

No. 741,286.

PATENTED OCT. 13, 1903.

L. J. STARK.
POTATO DIGGER SHAKER.
APPLICATION FILED JAN. 23, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

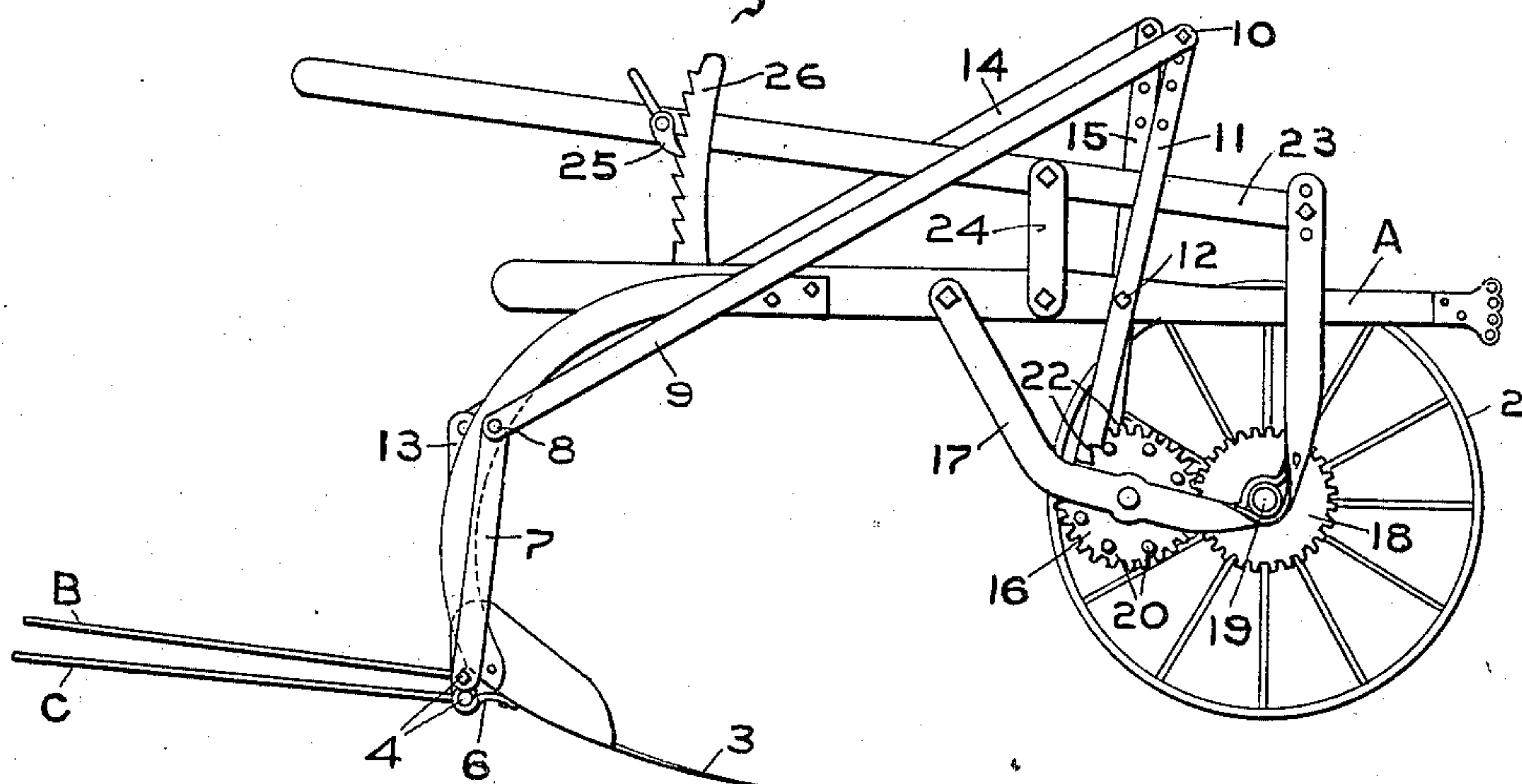


Fig. 2.

