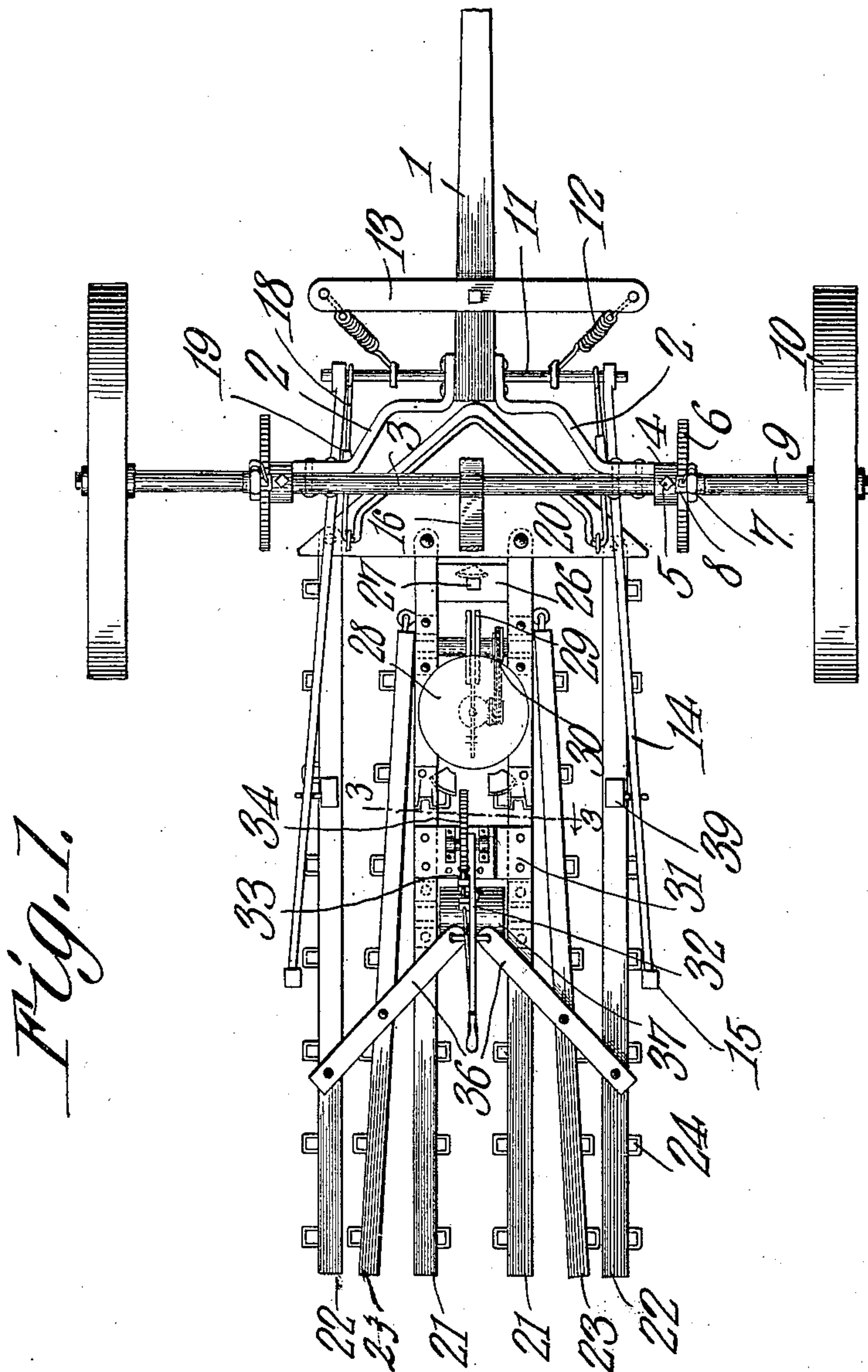


No. 859,243.

PATENTED JULY 9, 1907.

J. T. OLIVE.
HARROW, PLANTER, AND CULTIVATOR.
APPLICATION FILED MAR. 19, 1907.

2 SHEETS—SHEET 1.



WITNESSES:

E. H. Stewart
Jas. M. Walker

James T. Olive,
INVENTOR.

