

APPLICATION FILED JULY 13, 1911.

Patented Nov. 21, 1911.



J. B. Bowling
Lelan Schley

INVENTOR

L. S. Ellett,

BY *Jack A. Chley*
ATTORNEY

UNITED STATES PATENT OFFICE.

LUTHER S. ELLETT, OF CELINA, TEXAS.

CULTIVATOR.

1,009,292.

Specification of Letters Patent.

Patented Nov. 21, 1911.

Application filed July 13, 1911. Serial No. 638,254.

To all whom it may concern:

Be it known that I, LUTHER S. ELLETT, a citizen of the United States, residing at Celina, in the county of Collin and State of Texas, have invented certain new and useful Improvements in Cultivators, of which the following is a specification.

This invention relates to improvements in cultivators and particularly to foot adjusting mechanism.

The main object of the invention is to provide certain improvements upon the cultivator for which Letters Patent were issued to me November 22nd, 1910, Number 976,729. These improvements having for their objects the simplification of the parts set forth in said Letters Patent and involving certain additional features which will be hereinafter set forth.

A further object of the invention is to provide mechanism which will be strong, durable and efficient and simple and comparatively inexpensive to construct, also one in which the several parts will not be likely to get out of working order.

With the above and other objects in view the invention has relation to certain novel features of construction and operation, an example of which is described in the following specification and illustrated in the accompanying drawings, wherein:

Figure 1 is a sectional view taken on the line *s-s* of Fig. 3, Fig. 2 is a plan view, Fig. 3 is a transverse sectional view taken on the line *x-x* of Fig. 2, Fig. 4 is a detail of the block tilting device, and Fig. 5 is a detail in section of one of the adjusting arms.

In the drawings the numeral 1 designates a cultivator beam about which a pair of semi-circular sleeve members 2 and 3 respectively are clamped. From the underside of the member 3 a sleeve 4 is suspended from a web 5 cast on the said member. The sleeve extends transversely of the beam and at substantially right angles to the member 3 and projects beyond the same as is shown in Figs. 2 and 3. A cylinder 6 is mounted for rotation in the sleeve and has one end extending beyond the same. This cylinder is arranged to carry the standard supporting means and when rotated or rocked will tilt said standard in a plane approximately parallel to the axis of the beam. For adjusting said cylinder a rigid arm 7 extends upward from the projecting end of the sleeve 4, while a similar arm 8 is provided on the projecting

end of the cylinder. Each arm is provided at its upper end with a pivoted eye plate 9 directed oppositely so that their eyes will aline. An adjusting screw 10 is rotatably confined in the eye plate of the arm 7 which latter is stationary. This screw is threaded in the eye plate of the arm 8 and is provided with a hand wheel 11 whereby it may be turned. It is apparent that by turning the screw 11 the arm 8 will be moved toward or from the arm 7 according to the direction in which said screw is rotated. The arm thus being swung will rock the cylinder and adjust the standard carrying means above mentioned.

The cylinder is cored to receive a square hollow shank 12 extending entirely through said cylinder. On the outer end of the shank a yoke 14 is formed and arranged to receive a pivoted block 15 in which standard supporting and adjusting devices are mounted. The shank has a central longitudinal slot 16 through which a stud 17 projects from the cylinder and extends vertically in the shank to the center of the same. A longitudinal screw 18 is threaded in the inner end of the shank and has its inner end rotatably confined in the stud. A hand wheel 19 is fixed on the outer end of the screw which projects outward from the shank. By rotating the screw the shank is moved longitudinally in the cylinder thereby adjusting the standard laterally with relation to the beam.

The block 15 is pivoted with its axis substantially parallel to that of the beam and when tilted will swing or adjust the standard and its shovel (not shown) transversely of the furrow. The block has one of its trunnions 20 extended through the yoke and its projecting end squared to receive a toothed segment 21. A worm 22 mounted in ears 23 on the side of the yoke meshes with the segment and is provided at its upper end with a hand wheel 24 whereby it may be rotated for the purpose of tilting the block. A set screw 25 passed through one of the ears impinges the worm for locking the same in adjusted position.

The block is recessed to receive a worm gear 25 which is shouldered at its upper end and flanged at its lower end, the recessed portion of the block being shaped to snugly receive the gear and having one side open whereby the gear may be slid into place. The gear has a central opening or bore 26

through which a standard 27 loosely passes. This standard carries the usual shovel (not shown) on its lower end and is provided with a longitudinal peripheral groove 28 into which a key 29 projects from the gear. It is obvious that when the gear is rotated the standard will likewise be rotated, but is free at the same time to be moved vertically. The worm gear is rotated to adjust the standard about its axis and present the shovel in various directions. The standard is moved vertically to vary the depth of the furrow.

