B. F. & L. W. NEEDHAM.
Wheel-Cultivator.

No. 199,565. Patented Jan. 22, 1878.

*Fig. 1.*

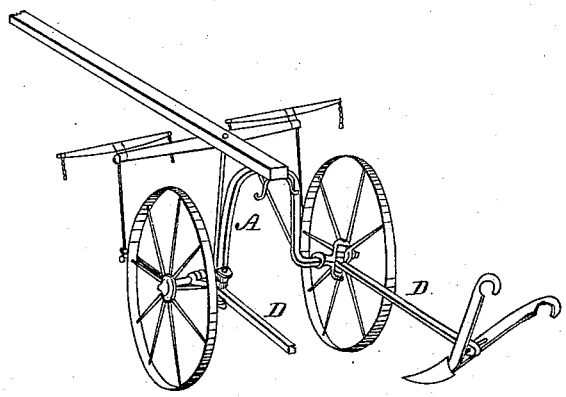



*Fig. 2.*

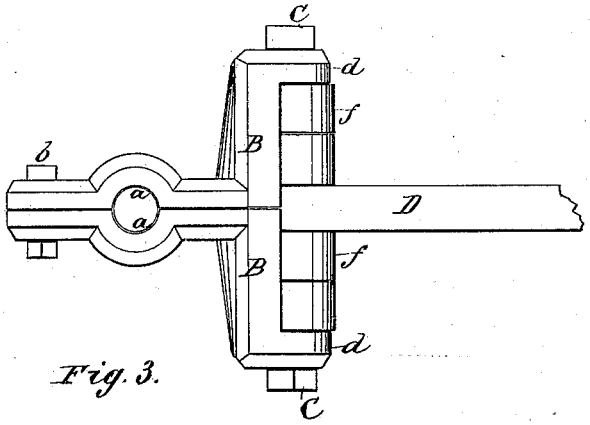
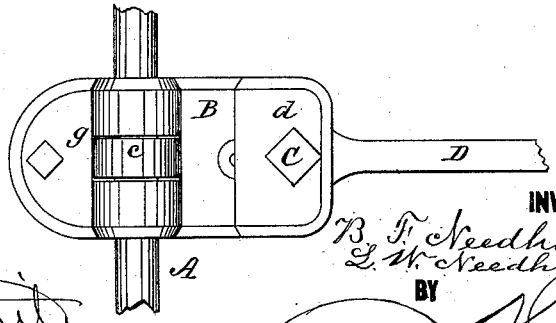



*Fig. 3.*

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## IMPROVEMENT IN WHEEL-CULTIVATORS.

Specification forming part of Letters Patent No. **199,565**, dated January 22, 1878; application filed November 13, 1877.

*To all whom it may concern:*

Be it known that we, BENJAMIN F. NEEDHAM and LABAN W. NEEDHAM, of Newcastle, in the county of Henry and State of Indiana, have invented a new and Improved Plow-Clevis for Wheeled Cultivators; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a perspective view, showing the application of coupling. Fig. 2 is a side view of the coupling, and Fig. 3 a top view of same.

This invention has reference to an improved form of clevis for attaching the plows of wheeled cultivators to the crank-axle of the same.

It consists in a pair of slotted clamp-plates arranged to be fastened about a fixed collar upon the axle, to form a horizontal bearing, and combined with a pivot-bolt for the plow-beam, arranged at right angles to the axle, and carrying adjusting-washers, to regulate the height of the plow-beam upon said pivot-bolt and control the depth of the plowing, as hereinafter more fully described.

In the drawing, A represents the crank-axle of a wheeled cultivator, upon the extremities of which are arranged the running-wheels, and just inside of which wheels are attached our improved clevises. Said clevises consist, each, of a pair of corresponding plates, B B, having semicircular grooves *a a*, which, when placed together and fastened by a bolt, *b*, form a round bearing for the axle, which permits the clevis to oscillate in a vertical plane upon the axle when the plows are lifted. These plates have each slots *g* at said bearings, to receive a fixed collar, *c*, formed upon the axle, which collar fits in the slots of the clamp-plates, and, by holding the clevis in place, prevents it from moving longitudinally upon the axle. The clamp-plates, in form, are bent twice at right angles, and have lugs *d d* at their extremities, through which passes a pivot-bolt, C, to form an attachment for the plow-beam D, whose front end is perforated to receive the bolt C. This connection allows the plows to be thrown by the plowman to the right or left, as may be desired.

To adjust the plow-beam vertically upon the pivot-bolt C, washers *f* are provided. By placing them above or below the plow-beam, the latter may be adjusted at its front end higher or lower, to regulate the depth of the plowing.

We are aware of the fact that it is not new to fasten the forward end of the plow-beam to the crank-axle of a cultivator by means of two plates clamped about the crank-axle and pivoted vertically to the plow-beam, and we therefore claim only our peculiar construction and arrangement of plates, which, bent twice at right angles to form lugs *d*, adapts the coupling to receive the blocks which give the vertical adjustment of the plow-beam.

Having thus described our invention, what we claim as new is—

1. The combination of the clamp-plates B, bent twice at right angles to form lugs *d*, with the pivot-bolt C, the washers *f*, and the perforated plow-beam, substantially as and for the purpose described.

2. The combination of the axle, having collar *c*, the clamp-plates B, having curved grooves and slots *g*, and bent twice at right angles to form lugs *d*, the pivot-bolt C, washers *f*, and plow-beam D, substantially as and for the purpose described.

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LABAN WICKLIFE NEEDHAM.

Witnesses:
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R. M. NIXON.