

H. R. ALKIRE.
CULTIVATOR.

APPLICATION FILED JULY 15, 1910.

992,630.

Patented May 16, 1911.

2 SHEETS—SHEET 1.

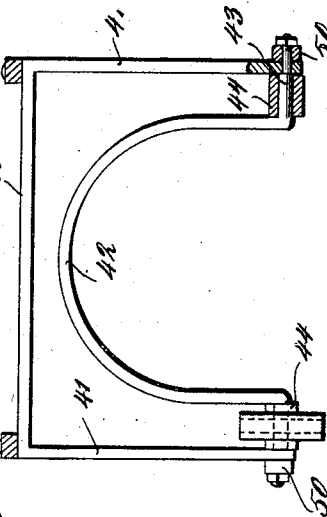
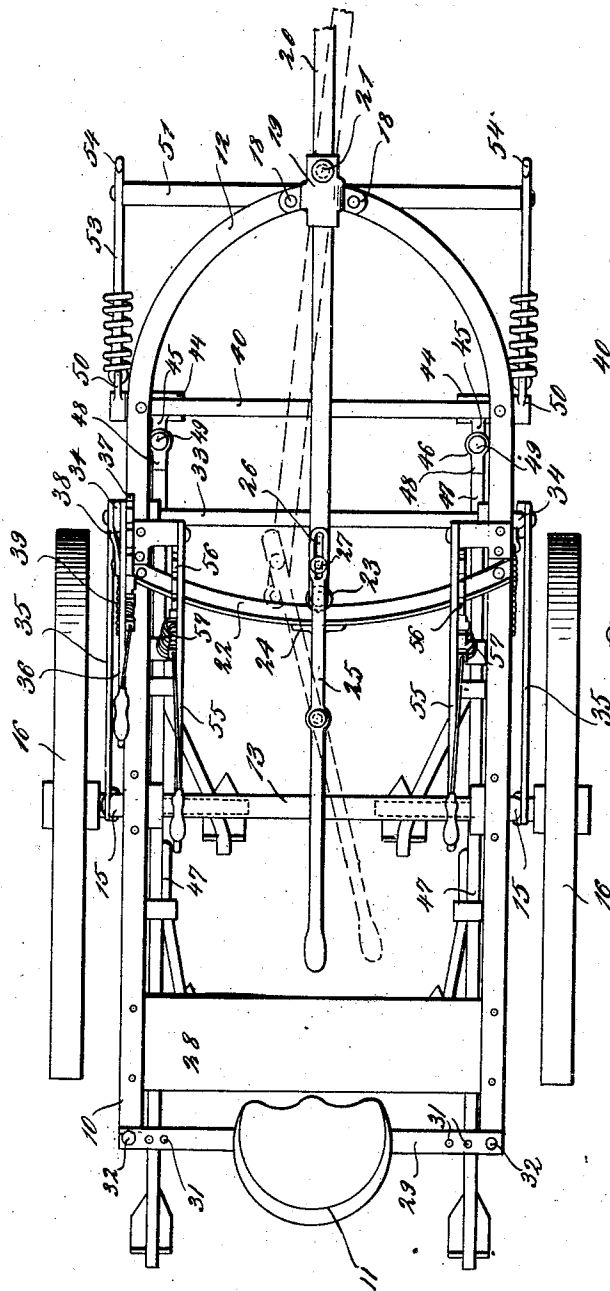