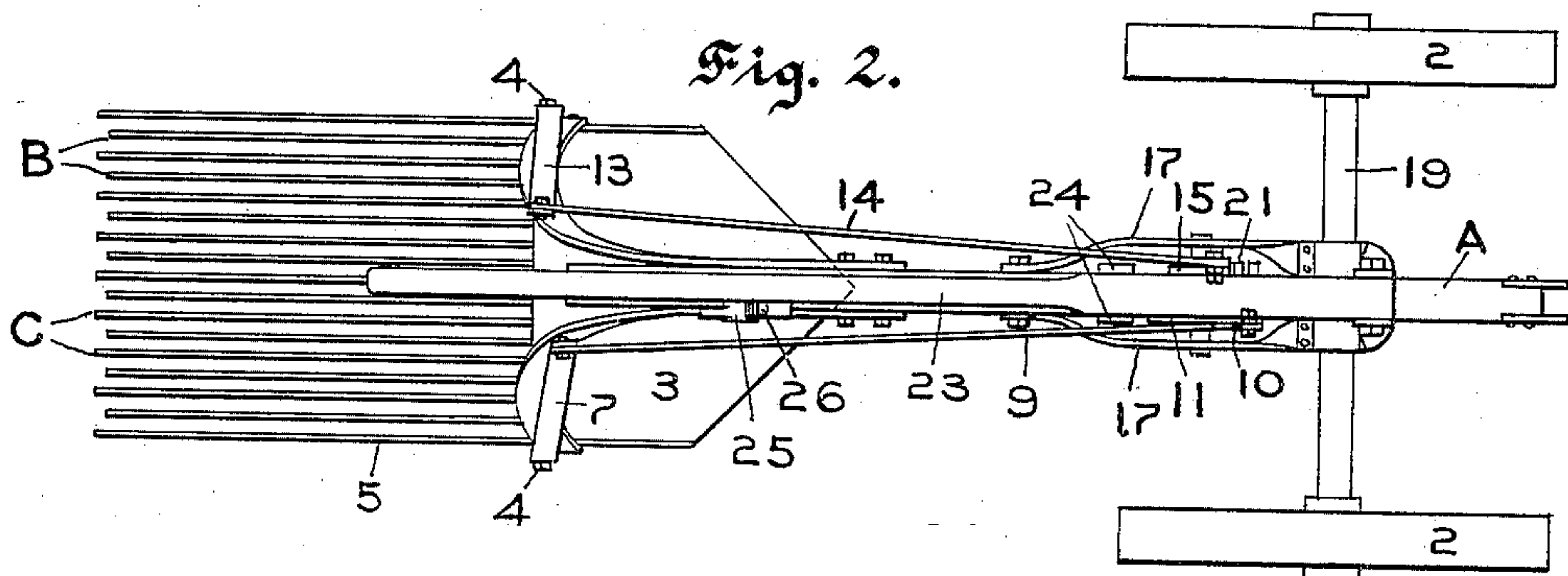


Fig. 3.

