W. E. BROWN.

CULTIVATOR.

APPLICATION FILED APR. 15, 1911.

1,003,869. **Patented Sept. 19, 1911.**

Fig. 1.

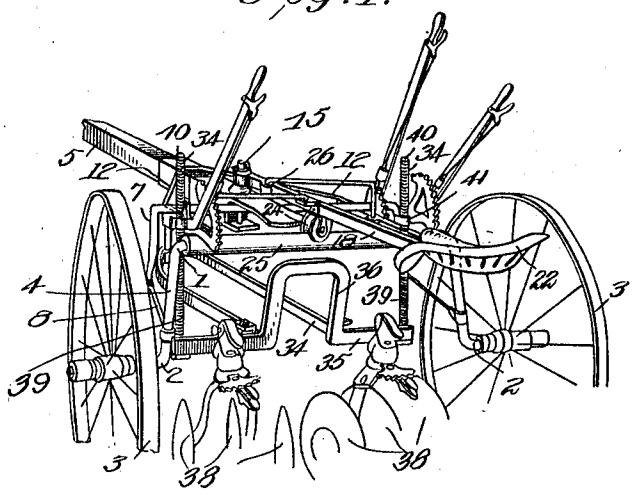


Fig. 2.

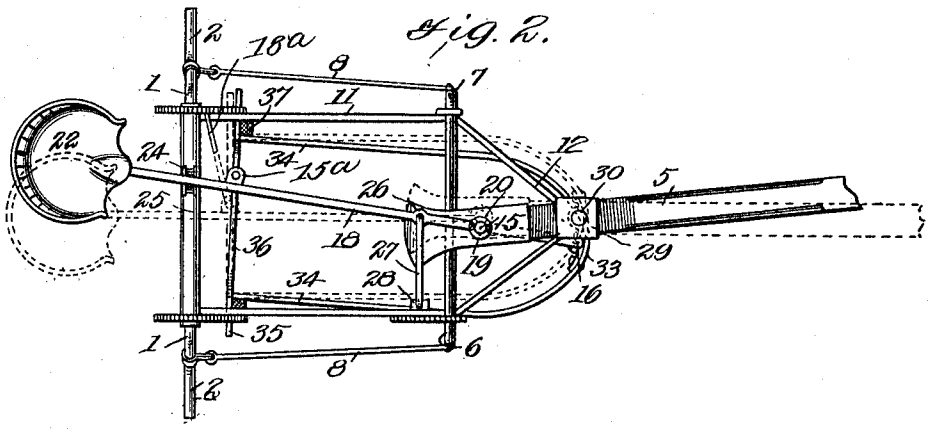
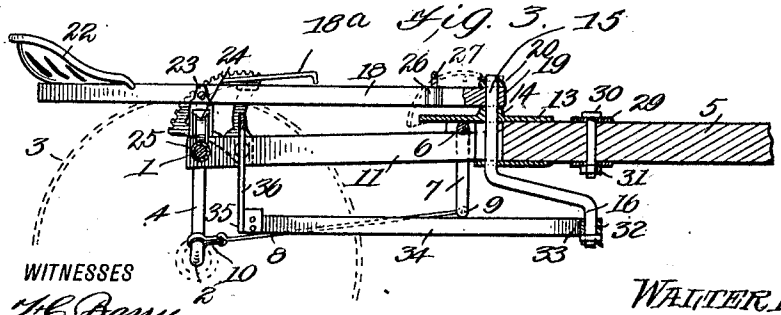


Fig. 3.



WITNESSES

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CULTIVATOR.

1,003,869. Specification of Letters Patent. Patented Sept. 19, 1911.

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To all whom it may concern:

Be it known that I, WALTER E. BROWN, a citizen of the United States, and a resident of Herrick, in the county of Gregory and State of South Dakota, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

My invention is an improvement in cultivators, and consists in certain novel constructions and combinations of parts hereinafter described and claimed.

Referring to the drawings forming a part hereof, Figure 1 is a perspective view of the improvement from the rear, Fig. 2 is a plan view, and Fig. 3 is a vertical longitudinal section.

The present embodiment of the invention comprises an axle 1, having laterally offset alined spindles 2, on each of which is journaled a wheel 3, and the spindles are connected to the body of the axle by angular portions 4. The axle is thus substantially U-shaped.

A tongue 5 is provided, and an arch is arranged in front of the axle. The body 6 of the arm 12 is substantially parallel with the body of the axle, and the arm 7 extends downwardly, and each arm is connected to the adjacent portion 4 of the axle by a link 8.

Each link 8 is pivoted to the arm 7 at one end as shown at 9, and at the other, is connected to a hanger 10 encircling the arm 4. Plates 11 are provided at one end with openings for receiving the body of the axle, and at the front end each of the said plates is bent inwardly at an angle, as shown at 12, and is connected to the tongues, one on each side thereof.

The rear end of the tongue is provided with a plate 13, having at its center a hub or bearing 14. The rear end of the plate extends above the body 6 of the arch, and a crank arm comprising two laterally offset connected journal pins 15 and 16 is connected with the plate.

The journal pin 15 is journaled in the bearing 14, and in an opening in a plate 17 on the lower face of the tongue. A lever 18 is journaled with a bearing 19 at its front end journaled on the journal pin 15. A washer 20 encircles the pin above the arm, and a cotter pin 21 is passed through the pin above the washer. The rear end of the lever extends behind the axle, and a seat 22 is secured on the said end.

