

No. 709,442.

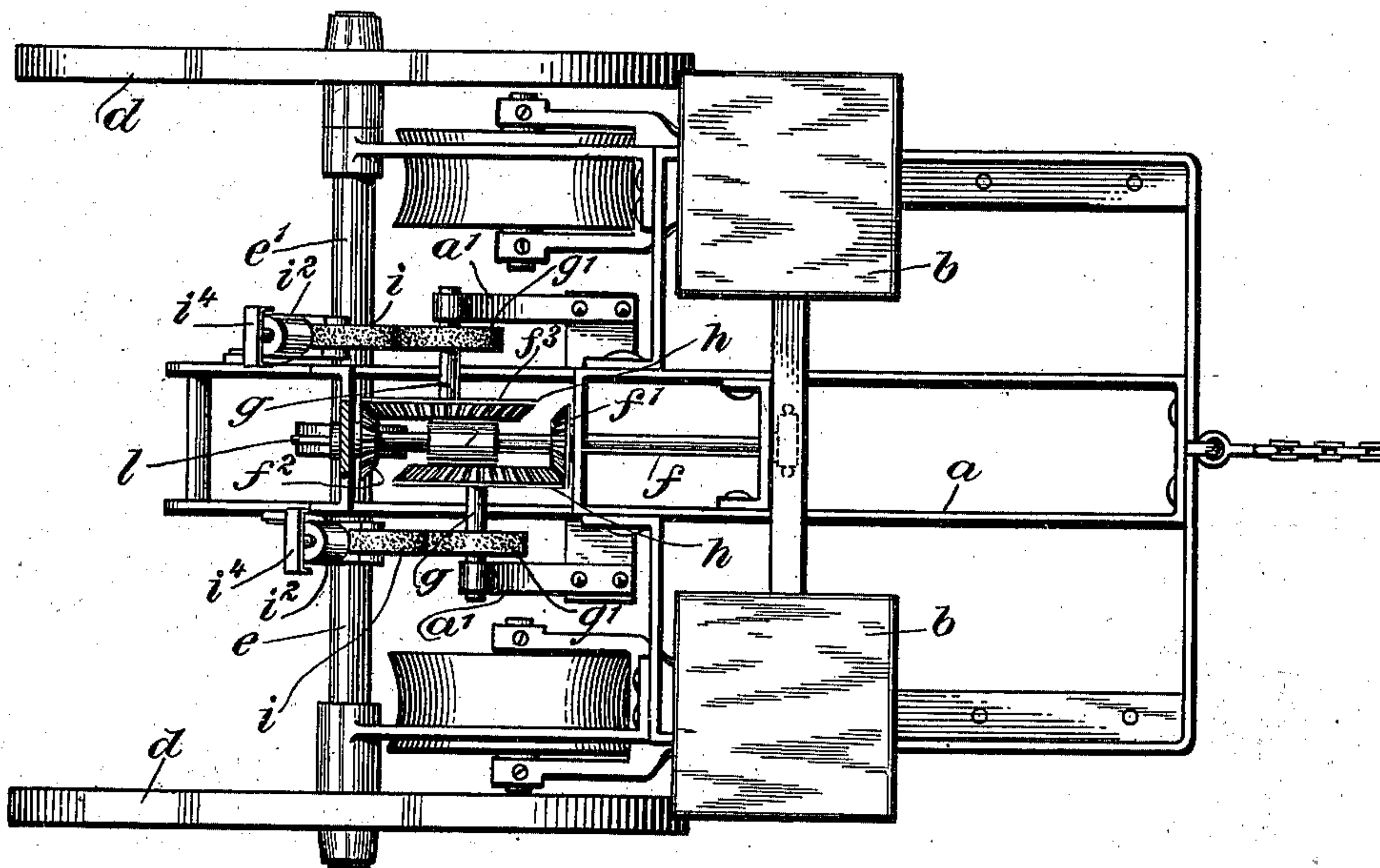
