

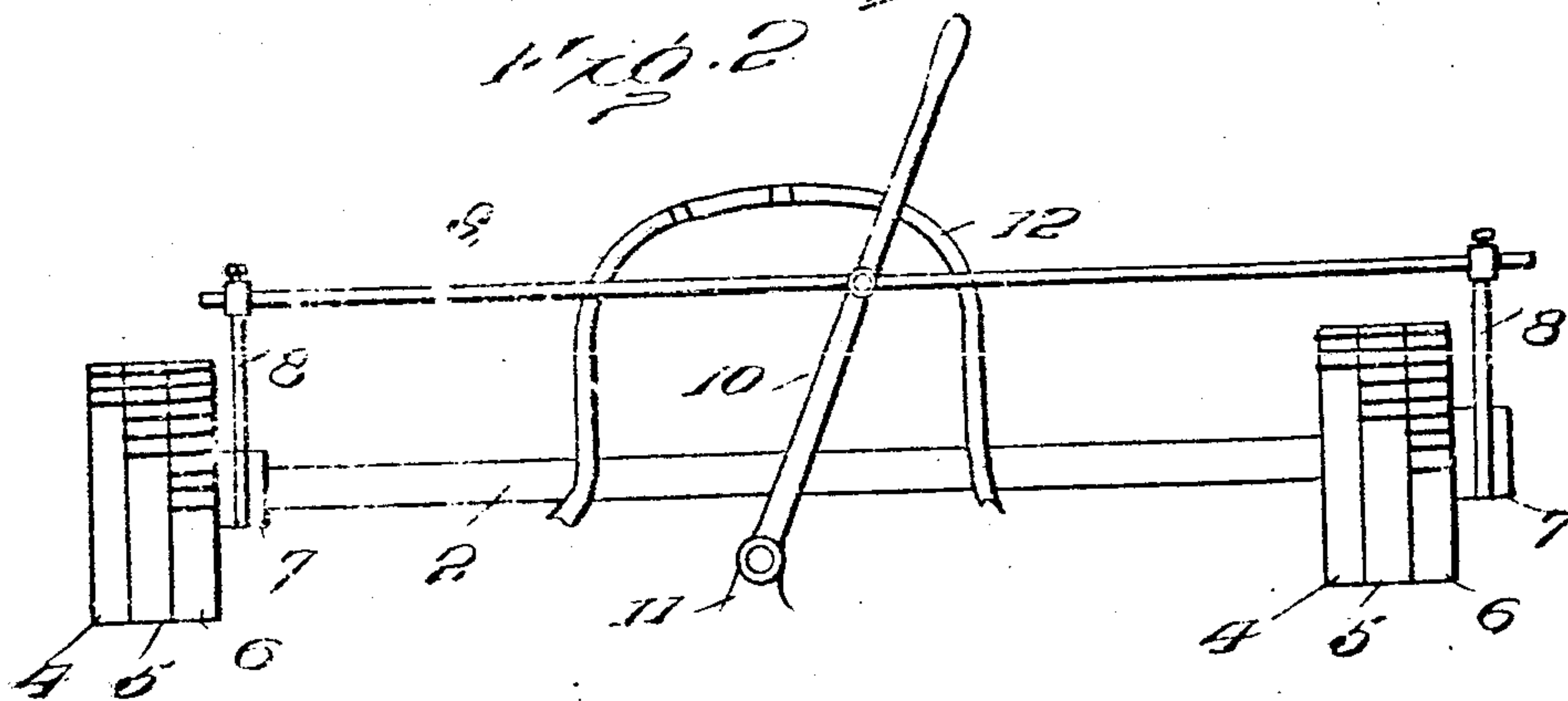
