

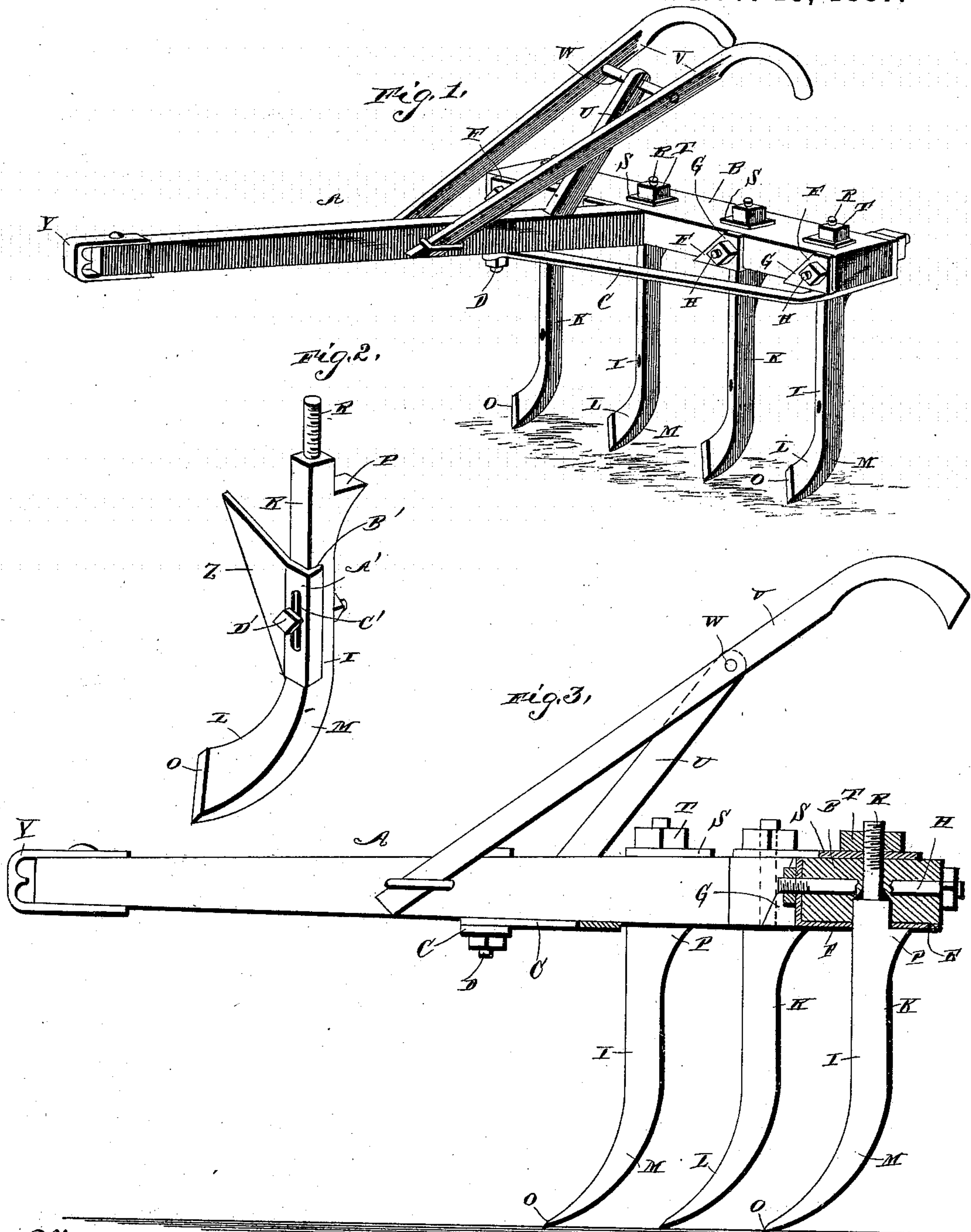
(No Model.)

B. F. JOHNSON.

CULTIVATOR PLOW.

No. 373,187.

Patented Nov. 15, 1887.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## CULTIVATOR-PLOW.

SPECIFICATION forming part of Letters Patent No. 373,187, dated November 15, 1887.

Application filed July 1, 1887. Serial No. 243,190. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN FRANKLING JOHNSON, a citizen of the United States, residing at Hickory, in the county of Newton and State of Mississippi, have invented a new and useful Improvement in Cultivator-Plows, of which the following is a specification.

My invention relates to an improvement in cultivators; and it consists in the peculiar construction and combination of devices which will be fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a cultivator embodying my improvements. Fig. 2 is a detached perspective view of one of the cultivating-teeth, showing the ridging-wing attached thereto. Fig. 3 is partly a side elevation and partly a vertical sectional view of my improved cultivator.

