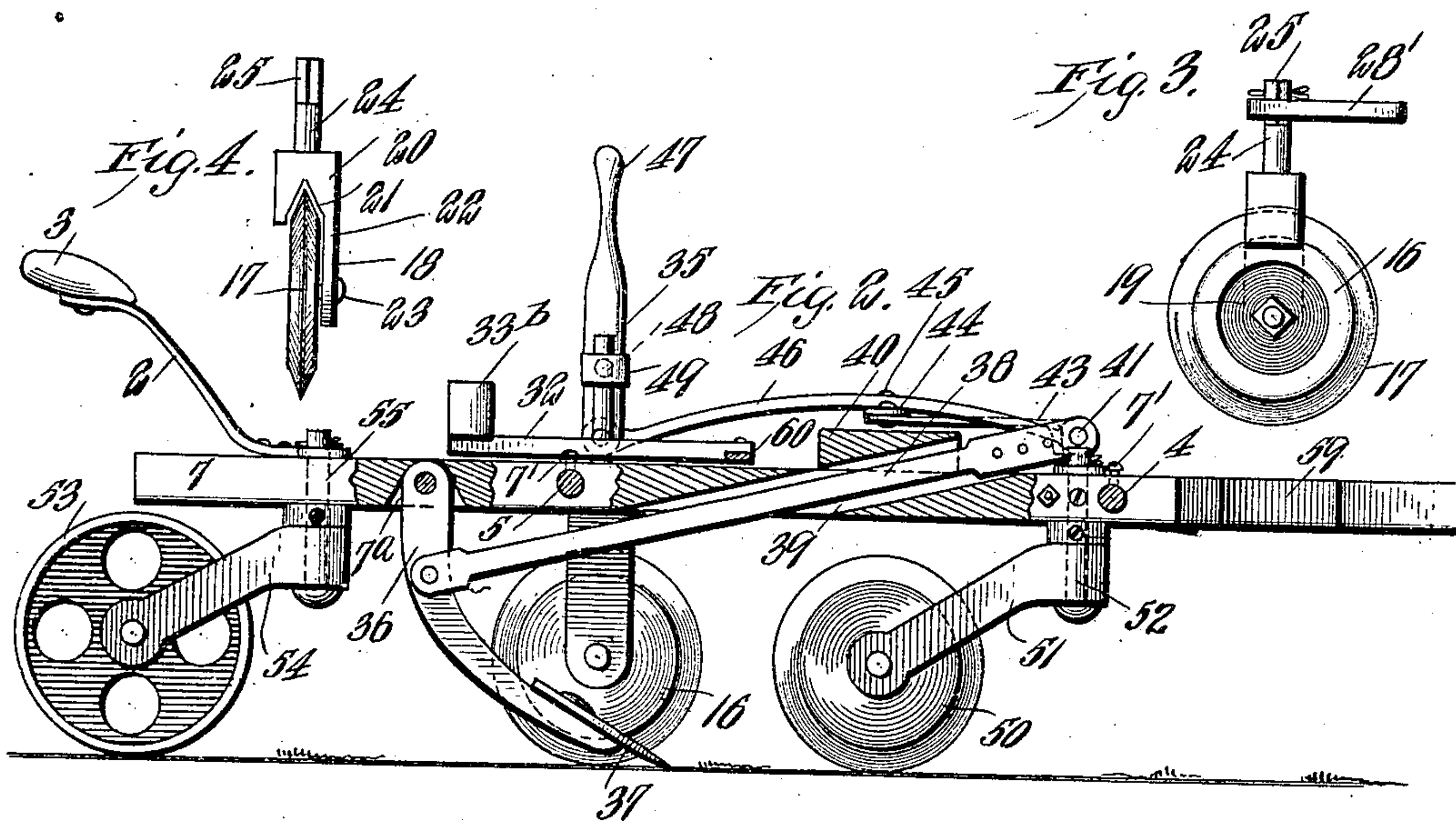