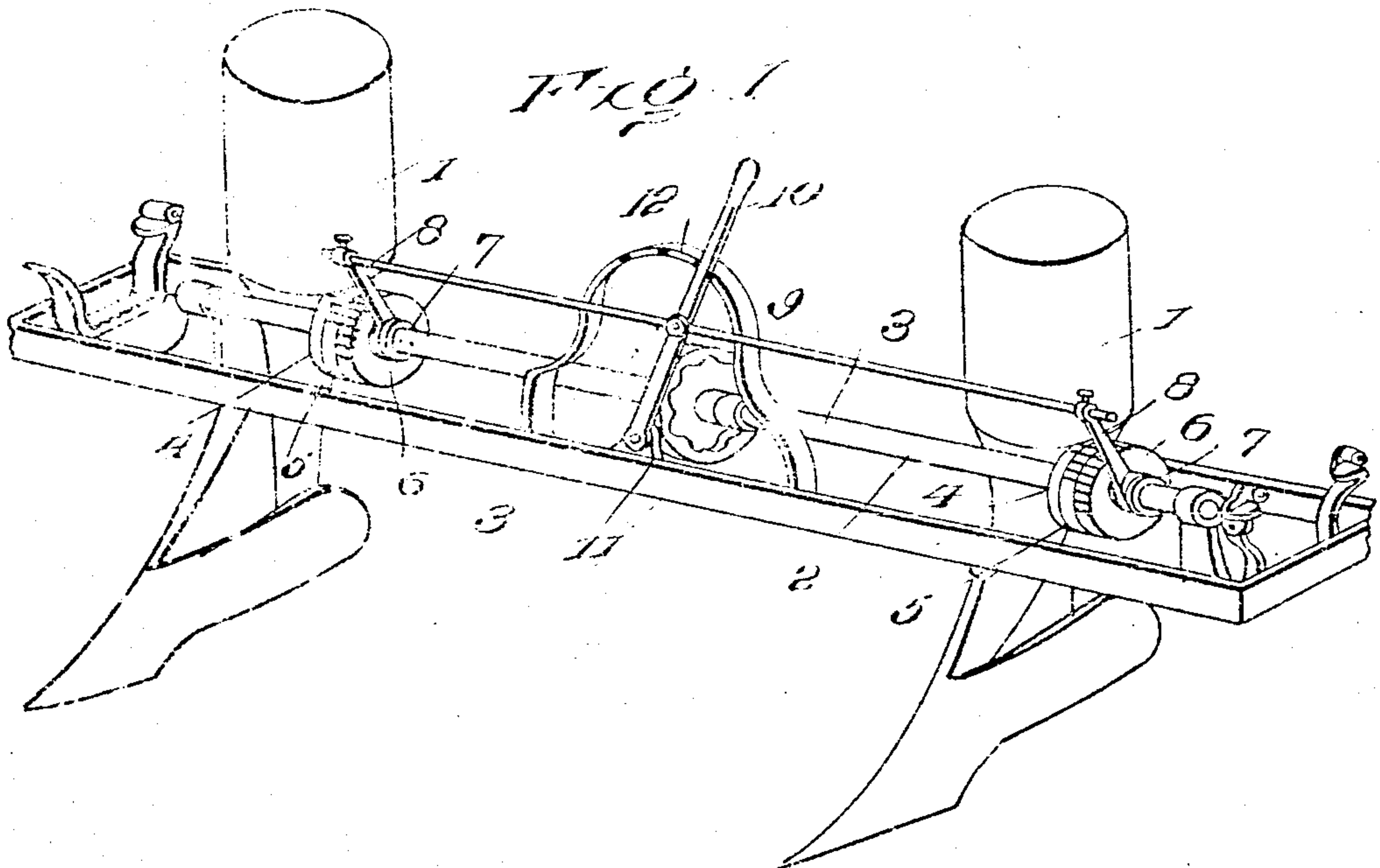
No. 877,810.

