

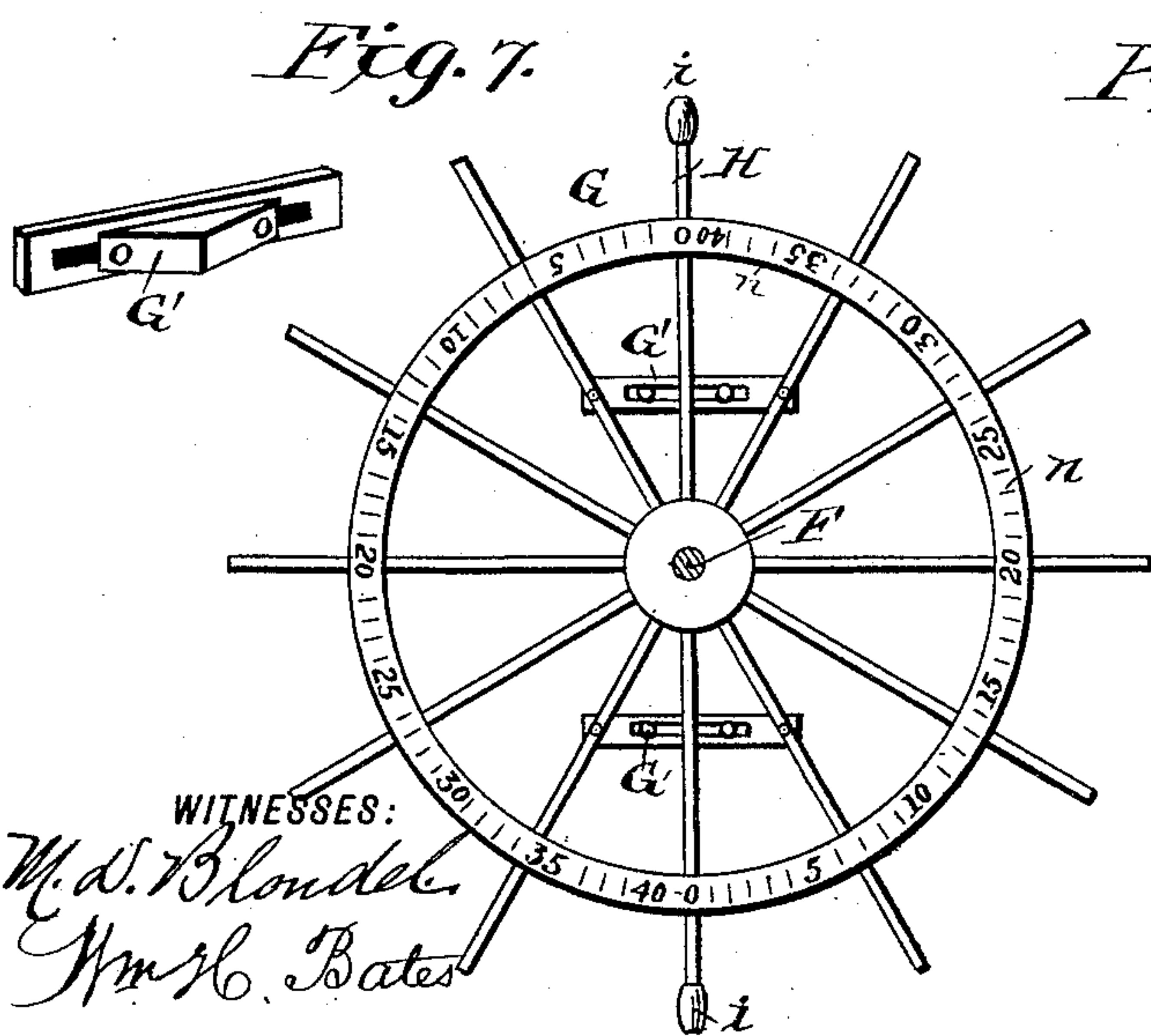
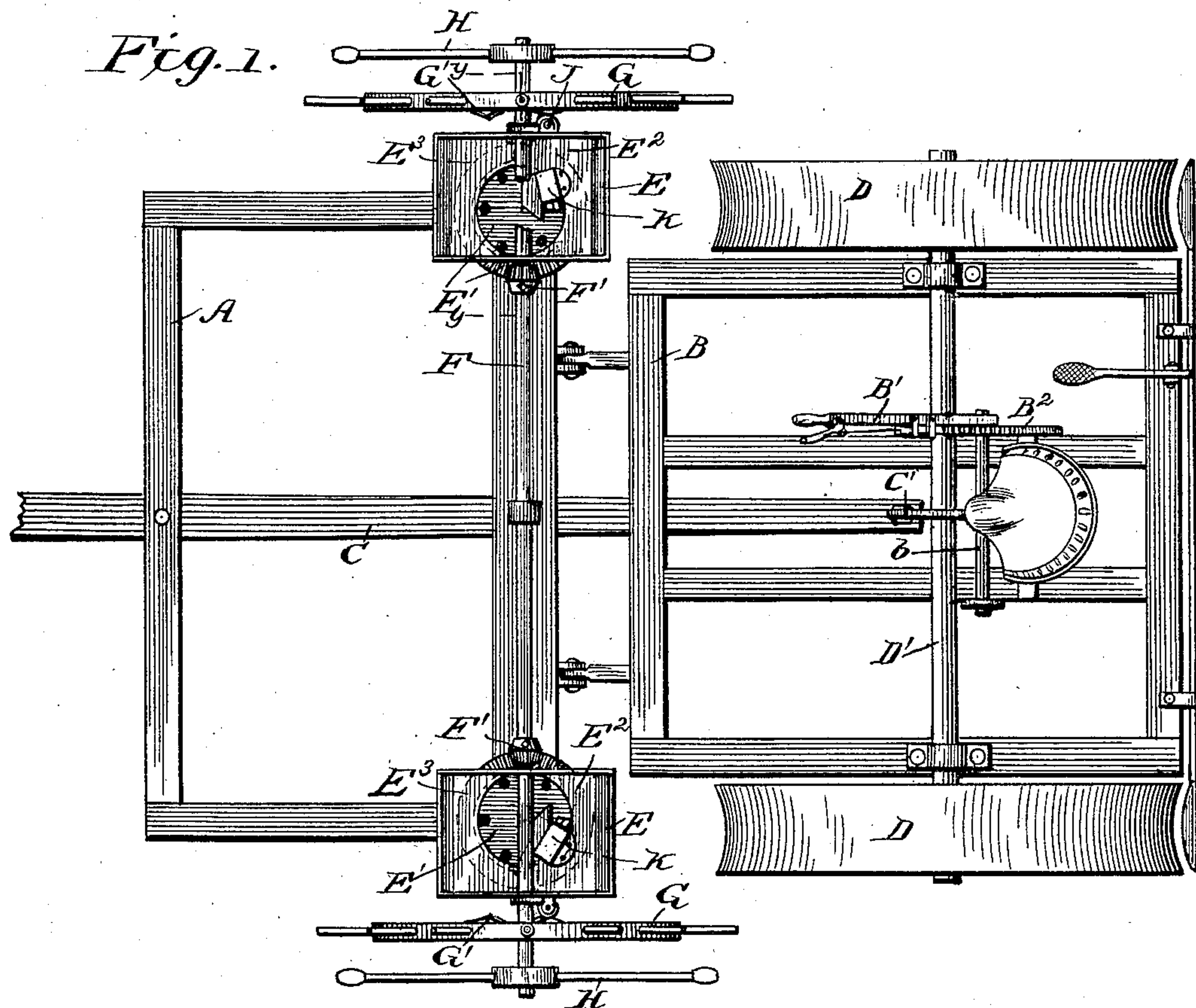