Fig. 1

Fig. 3

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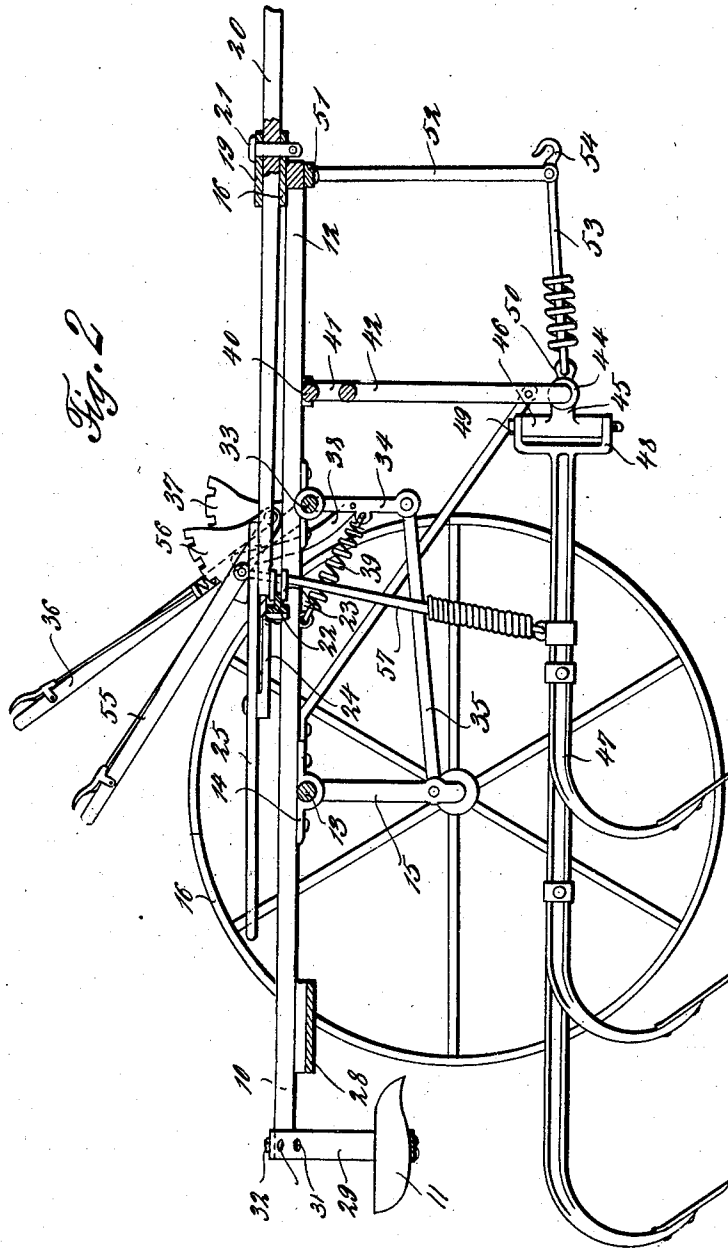
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UNITED STATES PATENT OFFICE.

HOMER R. ALKIRE, OF MOUNT STERLING, OHIO.

CULTIVATOR.

992,630.

Specification of Letters Patent.

Patented May 16, 1911.

Application filed July 15, 1910. Serial No. 572,170.

To all whom it may concern:

Be it known that I, HOMER R. ALKIRE, a citizen of the United States, residing at Mount Sterling, in the county of Madison and State of Ohio, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

This invention relates to farm implements, and is designed particularly to construct an improved cultivator which will be inexpensive, simple, and durable in construction.

It also contemplates the construction of a cultivator wherein the draft will be applied directly to the cultivator beams and also to construct a cultivator whereby the tongue may be swung in order to aid in guiding said cultivator.

With the above and other objects in view, this invention consists in the construction, combination, and arrangement of parts, all as hereinafter more fully described, claimed, and illustrated in the accompanying drawings, wherein—

Figure 1 is a top plan view of a cultivator constructed in accordance with the present invention; Fig. 2 is a central longitudinal section thereof; Fig. 3 is an elevation of the arch to which the cultivator beams are secured.

Referring more particularly to the drawings 10 indicates a rectangular frame having a seat 11 at the rear terminal thereof and the forward end 12 thereof curved. An axle 13 is centrally and rigidly mounted to the frame 10 through the instrumentality of the bearings 14 carried on the under side of said frame. The outer terminals of said axle have rotatably and adjustably mounted therein the crank axles 15 at the outer terminals of which are rotatably mounted the wheels 16. A base plate 17 is centrally secured to the curved end 12 of the frame 10 through the instrumentality of ears 18 with which the plate 19 coöperates. The tongue 20 is pivotally mounted between the plates 17 and 19 through the instrumentality of the pin 21, said tongue being adapted to swing about said pivotal point. A track 22 is interposed between the sides of the frame 10 and curved in an opposite direction to the curve of the end 12 of said frame, said track adapted to receive a grooved roller 23 carried by the inner terminal of the tongue 20, thus forming the support

for the terminal of said tongue and also a guide to insure the direct operation thereof.