PATENTED JAN. 28, 1908.

W. A. TUTTLE.
CORN PLANTER.

APPLICATION FILED SEPT. 23, 1907.

3 SHEETS—SHEET 1.



Inventor

W. A. Tuttle

Witnesses

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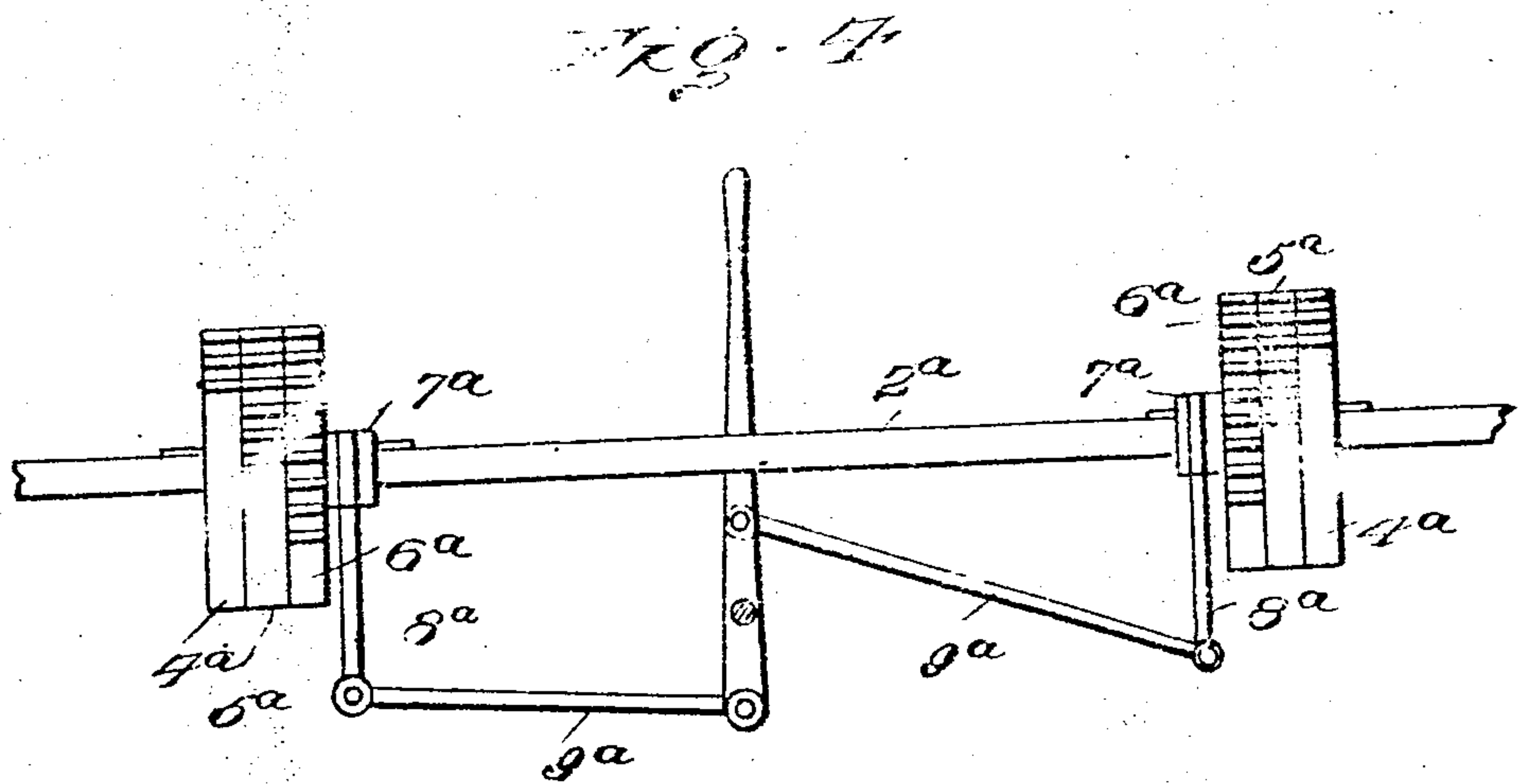
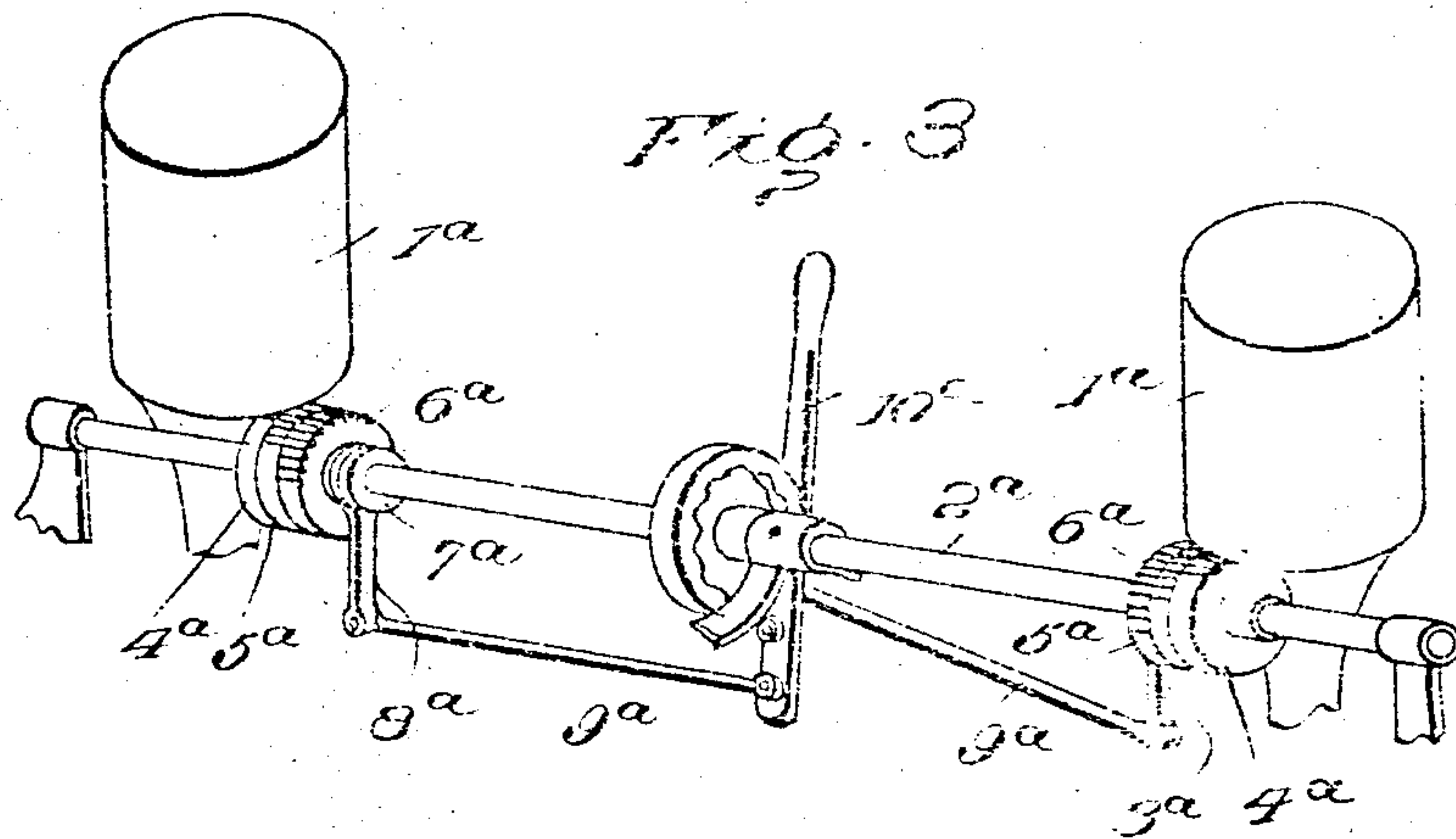
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3 SHEETS--SHEET 2



