

No. 698,778.

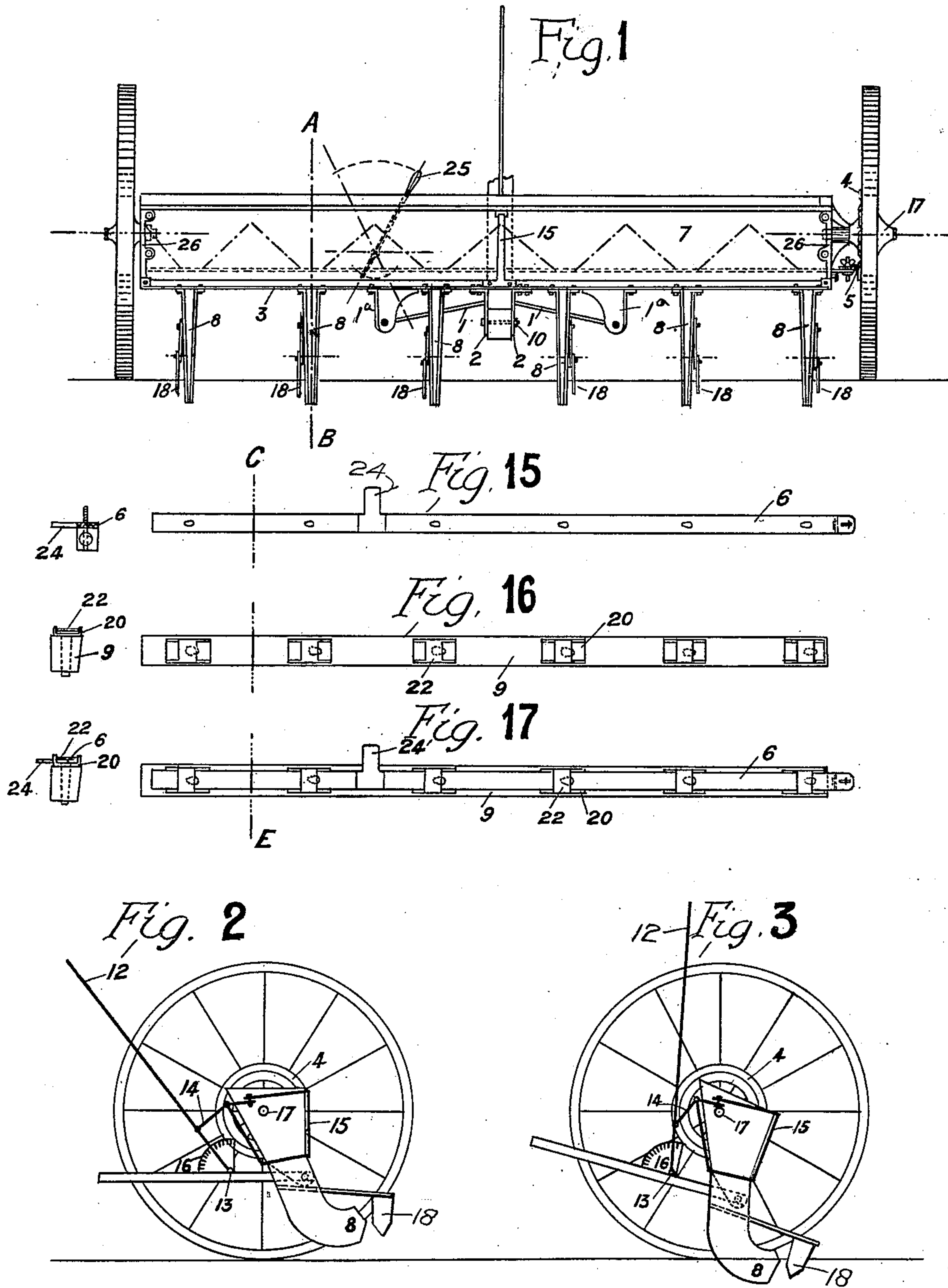
Patented Apr. 29, 1902.

R. D. ZIMMERMANN.
SEEDING AND PLANTING MACHINE.

(Application filed May 4, 1901.)

(No Model.)

