow D', which consists of a cutter or colter, *d*, (for making a vertical cut in the soil,) an inclined blade, *d'*, for raising and breaking up the soil containing the potatoes, and an oblique flange, *d''*, (formed on the upper surface of the blade *d'*,) for directing the broken soil and potatoes toward the rear-  
30 most edge of the blade *d'*. A lever, E, fulcrumed to the side of the frame A near the beam D, is provided with a grooved quadrant, *e*, to which one end of the chain *e'* is fastened. The other end of said chain is attached to the beam D, and the parts are so arranged that by means of the lever E the beam D and its attachments can be elevated so as to raise the plow D' clear from the surface of the ground, as indicated by the dotted lines in Fig. 1. A  
40 pawl, *e''*, is pivoted to the lever E, and arranged to engage in the notches of the quadrant *e'*, for the purpose of locking the lever E at any point required for maintaining the beam D at any elevation. To the foremost end of the beam D a pointed bar, F, is secured, for the purpose of raising up and breaking the potato-vines. Said bar has near its outer end an inwardly-inclined rod, *f*, for the purpose of forcing the separated vines toward the plow  
50 D'. Near the foremost end of the beam D a forked bracket, G, is pivoted, as at *g*, to swing in a vertical direction, and a leading-wheel,

H, is arranged in the forward end of said bracket to rotate freely on a pin, *h*. Said pin is adapted to fit into any of the holes *g'*, formed 55 in the lugs on the upper side of said bracket, so as to raise or lower the wheel H, and thereby effect a corresponding variation in the depth of the penetration into the soil of the plow D' and pointed bar F, as occasion requires. The 60 inner end of the bracket G is connected by means of the rod *i* to a bent lever, I, that is fulcrumed to the outer side of the beam D. Said lever is provided with a spring-latch, *i'*, that engages in the notches of a quadrant, *i''*, 65 so as to lock the lever I, and thus secure its connected parts in any required position. By means of the lever I and pivoted bracket G the plow D' can be thrown down to a lower plane, as indicated by the dotted lines in Fig. 70 4, while the leading-wheel H continues to bear upon the surface of the ground, and this feature is particularly important in starting the plow in making a furrow, and, where the machine is used upon very uneven ground, to ef- 75 fect a sudden and momentary depression of the plow to penetrate below the surface of the soil in abrupt gullies.

J represents trailing bars or separators, loosely pivoted to the under side of the plow- 80 blade *d'* near the rearmost side of said blade. Said separators are adapted to slide along the bottom of the cut made by the plow D', and each of them is provided at its rearmost end with two upturned points, *j* and *j'*, one of said 85 points being formed behind the other, and the rearmost one being deflected sidewise, as shown in Fig. 2, to follow in the wake of the space left between every two adjacent separators. The purpose of these upturned points is to 90 break up the soil raised by the plow D' and force the potatoes up to the top of the broken soil.

K is a guard pivoted to the left side of the plow D, and arranged to swing freely up and 95 down while dragging over the surface of the ground. Said guard is employed for the purpose of preventing the discharge of the potatoes at that side where they would come in the path of the machine while making the next 100 succeeding furrow.

I am aware of the patent to Riggs, No. 184,480, granted November 21, 1876, wherein it is proposed to pivot to the under surface

of a potato-digging scoop a series of trailing bars having upturned fingers, and do not therefore claim the features thus broadly shown in the said patent.

5 I claim as my invention—

1. In a potato-digger, the combination, with the plow-blade *d'*, of the trailing bars *J*, pivoted beneath the rear edge of said plow-blade, and each provided with upturned fingers *j* and  
10 *j'*, one of said fingers being formed behind the other and deflected sidewise toward the outer wheel of the plow, substantially as shown and described.

2. In a potato-digger, the combination, with  
15 the wheeled frame and tongue, the plow-beam

*D*, and plow *D'*, of the bent lever *I*, fulcrumed to the outer side of the plow-beam, said lever being provided with means for locking it in any desired position, the bracket *G*, pivoted to the beam at *g*, the said bracket having a 20 short arm, to which the lever *I* is pivoted by the link *i*, and being provided at its forward end with a series of holes, *g'*, for engagement of the axle-pin *h'*, whereby the wheel *H* may be raised or lowered at will, substantially as 25 shown and described.

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Witnesses:

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