

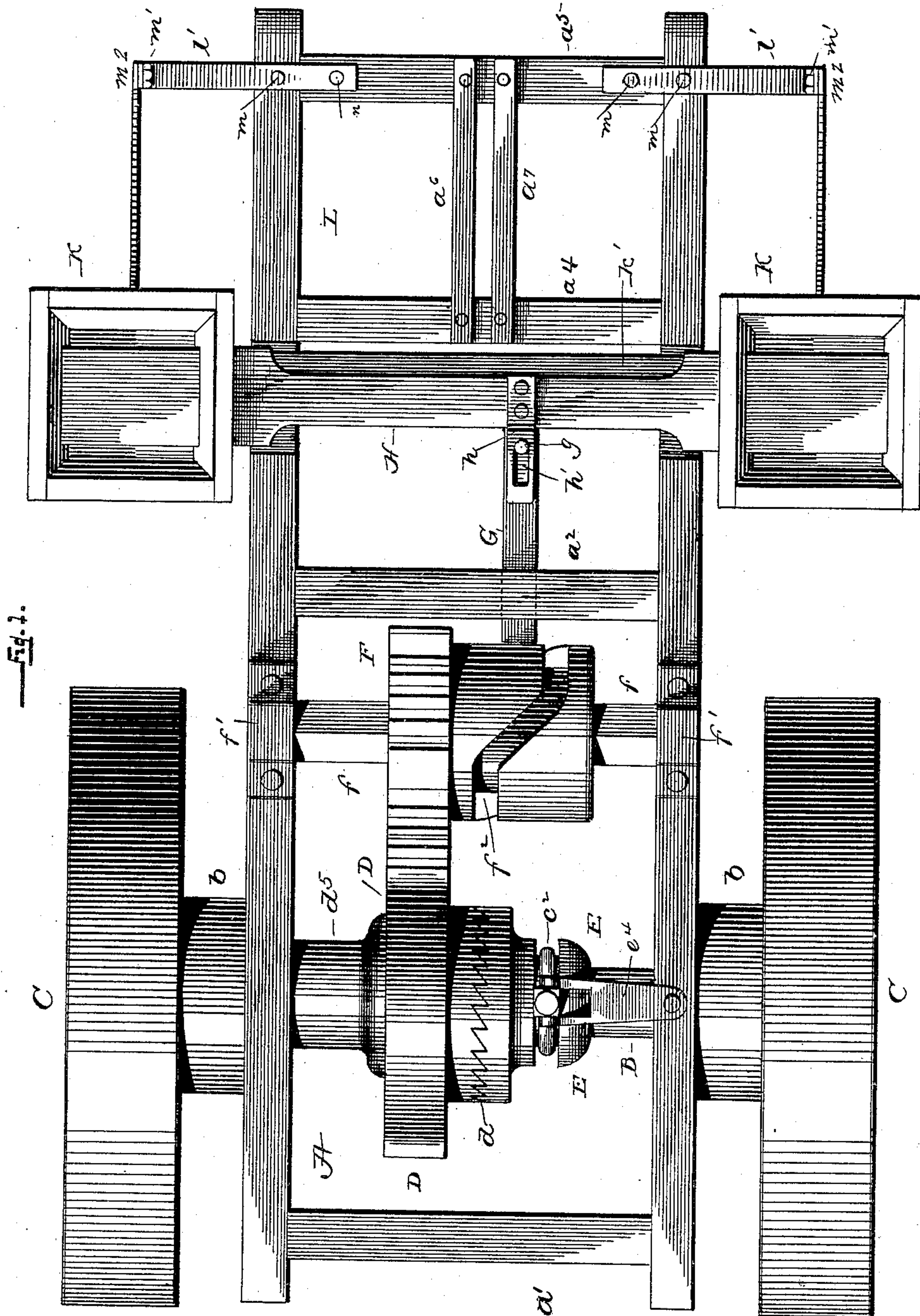
(No Model.)