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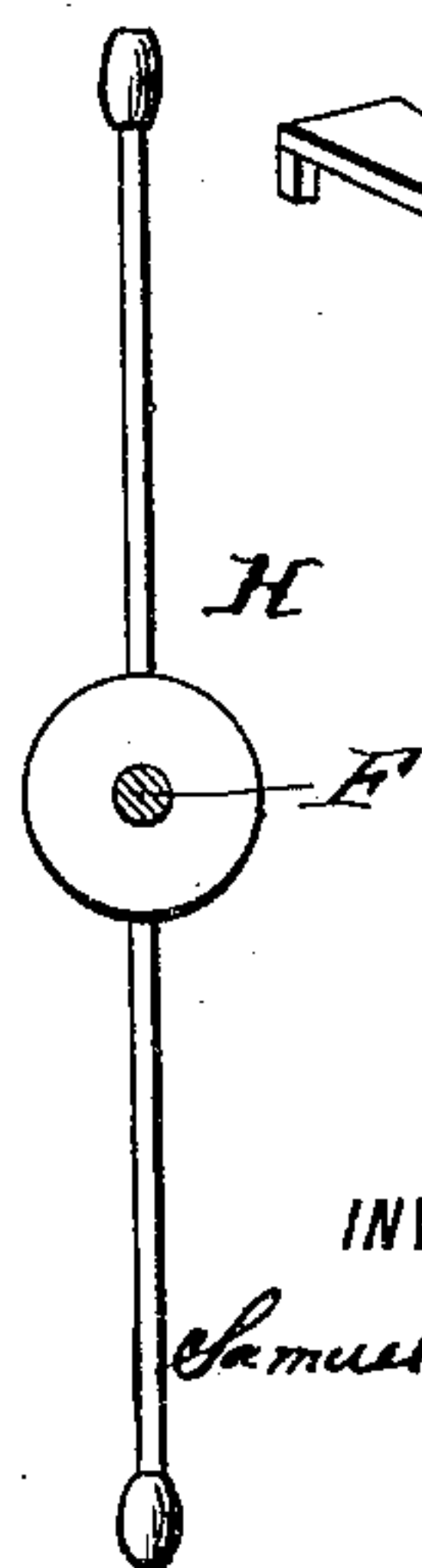
S. HUFFMAN.  
CORN PLANTER.

