

Wheel Cultivator.

Patented Mar. 28, 1871.



UNITED STATES PATENT OFFICE.

LEE W. CONNER AND RICHARD G. CONNER, OF TROY, IOWA.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 113,019, dated March 28, 1871.

To all whom it may concern:

Be it known that we, LEE W. CONNER and RICHARD G. CONNER, of Troy, in the county of Davis and State of Iowa, have invented certain Improvements in Cultivators, of which the following is a specification.

The nature of our invention relates to improvements in that class of farming implements known as "straddle-row cultivators;" and the invention consists, first, in the construction of the axle in such shape as to bring the ends of the plow-beams, which are attached thereto, well forward and near the draft-animal, all as hereinafter fully described.

It consists, second, in the combination and arrangement of devices for connecting the plow-beams with the axle and main frame, all as hereinafter fully described.

It consists, third, in the arrangement of devices for connecting the shanks of the "inside shovels" to the beams, to allow said shovels to be moved to the right or left, to avoid plants not in row, all as hereinafter fully described.

In the accompanying drawings, Figure 1 is a perspective view of a machine embodying our invention. Fig. 2 is a top view of one-half of Fig. 1, divided longitudinally. Fig. 3 is a perspective view of the axle alone. Fig. 4 is a horizontal sectional view of a part of Fig. 1 on the line *x x*. Fig. 5 is a detached sectional and side view, showing the attachment of the lower braces or stay-rods to the shanks of the inside plows.

A represents the axle, of metal or iron, and curved, as shown at Fig. 3, first to elevate the central portion; second, to advance the part to which the beams are attached forward to the wheel-spindles, and, third, to turn outwardly for the reception of the wheels.

B is the draft-pole, mounted on the axle A, and stayed thereto by the braces *b b*.

C is the double-tree, pivoted on the tongue B, and having bars *c c* extending from its ends downward, and connected at their lower ends to the axle A by rods *c' c'*, with eyes and hooks on their ends, as shown. The bars *c c* are pierced with holes *c'' c''*, for attaching the draft-animals.

D are the plow-beams, pivoted to the vertical part of the axle A by the bolt *d*, which is provided with an eye on its inner end and a nut on the outer end, and may be passed

through either of the series of holes *a a* in the axle A, to raise or lower the front ends of the beams D, as desired. The beams D may be set on either side of the vertical part of the axle A, to adjust their distance apart, and are so pivoted on the bolt *d* as to allow of their free vertical movement or oscillation of their rear ends.

E E are the rear and outside plow-shanks, and are attached to the beams D in the usual manner.

F F are the inside shanks, and are pivoted between the arms of forked bars G G, the shanks of which forks pass through the beams D and are held by the nut *g*.

H H are braces extending from the lower part of shanks F F forward, and provided with a hook at the forward end, which engages with the eye on the beam-bolt *d*, as shown plainly at Fig. 4. The rear ends of the braces H H are connected to the shanks F F, as shown at Fig. 5, by an eyebolt, *f*, threaded and carrying nuts *f' f'*, by which the length of the braces H may be adjusted to change the angle of the shanks F with the ground.

I I are short braces staying the forks G.

J J are the two ends of a connecting-bar between the upper ends or handles of the shanks F F, and may be adjusted in length by means of the thumb-screw *j* and holes *j' j'*.

K K are staples or eyes on the shanks F F, which may be engaged with the hooks L L on the bar M on the rear end of the draft-pole B, for the purpose of elevating and holding the plows in transporting or moving the cultivator when not in use.

P P are braces from the beams D to the axle A. The peculiar construction of the axle A and the manner of attaching the beams D thereto, it will be plainly seen, brings the plows forward, producing both ease and steadiness of draft.

The shanks F F, being pivoted in the forks G G, may be oscillated freely, and swung to the right or left at the bottom, to avoid plants out of line, and for other purposes.

The distance of the shovels on the shanks F apart may be regulated by shortening the rod or bar J to increase the distance of said shovels apart, and by extending the rod J to decrease the distance of said shovels apart.

We claim as our invention—

1. The axle A, constructed as described, and combined with the beam D and eyebolt *d*, substantially as described, and for the purpose specified.

2. The arrangement of axle A and tongue B, double-tree C and rods *c c'*, with beams D D, shanks E and F, forks G G, and braces H and

P, substantially as and for the purpose specified.

LEE W. CONNER.
RICHARD G. CONNER.

Witnesses:

HENRY J. EVANS,
FINLEY HUNT.