4 Sheets—Sheet 1.



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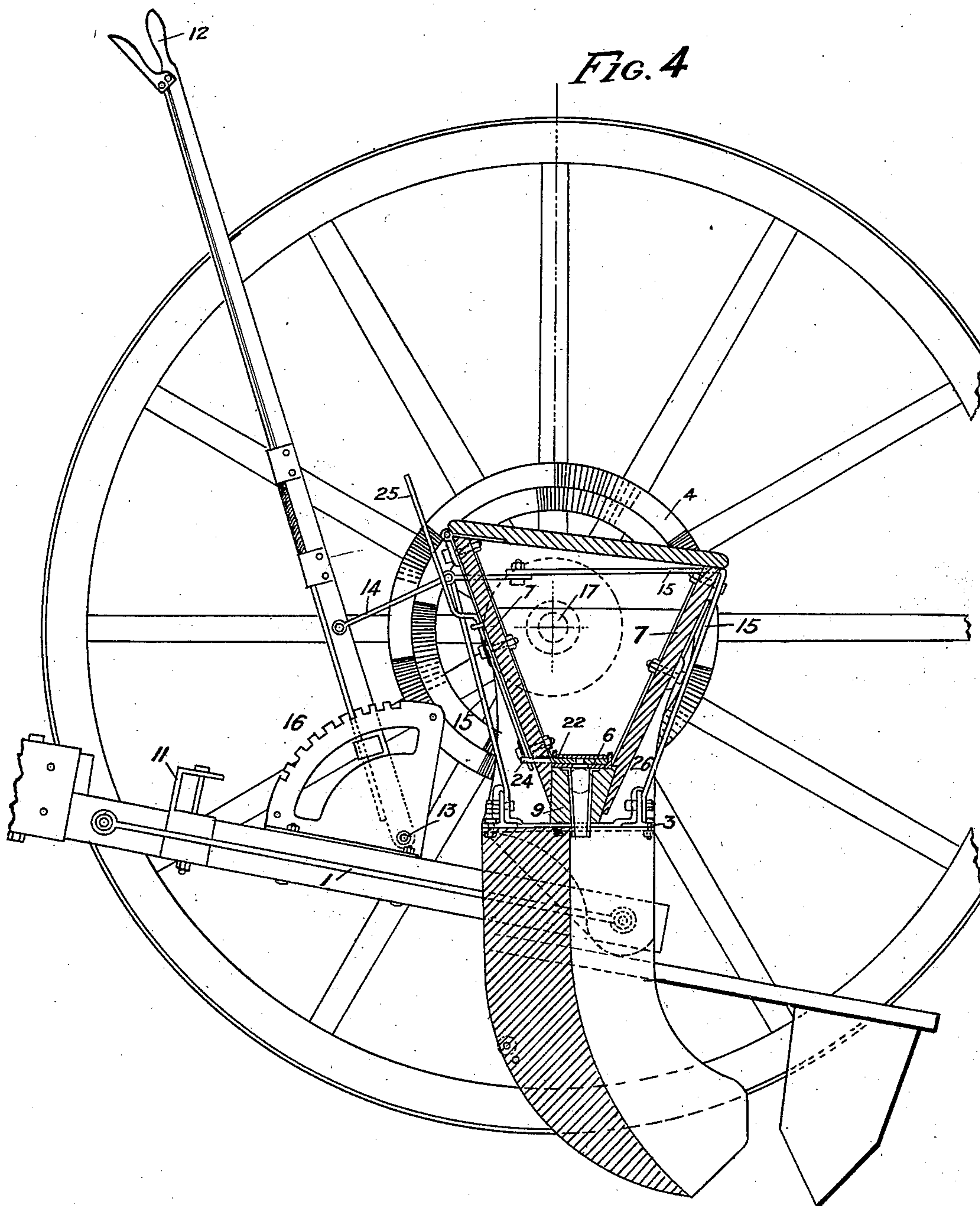
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4 Sheets—Sheet 2.