No. 452,709.

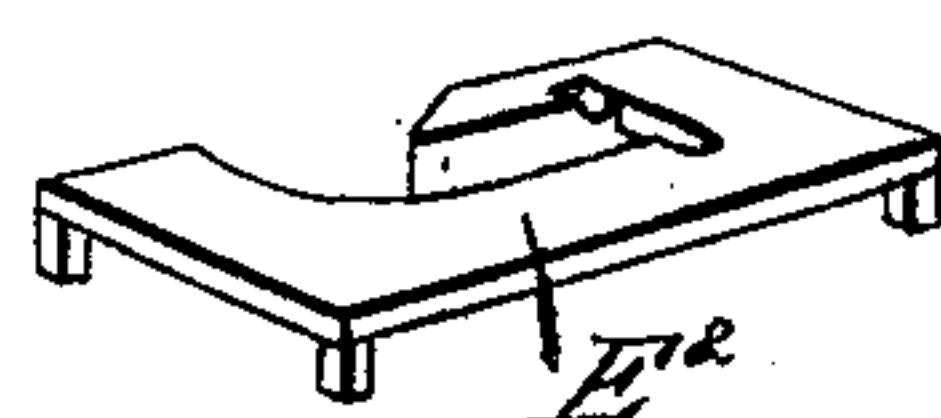
Patented May 19, 1891.



*Fig. 8.*



*Fig. 9.*



WITNESSES:  
*W. A. Blondel*  
*Wm H. Bates*

INVENTOR  
*Samuel Huffman*

(No Model.)

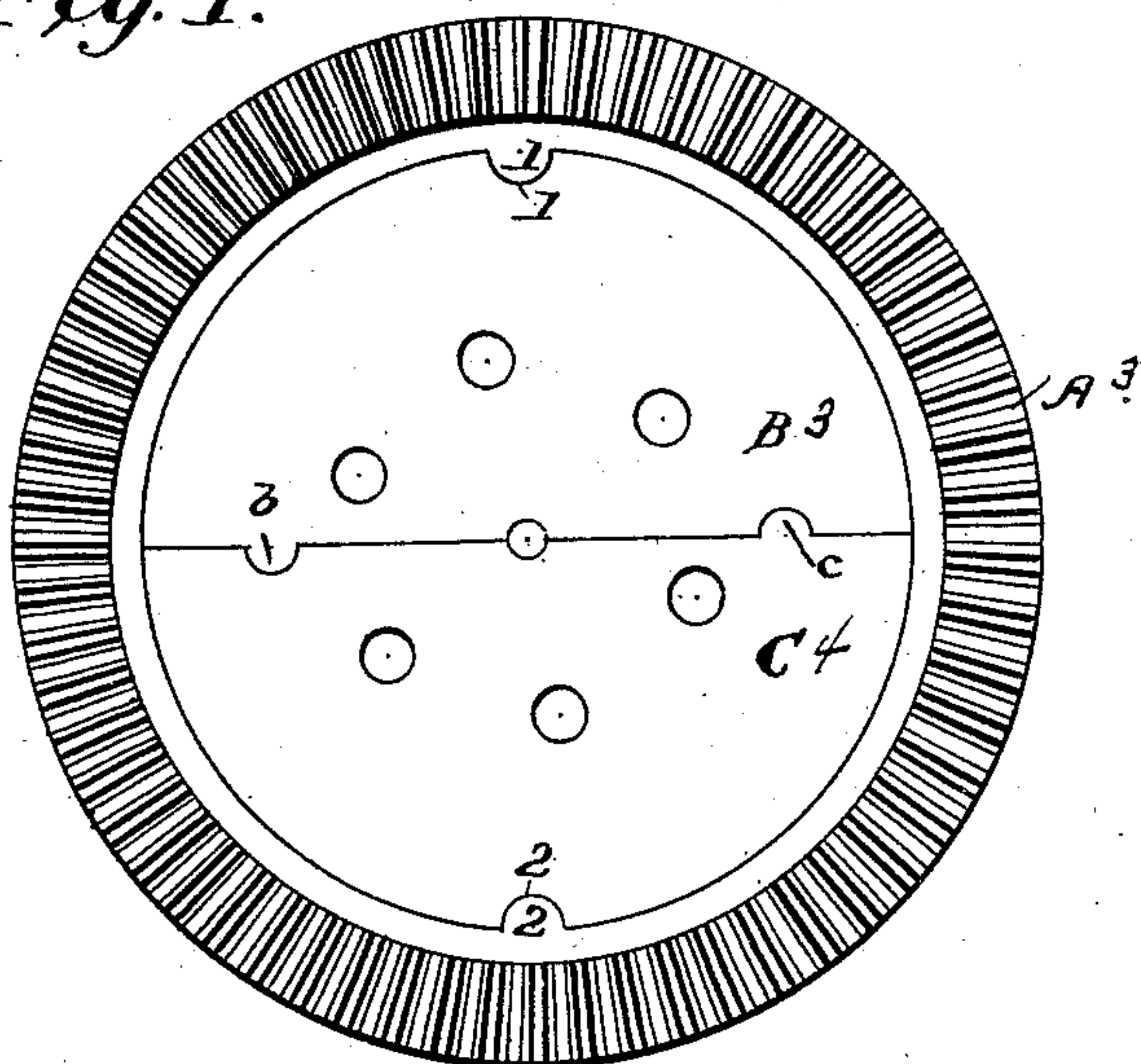
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S. HUFFMAN.  
CORN PLANTER.

