D. & H. LUMSDEN.

MEANS FOR OPERATING PLANTER MARKERS.

APPLICATION FILED OCT. 3, 1908.

915,615.

Patented Mar. 16, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

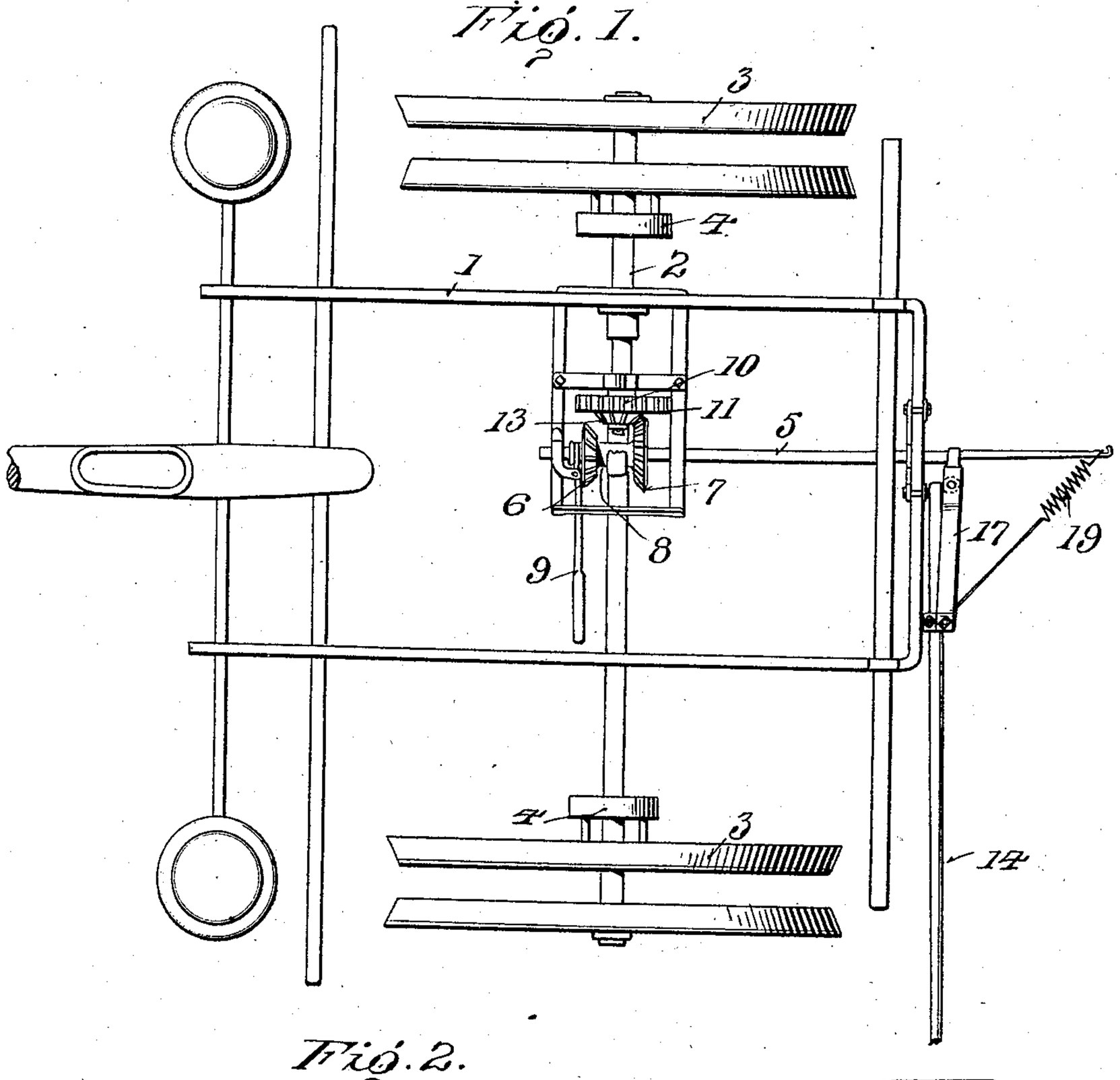
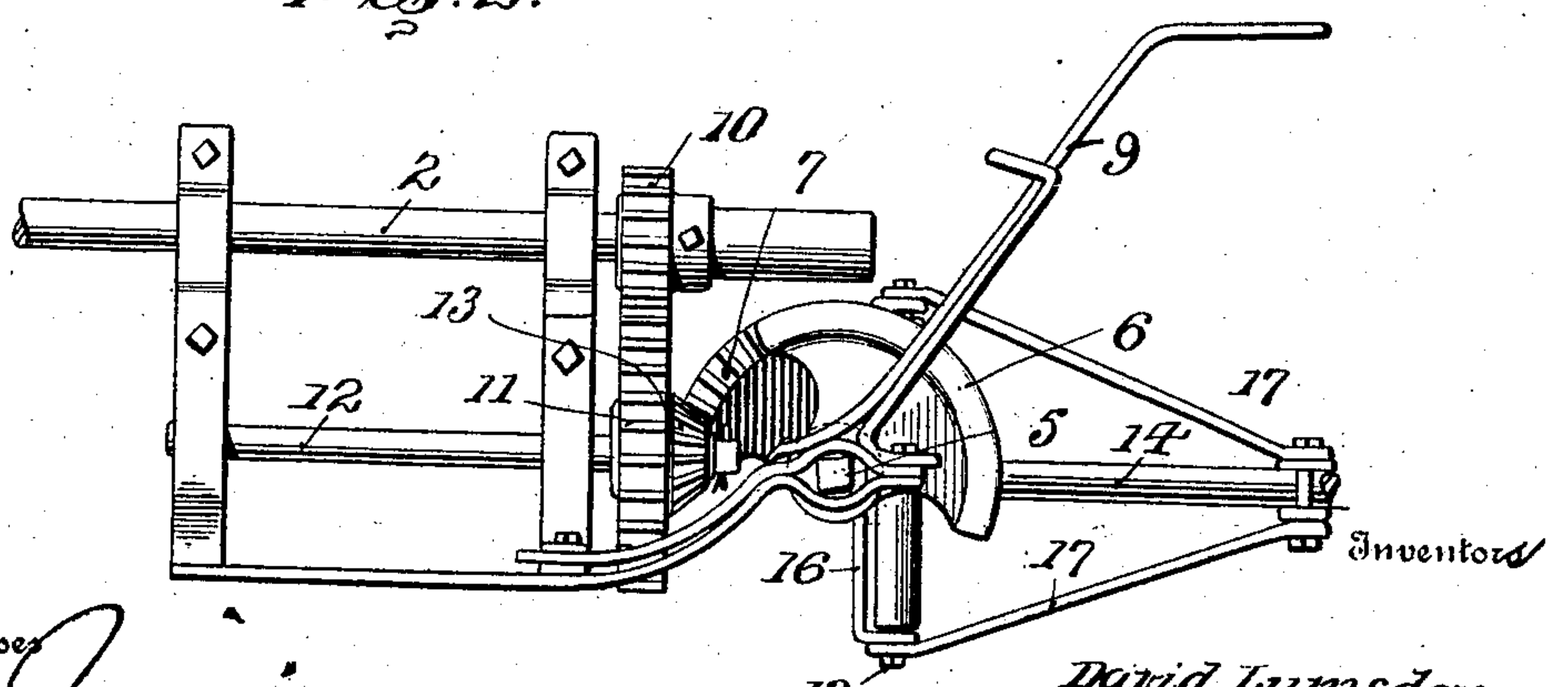