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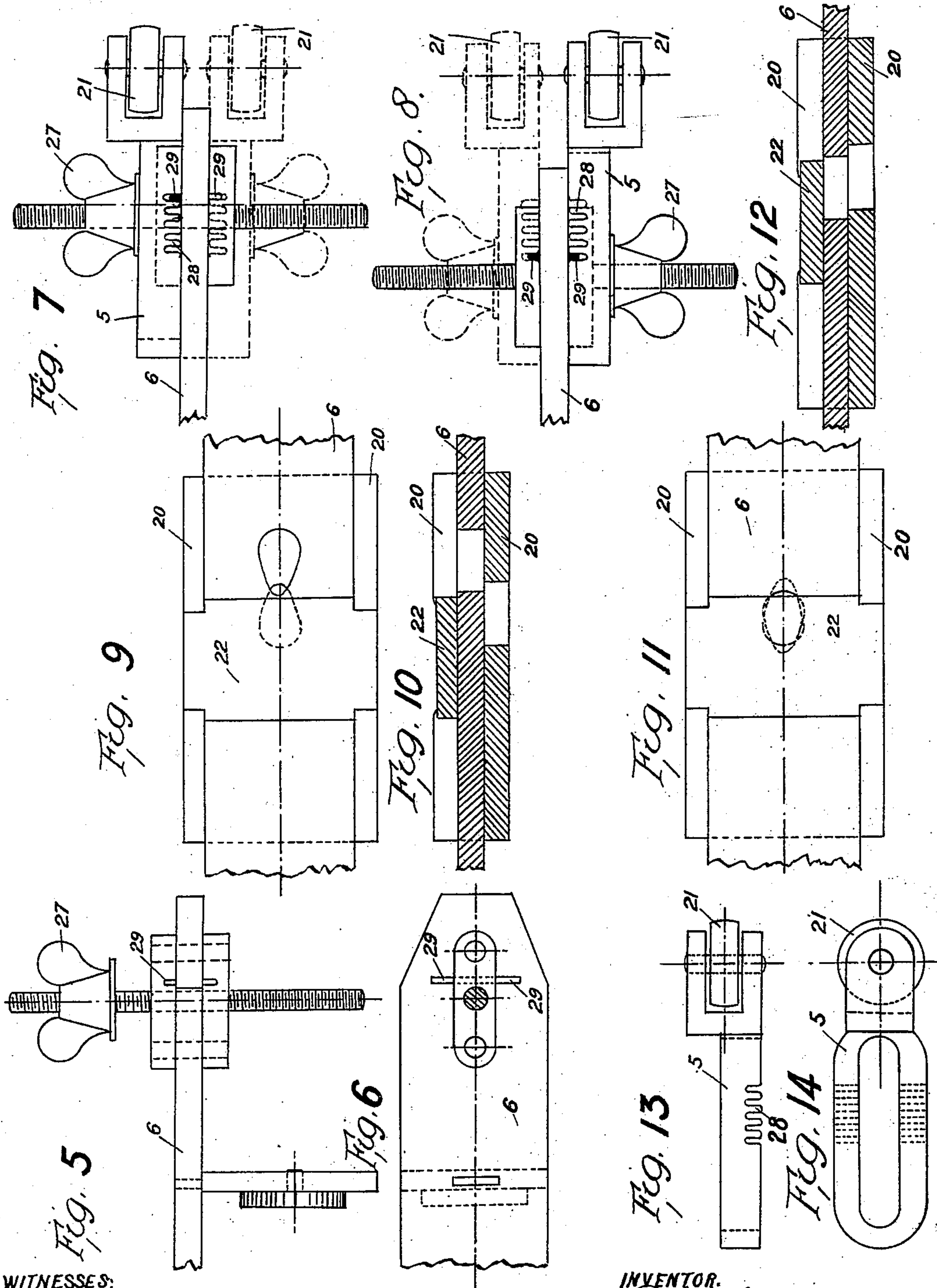
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4 Sheets—Sheet 3.



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4 Sheets—Sheet 4.