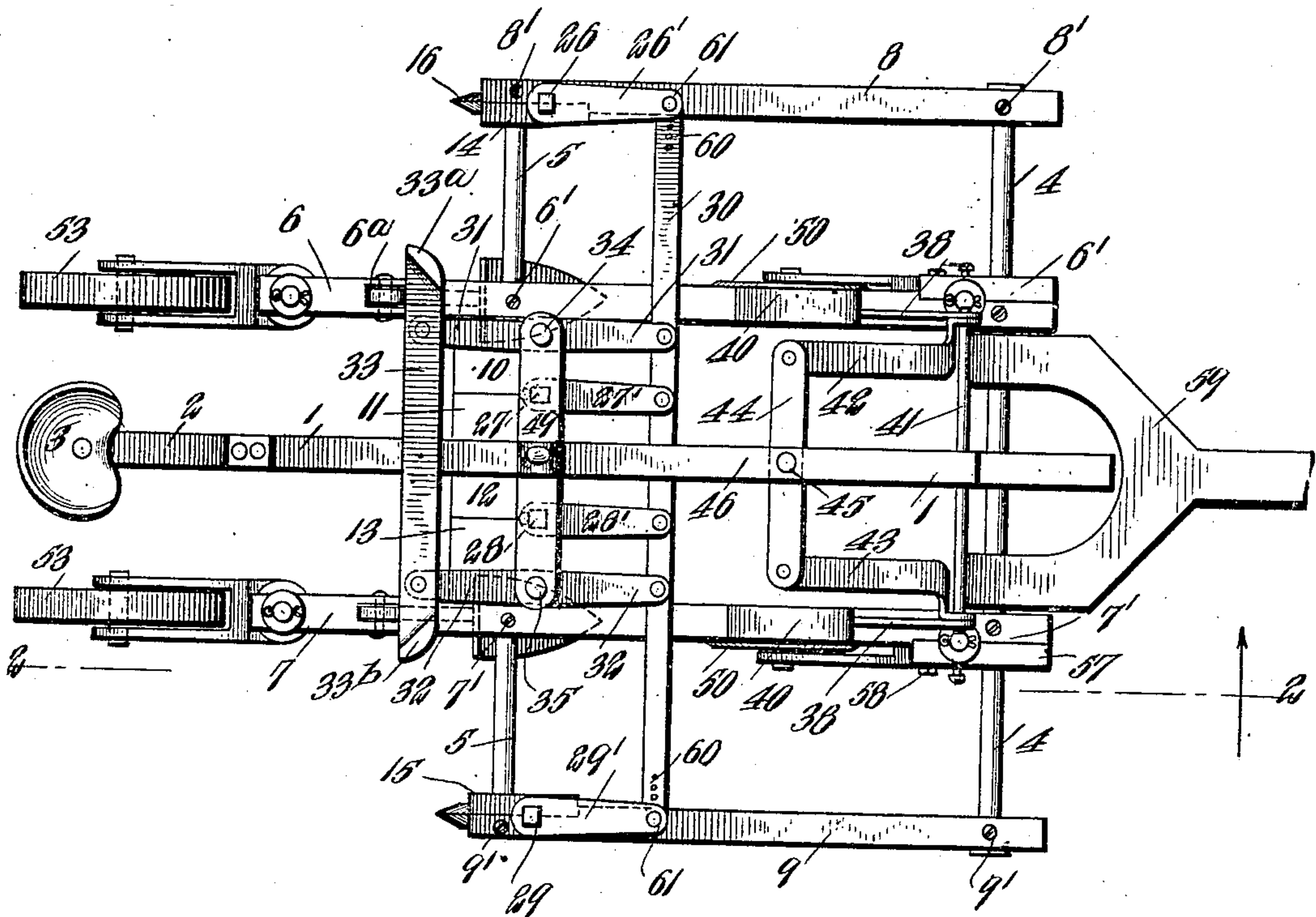


