(No Model.)

F. P. KUHN.

CORN PLANTER.

No. 248,657. **Patented Oct. 25, 1881.**

Fig. 1.

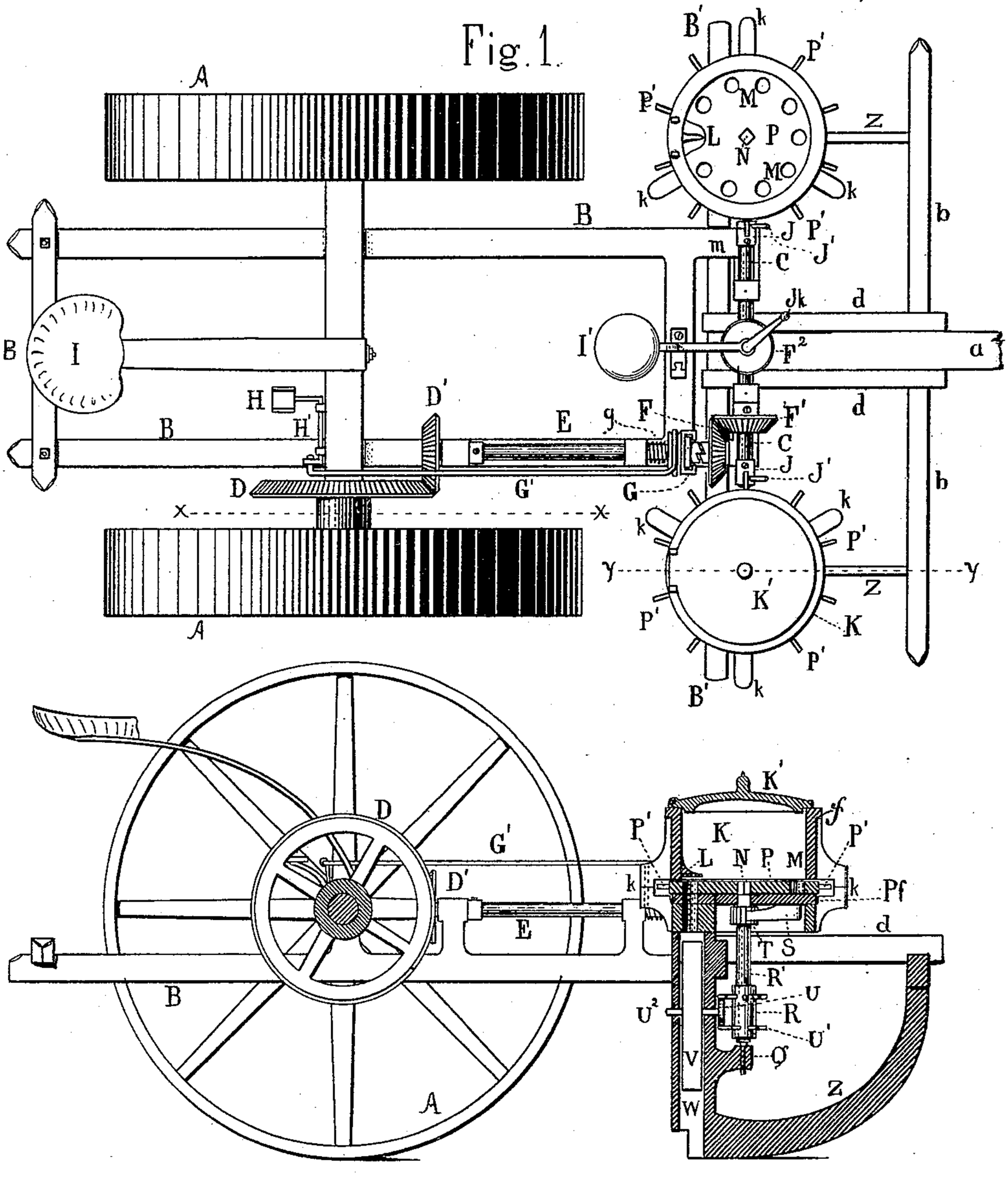

Fig. 2.

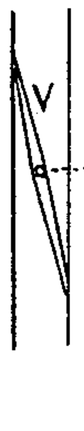

Fig. 3.

Fig. 4

Witnesses;
N. N. Wells
Richd C. Goldsbrough

Inventor,
Frank P. Kuhn;
per Artemas B. Upham,
Attorney.

UNITED STATES PATENT OFFICE.

FRANK P. KUHN, OF PEORIA, ILLINOIS.

CORN-PLANTER.

SPECIFICATION forming part of Letters Patent No. 248,657, dated October 25, 1881.

Application filed June 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, FRANK P. KUHN, of Peoria, in the county of Peoria, in the State of Illinois, have invented an Improved Corn-Planter; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making a part of this specification, in which like letters of reference refer to like parts, and in which—

Figure 1 represents a top view of the planter; Fig. 2, vertical sections through *x x* and *y y*; Fig. 3, view of valve V; Fig. 4, view of cam U.