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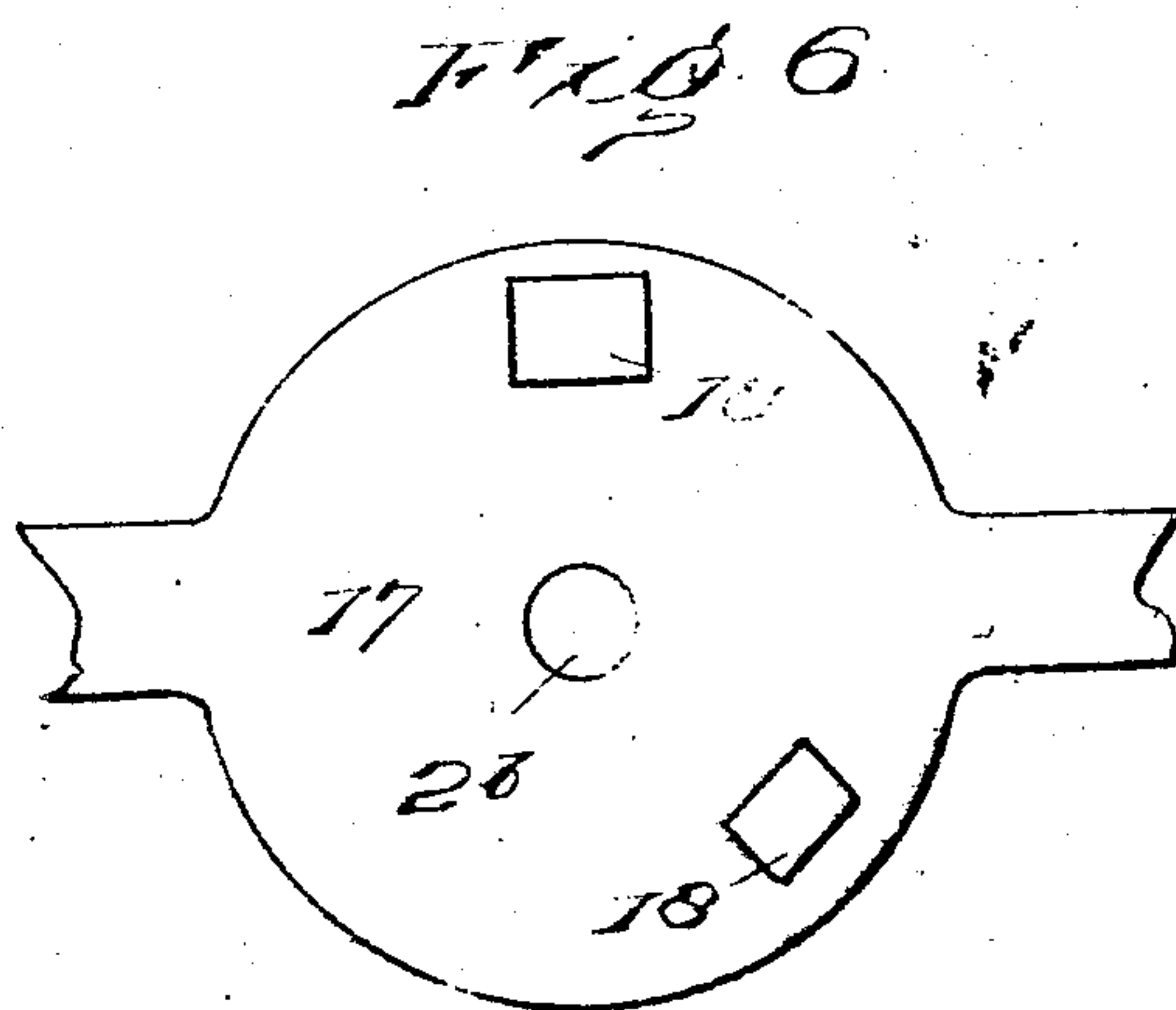
