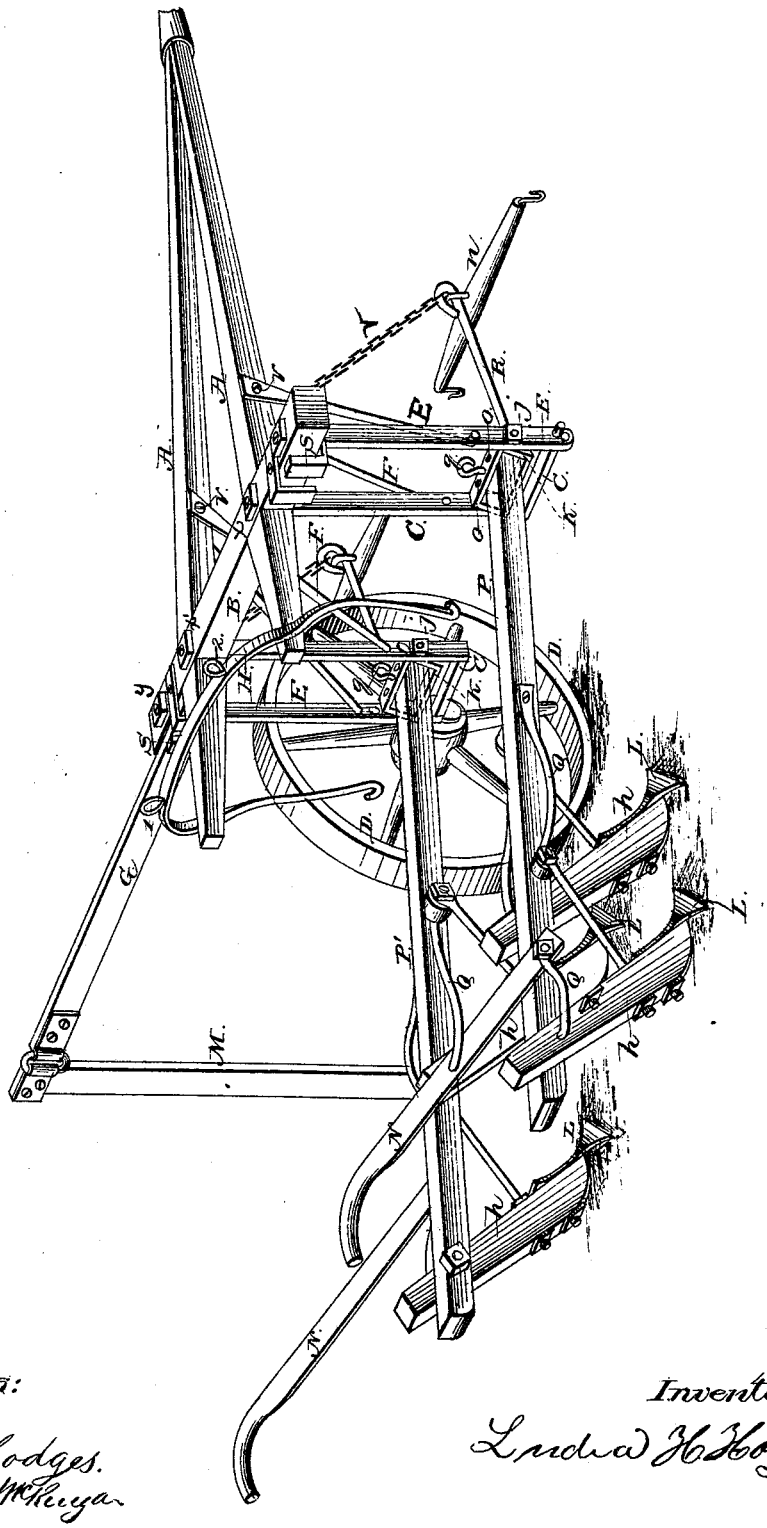
L. H. HODGES.

WHEEL-CULTIVATOR.

No. 183,004. Patented Oct. 10, 1876.



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UNITED STATES PATENT OFFICE.

LUDIA H. HODGES, OF TARRANT COUNTY, TEXAS.

IMPROVEMENT IN WHEEL-CULTIVATORS.

Specification forming part of Letters Patent No. **183,094**, dated October 10, 1876; application filed July 20, 1875.

To all whom it may concern:

Be it known that I, LUDIA H. HODGES, of the county of Tarrant and State of Texas, have invented a new and useful Machine for Plowing, to be known as the "Lone Star Cultivator and Break-Plow;" and I hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making part of this specification.