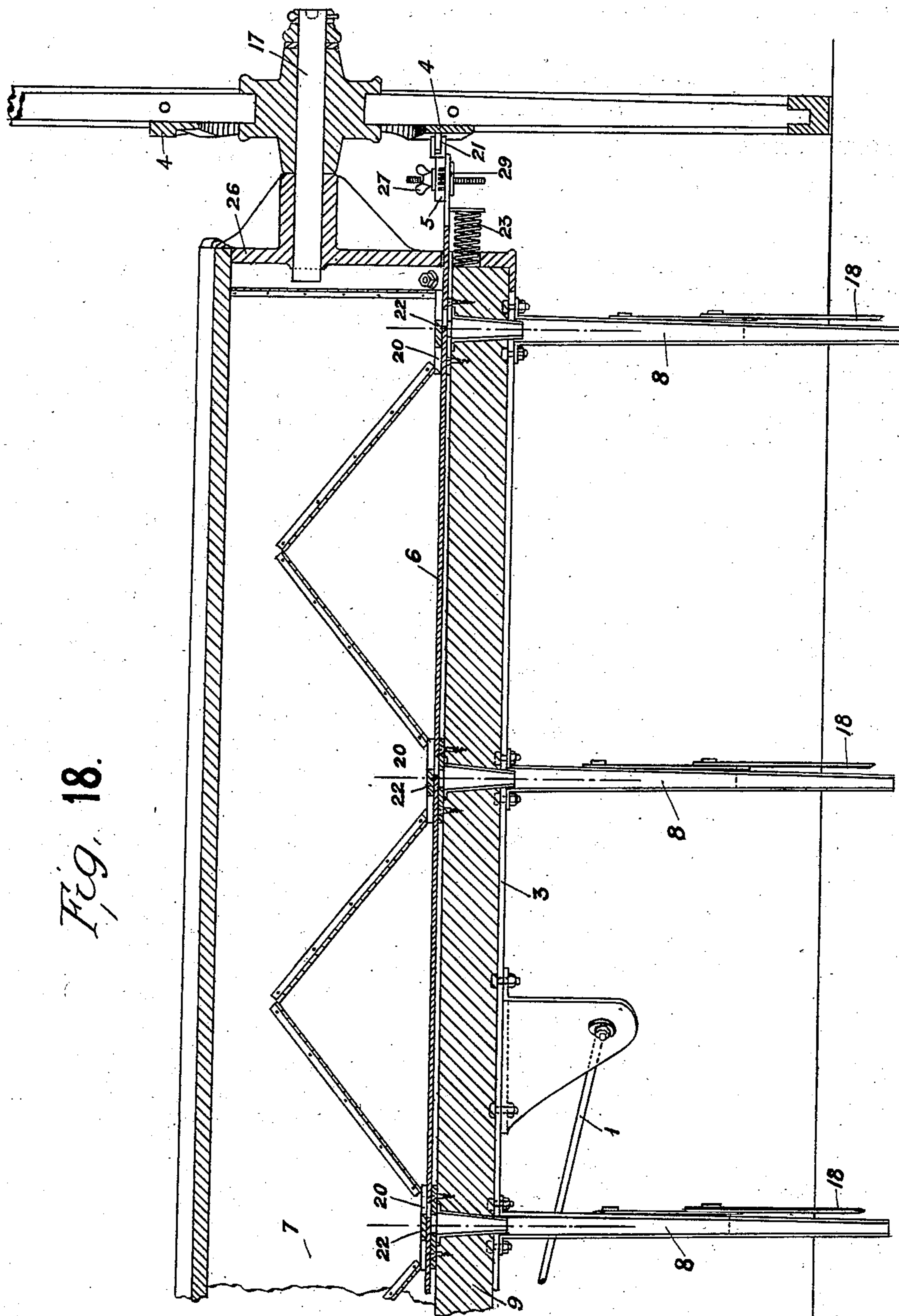


Fig. 18.

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UNITED STATES PATENT OFFICE.

ROBERTO D. ZIMMERMANN, OF BUENOS AYRES, ARGENTINA.

SEEDING AND PLANTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 698,778, dated April 29, 1902.

Application filed May 4, 1901. Serial No. 58,744. (No model.)

To all whom it may concern:

Be it known that I, ROBERTO D. ZIMMERMANN, a citizen of Argentina, and a resident of Buenos Ayres, Argentina, have invented certain new and useful Improvements in Seeding and Planting Machines, of which the following is a specification.

The invention consists in the devices and combination of devices hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a rear view of the machine. Fig. 2 is a sectional view of Fig. 1. Figs. 3 and 4 are similar views on line A B of Fig. 1, the latter on a larger scale. Figs. 5, 6, 7, 8 are detail views of an adjustable feed-controlling block. Figs. 9, 10, 11, and 12 are views of one of the holes in the feed-slide opened to the smallest and largest degree, respectively, of the feed-controlling block, Figs. 7, 8. Figs. 13, 14, respectively, are a side and a plan view of the roller, showing the notches and slot. Figs. 15, 16, 17, respectively, are views of the feed-slide, plates thereof, and lower beam of the seedbox, showing the feed-slide secured in place. Fig. 18 is a longitudinal section of the machine on a large scale, showing the interior of the seedbox, the feed-slide and roller engaging with the teeth or cams of the wheel.

The frame of the machine comprises inverted-T-shaped beams 3, Figs. 1 and 18. These are secured to the cast-iron end pieces 26, forming the ends of the seedbox 7, and from which end pieces the axles 17 of the wheel extend, the said axles being located eccentrically to the seedbox—that is to say, toward the front of its center of gravity.