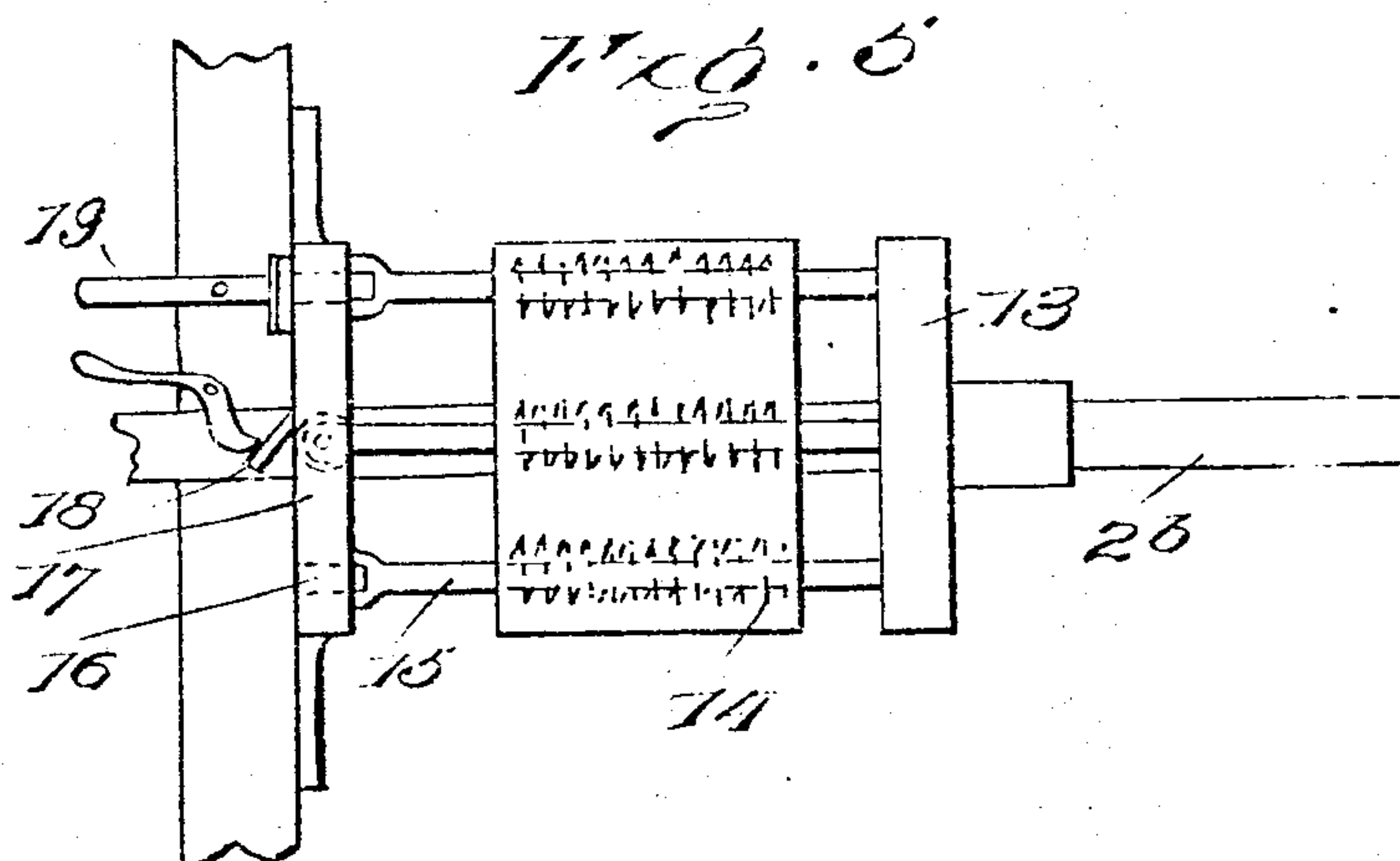
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3 SHEETS—SHEET 2