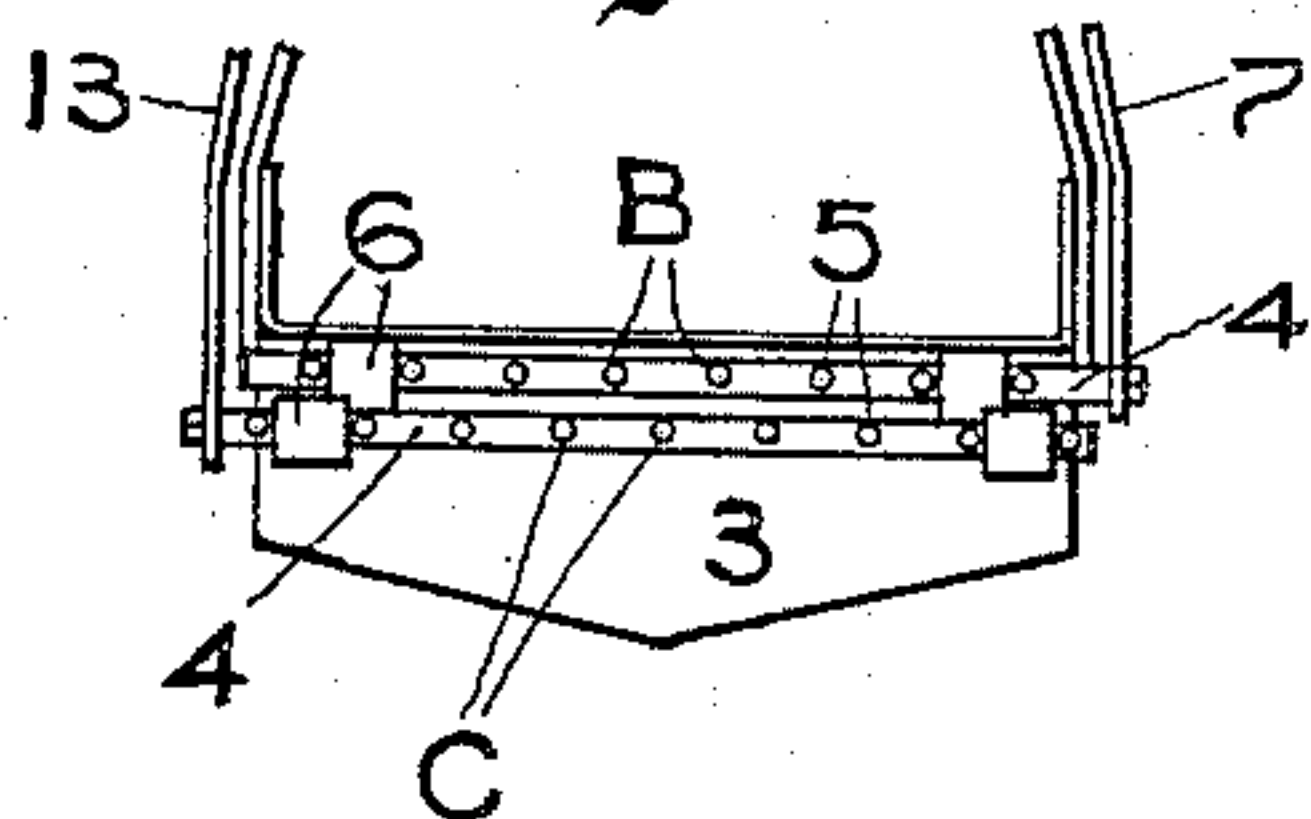
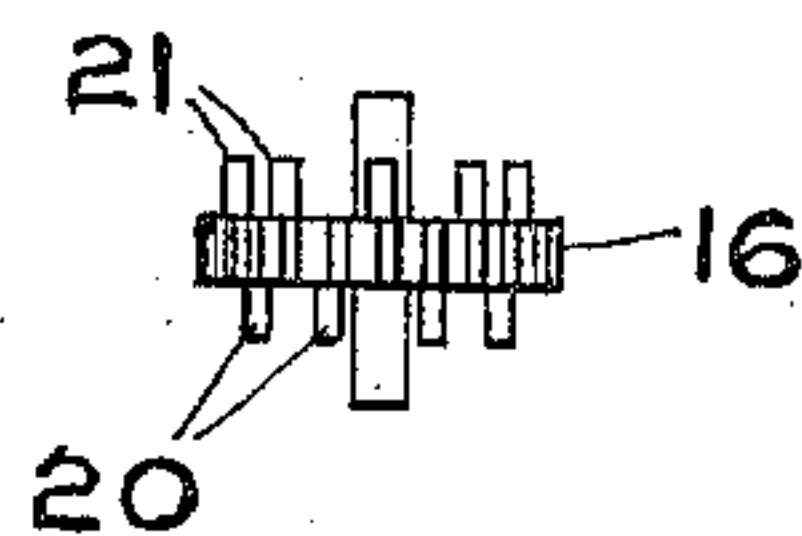


Fig. 4.