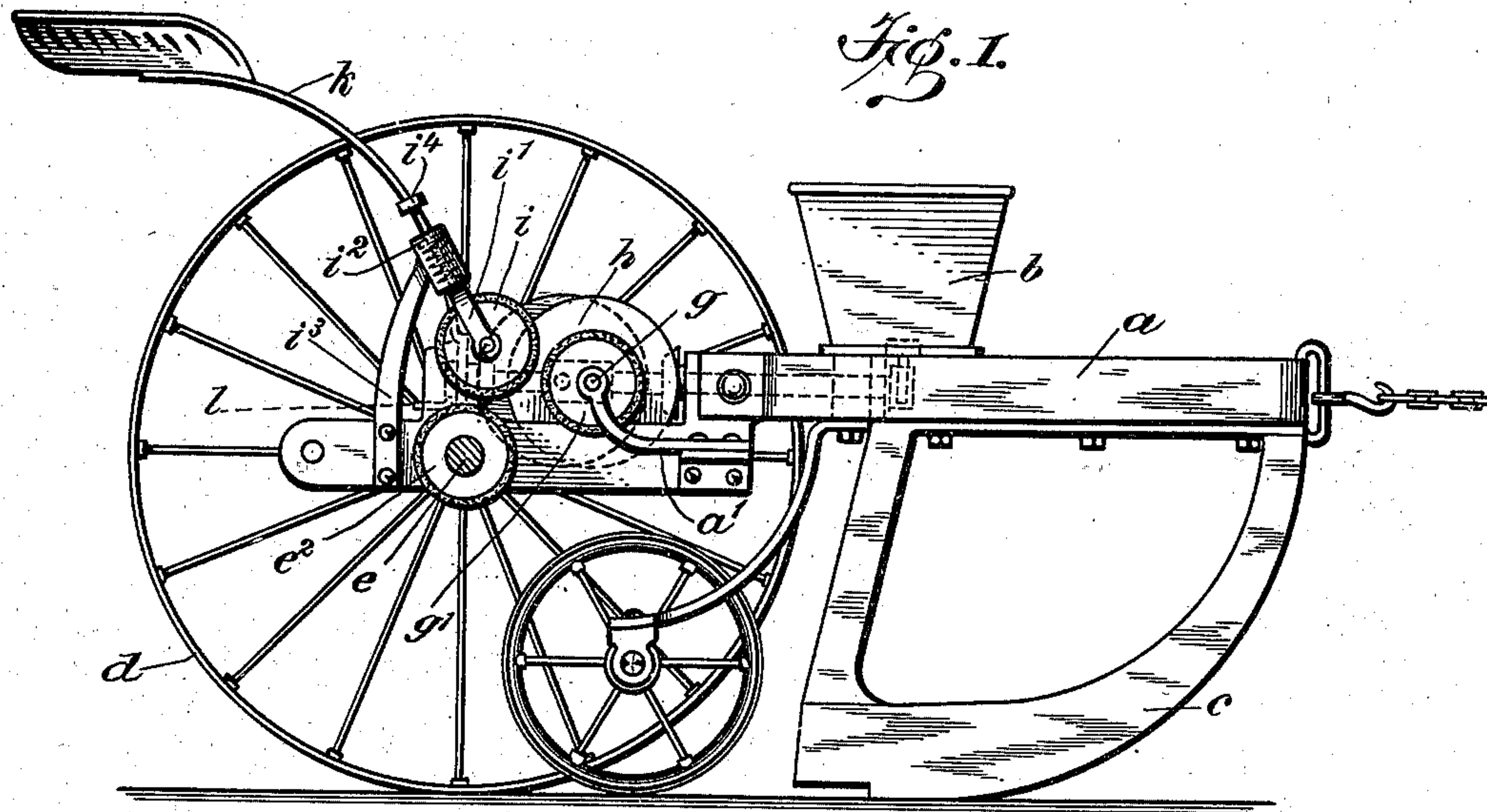
Patented Sept. 16, 1902.