A bracket 24 is secured centrally to the track 22 on the side thereof opposite to the tongue 20 and has pivotally mounted at the terminal thereof the arm 25 which is provided at each terminal with a slot 26, the slot in the forward terminal thereof engaging a pin 27 carried by the inner extremity of the shaft 20. A platform 28 is interposed between the sides of the frame 10 directly in front of the seat and carries adjacent the forward edge thereof the vertical pivot 29. To this vertical pivot 29 is connected a link 30, said link having on each side thereof a foot rest 31 and a chain 32 at its outer terminal, said pin engaging the slot 26 in the rear terminal of the arm 25. From this construction it will be understood that as the foot rests 31 are shifted one way or the other the tongue 20 will likewise be shifted, thus greatly aiding in the steering of the present invention.

A shaft 33 is mounted on the under side of the frame between the track 22 and the curved end thereof, said shaft having the terminals 34 thereof bent downwardly and connected to the axles 15 by the links 35. A lever 36 is rigidly connected to the shaft 33 adjacent one terminal thereof and co-operates with the quadrant 37, said lever being adapted to regulate the height of the frame 10 above the ground. An auxiliary connection or brace 38 is interposed between the lever 36 and one of the terminals 34 of the shaft 33, thereby insuring a positive connection between said lever and said shaft. In order to aid in operating the lever 36 a spring 39 is interposed between each of the downwardly bent portions 34 of the shaft 33 and the sides of the frame 10. The bar 40 is mounted on the under side of the frame 10 adjacent to the forward terminal 12 thereof and is provided with a downwardly projecting extension at each terminal thereof. These extensions 41 support at their lower terminals the arch 42, said arch being bent horizontally to form the bearing shafts 43 to which the lower terminals of the extensions 41 are secured. A sleeve 44 is mounted on each of the bearing shafts 43 and has a rearwardly extending projection 45 on the inner side thereof, said projection having a vertically extending tube 46 formed thereon. The cultivator beams 47

are secured to the tubular members 46 by the yokes 48 through which the bolts 49 extend, thus mounting said beam for lateral movement. On the outer side of the extensions 5 41 on each shaft 43 is mounted a collar 50 to which the draft mechanism is secured as hereinafter more fully described. The bar 51 is mounted on the under side of the curved terminal 12 of the frame 10 directly 10 under the pivotal point of the tongue 20, said bar having the downwardly projecting extension 52 formed at each terminal thereof. The lower terminals of the extension 52 are connected by the resilient links 53 to the 15 collars 50 and have on the opposite sides thereof the hooks 54 to which are secured the draft mechanism.

In order to provide a means whereby the cultivator beams 47 may be raised and lowered a lever 55 is mounted on each side of 20 the frame 10 and coöperates with the quadrant 56, said levers being connected to the cultivator beams 47 through the instrumentality of the resilient link 57. Thus upon 25 operating the levers about the quadrant 56 the cultivator beams 47 will be swung about the shaft 43 of the arch as an axis. From this construction it will be readily understood that the pull is exerted directly upon 30 the cultivator beams and not through any intermediate element.

Having thus fully described my invention, what is claimed as new is:

In a device of the class described, the com-

35 bination with a rectangular frame, of wheels carried thereby, a U-shaped cultivator supporting rod carried on the under side of said frame adjacent to the forward terminal thereof, an arch disposed within said U-shaped supporting rod for the terminals 40 thereof bent outwardly and mounted in the terminals of said rod, sleeves loosely mounted on the bent portions of said arch adjacent to the inner surfaces of the terminals of said rod, a vertical tubular bracket 45 carried by the rear sides of said sleeves, cultivator beams, vertical yokes carried by said cultivator beams adapted to span said tubular brackets, pins pivotally securing said yokes to said brackets, collars loosely 50 mounted on the bent portions of said arch on the exterior of the terminals of said rod, a transverse bar carried under the forward extremity of said frame, downwardly extending projections formed at each terminal 55 of said bar, resilient connections between said collars and the lower terminals of said extensions, levers mounted on said frame above said cultivator beams, and resilient connections between said levers and said 60 beams.

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

HOMER R. ALKIRE.

Witnesses:

G. M. FISHER,
GEORGE K. FRASH.