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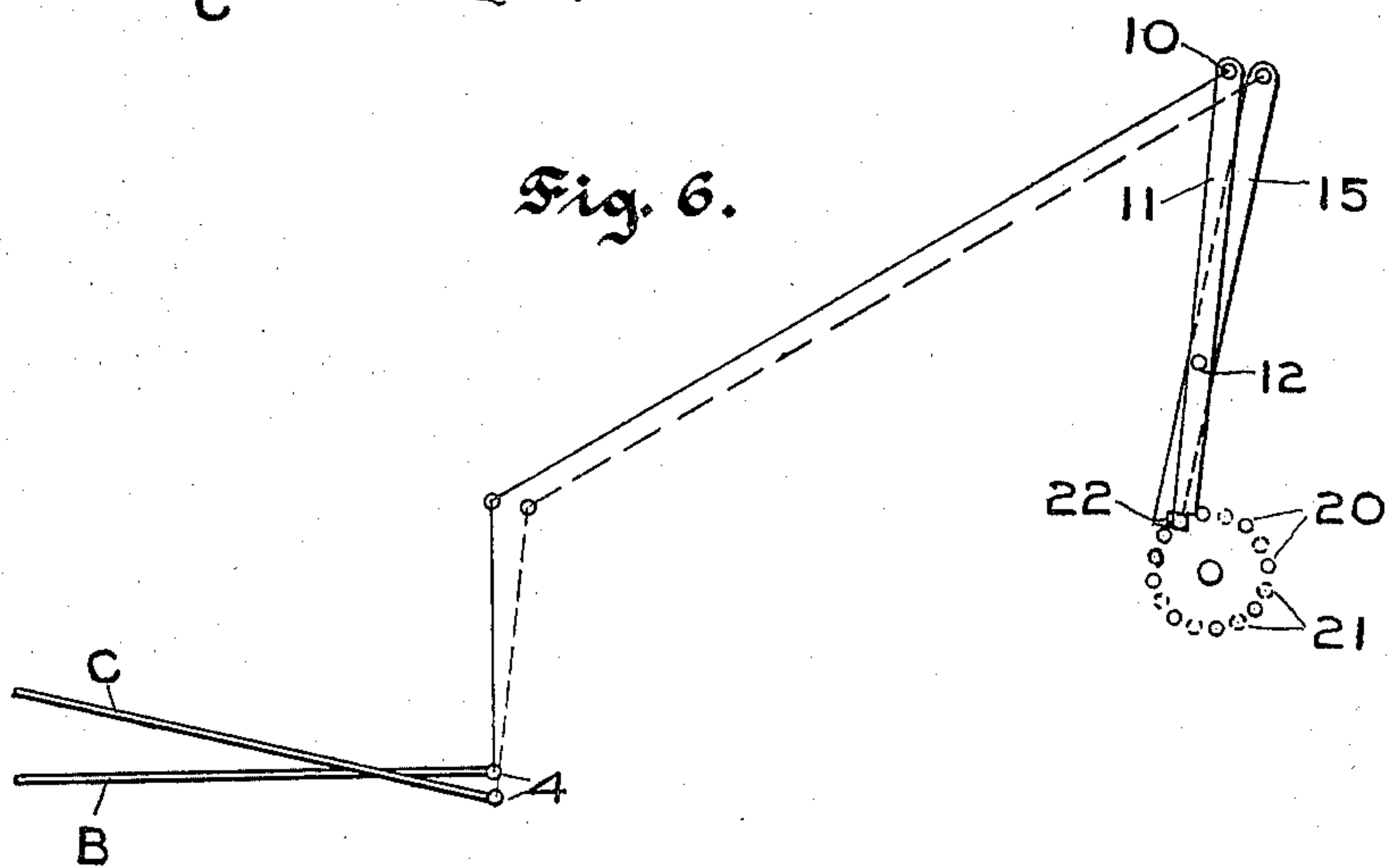