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

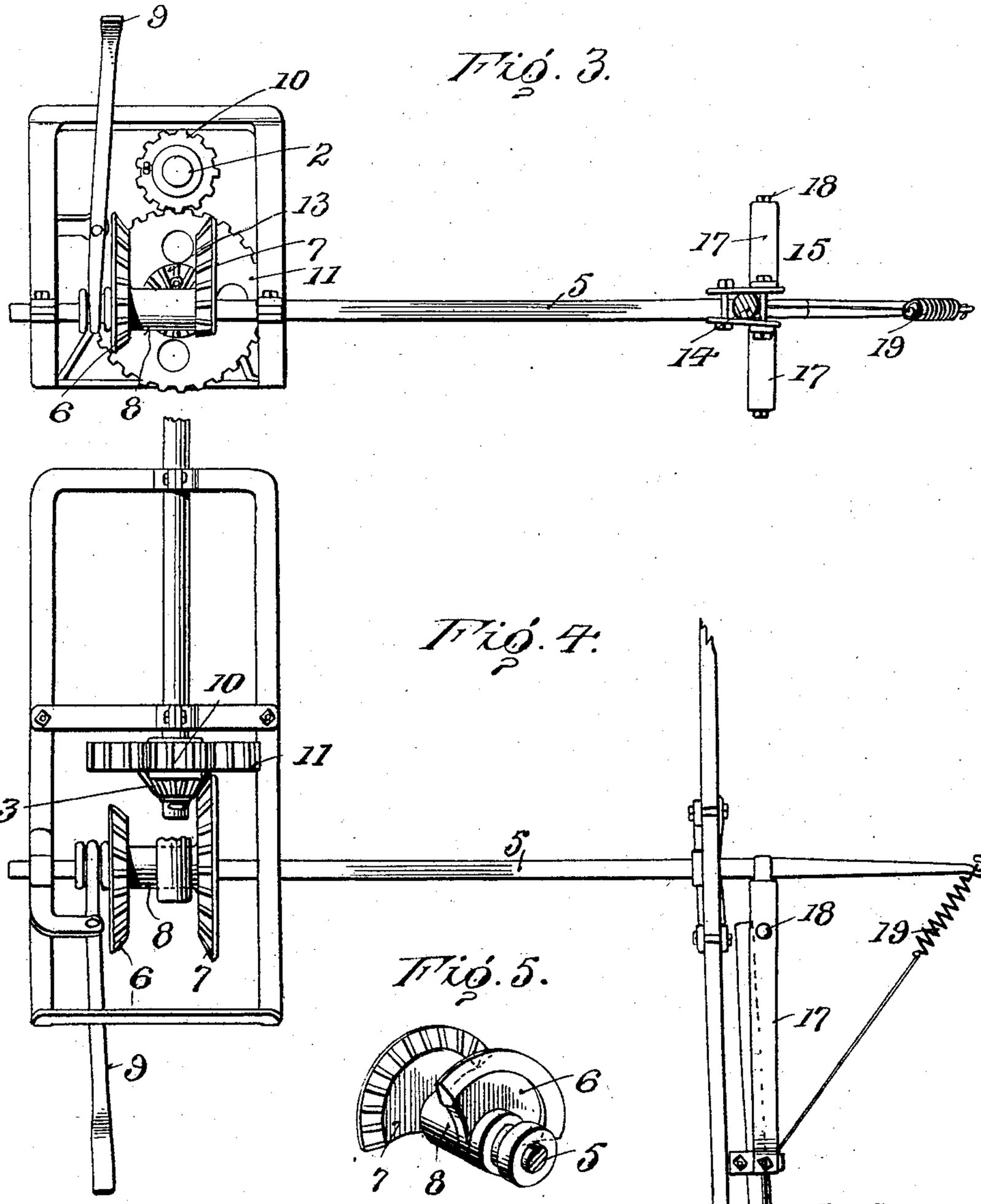
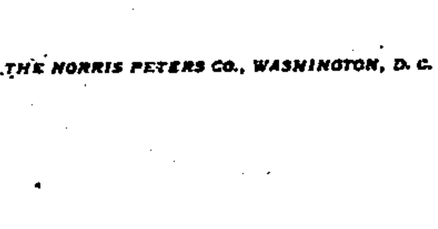


Fig. 4.

Fig. 5.



Witnesses

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MEANS FOR OPERATING PLANTER-MARKERS.

No. 915,615. Specification of Letters Patent. Patented March 16, 1909.

Application filed October 3, 1908. Serial No. 456,098.

To all whom it may concern:

Be it known that we, DAVID LUMSDEN and HUGH LUMSDEN, citizens of the United States, both residing at Morehouse, in the county of New Madrid and State of Missouri, have invented certain new and useful Improvements in Means for Operating Planter-Markers, of which the following is a specification.

The present invention provides novel means for automatically operating the marker of planters.

Heretofore planters, as generally constructed and provided with markers, were adapted to have said markers moved by hand from one side of the machine to the other when turning the planter at the end of a row preliminary to recrossing the field.

The present invention provides operating means whereby the marker may be thrown from one side of the machine to the other automatically at the time of turning the machine at the end of a row.

The invention contemplates clutch devices between the ground wheels and the axle, whereby when turning the machine the wheel describing the larger circle operates to rotate the axle so as to move the marker from one side of the machine to the other when the operating gearing is thrown into clutched engagement by the shifting of a lever.

The invention further contemplates oppositely disposed segment gears connected for simultaneous movement and mounted upon a shaft to move thereon and to turn therewith, said shaft having the marker connected therewith. A second shaft arranged at a right angle to the shaft provided with the segment gears, is supplied with a gear wheel designed to mesh with either one of the segment gears, and with a second gear wheel in meshing relation with a gear wheel fast to the axle and receiving power therefrom.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment is shown in the accompanying drawings, in which:

Figure 1 is a plan view of a portion of a planter provided with a marker and coöperating gearing embodying the invention. Fig. 2 is a rear view of a portion of the framework of the planter, showing the operating mechanism of the marker on a larger scale. Fig. 3 is a plan view of the parts illustrated in Fig. 2. Fig. 4 is a plan view of the elements shown in Figs. 2 and 3. Fig. 5 is a detail perspective view of the segments.

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.

The invention is adapted to be applied to any make or type of planter provided with a marker adapted to be thrown from one side of the machine to the other.

In the drawings, the numeral 1 indicates the main frame of the planter, 2 the axle, 3 the ground wheels loosely mounted upon the arms or spindles of the axle and 4 clutch or ratchet devices between the ground wheels and the axle, whereby the latter may be rotated at the end of a row by means of the wheel describing the larger circle.

The clutch devices 4 may be of any construction so long as they serve to permit motion from the ground wheels to the axle and admit of said ground wheels turning backward without imparting any movement to the axle.