2 Sheets—Sheet 1.

J. BRADY.  
CORN PLANTER.

No. 397,690.

Patented Feb. 12, 1889.



Witnesses:  
W. W. Mortimer  
David Stinson

Inventor:  
James Brady,  
by A. S. Dyrenforth,  
his Attorney

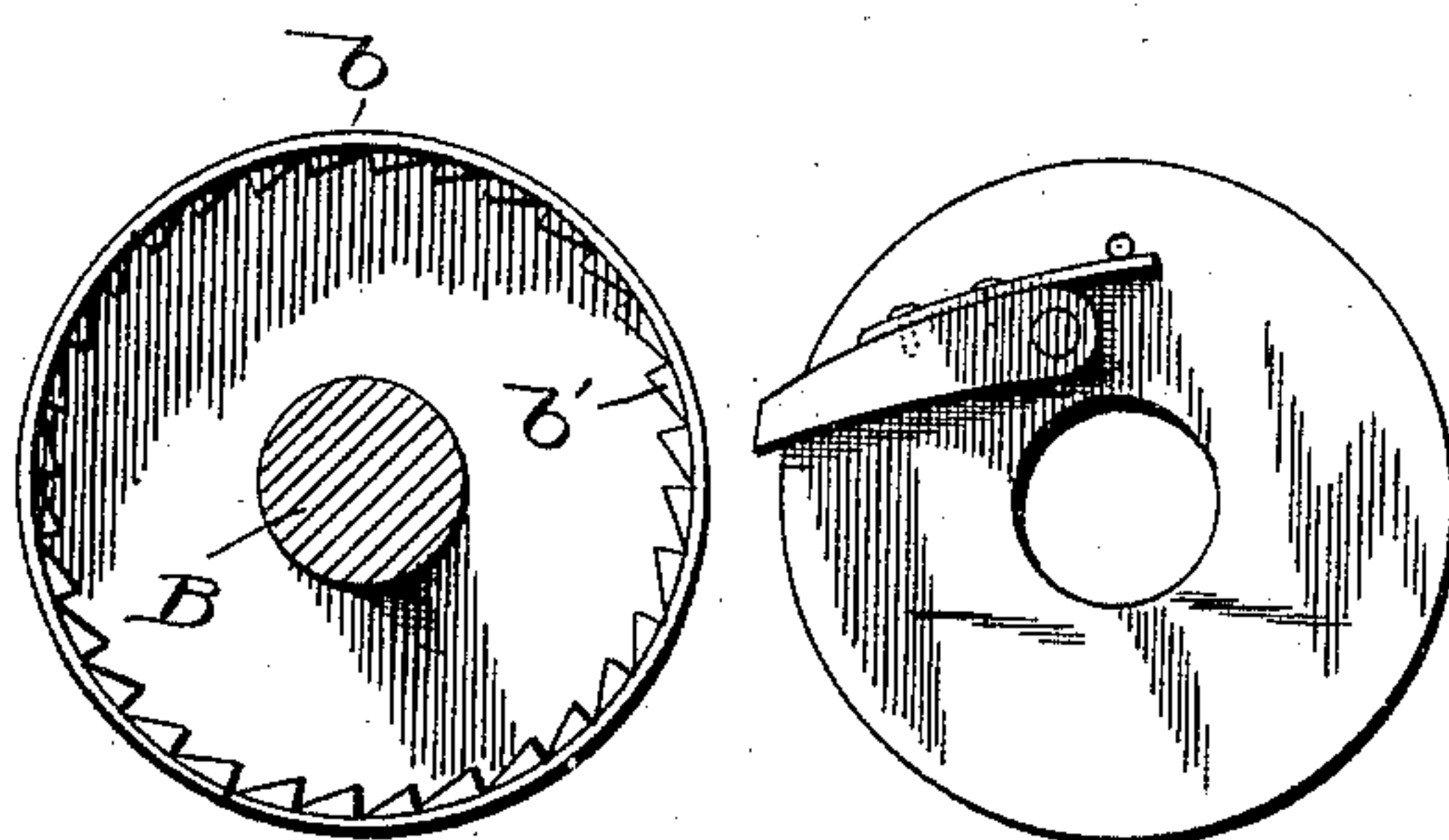
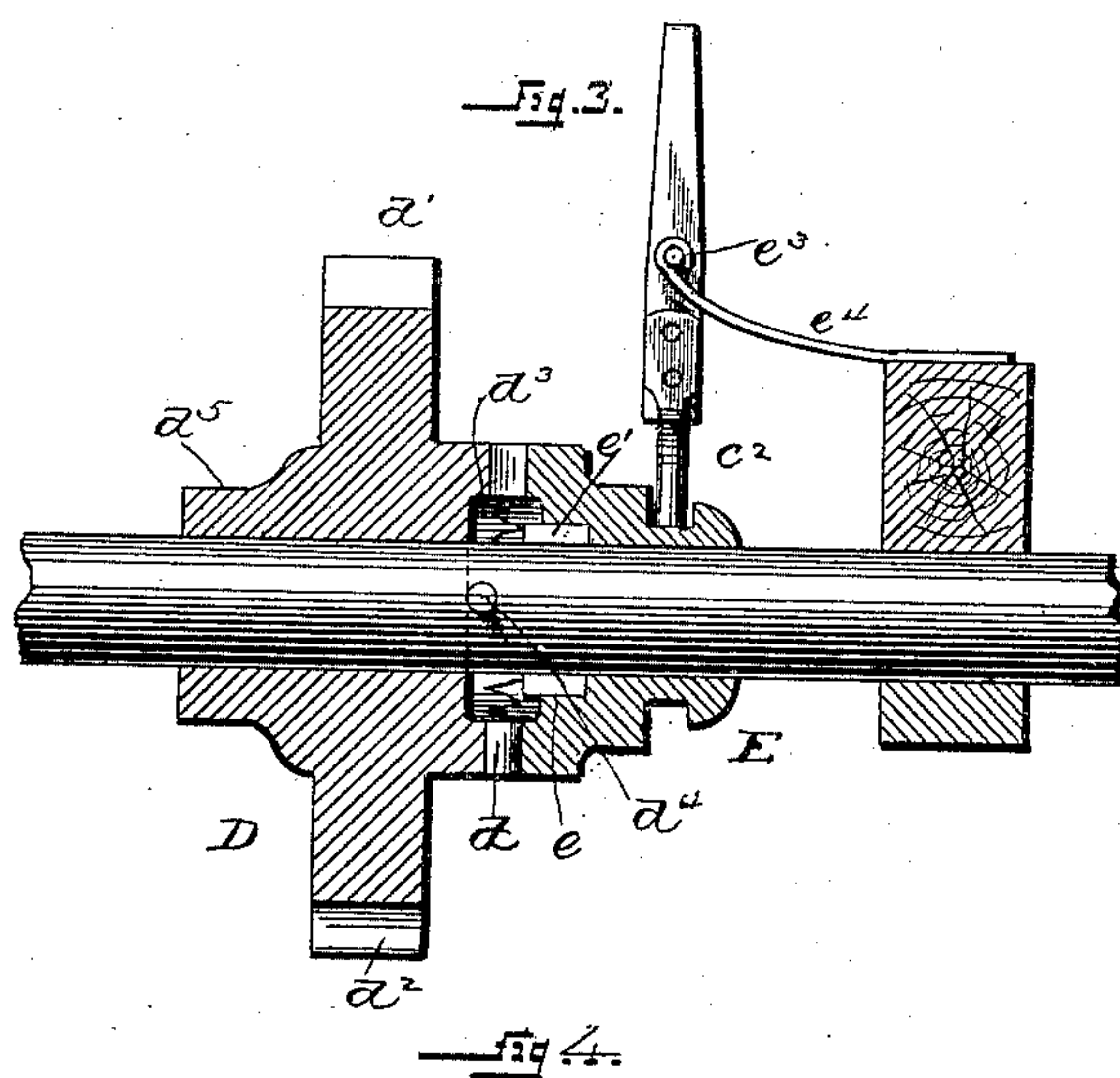