For rotating the gear 25 a worm 30 is journaled in ears 50 provided on the block and has a hand wheel 31 fixed thereon whereby it may be rotated. This worm meshes with the gear and may be locked in position by a set screw 32 threaded through one of the ears of the block. After the standard has been rotated to bring its shovel at the proper point it may be locked against further rotation by tightening the set screw.

The standard is screw threaded and engages in a nut 33 mounted on the block 15. This nut has lateral flange 34 at its bottom and lugs 35 mounted on the block project over said flange and confine the nut in position. One of these lugs is removably fastened on the block and when removed permits the nut to be slid under the lugs, the standard first being removed. It is apparent that by applying a suitable wrench the nut may be rotated and the standard adjusted vertically as desired.

It is to be understood that while I have only shown one standard supporting and adjusting mechanism as many as are desired may be used and they may be arranged as shown in the Letters Patent hereinbefore referred to. The several adjustments may be readily made and except for the nut 33 no tools of any nature are required in effecting the adjustments.

For confining the cylinder 6 against longitudinal displacement with relation to the sleeve 4 an annular flange 60 is provided near one end so as to bear against the end of the sleeve. On the opposite end of the cylinder a collar 70 is suitably fastened and engages in a recess in the sleeve and web 5.

What I claim, is:

1. In a cultivator foot adjusting mechanism, a pair of sleeve members adapted for engagement with the beam of a cultivator, a sleeve rigidly attached to one of said members transversely thereof, a cylinder rotatably mounted in the sleeve, an arm extending from the sleeve, an arm extending from the cylinder, an adjusting device extending between and connected to the arms, a yoke carried by the cylinder, a block pivoted in the yoke, and a standard mounted in the block.

2. In a cultivator foot adjusting mechanism,

a pair of sleeve members adapted for engagement with the beam of a cultivator, a sleeve rigidly attached to one of said members transversely thereof, a member rotatably mounted in the sleeve, an arm extending from the sleeve, an arm extending from the rotatable member, eye plates, one pivoted at the end of each arm, a screw rotatably confined in one of said plates and having screw threaded engagement with the other, a hand wheel fixed on the screw, and a standard carrying device mounted in the rotatable member.

3. In a cultivator foot adjusting mechanism, a sleeve having provision for attachment to a cultivator beam transversely thereof, a cylinder rotatably mounted in the sleeve and having a bore of non-circular cross section, a projection extending from the cylinder into the bore thereof, a hollow shank extending into the bore of the cylinder and having a longitudinal slot through which the projection extends, a screw threaded through one end of the shank and rotatably confined in the projection of the cylinder, a hand wheel mounted on the screw, a yoke carried by the shank, and a standard supporting member pivoted in the yoke, the screw projecting from one end of the shank and the yoke extending from the other end.

4. In a cultivator foot adjusting mechanism, a sleeve having provision for attachment to a cultivator beam transversely thereof, a rotatable member mounted in the sleeve in adjustable relation thereto, a non-rotatable shank mounted in the member, said shank being arranged for movement longitudinally of the member, a yoke fixed on the projecting end of the shank, a block pivoted in the yoke, a tilting device mounted on the yoke and having connection with the block, a worm gear mounted in the block, a worm meshing with the gear and mounted in the block, a hand wheel fixed on the worm, a screw threaded standard passing loosely through the worm gear, said standard having a longitudinal groove, a projection extending from the gear and engaging in the groove of the standard, and a nut rotatably confined on the block and having internal screw threads engaging the threaded portion of the standard.

5. In a cultivator foot adjusting mechanism, a sleeve having provision for attachment to a cultivator beam transversely thereof, a rotatable member mounted in the sleeve in adjustable relation thereto, a non-rotatable shank mounted in the member and arranged for movement longitudinally thereof, a yoke fixed on the end of the shank, a block pivoted in the yoke, a block tilting device mounted on the yoke and having connection with the block, the block being recessed and open at one side, a worm gear fitting

in the recess of the block, a worm journaled between ears on the yoke and meshing with the gear, a key projecting from the gear into its bore, a screw threaded standard
5 passing vertically and loosely through the gear and having a longitudinal groove receiving the key, a flanged nut mounted on the block and receiving the standard, lugs on the block engaging over the flanged por-

tion of the nut, and a locking device mounted in the yoke and engaging the worm.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LUTHER S. ELLETT.

Witnesses:

ROBT. L. CLAYTON,
S. E. BATEMAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