Witness

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UNITED STATES PATENT OFFICE.

WILLIAM A. TUTTLE, OF GRAYMONT, ILLINOIS.

CORN-PLANTER.

No. 877,810.

Specification of Letters Patent.

Patented Jan. 28, 1908.

Application filed September 23, 1907. Serial No. 394,130.

To all whom it may concern:

Be it known that I, WILLIAM A. TUTTLE, citizen of the United States, residing at Graymont, in the county of Livingston and State of Illinois, have invented certain new and useful Improvements in Corn-Planters, of which the following is a specification.

This invention contemplates certain new and useful improvements in corn planters of that type known as edge drop planters, in which the corn is fed through the drill from hoppers, mounted on the framework of the planter, the feed being regulated by means of revoluble plates mounted in the lower ends of the hoppers and rotated by pinions mounted on the actuating shaft and meshing with teeth on the lower face of the feed plates.

This invention has for its primary object an improved construction of corn planter of this character, so arranged that any desired number of kernels may be planted in a hill, according to the soil fertility, by the simple movement of a single lever, doing away with the necessity of changing the feed plates in order to change the feed.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe, and then point out the novel features in the appended claims.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of a part of a corn planter equipped with the improvements of my invention; Fig. 2 is an elevation of a portion of the feed regulating mechanism; Figs. 3 and 4 are similar views illustrating a modified form of the invention; Fig. 5 is a fragmentary view illustrating another modification hereinafter referred to; and, Fig. 6 is a detail of a plate employed in the last named modification.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, Figs. 1 and 2, the numeral 1 designates the hoppers of an edge corn planter, 2 the actuating shaft for the feed plates of said hoppers, and 3 the framework supporting the hoppers and other parts of the planter.

As heretofore constructed the actuating shaft of planters of this type carries two pinions which mesh with teeth on the lower sides of the feed plates, so as to revolve the plates as the shaft turns. As before stated, it is customary to remove one plate and substitute a different plate for it, in order to change the feed. My invention aims to obviate this difficulty and use the same feed plates for depositing the different quantities of kernels in the hills.

In carrying out my invention, I mount upon the actuating shaft 2, two series of pinions to slide on the said shaft but held to turn therewith. In order to secure a different feed, one pair of pinions designated 4, may be provided, for instance, with three teeth, the remaining portion of the periphery being smooth or devoid of teeth, the next pair of pinions 5 may be provided with, say, six teeth, and the other pair of pinions 6 may be formed with nine teeth. The two sets of pinions, 4, 5 and 6 are provided with grooved collars 7, respectively, secured thereto or formed integrally therewith, and shifting forks 8 engage the respective collars so as to move the two sets of pinions along the shaft in one direction or the other, so as to cause meshing engagement of the feed plates with any pair of pinions, according to the feed desired.

Obviously if the pair of pinions 4 mesh with the feed plates the latter will be turned upon the revolution of the shaft 2 and discharge, say, but one kernel at each hill. If the pinions are shifted along the shaft so as to bring the pinions 5 with six teeth into engagement with the respective feed plates, twice the number will be deposited at each hill, and if the pinions are shifted along the shaft so as to cause the pinions 6 with nine teeth to mesh with the feed plates, three kernels may be deposited at each hill.

In order to simultaneously shift both sets of pinions, I connect the two shifting forks 8 by means of a rod 9, said rods being connected at its ends to a shipper lever 10, fulcrumed on a bracket or standard 11, on the framework 3 and designed to be held in locking engagement with any one of a series of notches in the quadrant 12.

Some makes of planters are arranged to actuate both feed plates in the same direction and Figs. 1 and 2 illustrate my invention arranged with this type of planter, the two shifting forks 9 and their actuating rods

being connected to the actuating hand lever 10 at the same point or on the same side of the fulcrum of said lever.

For that type of planter in which the plates turn in opposite directions, the parts of my invention are arranged as illustrated in Fig. 3, in which 2^a designates the actuating or drive shaft of the plates, 4^a, 5^a and 6^a the pinions, 7^a the collars thereof, and 8^a the shifting forks that are secured by means of the link rods 9^a to the actuating lever 10^a at opposite sides of the fulcrum thereof, so that when said lever is moved in one direction the two sets of pinions will be moved apart or away from each other. In this arrangement, the two sets of pinions are both located between or on the inner sides of the hopper 1^a, whereas it is noted that in this arrangement illustrated in Figs. 1 and 2, one set of pinions is located on the inner side of the hopper and the other set of pinions is located on the outer side of the other hopper.