One of the wheels is provided with a disk 4, having two concentric rows of teeth or cams adapted to engage a roller 21, Fig. 18, carried by a block 5, provided with a slot, Fig. 14, to allow it to be moved in relation to the screw 27 longitudinally of the feed-slide 6 and attached adjustably thereto, the said slide being adapted to be reciprocated on the upper surface of the beam 9, which is arranged at the lower part of the seedbox, to thus control the feed, said slide having a series of holes, as shown in Fig. 15, through which the seed pass to the shares 8. The two rows of teeth on the cog-wheel 4 are composed of different

numbers of teeth, the outer row having seven teeth and the inner row five teeth. The block 5 is held to the slide 6 by the screw 27 and may be clamped to either the upper or lower side of the feed-slide, Figs. 7 and 8. When on the upper side, its roller 21 will be operated and the slide 6 moved five times for each revolution of the carrying-wheel and the toothed disk, and when the block 5 is secured to the under side of the feed-slide said slide will be operated seven times for each revolution of the toothed disk, said roller 21 being then in line with the outer row of teeth. Further than this, the block 5 can be adjusted in a direction longitudinally of the feed-slide, for which purpose it is provided with a series of notches 28, Figs. 7, 8, and 13, engaging with a pin 29, secured to the said slide, and in this way the block 5 with its roller can be set toward or from the toothed disk to be operated more or less thereby, and thus the number of seeds fed may be regulated. For instance, if the block 5 is set as far from the toothed disk as possible the feed-slide will be moved to let only one seed pass, Figs. 7 and 9. If held by the second notch, three seeds will pass each time the slide is operated, and so on, adding two seeds for each successive notch, the feed-slide having a large feed-hole which is opened to different degrees, according to which hole is holding the graduator, as shown in Figs. 7, 8, 9, 10, 11, and 12.

To the lower part of the inverted T-beams two iron braces 2 are secured to support the draft-pole located fifteen degrees beneath the seedbox. Two braces 1^a secure in position the draft-rods 1, located on the front part of the pole, as shown in Fig. 4, and on top of the pole at a part located between the said rods an iron clamp 11, Fig. 4, is secured for the placing of a swing-bar.

An essential feature of my invention is the movement of the seedbox in relation to the draft-pole in order to counterbalance the force exercised by the shares when cutting the earth.

Another feature of my invention relates to the position of the axles being eccentric, which admits of the seedbox tilting backward and forces the shares to remain below the ground.

The shares 8 are secured rigidly to the bottom of the seedbox. They have channels on their rear sides, into which the seed pass through holes in the beam 9.

5 The braces or hangers 2 are pivotally connected with the draft pole or beam at 10. In order to raise and lower the shares 8 to and from the ground, a hand-lever 12 is pivoted to the draft-pole at 13 and is connected by
10 two rods 14 to a band 15, encircling the seedbox, the ends of the band being secured to the T-beams.

A toothed sector 16 is located on top of the draft-pole to hold the lever 12 in any position
15 to which it may be adjusted. Fig. 2 shows the seedbox tipped forward by operating the lever, and the shares are thus raised from the ground.

Fig. 3 represents the parts as in their low-
20 ered position.

The shares 8 cut furrows in which the seed are deposited.

Blades or moldboards 18 are provided connected to the shares to remove weeds.

25 Fig. 16 shows plates 20 designed to facilitate the motion of the seed-slide 6, and the parts marked 22, Figs. 9, 10, 11, 12, also serve as cut-offs to let only so many seeds pass as have gathered in the holes of the feed-slide.

30 Fig. 18 shows the position of the feed-slide with the block 5 attached thereto, the spring 23 tending to push the slide to the right in opposition to the operation of the block 5 and the teeth of the wheel 4.

35 At 24, Figs. 15 and 17, is shown an arm projecting from the feed-slide to be engaged by a pivoted lever 25, Fig. 1, so that the feed-

slide may be moved and held in inoperative position in relation to the toothed wheel.

Having now substantially described and 40 set forth the nature of my invention and in what manner the same is to be performed, I do declare what I claim as my sole and exclusive property is—

1. In combination, the draft-beam, a seed- 45 box pivoted thereto, shares rigidly connected to the seedbox to tilt therewith and means for tilting the seedbox in relation to the beam, substantially as described.

2. In combination, the draft-beam, a seed- 50 box pivoted thereto, shares rigidly connected to the seedbox to tilt therewith and means for tilting the seedbox in relation to the beam, said means comprising a lever pivoted to the beam, a segment on the beam for holding the 55 lever in any desired position, and a strap connecting the lever with the seedbox, substantially as described.

3. In combination, a seedbox, a feed-slide 60 therein, a block carried by said feed-slide and adjustable from the upper to the lower side thereof, said block being also adjusted in a direction longitudinally of the slide and a wheel carrying two rows of teeth, said teeth 65 operating transversely of the end of the feed-slide and being located at the end of the seedbox, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ROBERTO D. ZIMMERMANN.

Witnesses:

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