J. M. HIGBE.  
SEED PLANTER.

(Application filed Jan. 2, 1902.)

(No Model.)

2 Sheets—Sheet 1.



*Fig. 2.*

WITNESSES:

*A. R. Appleman*  
*R. B. Owens*

INVENTOR

*James M. Higbe*

BY

*Wm. L. Owens*  
ATTORNEYS

No. 709,442.

Patented Sept. 16, 1902.

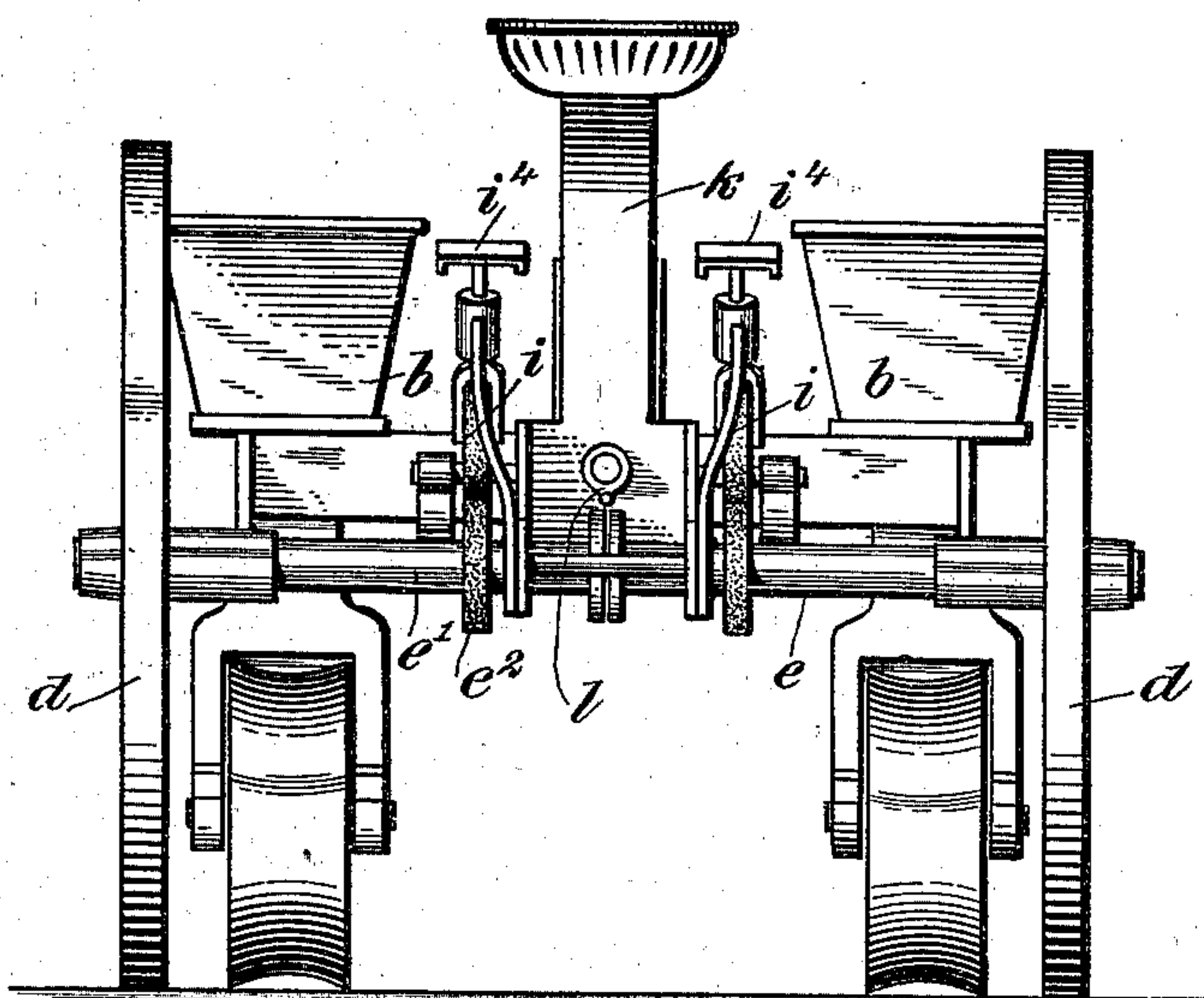
J. M. HIGBE.  
SEED PLANTER.

(Application filed Jan. 2, 1902.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 3.



WITNESSES:

*A. R. Appleman*

Isaac B. Owens.

INVENTOR

James M. Higbe

BY

*Munn*

ATTORNEYS



# UNITED STATES PATENT OFFICE.

JAMES M. HIGBE, OF MANSON, IOWA.

## SEED-PLANTER.

SPECIFICATION forming part of Letters Patent No. 709,442, dated September 16, 1902.

Application filed January 2, 1902. Serial No. 88,063. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES M. HIGBE, a citizen of the United States, and a resident of Manson, in the county of Calhoun and State of Iowa, have invented a new and Improved Seed-Planter, of which the following is a full, clear, and exact description.

This invention relates to a seed-planter in which the dropping mechanism is driven by frictional gearing from the axle or other part connected with the traction-wheels of the planter. The gearing comprises two independently-operative trains, either one or both of which may be thrown into action, as desired, and said trains acting independently uniformly to drive the dropping mechanism.

This specification is a specific description of one form of the invention, while the claims are definitions of the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in the views.

Figure 1 is a side elevation of the planter, showing the axle in section. Fig. 2 is a plan view of the planter, and Fig. 3 is a rear view.

*a* indicates the main framing, *b* the seed-boxes, and *c* the shoes or furrow-openers.

*d* indicates the traction-wheels, which are fastened to the axle, and this axle is formed in two sections *e* and *e'*, (see Fig. 3,) to which the wheels *d* are respectively connected.