A hanger 23 is pivoted to the arm directly above the axle, and a pulley or grooved wheel 24 is journaled in the hanger. The wheel 24 is on a sleeve 25 which encircles the axle body, between the portions 4. The arm is also provided with a bearing 26 near its forward end.

A link 27 is provided at each end with angular portions, one of which is engaged with the bearing 26, and the other with a perforated lug 28 on the adjacent plate 11. The forward ends of the portions 12 of the plates 11 are connected with a box or sleeve 29 on the tongue, and a journal pin 30 is passed through the sleeve and is engaged by a nut 31 to hold the sleeve in place.

The sleeve is of greater size than the tongue, so that the tongue is free to rock laterally, as indicated in dotted lines in Fig. 2. When the front end of the tongue swings to either side, the seat is swung in the same direction, the lever 18 swinging in the link 27 as a fulcrum.

The journal pin 16 of the crank arm is journaled in a bearing 32 on the body 33 of a yoke, whose arms 34 are connected by a bar 35, having at its center an upwardly offset part 36. A foot rest or step 37 is attached to each arm 34 at its junction with the bar 35.

The cutting disks 38 are supported from the bar 35, one set on each side of the portion 36, and the rear end of the frame, formed by the yoke and the bar, is supported by springs 39, which encircle rods 40, connected at one end with the ends of the bar, and passing at the other through bearings 41 on the sleeve 25.

This cultivator and adjusting mechanism form no part of the invention, however, the invention consisting in the connection between the seat and the tongue. The operator when seated in the seat 22, with his feet on the rests 37, may swing the frame 33, 34, 36 in either direction. When the seat is moved to one side, the lever 18 is swung laterally.

In operation when the operator is seated, and the machine is moving forward, and it is desired to shift the pull on the disks or shovels to one side or the other, the operator pushes with the right or the left foot on the rest 37, swinging the seat in the opposite di-

rection. The portion 16 of the crank arm is swung laterally in the opposite direction to the seat, and the disks or shovels tend to move in the same direction. It will be evident that but slight strength is necessary for this movement, so that the operator has complete and easy control over the machine, permitting him to follow the row closely without covering or plowing up plants that may be at one side of the row. The disks or shovels may be thus guided to follow the row, regardless to a certain extent of the position of the supporting frame. Since this movement is brought about by the operator and his feet, both hands are left free for operating the other parts of the machine. It will be evident that a great saving of time is thus effected, as well as a saving of strength on the part of the operator. For road travel the lever 18 is locked at the center of the machine by means of the hook 18ª, which is engaged with the eye 15ª on the lever.

I claim:—

1. In a cultivator, the combination with the frame and wheels for supporting the frame, of a tongue, a pivotal connection between the tongue and the frame near the rear end of the said tongue, a crank having one arm journaled in the tongue, a lever pivoted at one end to the said crank arm, a seat connected with the other end of the lever, said lever extending behind the frame, a foot rest on the frame near each side thereof, a bar supported by the frame above the same, a stirrup hanger pivoted to the lever, a grooved roller journaled in the hanger and engaging the bar, a rigid link pivoted at one end to the frame and at the other to the lever near the crank, an auxiliary frame having a bearing at its front end for receiving the other arm of the crank, a swinging connection between the rear end of the auxiliary frame and the main frame, cultivating means supported by the auxiliary frame, and means for locking the lever from swinging movement.

2. In a cultivator, the combination with the wheel supported frame, of a tongue pivotally connected with the front of the frame, a crank having one arm journaled in the tongue, a lever pivoted at one end to the said crank arm, a seat connected with the other end of the lever, a rigid link pivoted at one end to the frame and at the other to the lever intermediate the seat and the crank arm, an auxiliary frame having a bearing at its front end for receiving the other arm of the crank, a swinging connection between the rear end of the auxiliary frame and the main frame, a bar supported by the frame near the front thereof, a pulley journaled on the lever and running on the bar, means for locking the said lever from movement, and cultivating means supported by the auxiliary frame.

3. In a cultivator, the combination with the wheel supported main frame, of an auxiliary frame supported below the main frame, a connection between the rear ends of the said frames, a tongue pivoted to the front end of the main frame, a crank having one arm journaled in the tongue behind the said pivotal connection and having another arm journaled on the front of the auxiliary frame, a lever pivoted at one end on the said first-named arm of the crank, a seat on the other end of the said lever, a track supported transversely of the main frame, a roller on the lever running on the track, cultivating means supported by the auxiliary frame, and a pivotal connection between the frame and the lever intermediate its ends.

4. In a cultivator, the combination with the wheel supported main frame, of an auxiliary frame supported below the main frame, a connection between the rear ends of the said frames, a tongue pivoted to the front end of the main frame, a crank having one arm journaled in the tongue behind the said pivotal connection and having another arm journaled on the front of the auxiliary frame, a lever pivoted intermediate its ends to the main frame and pivoted at its front end to the auxiliary frame, a seat on the other end of the lever, and detachable means for preventing swinging of the lever.

5. In a cultivator, the combination with the wheel supported main frame, of an auxiliary frame supported below the main frame, a connection between the rear ends of the said frames, a tongue pivoted to the front end of the main frame, a crank having one arm journaled in the tongue behind the said pivotal connection and having another arm journaled on the front of the auxiliary frame, and a lever pivoted intermediate its ends to the main frame and pivoted at its front end to the auxiliary frame.

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Witnesses:
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