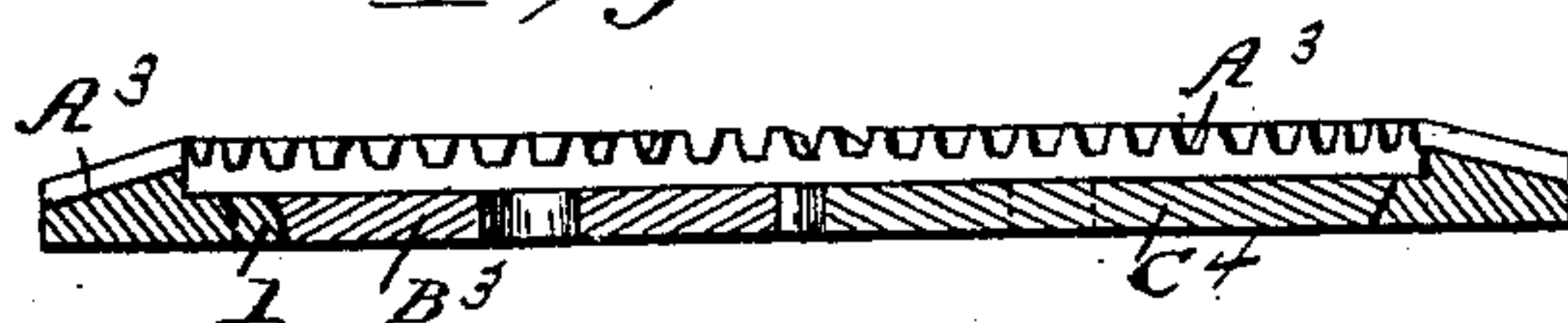
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*Fig. 1<sup>a</sup>*



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



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(No Model.)

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No. 452,709.

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Fig. 2.

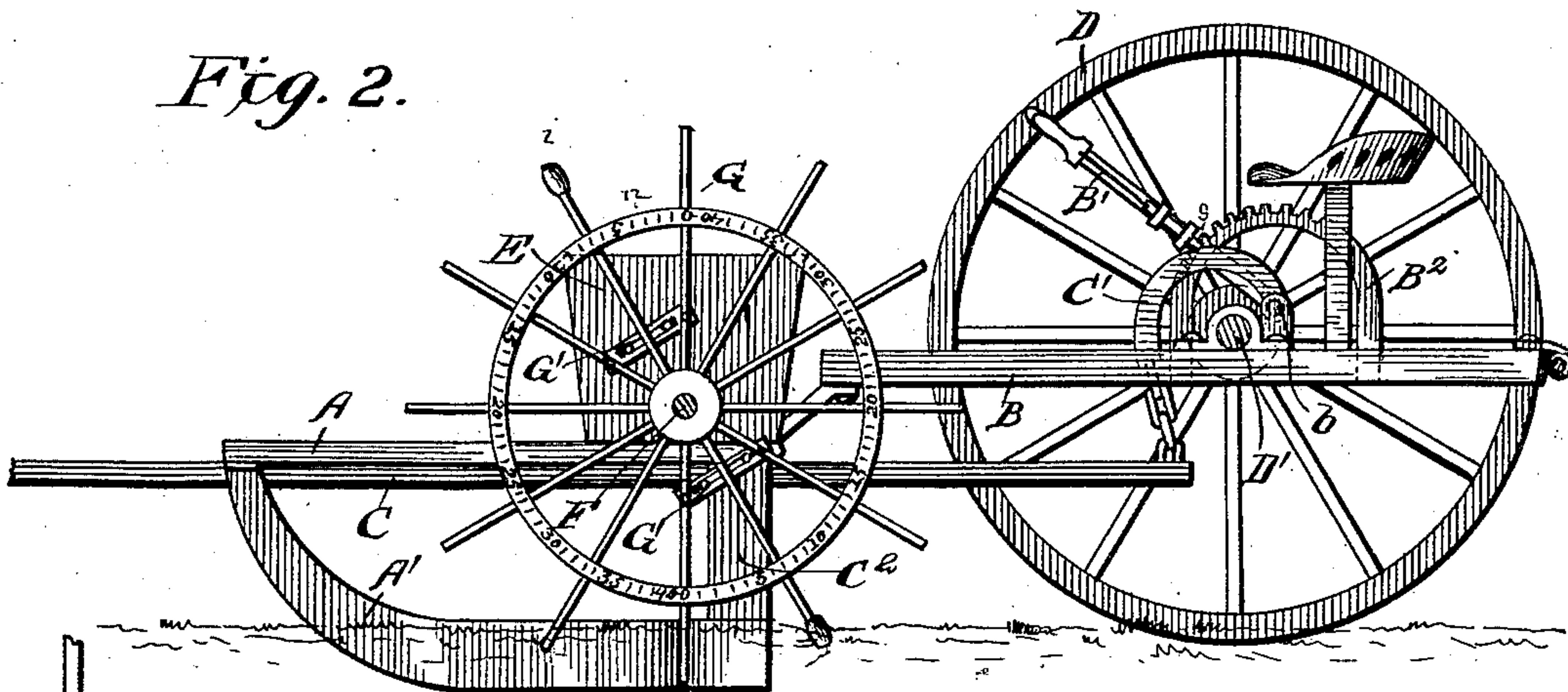


Fig. 3.