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COTTON CHECKER AND CULTIVATOR.
APPLICATION FILED NOV. 10, 1908.

946,509.

Patented Jan. 11, 1910.

Fig. 1.



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COTTON CHECKER AND CULTIVATOR.

946,509.

Specification of Letters Patent.

Patented Jan. 11, 1910.

Application filed November 10, 1908. Serial No. 461,883.

To all whom it may concern:

Be it known that I, ROBERT HAMILTON, a citizen of the United States, and a resident of Gouldbusk, in the county of Coleman and State of Texas, have made certain new and useful Improvements in Cotton Checkers and Cultivators, of which the following is a specification.

My invention relates to improvements in devices for cultivating cotton and it consists in the constructions, combinations and arrangements hereinafter described and claimed.

An object of my invention is to provide a device by means of which the width of the hills or rows may be adjusted to suit the requirements of various grades of soil.

A further object of my invention is to provide means by which the plows of the cultivator may be simultaneously raised or lowered, and when so raised or lowered may be kept in their adjusted positions.

A further object of my invention is to provide a novel means for mounting the spacing and cutter wheels of the cultivator.

Other objects and advantages will appear in the following specification and will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my device. Fig. 2 is a view partly in section along the line 2—2 of Fig. 1, looking in the direction of the arrow. Fig. 3 is a detail view showing the method of mounting the cutter or spacer wheels. Fig. 4 is an edge view at right angles to Fig. 3.

Referring now to Fig. 1 I have shown therein a center beam 1, at the rear end of which is fastened a spring 2 bearing a seat 3. Passing through the forward end of the center beam 1 is a transverse rod 4, which is preferably of round steel about an inch and a quarter in diameter, while a similar rod 5 is disposed between the seat and the front rod 4. The rods 4 and 5 also pass through the plow beams 6 and 7, which are secured to these rods by means of the set screws 6' and 7'. At the outer ends of the transverse rods are located the parallel spacer beams 8 and 9 which are also adjustably secured to

the rods 4 and 5 by means of set screws 8' and 9' respectively.

In order to provide bearing clamps for the movable cutter wheels, I have arranged the clamps 10, 11, 12 and 13, through which the rod 5 passes. These clamps also constitute spacing members between the center beam 1 and the beams 6 and 7 on each side thereof. Both the clamps 10 and 11 are attached on one side of the center beam by means of suitable bolts, while the clamps 12 and 13 are attached on the other side. Each clamp is provided with a semicircular groove adapted to register with a similar groove in the adjacent clamping member, thereby providing bearings for the vertical shafts of the cutter wheels. The outside beams 8 and 9 are also provided with detachable clamping members 14 and 15, which are of similar construction to the clamps 10—13, and form bearings for vertical axles for the outside cutter wheels.

The cutter or spacer wheels themselves are made as shown in Figs. 3 and 4. They consist of cylindrical disks 16 having sharpened beveled edges 17. These disks are flat on their inner sides 18 and on their outer sides are reamed out at 19. The supporting member for the wheel consists of a casting 20, having a V-shaped slot 21 therein arranged to receive the wheel and an extended arm 22 in which the axle 23 of the wheel is journaled. A shaft 24 extends upwardly from the casting 20 and is arranged to be journaled in the boxing formed by the clamping members 10—13 and 14 and 15 already described. The upper ends of the shafts 24 are square as shown at 25 in Fig. 4. The four upright shafts are shown in Fig. 1 at 26, 27, 28 and 29. In order to give these cutter wheels a turning motion on their vertical axles I arrange a series of levers 26', 27', 28' and 29', which are attached to the upper squared ends of the shafts and are all pivotally attached to a common connecting rod 30, as shown in Fig. 1. The rod 30 may be moved transversely of the machine by means of the parallel levers 31 and 32, pivoted to said rod 30 at one end and at the other end to a foot lever 33, which is provided with the upright foot rests 33^a and 33^b at its ends. The levers 31 and 32 are

each pivoted at their central parts to the uprights 34 and 35 respectively. It will be seen that on pushing the foot lever 33 to the right or to the left all four cutter wheels 5 will be moved simultaneously to the left or to the right respectively.