By *C. A. Snow & Co.*
ATTORNEYS

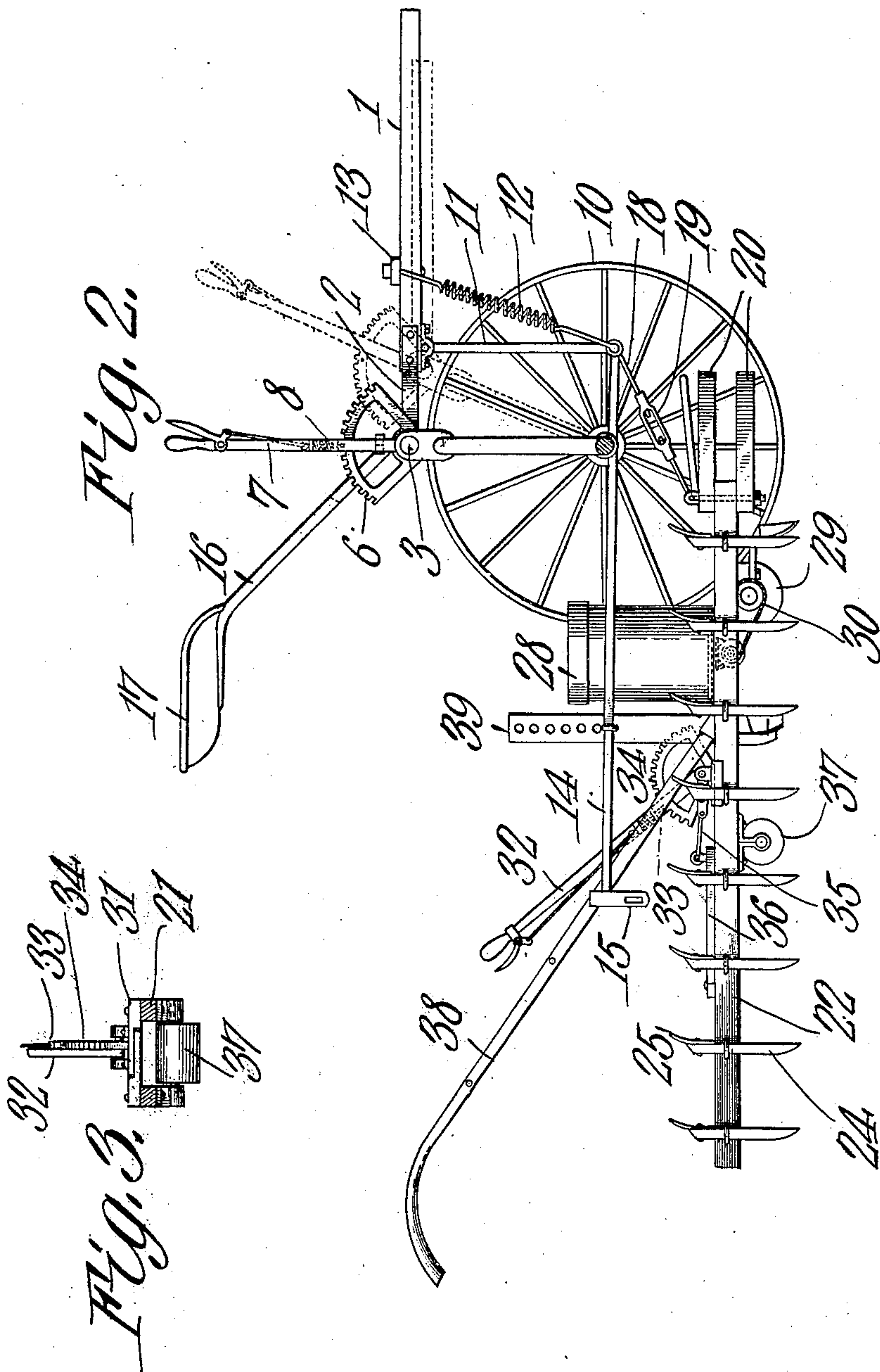
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WITNESSES:
E. H. Stewart
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UNITED STATES PATENT OFFICE.

JAMES THOMAS OLIVE, OF DAMASCUS, ARKANSAS.

HARROW, PLANTER, AND CULTIVATOR.

No. 859,243.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed March 19, 1907. Serial No. 363,186.

To all whom it may concern:

Be it known that I, JAMES THOMAS OLIVE, a citizen of the United States, residing at Damascus, in the county of Faulkner and State of Arkansas, have invented a new and useful Harrow, Planter, and Cultivator, of which the following is a specification.

This invention has relation to combined harrows, planters and cultivators and it consists in the novel construction and arrangement of its parts as hereinafter shown and described.

The object of the invention is to provide an implement of the character indicated with a series of beams which are pivotally attached between parallel plates. The said beams are arranged in an inner and outer pair and supplemental beams are pivoted to the members of the inner pair. The said supplemental beams and outer beams are connected together and means is mounted upon the inner beams for moving the outer beams and supplemental beams laterally.

In the accompanying drawing:—Figure 1 is a top plan view of the implement. Fig. 2 is a side elevation of the same, and Fig. 3 is a transverse section cut on the line 3—3 of Fig. 1.