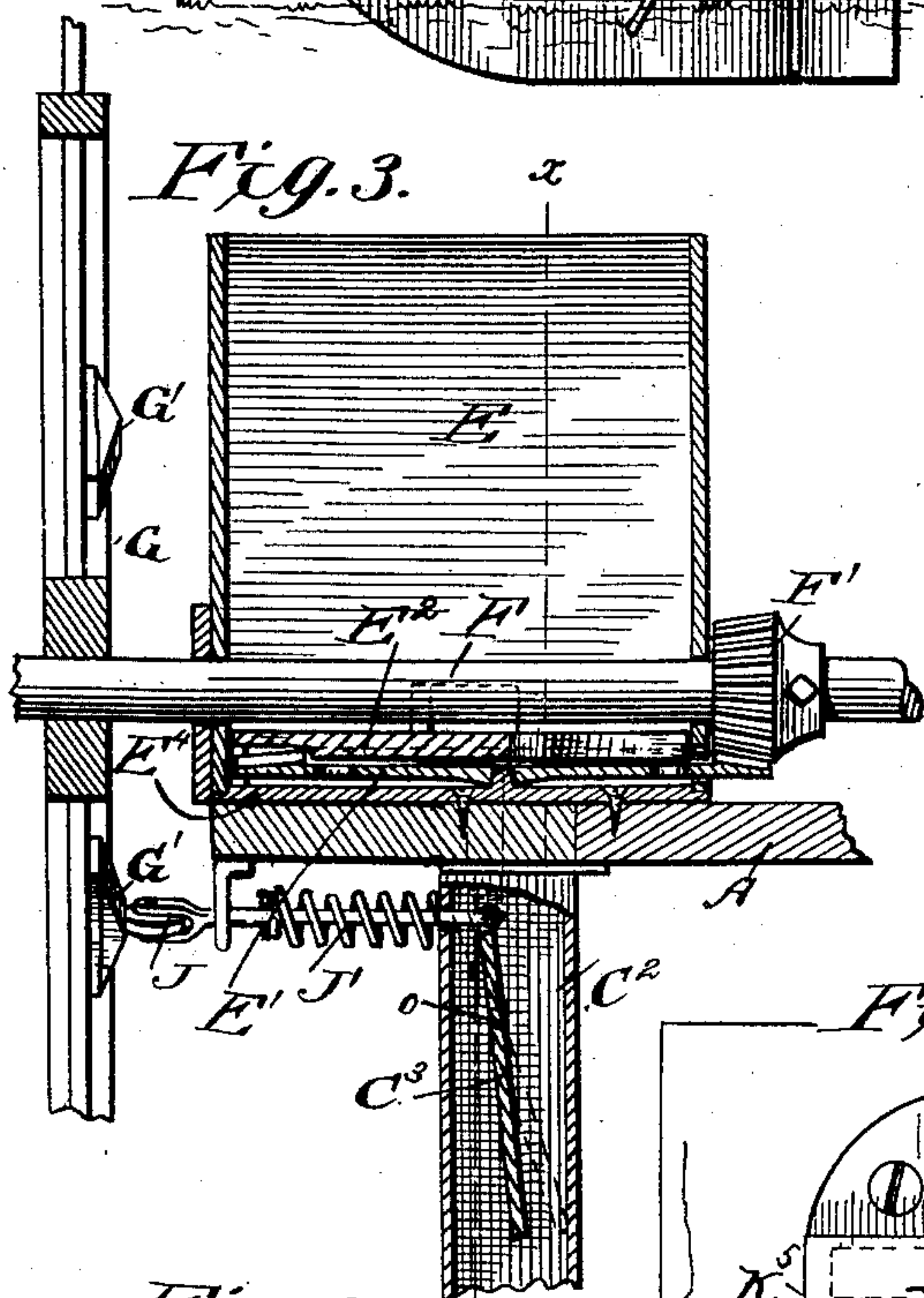


Fig. 4.