Pivotally secured in the slots 6^a and 7^a of the beams 6 and 7 respectively, are the plow standards 36 bearing the plows 37. To each 10 of the standards there is pivotally attached an upwardly inclined link 38, which is adapted to pass through inclined slots 39 in the respective beams 6 and 7 and in a raised portion 40 of the beams. The link 15 38 is provided with a series of holes at its upper end arranged to receive the end of a transverse rod 41, which may be adjustably secured to said links by means of the nuts on the end of the rod. Between the links 20 38 of the respective plow beams is a yoke which has the arms 42 and 43, through which the rod 41 passes at one end and which are both pivotally connected to a cross lever 44 pivoted at 45 to a curved rod 25 46, through which the rod 41 also passes. The rod 46 is pivotally attached to the lower end of an upright handle 47, which is journaled on a horizontal axis 48 consisting of the rounded portion of the transverse 30 beam 49, which is supported by the standards 34 and 35. From an inspection of Fig. 2 it will be seen that when the handle 47 is pulled toward the rear by the driver of the vehicle, the rod 46 will be thrown forwardly, thereby pushing forwardly the links 35 38 and raising the plows. It will be observed that in order for the plows to fall back again after being once raised, considerable force must be exercised through the 40 various levers, since they are arranged in such a manner that certain components of this force are inevitably lost in reactions against the frame itself. On the other hand, this arrangement provides means for 45 increasing the power exerted by the lever 47, so that the plows can be readily moved. This arrangement does not necessitate the use of a lock, since by frictional engagement of the parts the plow will remain in any 50 position in which the lever is placed.

At the front and rear ends of each plow beam are the cutter wheels 50, supported in the slotted arms 51 and arranged to be dragged behind their pivotal axes 52, while 55 at the rear ends of the plow beams 6 and 7 are the rollers 53 similarly mounted on slotted arms 54 and movable on vertical axes 55. The front cutter wheel is held by a clamping member 57 secured by bolts 58 to the plow beam. Pivotally attached to the 60 rod 4 is the tongue 59.

From the foregoing description of the various parts the operation of my device can be readily understood. In using this 65 cultivator or checker on bottom land the

cutter wheels or spacers may be spaced to provide hills or rows twenty-five inches wide. On the up-land, however, the rows should be narrower. Perhaps twenty or even sixteen inches in width will suffice. 70 All that is necessary to do is to loosen the set screws 6', 7', 8' and 9' and move the beams 6, 7, 8 and 9 inwardly the required distance upon the rods 4 and 5. The set screws may be then again tightened and 75 the machine worked with the spacer wheels in proper positions. In order to permit the adjustment of the beams 8 and 9 I arrange a series of holes 60 adapted to receive bolts 61 which are passed down 80 through the ends of the levers 26' and 29' and which may be placed in any of the holes 60 to conform with the sidewise movement of the beam. The arrangement of the foot lever 33 provides a convenient device for 85 turning the cutter wheels on their vertical axes simultaneously. This is especially desirable in turning corners, or in effecting a cut of some width when the foot may be held against one of the foot rests, slightly 90 turning the cutter and causing it to proceed forwardly with a slight inclination, thereby widening the cut.

The method of mounting the cutter wheels is particularly advantageous. They may be 95 easily removed by withdrawing the bolt 23, and the provision of the slot 21 keeps the wheel in alinement and acts at the same time to scrape the mud or dirt which has collected thereon, thereby leaving the cutter al- 100 ways clean and sharp.

I am aware that other forms of the device based upon the same general idea might be made, but I consider as my own and desire 105 to claim all such modifications as fairly fall within the spirit and scope of the invention.

I claim—

1. In a cotton checker and cultivator, a center beam, parallel plow beams secured thereto, cutter wheels pivotally mounted be- 110 tween said center beam and said plow beams, other cutter wheels adjustable relatively to said first-named cutter wheels for spacing purposes, vertical axes for said cutter wheels, and means for simultaneously turn- 115 ing all of said cutter wheels upon their vertical axes.

2. In a cotton checker and cultivator, a center beam, a plurality of cutter wheels arranged in a transverse row and provided 120 with vertical axes, means for adjusting certain of said cutter wheels relatively to the others for spacing purposes, levers attached to the ends of said vertical axes, a common bar pivotally attached to all of said levers, 125 and a foot lever connected with said bar and arranged when operated to simultaneously turn all of said cutters upon their axes.

3. In a cotton checker and cultivator, a central beam, a plurality of sets of cutter 130

wheels arranged in a transverse row and provided with vertical axes, one set of said cutter wheels being movable only about their axes and the other being adjustable relatively to the first set, levers attached to the ends of each of the vertical axes, a common bar pivotally attached to all of said levers

and a foot lever connected with said bar and arranged when operated to simultaneously turn all of said cutters upon their axes.

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Witnesses:

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