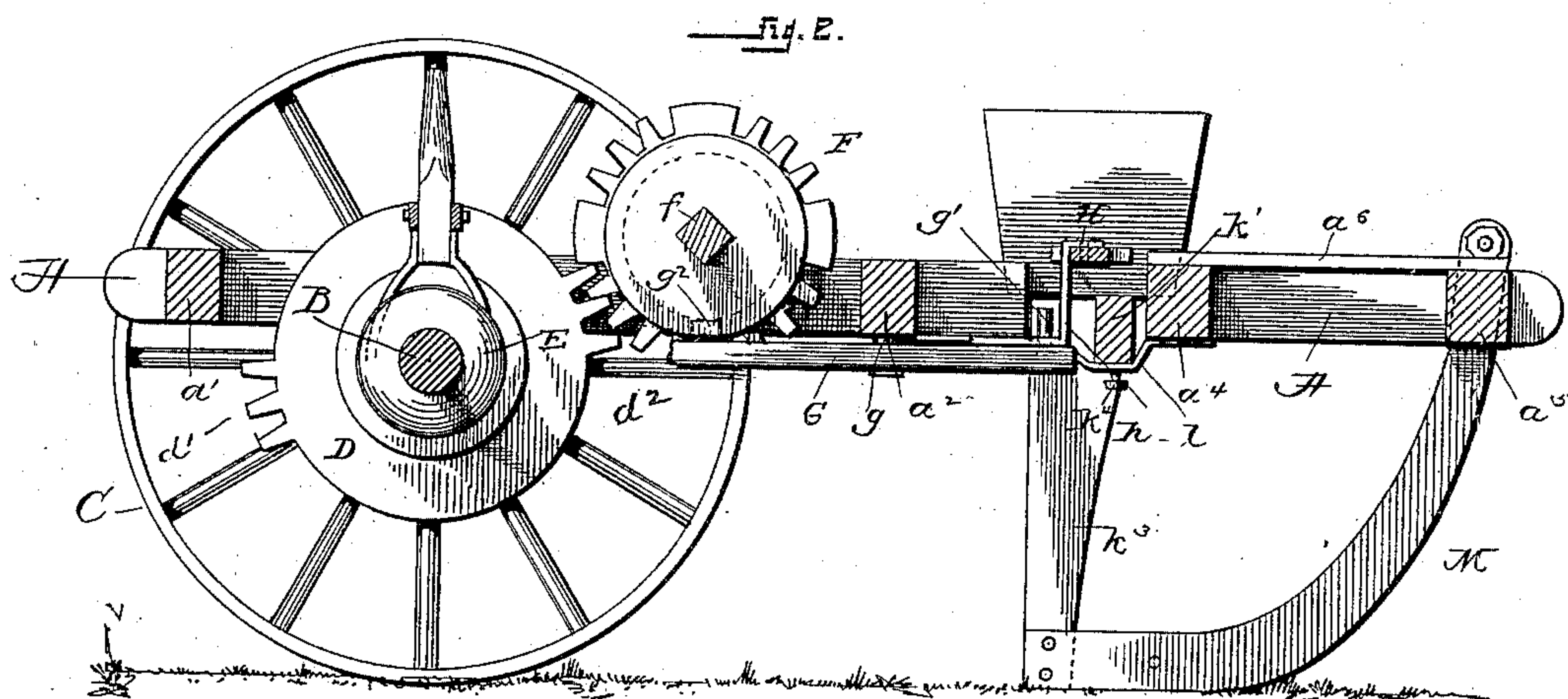
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# UNITED STATES PATENT OFFICE.