A shaft 5 is arranged at a right angle to the axle 2 and is mounted in suitable bearings and is provided with the marker and with connected segment gears 6 and 7. The shaft 5 is centrally disposed with reference to the width of the machine so that the marker may extend a like distance from each side of the machine and accurately space the rows. The segment gears 6 and 7 are connected by means of a sleeve 8, one end of which is extended and provided with an annular groove to receive the forked end of a shipper lever 9. The shipper lever 9 may be of any construction or arrangement and preferably consists of a foot lever of such formation and location as to be actuated by a foot of the driver, thereby leaving the hands free for management of the team and other parts of the machine.

A gear wheel 10 fast to the axle 2 is in mesh with a gear wheel 11 fast to a shaft 12 paralleling the axle and located beneath the same. A gear wheel 13 formed with or connected to the gear wheel 11 is adapted to

mesh with the teeth of either of the segment gears 6 or 7 according to the position of the lever 9. The segment gears 6 and 7 are of such construction and arrangement that when the marker is in operative position, the segment gear last in mesh with the gear wheel 13 clears the latter, thereby permitting continued rotation of the axle and shaft 12 without disastrous results. The other segment gear is in position so that upon operating the shipper lever 9 it will engage with the gear wheel 13 and thereby serve to move the shaft 12 to throw the marker to the opposite side of the machine and just prior to said marker reaching the limit of its throw, the segment gear clears the gear wheel 13, thereby permitting the axle and shaft 12 to continue rotating without breaking or straining any of the parts associated with the marking mechanism.

The marker comprises an arm 14 and a runner 15. The arm 14 is connected to the shaft 5 in such a manner as to have a limited pivotal movement. As shown, a yoke 16 is clamped to the shaft 5 and braces 17 are pivotally connected to the ends of the yoke 16 by means of a bolt 18. The inner end of the arm 14 is pierced and the bolt 18 passes therethrough. The outer ends of the braces 17 are clamped or otherwise secured to the arm 14, thereby steadying the same in the plane of movement of the marker when thrown from one side of the machine to the other. A spring 19 connects the arm 14 with the rear end of the shaft 5 so as to hold the marker in proper position when backing the machine for any purpose.

When the machine reaches the end of a row and is about to be turned, the shipper lever 9 is operated to throw one of the segment gears 6 or 7 into position to engage with the gear wheel 13. As the machine turns, the wheel traveling on the larger circle serves by means of the clutch or ratchet mechanism to rotate the axle 2 which by reason of the gear wheels 10 and 11 rotates the shaft 12 and the gear wheel 13, the latter in turn causing the shaft 5 to rotate so as to throw the marker from one side of the machine to the other.

It is to be understood that after the marker passes the perpendicular, it may descend by gravity, hence when the segment gear in mesh with the gear wheel 13 clears the latter, the marker will drop until the runner 15 rests upon the ground.

It is to be understood that the operating gearing, after serving to throw the marker from one side of the machine to the other, automatically throws itself out of action, thereby preventing injury to any part of the mechanism coöperating therewith.

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

1. In a planter provided with a marker adapted to be thrown from one side of the machine to another, the combination of a power driven shaft, a second shaft arranged substantially at a right angle to the power driven shaft and having the marker connected therewith to be moved thereby from one side of the machine to the other, connected segment gears mounted to turn with and to move on said second shaft, a coöperating gear fast to said power driven shaft and adapted to mesh with either one of the segment gears, and means for moving the segment gears to bring one into position to mesh with the said gear wheel fast to the power driven shaft, the segment gears being of such construction and arrangement as to automatically clear the coöperating gear wheel after the marker has passed the dead point in its movement and prior to reaching the ground.

2. In combination, a shaft provided with a marker, spaced segment gears mounted on said shaft to turn therewith and move thereon, said segment gears being connected to move in unison, a shipper lever for moving the segment gears, a power driven shaft, and a gear wheel fast to the power driven shaft and extending into the space formed between the said segment gears to mesh with one or the other thereof.

3. In a planter, the combination of an axle, ground wheels mounted loosely upon said axle, a clutch mechanism between each ground wheel and axle, a second shaft provided with a marker, segment gears mounted upon said second shaft to turn therewith and to move thereon, an intermediate shaft between the axle and said second shaft and geared to the axle, and a gear wheel fast to said intermediate shaft in position to mesh with either one of said segment gears to automatically throw the marker from one side of the machine to the other, the segment gears having their end portions overlapped and arranged to admit of the active segment gears clearing the drive gear prior to the marker shaft reaching the limit of its movement in either direction.

In testimony whereof we affix our signatures in presence of two witnesses.

DAVID LUMSDEN. [L. S.]
HUGH LUMSDEN. [L. S.]

Witnesses:
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A. N. DARROW.