*f* indicates the shaft which drives the dropping mechanism of the seedboxes, this shaft extending longitudinally along the center of the seed-planter and having bevel-gears *f'* and *f''* fastened thereto. Mounted in brackets *a'*, attached to the main frame, and in a box *f''*, carried on the shaft *f*, are transverse shafts *g*, which carry bevel-gears *h*, meshed, respectively, with the bevel-pinions *f'* and *f''*. The shafts *g* also carry friction-wheels *g'*, and these friction-wheels are adapted to be connected with friction-wheels *e''*, respectively, on the axle-sections *e* and *e'* by means of intermediate friction-wheels *i*. These intermediate friction-wheels *i* are carried in hangers *i'*, arranged to slide in boxes *i''*, supported upon the frame *a* by brackets *i'''*. The hangers *i'* project above the boxes *i''* and have foot-rests *i''''* thereon, and within the boxes *i''* are arranged springs, (see the dotted lines in

Fig. 1,) which serve to throw upward the intermediate friction-wheels *i*. When the operator presses down on the foot-rests *i''''*, the wheels *i* are caused to engage the wheels *g'* and *e''*, and thus the wheels *h* are driven from the wheels *e''*. It will be observed that the wheels *i* are independently operative and may be made one to work when the other is at rest or both may be worked together.

In using the invention the operator may rest on his seat *k*, suitably supported on the framing *a*, and actuate either of the wheels *i*, as desired. If one of the traction-wheels *d* is about to run against an obstruction, the wheel *i* adjacent to said traction-wheel may be raised, and thus the erratic movement of the said traction-wheel *d* produced by the obstruction will not be transmitted to the seed-dropping mechanism; but this mechanism will be evenly operated by the movement transmitted by the other train of gearing from the other traction-wheel, which latter traction-wheel is then running evenly over the unobstructed ground. If both wheels are running evenly, both trains of gearing may be allowed to operate, and whenever an obstruction is reached the wheel influenced by the obstruction may be thrown out of gear with the dropping mechanism. When both trains of gearing are operating, the action is the same as though the axle were one structure; but either section of the axle and the corresponding traction-wheel may be thrown out of action, as desired.

*l* indicates a crank, (see dotted lines, Fig. 1, and full lines, Fig. 2,) which is fastened to the rear end of the shaft *f* and which enables the manual rotation of this shaft for the proper adjustment of the dropping mechanism when starting or at other periods in the operation of the machine. The mechanism may be so arranged that when this crank points in any direction—for example, downward—the mechanism will be ready to drop, and this enables the operator of the planter properly to start the action of the parts.

If desired, a quantity of colored marking-powder may be carried by the machine and dropped on the ground from time to time to show the track of the planter and to indicate where each row starts and ends.

Various changes in the form and details of



my invention may be resorted to at will without departing from the spirit of my invention. Hence I consider myself entitled to all forms of the invention as may lie within the intent  
5 of my claims.

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

1. A seed-planter, comprising a dropping  
10 mechanism, an axle in two sections, a traction-wheel connected to each section of the axle, and two trains of gears running respectively from the sections of the axle to the dropping mechanism, said trains of gears being oper-  
15 ated simultaneously or independently to uniformly actuate the dropping mechanism.

2. A seed-planter, comprising dropping mechanism, a driving member, and two trains of gears from the driving member to the drop-  
20 ping mechanism, said trains of gears being operative independently or simultaneously to uniformly actuate the dropping mechanism.

3. A seed-planter, comprising dropping mechanism, a driving-axle, two trains of gears  
25 for driving the dropping mechanism from the axle, each of said trains comprising friction-wheels mounted on fixed axes, and an additional friction-wheel mounted to move toward and from the first friction-wheel to connect  
30 or disconnect the same.

4. A seed-planter, comprising dropping mechanism, a driving-axle, two trains of gears for driving the dropping mechanism from the

axle, each of said trains comprising friction-wheels mounted on fixed axes, an additional  
35 friction-wheel mounted to move toward and from the first friction-wheel to connect or disconnect the same, said friction-wheels being carried in independently-movable hangers, and brackets for sustaining the hangers.  
40

5. A seed-planter, comprising a frame, a dropping mechanism, a longitudinal shaft in connection therewith, pinions fastened to the shaft, counter-shafts, gears carried by the counter-shafts and respectively meshed with  
45 the pinions, an axle, and friction-gears connecting the axle with the counter-shafts, said friction-gears comprising shiftable elements for throwing the sets of gears into and out of  
50 action.

6. In a seed-planter, the combination of dropping mechanism, a driving member, two independently-operative groups of movement-transmitting means driven by the driving member, and a means (such as the shaft  
55 *f*) for connecting said groups of movement-transmitting means with the dropping mechanism.

In testimony whereof I have signed my name to this specification in the presence of  
60 two subscribing witnesses.

JAMES M. HIGBE.

Witnesses:

HUGH HARRISON BLACKMAN,  
ADONIRAM JUDSON LANGDELL.