C. JOHNSON.

CULTIVATOR.

APPLICATION FILED JULY 6, 1915.

1,162,068.

Patented Nov. 30, 1915.

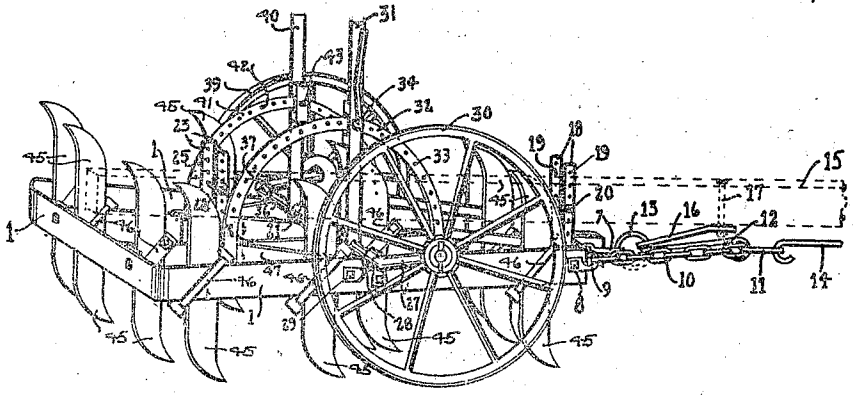


FIGURE 1

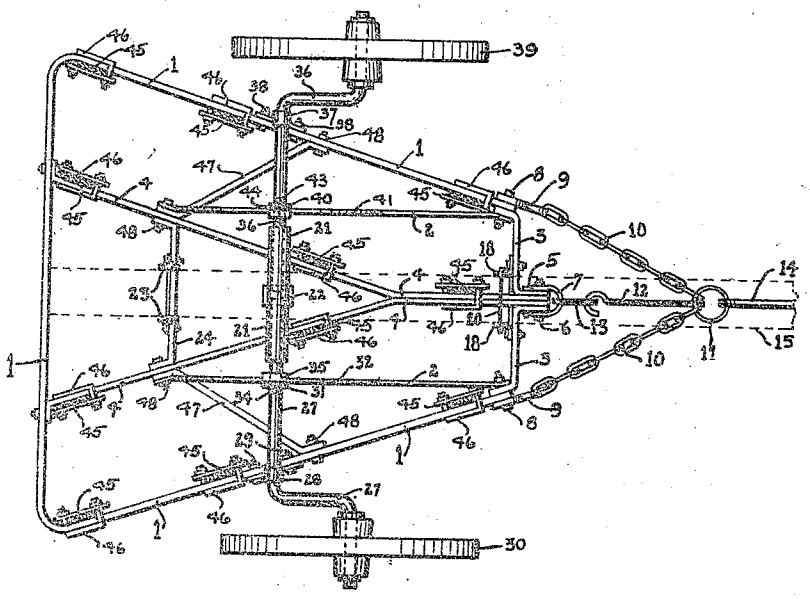


FIGURE 2

WITNESSES

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CULTIVATOR.

1,162,068. Specification of Letters Patent. Patented Nov. 30, 1915.

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To all whom it may concern:

Be it known that I, CHARLES JOHNSON, a citizen of the United States, residing at San Jose, in the county of Santa Clara and State of California, have invented a new and Improved Cultivator, of which the following is a full, clear, and exact description.

My invention relates to an improvement in cultivators for the purpose of cultivating the ground in orchards and fields or in any other place where the ground is hard and it becomes necessary to break up the same.

The objects of my invention are first, to so construct a cultivator which will break up the earth in a suitable manner and to the fineness that may be required. Second to, so construct a cultivator that all parts thereof can be duplicated, and one which may be operated in field, orchard, or road and one in which the cultivator teeth are reversible. Third to so construct a cultivator that either side may be raised or lowered to any angle required without interfering with the other side, or both sides may be raised and lowered at the same time. Fourth to so construct a cultivator that may be drawn by horses or attached to a traction engine and one that may be built in any size and strength for the work required thereof.

I attain these objects by means of the parts illustrated in the accompanying drawings, in which;

Figure 1 is a perspective view of my improved cultivator. Fig. 2 is a plan view of the same.

In the drawings similar reference characters indicate corresponding parts in all of the views.