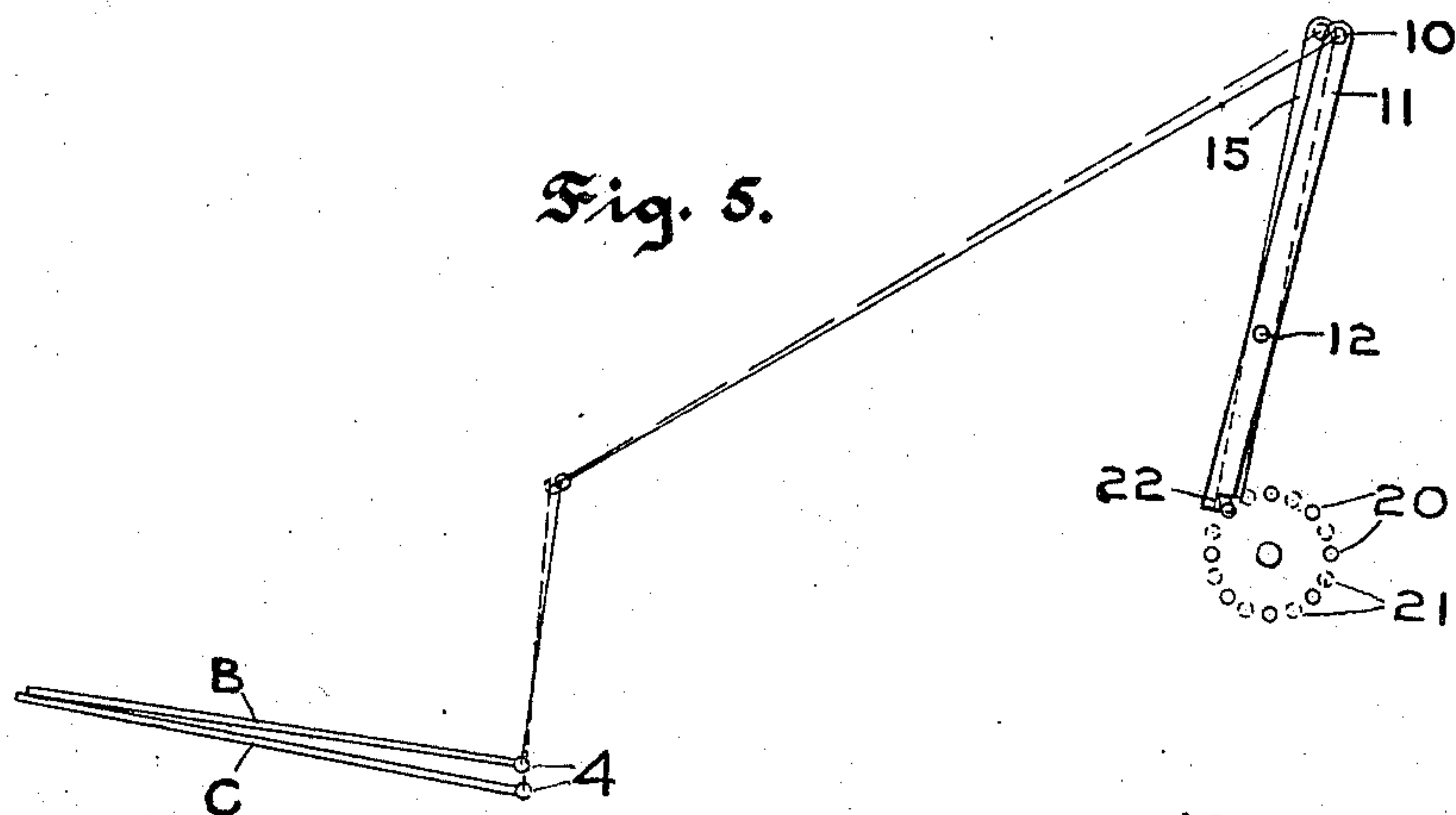
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