The object of this invention is the construction of a wheel-marking corn-planter, in which the motion of dropping the seed shall be made more regular and exact. This is accomplished in the following way:

B B B B′ compose the frame-work of this corn-planter; A A, the wheels; Z Z, the shoes; *a*, the tongue, and I the driver's seat.

To the wheel A is secured the gear-wheel D, which communicates motion to the smaller gear-wheel, D′, keyed to one end of the shaft E. At the other end of this shaft E is the loose gear-wheel F, to which motion can be communicated from said shaft E by means of the clutch G. The spring *g* keeps this clutch engaged with the gear-wheel F, while it can only be disengaged by the rod G′ and lever H′, actuated by the presser-foot H.

As in most other corn-planters, there are two grain-boxes; but as they are both constructed and operated just alike, I will describe only one of them. The grain-box K, with hinged cover K′, has two bottoms, the lower one, P *f*, being solid and immovable, with an opening leading down into the spout W, and a central bearing for the shaft R′. Upon this bottom P *f*, with its edges projecting outside of the box K, is the other bottom, P, perforated and movable. At the center of this disk P is a square hole fitting upon the end of the shaft R′, so that disk and shaft must both rotate together. Equidistant from the center N there are in this disk P ten holes or ports so situated that each can be in turn brought over the opening in the bottom P *f* that leads into the spout W, and each of these ports M are made of such a diameter as to hold just enough corn for one hill—say five kernels. The piece L, attached to the side of the box K, acts as a cover to prevent any more corn going down into the spout W except what was in the port M. The box K is supported upon its bottom P *f* by means of the pillars *k*, notched to admit of the pins P′ passing them as the disk P is revolved about its center N. Upon the ends of the shaft C are attached removable collars J, having pins J′ projecting radially therefrom. At each revolution of this shaft C the pin J′, coming against one of the pins P′ of the disk P, rotates it just enough to move one of the ports M away from the opening through the bottom P *f* into the spout W, and bring the next port M into position over said opening. Said shaft C is rotated by means of the gear-wheels F′ and F.

If it is desired to shorten the distance apart of the hills of corn, the collar J is removed and another collar having two or more pins put in its place. If the new collar has two pins, the disk P will be revolved just twice as often as before to the same distance traversed by the corn-planter, making the hills one-half as far apart. If three or more pins are used on the new collar, a further decrease is made in the distance apart of the hills of corn.

To use this corn-planter as a hand-dropper, the gear-wheel F′ is removed from in contact with the gear-wheel F and placed on the shaft C where it can engage its teeth with those of the wheel F^2. This latter wheel F^2 is turned by means of the crank J *k*, which can be operated by a boy seated upon the seat I′.

At the heel of the shoe Z is the spout W, opened and closed by the valve V, said valve being operated as follows: The valve itself consists of a flat, thin, rectangular strip of just about the same width as the inside of the spout W and suspended by the shaft U^2, so that when said valve is rocked in either direction its top edge and bottom edge will be against opposite sides of the spout W. At one end of the shaft U^2 is attached the cam U, shaped as shown in Fig. 4. Upon the barrel R there are ten pins, arranged so that there are five pins above the shaft U^2 and five below, the spaces between the five pins of the upper set being just over the pins of the lower set, and the vertical distance between these two sets being a little less

than the diameter of the cam at its widest part. As a pin, U′, moves along upon the upper side of this cam U, it forces said cam to rock downward, and leaves it just as a pin in the lower series comes around below the cam and locks it upward again. In this way the valve V is rocked back and forth, opening and closing the spout W, and so only dropping the corn in hills without scattering it. The barrel R is by means of the shaft R′ made to revolve with the disk P, said shaft R′ having the part of the shoe-heel Q as its lower bearing. The ratchet-wheel T, having ten teeth, is secured to this shaft R′, to hold, in connection with the spring S, the disk P from turning backward, and also keep the ports M in correct position when they come to the opening through the bottom of the box K into the spout W.

The cross-bar B′ B′, which holds together the shoes Z Z and grain-boxes R K, is hinged at *m m* to the frame-work B B. This arrangement enables the corn-planter to adjust itself to variations and inequalities in the surface of the ground, so that the heel of the shoe Z shall not at one time be elevated too high, thereby not planting the corn deep enough, or at another time burying the corn too deep in the ground.

The mode of operation of this corn-planter is essentially the same as in most other planters in which the spacing of the hills is done by means of the wheels A, excepting as has previously been described and explained.

What I claim as my invention, and for which I desire Letters Patent, is as follows, to wit:

The combination of the cylindrical grain-box K, having notched supporting-pillars *k k k*, the disk P, having pins P′, the shaft R′, barrel R, having pins U′, cam U, valve V, and shoe Z, together with the shoulder J, having one or more pins, J′, shaft C, gear-wheels F and F′, clutch G, having spring *g*, shaft E, and gear-wheels D D′, substantially as and for the purpose specified.

In testimony that I claim the foregoing invention I have hereunto set my hand this 11th day of June, 1881.

FRANK P. KUHN.

Witnesses:
RICHD. A. GOLDSBROUGH,
H. W. WELLS.