Referring to the drawings 1 indicates the frame or longitudinal outer bar and rear end cross bar which is an integral part thereof, longitudinal inner bars are shown at 2, forward cross bars 3 are shown connected to draw bars 4 by bolt 5 and clevis bolt 6 and clevis 7, the outer ends of said cross bars 3 are connected to longitudinal bars 1—2 by bolts 8 by which draw hooks 9 are fastened thereto to which chains 10 are connected the outer ends of which are connected to ring 11, connected to ring 11 is hook 12 connecting with link 13, said link connecting with clevis 7, draw bar 14 is here shown connecting with ring 11 on the under side of pole or tongue 15, said draw bar extending forward a distance, the same being adapted to connect with a traction engine or any other means for drawing the cultivator, the position of pole or tongue 15 is here shown in dotted lines for the purpose of more clearly showing other important parts of the cultivator, connecting rod 16 is shown in Fig. 1 connecting with link 13 and tongue 15 by bolt 17, this rod 16 is for the purpose of connecting pole 15 direct to link 13 and clevis 7 when so required, upright adjusting bars 18 are attached to forward cross bars 3, pole 15 being positioned therebetween, said bars 18 having a plurality of holes therein as shown at 19 which are for the purpose of raising or lowering the ends of pole 15 to any required position, the same being held in place by pin 20, said pole 15 extends backwardly resting on axle sleeve 21, the same being connected thereto and turnable thereon by strap 22, upright adjusting bars 23 are shown attached to cross bar 24 the same having a plurality of holes 25 therein for the purpose of adjusting the rear end of pole 15 therebetween by pin 26, axle sleeve 21 is fastened to draw bars 4 in any suitable manner, crank axle 27 is shown having its inner bearing in axle sleeve 21 and its outer bearing 28 attached to frame 1 by bolts 29, on the journal of said axle 27 is mounted wheel 30, said axle being operated by lever arm 31 fastened thereto and adapted to turn said axle 27 in sleeve 21 and bearing 28, said lever arm 31 engaging half circle rack 32 which is fastened to longitudinal inner bar 2 in any suitable manner, said rack 32 having a plurality of holes 33 therethrough for the purpose of engaging lever arm 31 by spring pin 34, a collar 35 is shown attached to axle 27 and bearing against longitudinal inner bar 2, this collar is for the purpose of retaining axle 27 in position in sleeve 21 while in operation. On the other side of frame 1 is crank axle 36 having its inner bearing in axle sleeve 21 and its outer bearing 37 attached to frame 1 by bolts 38, on the journal of said axle 36 is mounted wheel 39, said axle being operated by lever arm 40 fastened thereto adapted to turn said axle 36 in sleeve 21 and bearing 37, said lever arm 40 engaging half circle rack 41, the same being fastened to longitudinal inner bar 2 in any suitable manner, said rack having a plurality of holes shown at 42 therethrough for the purpose of engaging lever arm 40 by spring pin 43, a collar 44 is shown attached to axle 36 and bearing against longitudinal inner

bar 2, this collar is for the purpose of retaining axle 36 in position in sleeve 21 while in operation, cultivator teeth 45 are made curved at their ends and are reversible, the same being fastened to frame 1 and bars 4 by clamps 46, braces are shown at 47 connecting frame 1 with draw bars 4 by bolts 48, these braces are for the purpose of strengthening frame 1 with bars 4.

The operation and construction of my improved cultivator is as follows:—It will be seen that each axle is operated separate and independent from each other with regard to the elevation required on either side of said cultivator, or both sides may be operated together with regard to the depth required of the teeth in the ground, the pole or tongue can be adjusted to suit different positions required, the teeth are curved at both ends and are thereby reversible and adjustable by clamps; this cultivator may be made in any size required for heavy or light work required of the same.

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

1. In a cultivator frame of the class described the combination of outer longitudinal bars 1 forming rear end cross bar, longitudinal inner bars 2 connecting with forward end cross bars 3, longitudinal bars 4, connecting with rear end cross bar 1 and cross bars 24 and bolt 5, connecting the front ends of bars 4 with cross bars 3, means by which said cross bars 3 are connected to longitudinal bars 1—2, braces 47 connecting bars 1 with bars 4, substantially as herein described.

2. In a cultivator consisting of the tooth-carrying frame the combination of the outer longitudinal bars 1 forming rear end cross bar longitudinal inner bars 2 connecting with forward end cross bars 3 the same connecting with longitudinal inner bars 4 by bolt 5 said bars 4 connecting with rear end bars 1, and cross bar 24, and the rear ends of the bars 2 and the axle sleeve 21 fastened to said bars 4, and the pole or tongue 15 secured to said axle sleeve by strap 22 and turnable on said axle sleeve and carried by the inner bars 4 of the frame substantially as herein described.

3. In a cultivator consisting of the tooth carrying frame the combination of the outer bars 1, forming rear end cross bar longitudinal inner bars 2—4 connecting with the cross bars 3—24, and the bolt 5, connecting the front ends of the bars 3—4, the axle sleeve 21 secured to and carried by longitudinal bars of the frame 4 the pole or tongue 15 secured to said axle sleeve 21 and turnable thereon, and the wheeled crank-axles 27—36, carried by said axle sleeve 21 and said bearings 28—37 fastened to bars 1 of said frame substantially as herein described.

4. In a cultivator of the class described the combination of a tooth-carrying frame composed of the outer bars 1 forming rear end cross bar longitudinal inner bars 2—4, cross bars 3—24, and braces 47, said bars 1 and bars 4 being adapted to carry clamps 46 the same being adapted to clamp cultivator teeth 45 to said bars, an axle sleeve fastened to bars 4 in which axles 27—36 operate, a collar 35 attached to axle 27 and bearing against inner bar 2 adapted to retain axle 27 in position in said sleeve, a collar 44 attached to axle 36 and bearing against inner bar 2 adapted to retain axle 36 in position in said sleeve, substantially as herein described.

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

CHARLES JOHNSON.

Witnesses:
J. B. Cambers,
L. K. Smith.