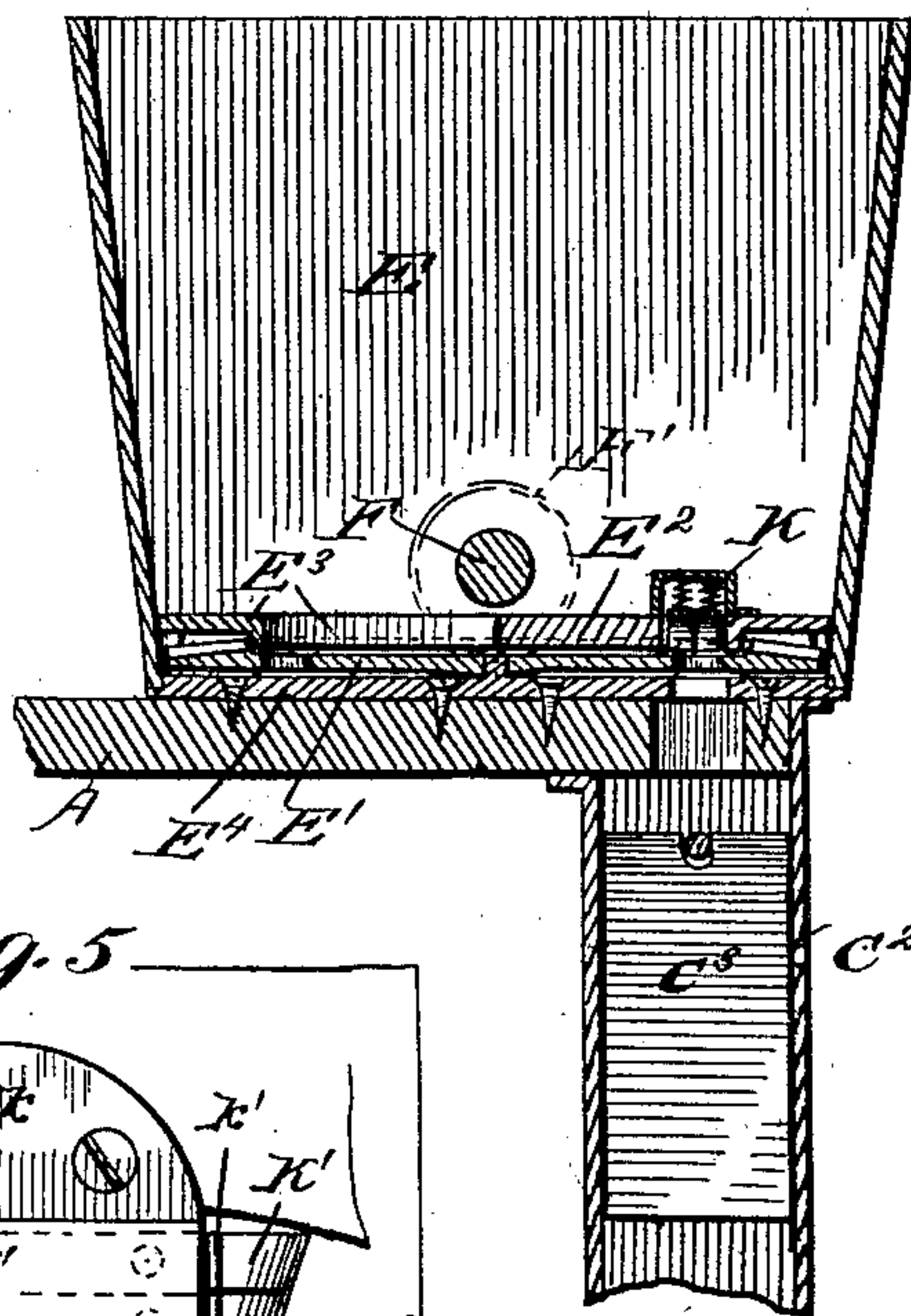


Fig. 5.