Letter A represents the tongue, which consists of two wooden pieces united at the front extremity. Each piece is secured to a cross-beam, B, at *x x'*, elevated, preferably, two feet above the line of the axle C, and forming the center part of said axle.

The axles are made of iron, which elbow perpendicularly upward at a suitable distance from the inside of each wheel, and pass through the cross-beam B and tongue at *x* and *x'*, and are secured to said cross-beam B by nuts at the top of each, thus making the said cross-beam B at top a part of the extension of the axle between the wheels. The tongue extends in rear of this cross-beam B, to the ends of which are attached a flat iron bar, H, crooked at either lower extremity for a hook on which to suspend the two double plows P' P' in turning at the end of the row or when otherwise not needed in the ground. Through the top of said iron bar H are two loops, 1 and 2, through which the lines pass. To either end of the cross-beam B is attached a staple and spring, *s*, which secures a wooden gage or arm, G, to the outer extremity of which gage G is hinged a marker, *m*, for the purpose of laying off corn-rows.

At the shoulder-boxing of each wheel the axle is made to pass through an iron bar, E, which bar extends upward at right angles to the axle, and, passing through the cross-beam B at G, is secured by a nut at the top. An iron brace, F, extends from the crook of the axle to the inside of the tongue. A second brace of same size and material extends from each outer upright bar E' E' to the outside of the tongue, and is secured along with the other brace by a bolt passing through the tongue at *v*. A reversible clevis, K, is suspended between the upright bar E and the upright portion of the axle by means of two bolts, *j j*. Said clevis has three holes, *o o o*, in it at top and bottom to receive the clevis-pin *g*. The bolts which secure it in place are inserted, preferably, one inch from one side and two inches from the other, so that the clevis can be turned over at will, thus elevating or depressing the end of the plow-beam. The bolts which confine the clevis in position can be elevated or lowered, there being two or more holes, *o o*, two inches apart in the opposite sides of the upright clevis-frame described, thus enabling the operator, by the turning of the clevis over and by the shifting of it in position on the frame, to lower or elevate the plow-beam one inch at a time over a range of three or more inches. The three holes *o o o* in the nine-inch clevis enables the operator to bring the plows nearer together or farther apart six inches with each clevis, making twelve inches lateral variance for the two double plows. To each clevis-bolt is attached an iron rod, R, which acts as a washer to the outer side of the clevis, and which project in front of the wheel, and to the end of which is attached the single-tree *n*. The outer and front end of said iron rod R is braced to the upper cross-beam by means of a chain, which prevents the single-tree from falling to the ground. The plows L are of steel, preferably, four and one-half inches wide by twelve inches in length, turned down on the bar side three-quarters of an inch, so as to act as a brace against the square helve, to which it is attached and secured by means of a single bolt. This turning down on the bar side strengthens the plow. Either plow can be fitted on either helve by reason of the one bolt and side brace. Four or more plows can be used, two right-hand and two left-hand. The wooden helves *h* are straight and bolted in pairs to two beams, P, and secured by side braces of iron, the brace and bolt in each case forming but one piece. The helve-rod Q is bolted to the beam, with a block inserted to throw it out in line with the plow, and passes through the helve with a tap or nut on either side of the helve, by means of which the helve can be lowered or elevated at pleasure. The side blocks, one and one-half inch thick,

throw the helves six inches apart on each beam. A handle, N, is attached to the rear end of each beam by a bolt and brace of one piece. The interior braces on either plow-beam suspend the plows to the hooks *i i* in turning, &c. The only material used is wood, wrought-iron, and steel.

From this peculiar construction the plows cut and turn, and answer for break-plows as well as cultivators. The plows running square upon the bottom like the other break-plows, will break or plow the soil at a uniform depth, and leave no intervening ridges between the plows. Each plow of the size shown is designed to cut and turn five inches, thus making twenty inches for the four plows or twenty-five inches for five. By changing and reversing the plows on the beam the operator can either bar off or ridge, or both at the same time. The fact that these plows cut and turn makes the draft lighter. It will also be observed that the power is applied in line with the end of the beam, causing lightness of draft. By dispensing with the use of the double-tree the plow is not necessarily turned out of position by uneven pulling, as the power of each horse is extended to the entire number of plows.

I claim as my invention—

1. The clevis K, having four sides in the form of a parallelogram, and pivoted eccentrically between the vertical bars E F, as set forth.

2. The reversible clevis K, eccentrically pivoted on the vertical bars E and F, in combination with the plow beam and frame, whereby the front end of the plow-beams are attached and provided with both lateral and vertical adjustments, as specified.

3. The bent plate S, forming a keeper for the marker and a draft-hook, in combination with the draft-rod R, chain *b*, beam B, and bar E, as shown and described.

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Witnesses:

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