JAMES BRADY, OF NAUVOO, ILLINOIS.

## CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 397,690, dated February 12, 1889.

Application filed June 18, 1888. Serial No. 277,423. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BRADY, a citizen of the United States, residing at Nauvoo, in the county of Hancock and State of Illinois, have invented certain new and useful Improvements in Corn-Planters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to agricultural implements.

The object is to plant corn or seed at predetermined intervals by means of a planter set on wheels to be drawn by horses or other animals.

To this end my invention consists of a frame, a main axle carrying a mutilated cog-wheel, and two driving-wheels, a cog-wheel and a cam-grooved pulley on a counter-shaft, and two seed-hoppers, an oscillating valve-rod actuated by a lever provided with a pin and friction-roller engaging the cam-groove in the pulley; also of a frame formed in two parts for the purpose of adjustment of runners, a mutilated cog-wheel, a cog-wheel, and a cam-grooved pulley, two seed-hoppers placed over perforated posts, a sliding valve-rod actuated by a lever provided with a pin and friction-roller engaging the cam-groove in the pulley, and a pawl-and-ratchet movement to cause the turning of the shaft affecting the mechanism for dropping the seed, a clutch for throwing out of engagement, the mutilated cog-wheel, with the main axle, and sundry details of construction, to be hereinafter described.

In the accompanying drawings, forming part of this specification, and in which like letters of reference indicate corresponding parts in all the figures, Figure 1 is a plan view of my corn-planter. Fig. 2 is a sectional view showing one of the driving-wheels, the mutilated cog-wheel on the main axle, the second cog-wheel on the counter-shaft carrying the cam-grooved pulley, the lever provided with the pin and friction-roller engaging in the cam-groove and one of the seed-hoppers with part of the oscillating valve-rod connected to the lever. Fig. 3 shows the construction of the clutch for throwing the mutilated cog-

wheel out of engagement with the main axle. Fig. 4 shows the pawl-and-ratchet device to prevent the backward rotation of the driving-wheels affecting the mechanism for dropping the seed.

In the drawings, A represents the frame, which is formed in two parts, one carrying the main axle B and provided with the cross-rails  $a' a^2$ , and the other carrying the runners, and having the two cross-rails  $a^1 a^5$  and the braces  $a^6 a^7$  to receive the tongue.

On the main axle B, outside of the frame, is the drum  $b$ , having the ratchet-teeth  $b'$  formed on its inside surface.

C designates the driving-wheels, the hubs of which are provided with ratchets and springs adapted to engage the ratchet-teeth in the inner surface of the drums  $b$ . On the axle B, inside the frame, is loosely mounted the mutilated cog-wheel D, having the clutch-teeth  $d$  in its side and the diametrically-opposite gear-teeth  $d' d^2$ . I have shown in the drawings three gear-teeth on one side and three on the other; but a larger number may be used when it is desired to increase the quantity of seed sown. This cog-wheel has a depression,  $d^3$ , in its hub, near the axle, within the clutch-teeth, and the axle carries a pin,  $d^4$ , moving in the depression. The axle has also a collar,  $d^5$ , on the other side of the cog-wheel, which, with the pin  $d^4$ , prevents the cog-wheel from having any lateral motion on the axle.

E designates the movable portion of the clutch mounted on the axle, and which, by means of the spline  $e$  and feather  $e'$ , receives the movement of the axle and transfers the said movement to the mutilated cog when thrown into engagement by means of the bifurcated lever  $c^2$ , pivoted at  $e^3$  in the arm or bracket  $e^1$ , attached to the frame.