A represents the beam, and B represents the head-block, which is attached near its center to the rear end of the beam, and is arranged at an angle of about thirty degrees with relation thereto. To the ends of the head-block, at the rear side thereof, are bolted the rear upturned ends of braces C, and the front converging ends of the said braces are provided with vertical aligned openings, which receive the lower end of a vertical bolt, D, that extends transversely through the beam. These braces serve to maintain the head-block rigidly with relation to the beam and prevent the same from working loose therefrom.

In the under side of the head-block, at suitable regular distances apart, are shallow recesses E, in which are placed metallic plates F. The front ends of the said plates are upturned and bear against the front sides of the head-block, as at G, and bolts H extend transversely through the said upturned ends G and through the head-block and secure the said plates to the said head-block, as shown. Vertical openings are made through the head-block at regular distances apart, which openings are rectangular in cross-section and coincide with similar openings which are made in the plates E.

I represents a series of cultivating teeth or plows, each of which is made from a bar of steel of suitable length and thickness, and comprises a vertical standard, K, and the tongue

or shovel L at the lower end thereof, the said tongue or shovel being curved forward, as shown, and broadened and flattened at its outer cutting-edge. One edge, M, of the shovel or tongue is arranged in line with one side of the standard and is straight, and the other edge end of the shovel or tongue is curved outward from the opposite side of the said standard. The front cutting-edge, O, is oblique and is sharpened, as shown. Near the upper end of the standard, on the rear side thereof, is formed a rearward-extending offset or shoulder, P. The extreme upper end of the standard is reduced and threaded to form a vertical stud, R. The standards are secured to the head-block by inserting their upper ends in the rectangular openings in the head-block and plates E. As the upper ends of the standards are squared, it will be readily understood that the said standards are prevented thereby from turning in the head-block. The shoulders P on the rear sides of the standards rest under the plates E, thus preventing the standards from rising in the head-block. On the upper side of the head-block is arranged a series of rectangular metallic plates, S, having central openings, through which the threaded studs of the standards extend, and nuts T are screwed onto the said threaded studs and bear upon the upper sides of the plates S and serve to rigidly clamp the upper ends of the standard to the head-block.

Owing to the angle at which the head-block is arranged on the rear end of the beam, the teeth or plows are arranged one in advance of the other, and the said plows are arranged in parallel lines coinciding with the axis of the beam, and thereby enable the implement to run freely through the ground and prevent strain.

From the upper side of the beam, near the rear end thereof, projects a rearward and upward inclined standard, U.

V represents a pair of handles, which have their lower front ends secured to the opposite sides of the beam, and are connected near their upper ends to the ends of the cross-bar W, that projects from both sides of the upper end of standard U.

Y represents a clevis of suitable construction, which is attached to the front end of the beam.



A cultivator thus constructed is especially adapted for cultivating corn, cotton, and other growing crops, and is arranged to go between the rows of plants and thoroughly stir and pulverize the soil, each tooth or plow turning a furrow, which is filled by the adjacent following tooth or plow. This enables the implement to thoroughly cultivate the earth without ridging the same, thus keeping the earth level between the rows. When a cultivator thus constructed is employed to cultivate a growing crop of corn or cotton, the hoe may be almost entirely dispensed with.

When it is desired to form ridges and earth up the growing plants when cultivating them for the last time, I attach a ridging-wing, Z, such as shown in Fig. 2, to the front plow-standard. The said wing is turned slightly rearward and projects beyond the outer side of the standard, and its lower edge curved, as shown. At the inner side of the wing is formed a rearward extending flange, A', which bears against the inner side of the standard. That portion of the wing which bears against the inner side of the standard is flattened, as at B', and provided with a vertical slot, C'. A clamping bolt, B', extends through the said slot and through a horizontal opening in the standard, thus serving to secure the ridging-wing firmly to the standard. By loosening the nut on the clamping-bolt the ridging-wing may be adjusted vertically on the standard to suit the requirements of the case. If desired, one of these ridging-wings may be attached to each plow-standard.

Having thus described my invention, I claim—

1. The combination, in a cultivator, of the diagonally-arranged head-block and the teeth attached thereto at suitable distances apart, the said teeth having the shovels or tongues at their lower ends curved forward and widened at their front edges, the front cutting-edges of the said shovels being oblique, the inner edges thereof being straight and in line with the inner sides of the standards, and the opposite edges of the tongues or shovels being curved and carrying the ridging-wing, substantially as described.

2. The combination, in a cultivator, of the plow or tooth I, having the standard K and the tongue or shovel L, the ridging-wing adapted to fit upon the front side of the standard and project laterally beyond the same, the said ridging-wing having the flange A', to bear against the inner side of the standard and the vertical slot C', and the clamping-bolt extending through the said slot and through the standard, whereby the ridging-wing may be adjusted vertically, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

BENJAMIN FRANKLING JOHNSON.

Witnesses:

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R. R. BARNETT.