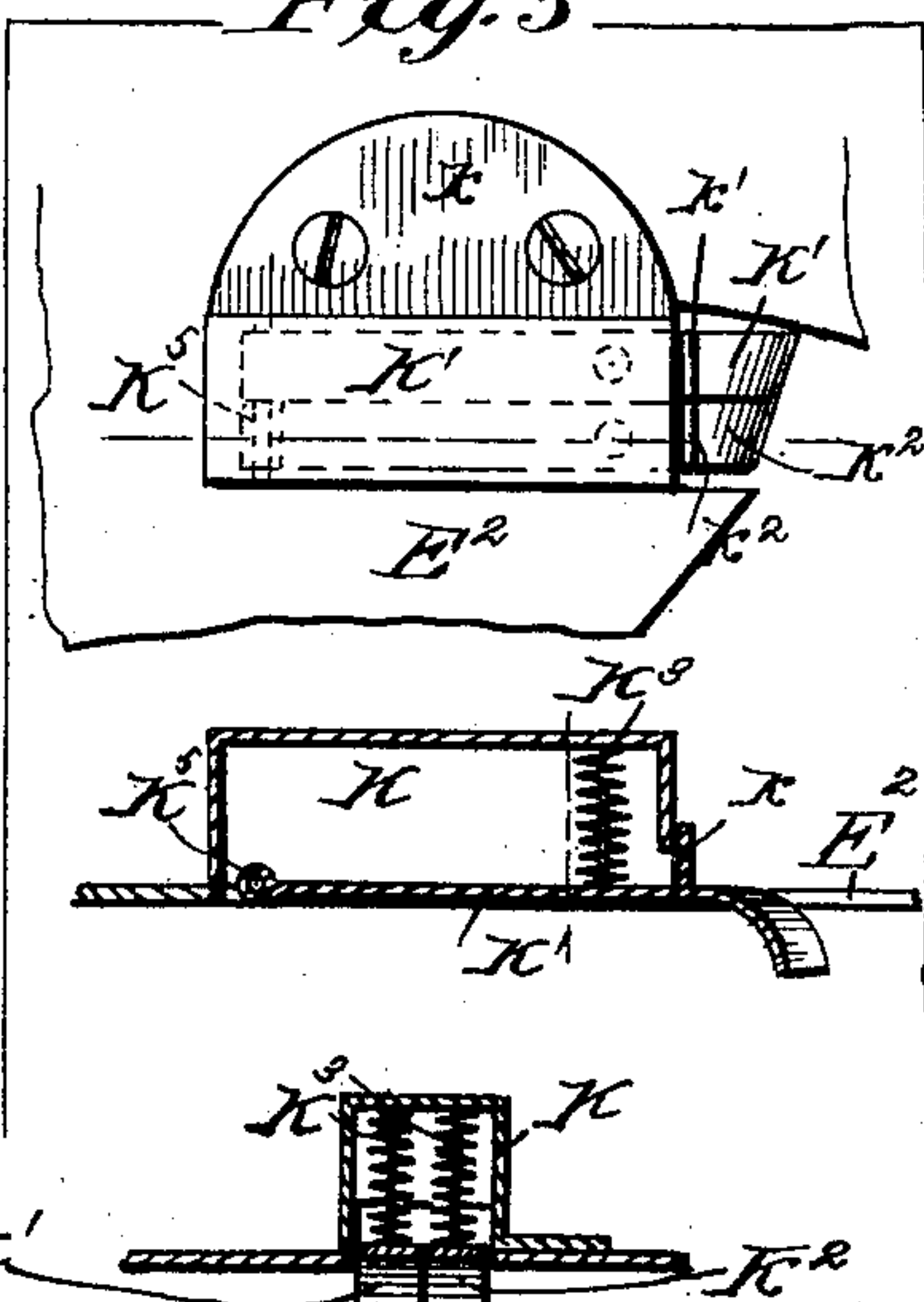
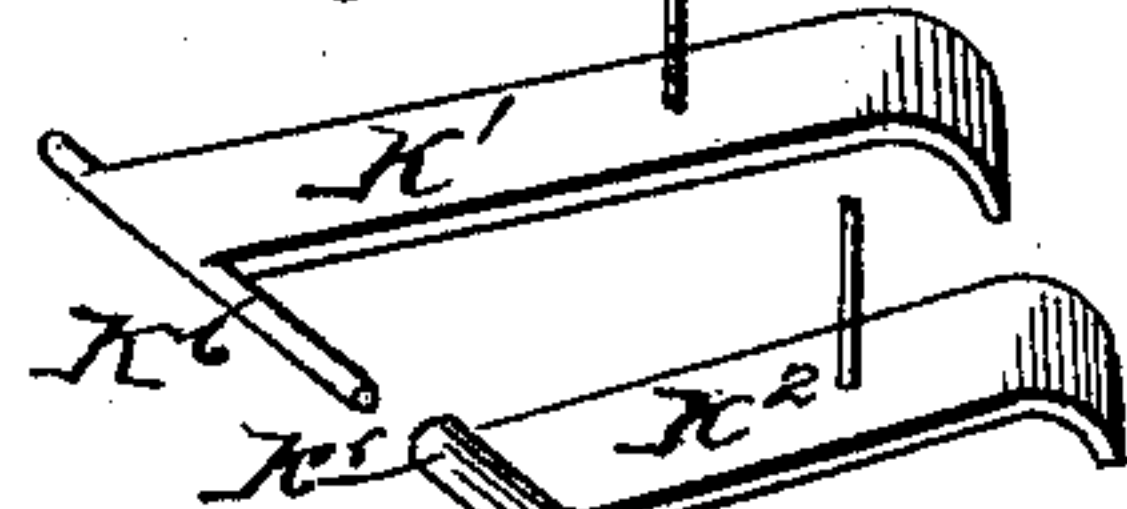


Fig. 6.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

SAMUEL HUFFMAN, OF NIOTA, KANSAS.

## CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 452,709, dated May 19, 1891.

Application filed February 10, 1890. Renewed April 2, 1891. Serial No. 387,358. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL HUFFMAN, a citizen of the United States, of Niota, in the county of Chautauqua and State of Kansas, have invented new and useful Improvements in Automatic Corn-Planters, of which the following is a specification.

The nature and object of my invention are to drop and check-row the corn without the assistance of wires, cords, or hand dropper. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the machine. Fig. 2 is a side elevation. Fig. 3 is a transverse section. Fig. 4 is a section on a line  $xx$  of Fig. 3. Fig. 5 shows plan and sectional views of the cut-off. Fig. 6 is a perspective view of the cut-off detached. Fig. 7 is a side view of the cam attachment for the spoke-wheel, dropping-lugs, and scale for setting the machine. Fig. 8 is an edge view of the marking or checking device. Fig. 9 is a perspective view of the cover for the dropping-plate and support for the cut-off. Fig. 1<sup>a</sup> is a dropping-plate shown in three parts A<sup>3</sup>, B<sup>3</sup>, and C<sup>4</sup>. Fig. 2<sup>a</sup> is a section of Fig. 1<sup>a</sup>.

Similar letters of reference refer to similar parts throughout the several views.

In constructing my planter I use similar parts common to double or two-row planters.

Frames A and B, wheels D, and runners A', hoppers E, and spouts C<sup>2</sup> shown in Figs. 1 and 2 are of the common form. The spoke-wheels G are mounted upon the transverse shaft F, and attached to the spokes are the adjustable operating-lugs G', and the scale  $n$  used for setting the drop. Upon the shaft F is mounted the gear or pinions F', which engage with the teeth upon the dropping-plates E'. Upon the ends of shaft F the markers H are secured to check when the corn is dropped. Shaft F has bearings between the hoppers E, attached to frame A. The pinion F' must have upon each half of its circumference as many teeth as there are teeth on the dropping-plate E' between the holes or corn-cups, and the dropping-plate E' must have on its periphery an equal number of teeth between its cups. Over the dropping-plate the cover E<sup>2</sup> is placed in the corn-hoppers E, leaving the center and cups exposed to the corn that the cups may