F designates the cog-wheel on the counter-shaft  $f$ , which is journaled in bearings  $f'$  on the frame. The shaft is preferably square, with round journals; but a round shaft may be used and the cog-wheel keyed to it. The cog-wheel F engages the gear-teeth of the mutilated cog-wheel, and has four of its teeth filled, as shown in the drawings. This construction gives greater strength to the wheel, and is permissible because of the other cog-wheel being mutilated. On the same shaft,



$f$ , is a pulley having on its periphery a cam-groove made of such a shape as to give two vibrations to the end of the lever operating the valve-rod at each revolution.

5  $G$  designates a lever, fulcrumed at  $g$  on the under side of the cross-rail  $a^2$ . On one end of the lever is a pin,  $g'$ , and at the other end a friction-roller,  $g^2$ , which engages with the cam-groove  $f^2$ .

10  $H$  designates the valve-rod, having a projection,  $h$ , provided with a slot,  $h'$ , in which moves the pin  $g'$  of the lever  $G$ . At each end of the rod are flat pieces, made either of metal or wood, which act as slide-valves in the hop-

15 pers.  $K$  designates the hoppers, of which there are two, carried on a cross-beam,  $k'$ , and provided with apertures communicating with vertical passages in the posts  $k^3$ .

20  $L$  designates the forward portion of the frame, connected with the other part by means of the curved pieces  $l$ , through which pass the screws  $k^1$ , which hold the cross-beam  $k'$  in position. On the forward part of the frame are

25 struts  $l'$ , to which are adjustably secured the ends of the runners  $M$  by means of the screws  $m$  and nuts  $m'$  and the holes  $m^2$ . The runners  $M$  are secured to the ends of the posts  $k^3$  in such a manner that the lower edge of

30 the bottom of the runners will be on a line with the end of the post.

The operation of the planter is as follows: The mutilated cog-wheel having been thrown into operation by the clutch, at every half-

35 revolution of the cog its teeth will engage the second cog-wheel, and thereby turn the cam-grooved pulley as long as the teeth engage the teeth of the second cog-wheel, the lever will be vibrated by its pin and friction-roller

40 moving in the cam-groove, and the valve-rod will receive an oscillating movement from side to side, thus causing the valves and their apertures to cross the apertures in the base of the seed-hoppers and allowing the seed to

45 drop down through the perforated posts. The distance between the seeds will naturally depend upon the number of teeth on the mutilated cog-wheel, for it is evident that the second cog-wheel will not be rotated, and there-

fore not actuate the valves, except when 50 meshing the teeth in the other cog-wheel. When it is desired to turn round or to back, the pawls on the hubs of the driving-wheels will not engage the ratchets on the drums attached to the main axle, and therefore will 55 not rotate the axle.

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

1. In a seed-planter, the combination, with 60 the axle, of the mutilated gear-wheel mounted loosely on the axle, the clutch adapted to connect the axle and mutilated gear, the second gear-wheel mounted contiguous to the first and rigidly connected to the wheel having 65 the cam-groove, and the valve-rod connected to and receiving motion from the second gear-wheel, substantially as described.

2. In a seed-planter, the combination, with 70 the axle, of the mutilated gear mounted loosely on the axle, the supporting-wheels, the pawls and ratchets connecting the wheels and the axle, the clutch connecting the axle and the gear, the second gear arranged contiguous to 75 the first, the wheel having the cam-groove rigidly connected to the second gear-wheel, the sliding valve-rod, and the lever connected at one end to the valve-rod and having its other end projecting into the cam-groove, substan- 80 tially as described.

3. In a seed-planter, the combination of a frame constructed in two parts, one supported by the axle having the mutilated gear-wheel and carrying the second gear having the cam-grooved wheel connected thereto, and the le- 85 ver communicating motion from the cam-grooved wheel to the valve-rod, and another part carrying the hoppers and valve-rods, the two portions being connected by the angular joining-pieces, and the runners connected, 90 substantially as described.

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

JAMES BRADY.

Witnesses:

LOU ARGOST,  
ROBERT BELL.