The tongue 1 is connected by means of the hounds 2 with the cross bar 3. The collars 4 are mounted upon the ends of the cross bar 3 and are held in fixed positions with relation thereto by the set screws 5. Each of the said collars is provided with a gear segment 6. When the screws 5 are loosened the collars 4 may be turned upon the cross bar 3. Adjacent each collar 4 is fulcrumed a lever 7. The cross bar 3 serving as the fulcrum point for the said levers. Each lever is provided with a spring actuated pawl 8 adapted to engage the adjacent gear segment 6 and the lower ends of said levers are extended down and out forming the spindles 9 upon which are journaled the ground wheels 10. The arch member 11 depends from the rear end of the tongue 1 and the springs 12 connect the end portions of the said arch member with the ends of the whiffletree 13 which is pivotally mounted upon the said tongue. The forward ends of the marker arms 14 are pivoted upon the end portions of the arch member 11 and the rear ends of said arms are provided with heads 15 to which marking points may be attached. The seat support 16 is mounted upon the cross bar 3 and is provided at its upper end with a driver's seat 17. The rods 18 are pivotally connected at their forward ends to the end portions of the arch member 11 and at their rear ends to an earth engaging frame as will be hereinafter described. The said rods 18 are provided with turn buckles 19 or other equivalent means whereby the said rods may be lengthened or shortened at will.

The earth engaging frame consists of the two forward triangular plates 20 which are spaced apart and lie in parallel planes. The rear ends of the rods 18 are attached to the upper plate 20. The beams 21, 21 and

22, 22 are pivoted at their forward ends between the plates 20 and may be moved horizontally upon their pivots. The beams 21, 21 are located adjacent the middles of the said plates 20 while the beams 22 are located at the extremities of the said plates. The supplemental beams 23, 23 are pivoted at their forward ends to the sides of the beams 21, 21 and all of the said beams are provided with reversible teeth 24, each of which is provided at one end with a shovel point 25. The block 26 is inserted between the forward portions of the beams 21, 21 and the furrow opener 27 is mounted upon said block. The seed box 28 is mounted upon the beams 21, 21 just behind the furrow opener 27. The ground wheel 29 is journaled for rotation between the furrow opener 27 and the seed box 28 and is operatively connected by means of the sprocket wheels and chain 30 with the stirrer of the seed box 28. The overlapping cross pieces 31 are attached to the beams 21 and the lever 32 is fulcrumed upon the said cross pieces. Said lever is provided with a spring actuated pawl 33 which is adapted to engage the gear segment 34 also mounted upon the cross pieces 31. The working end of the lever 32 is connected by means of a link 35 with the inner ends of the bars 36. The said bars are disposed at an angle to each other and are pivotally connected to the extreme beams 22 and the supplemental beams 23. The roller 37 is journaled between the beams 21 behind the seed box 28. The beams 22 are provided with the uprights 39 upon which the marker arms 14 may be hung when the said markers are not in use.

When the implement is used as a harrow the furrow opener 27, the ground wheel 29 and the roller 37 are removed from between the beams 21 and by moving the lever 32 the rear ends of the beams 22 and 23 may be spread apart to any desired degree. Also by adjusting the overlapping cross pieces 31 the rear ends of the beams 21 may be spread apart and held in such position. As the implement is drawn over the ground the ground engaging frame will trail behind the tongue 1 and work the soil. The operator may occupy the seat 17 or he may follow the implement and use the handles 38 which are attached at their lower ends to the beams 21 for the purpose of directing the harrow. When the implement is used as a planter the rear ends of the beams 21, 22 and 23 are preferably brought together or comparatively so and the furrow opener 27, seed box 28, ground wheel 29 and roller 37 are placed between the beams 21 in their respective positions. Thus as the implement is drawn over the ground a furrow is opened, the seed is deposited therein, the furrow is closed and the soil is rolled into the said furrow.

The implement may be used as a straddle row cultivator by reversing the teeth 24 so that the shovel points thereof will have contact with the ground and by removing the furrow opener seed box, ground wheel and

roller as above described. When used as a cultivator the rear ends of the beams 21, 22 and 23 are spread apart to any desired degree. When it is desired to mark the ground off the rods 18 are disconnected from the arch member 11 and the marker arms 14 are removed from the uprights 38. Thus the forward portion of the implement separated from the harrow and cultivator may be drawn across the field with the marking ends of the arms 14 in engagement with the ground for laying the field off.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In an implement such as described, parallel plates spaced apart, inner and outer beams pivoted between said plates, cross bars pivoted to the rear portions of the outer beams and being disposed at an angle to each other and a

lever mechanism supported by the inner beams and connected with said cross bars for moving the same to spread or bring together the rear portions of the outer beams.

2. An implement such as described having parallel plates spaced apart, inner and outer beams pivoted at their forward ends between the plates, supplemental beams pivoted to the first said beams, cross bars pivotally connected with the outer beams and supplemental beams and being disposed at an angle to each other and a lever mechanism supported by the inner beams and being operatively connected with the cross bars.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES THOMAS OLIVE.

Witnesses:

J. W. JONES,
P. R. HODGE.