receive the corn. A flange or legs, projecting down from the bottom of the cover E<sup>2</sup> surrounding the cups, keep the corn from passing under. The cover E<sup>2</sup> and flange E<sup>3</sup>, Figs. 3 and 4, protect the cogs on the periphery of the dropping-plate. Plate or cover E<sup>2</sup> holds the cut-off in its proper place and supports the cap or cover over the cut-off. The cut-off is in two parts K' K<sup>2</sup>, Figs. 5 and 6. K', Fig. 6 has an arm K<sup>6</sup>, over which the thimble K<sup>5</sup> on K<sup>2</sup> slips and fits loosely, allowing the parts to work independent of each other. The cut-off is pivoted, as shown in Fig. 5, at K<sup>5</sup>. Spiral springs K<sup>3</sup> will keep the double cut-off pressed down by the cap shown in Fig. 5, where a spring is placed around each pin, the cap K placed over them and secured to plate E<sup>2</sup>. (Shown in Fig. 5.) The front end of cap K (side view in Fig. 5) is cut away to allow the cut-off to rise, while the flange K will keep the corn from passing under.

In the sectional view, Fig. 5, K<sup>3</sup> shows the pins and springs; K, the cap; K' and K<sup>2</sup>, an end view of the double cut-off. The dropping-plates E' project from the hoppers E sufficiently to allow the pinions F' to engage with them, as shown in Figs. 1 and 3. The covering-plate E<sup>2</sup>, Fig. 9, is supplied with lugs to keep it from pressing upon the dropping-plate. The two frames A and B may be attached together as shown in the drawings, or by any suitable means. Upon the frame B, behind and above the axle D', is supported the transverse shaft  $b$ , carrying a circular arm C', having links attached to the tongue C. Upon the end of shaft  $b$  is attached the lifting-lever B', by which the runner-frame A with its machinery may be raised from the ground and held up by the ratchet B<sup>2</sup> and pawl  $s$  engaging. When the machine is in motion, the spoke-wheels G engage with the ground, causing shaft F and pinion F' to rotate. The pinion F' rotates the dropping-plate E<sup>2</sup>, and brings a corn-cup supplied with corn over the spout C<sup>2</sup> at the proper time, and deposits the corn in the spout C<sup>2</sup>, where it is held by the dropping-valves C<sup>3</sup> until the lug G' forces the arm J' by coming in contact with the roller J, and opens the valve C<sup>3</sup> and frees the corn. The valve C<sup>3</sup> shown in Fig. 3 is pivoted at  $o$ . Immediately after the corn is freed from the dropping-valve C<sup>3</sup> the valve



is closed by the spring upon the arm J', and another corn-cup is brought over spout C<sup>2</sup> and corn deposited for the next hill, as before.

The cut-off K' K<sup>2</sup> (shown in Figs. 1 and 5) allows only the corn to pass under what is contained in the cup or sufficient for a hill. The corn is dropped at regular intervals of each half-turn of the wheels G. When the corn is dropped, the marking-arms II, Figs. 8 and 1, mark or check the spot where it is deposited. The dropping-plate, Fig. 1<sup>a</sup>, showing the teeth on its periphery A<sup>3</sup>, is constructed in three parts A<sup>3</sup>, B<sup>3</sup>, and C<sup>4</sup>, having lugs and recesses 1, 2, b, and c, for holding the parts in place.

When it is desirable to change the size of the corn-cups, one-half of the cover E<sup>2</sup>, which is constructed in two parts in the hopper E, may be removed, and the half-plate C<sup>4</sup> be taken out, and by giving the plate a half-turn B<sup>3</sup> may be removed and be replaced by plates having cups of the desired size, thus leaving the rim and teeth adjusted to the pinion F'.

In setting the machine at the end of the row to drop at the proper place in rowing, I may use a staff with inches marked upon it indicating the width of the space between rows. I set the staff in line with the checks made last, then lay the staff horizontally on the ground at the drop at the heel of the runner, and the number of inches indicated in the space, turn that number down to

the heel of the runner, and start. The scale counts backward and the dropper will leave the corn at the right spot. The dropping-plate E' rests on the bead-plate E<sup>4</sup>.

Having described my invention sufficiently for a mechanic to understand, what I claim as new, and desire to secure by Letters Patent, is—

1. In an automatic corn-planter, the combination, with the frame A, runners A', and hoppers E, of the shaft F, spoke-wheels G, adjustable cam-lugs G', markers II, and scale n, all substantially as set forth.

2. In a corn-planter, a shaft F, pinions F', wheels G, cam-lugs G', and spout C<sup>2</sup>, in combination with rollers J, arms J', and dropping-valves C<sup>3</sup>, as described, and for the purpose set forth.

3. In a corn-planter, the frame A, with its mechanism, in combination with the extended tongue C, arm C', frame B, wheels D, shaft D', shaft b, lever B', and ratchet B<sup>2</sup>, all as described, and for the purpose set forth.

4. In a corn-planter, the geared dropping-plates, in combination with the sectional seed-disks B<sup>3</sup> C<sup>4</sup>, substantially as described, and for the purpose set forth.

SAMUEL HUFFMAN.

Witnesses:

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WM. II. BATES.