For an understanding of another form or embodiment of my invention, reference is to be had to Fig. 5. In this construction and arrangement of the parts 2^b designates the actuating shaft, and 13 the clutch member mounted thereon. In this case or form the rivet through the shaft on the clutch is drawn out and a disk or wheel 14 is riveted or otherwise held on the shaft close to the clutch member 13. This wheel carries a series of laterally movable pins 15 that are spring pressed away from the clutch and which carry the rollers 16 at their outer ends as shown. The pins 15 are located at equidistant points on the disk 14, and in the present instance, I have shown three of these pins, the arrangement being such as to enable the operator, without the necessity of changing the feed plates, to plant three, two, or one kernel in each hill, as desired. When the desired pin is pushed out, the clutch will catch the pin and carry the shaft around. One of these pins is arranged in this manner to roll the shaft clear around, so as to plant three kernels in a hill. The second pin is adapted to turn the shaft two-thirds of a revolution so as to deposit two kernels to a hill, and the third pin is arranged to turn the shaft one-third of a revolution so as to plant but one kernel in a hill. In order to control the pins 15 and push them up into the teeth of the clutch where the clutch will engage them, I mount a plate 17 fast to one side of the framework, close to the disk 14. The said plate 17 surrounds the shaft 2^b but does not move with the shaft, being made fast to the framework as above stated. The plate 17 is provided with outwardly opening doors 18, there being two of said doors in the present instance. These doors are arranged in the path of movement of the rollers 16 of the pins 15 and when open, the doors permit the pins to be retracted in the disk which

carries them so as to move out of operative relation to the clutch member 13. These doors may be independently closed by means of a hand lever 19, as shown. When both of said doors are closed, it is obvious that all of the pins will be shoved so that the clutch will catch them. It is to be understood that one of these doors is located where the clutch stops when automatically thrown out of gear by the usual tripping mechanism (not shown). The other door is located at a point further on in the plate, one-third of the circumference of the latter, and when the doors are open, the pins slide out into them so that the clutch can not strike them. By this means, if all the doors are closed, the feed plates will be carried entirely around and deposit, say, three kernels in a hill; if the first door is open, the plates will be carried around only two-thirds of their revolution so as to deposit two kernels in a hill, and if both the first and second doors are open, the plates will drop only one kernel to a hill. It is obvious that the invention is not limited to drop one, two, or three kernels in a hill, but the invention is susceptible to an arrangement whereby four or five kernels may be dropped, as desired. It is to be noted that these pins will slide into the doors when the latter are opened, but as the shaft runs on by the clutch, striking some pin that has been pushed out, the pin will move out of the door, owing to the slanting position of the door when opened. The next pin will drop in, but will move out if it is not the place for the shaft to stop by the clutch being thrown out of gear. It is to be understood that these doors close in various ways, the way illustrated in the drawing being selected for the purposes of illustration only. They may be closed either by a foot treadle or hand lever.

It is to be understood that in those forms of the invention illustrated in Figs. 1, 2 and 3, the shaft 2 or 2^a may either have a key or spline connection with the pinion, or it may be square and the pinions correspondingly shaped so as to slide freely therealong, but held to turn therewith.

From the foregoing description in connection with the accompanying drawings, it will be seen that I have provided a very simple, durable and efficient construction of corn planter of the edge drop type, so arranged that the feed may be varied according to the fertility of the soil in which the planter is operating without the necessity of changing the feed plates, this being an important advantage, particularly where there is both high and low ground in the same field.

Having thus described the invention, what is claimed as new is:

1. In a corn planter of the edge drop type, the combination with the feed hoppers, and

feed plates, of actuating mechanism for the feed plates, and means for adjusting said actuating mechanism so as to vary the extent of movement of said plates at each
5 actuation.

2. In a corn planter, the combination of feed plates, an actuating shaft arranged to turn said plates, a clutch member mounted on said shaft, a disk also mounted on said
10 shaft in proximity to said clutch member, a series of spring pressed pins carried by said disk and arranged for engagement by said

clutch member, a plate provided with doors designed when open to permit sundry of said pins to move by spring action out of the
15 way of said clutch member, and means for closing said doors.

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

WILLIAM A. TUTTLE. [L. s.]

Witnesses:

O. P. BOWLAND,
W. CRAWFORD.