LARS J. STARK, OF HARRIS, MINNESOTA.

POTATO-DIGGER SHAKER.

SPECIFICATION forming part of Letters Patent No. 741,286, dated October 13, 1903.

Application filed January 23, 1903. Serial No. 140,247. (No model.)

To all whom it may concern:

Be it known that I, LARS J. STARK, a citizen of the United States, residing at Harris, in the county of Chisago and State of Minnesota, have invented certain new and useful Improvements in Potato-Digger Shakers, of which the following is a specification.

My invention relates to improvements in potato-diggers, and particularly in the shaking-grates of diggers by means of which the dirt is separated from the potatoes.

To this end my invention consists in the features of construction and combination hereinafter particularly described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of a potato-digger embodying my features of invention. Fig. 2 is a plan view of the same. Fig. 3 is a view looking toward the free end of the grate, partly broken away. Fig. 4 is a detail of a gear forming part of the mechanism for operating the separating-grates, and Figs. 5 and 6 are diagrammatic views illustrating the arrangement of the separating-grates and operating mechanism.

In the drawings, A represents the framework of the potato-digger, supported upon carrying-wheels 2. Supported from the framework A is a suitable potato-digging blade or plowshare 3.

For the purpose of receiving the potatoes from the digger 3 and separating the dirt from the potatoes I provide a pair of grates B and C, each consisting of a cross-bar 4, carrying a series of outwardly-projecting parallel fingers 5. The cross-bars 4 of the grates B and C have journal support in the brackets 6, connected with the rear of the share.

Secured upon one end of the bar 4 of the grate B is an upwardly-extending strap 7, having pivotal connection 8 with a strap 9, which in turn has pivotal connection 10 at its opposite end with the upper end of a lever 11. The lever 11 has fulcrum-support 12 upon the frame A of the potato-digger. The opposite end of the bar 4 of the grate C is connected in a similar manner by straps 13 and 14 with a lever 15, corresponding to the lever 11. Arranged between the lower ends

of the levers 11 and 15 is a gear 16, supported in the straps 17, forming part of the framework. The gear 16 intermeshes with a gear 18, mounted upon the carrying-wheel shaft 19. The gear 16 carries upon its opposite sides outwardly-projecting pins 20 and 21, the pins 20 alternating with the pins 21, as shown in Fig. 4. The lower notched ends 22 of the levers 11 and 15 are engaged by the pins 20 and 21 to turn said levers and actuate the grates, as illustrated in Figs. 1, 5, and 6.

The straps 17, which constitute part of the framework, are each connected at one end with the horizontal beam of the framework and at the opposite end with one end of a lever 23, which has fulcrum-support 24. The lever 23 is provided with suitable pawl and ratchet 25 and 26.

What I consider as new is the construction and arrangement of the grates B and C and their connection with the operating mechanism. As shown in Figs. 1, 5, and 6, the grate B is supported above the grate C. In the forward travel of the potato-digger the gear 16 will be turned, causing alternate turning of the levers 11 and 15 upon their fulcrum-support by means of the pins 21 and 22. This will cause the grates to be turned upon their supports, causing the fingers of one grate to be carried between the fingers of the other grate, as illustrated in Fig. 6, thoroughly separating the dirt from the potatoes.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a potato-digger of the class described, the combination with the framework, carrying-wheels and a plow, of a pair of grates having independent pivotal support at the rear of said plow, the supporting-pivots of said grates being arranged one above the other, and means operated from said wheels for alternately turning said grates upon said pivots.

2. In a potato-digger of the class described, the combination with suitable framework, carrying-wheels therefor, a supporting-shaft for said wheels, and a plowshare supported from said framework, a pair of grates having piv-

otal support at the rear of said plowshare, a pair of upright levers fulcrumed upon the framework, and bars pivotally connecting the pivoted ends of said grates and the upper
5 ends of said levers, a gear supported between the lower ends of said upright levers, alternately-disposed pins projecting outwardly from the sides of said gear, and a second gear

carried by the wheel-shaft and intermeshing with said first-mentioned gear. 10

In testimony whereof I affix my signature in presence of two witnesses.

LARS J. STARK.

Witnesses:

H. S. JOHNSON,
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