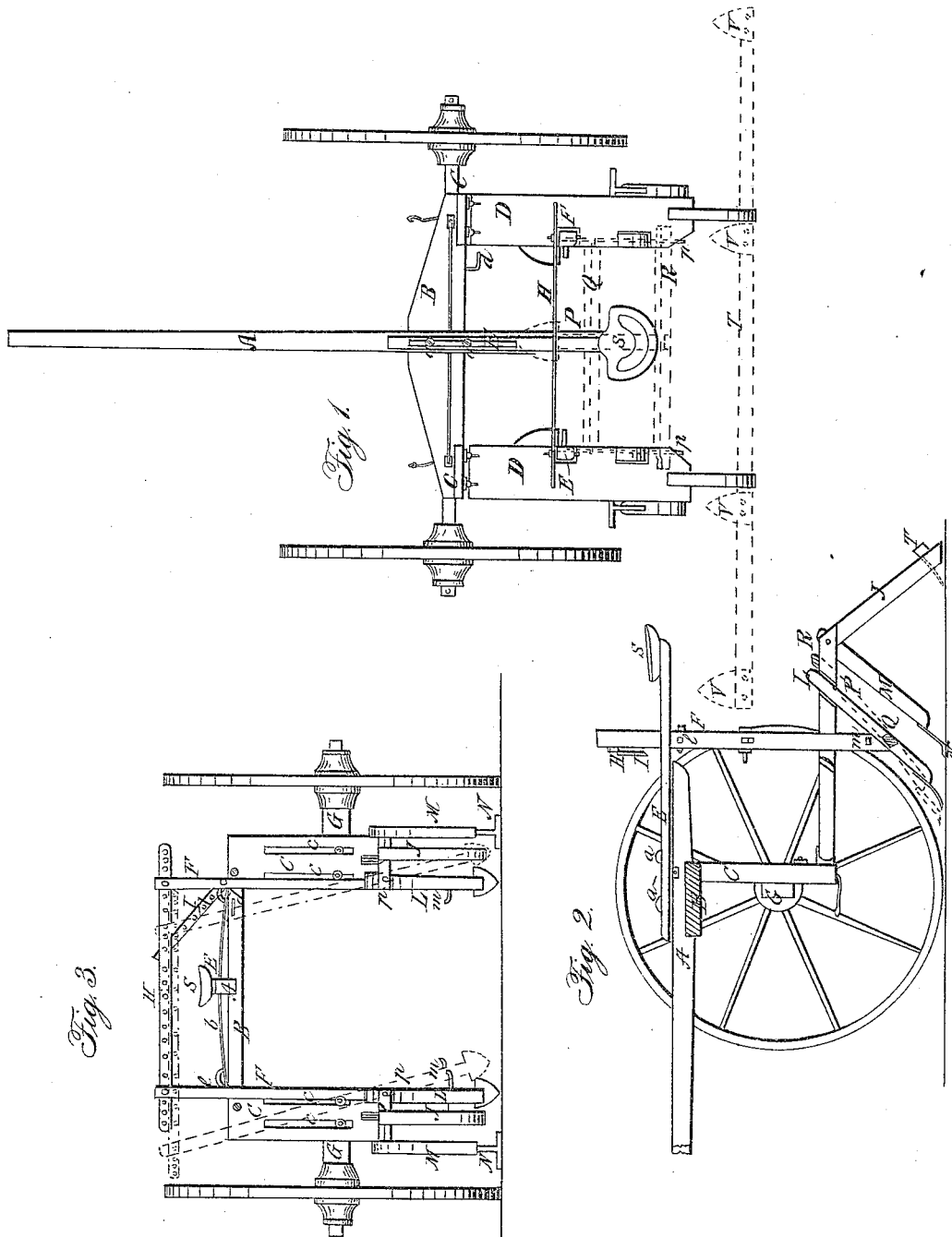


E. P. WHEELER.

Wheel Cultivator.

No. 53,911.

Patented Apr. 10, 1866.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD P. WHEELER, OF NEBRASKA CITY, NEBRASKA TERRITORY.

IMPROVEMENT IN CULTIVATORS.

Specification forming part of Letters Patent No. 53,911, dated April 10, 1866.

To all whom it may concern:

Be it known that I, EDWARD P. WHEELER, of Nebraska City, in the county of Otoe, and Territory of Nebraska, have invented a new and useful Improvement in Cultivators; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures marked thereon, which form part of this specification.

The nature of my invention consists in the employment of various new devices or arrangements of the parts of a wheeled cultivator, whereby a machine of great usefulness and thoroughness in its operation is produced, and which at the same time is readily controlled and operated by the attendant.

To enable others skilled in the art to understand how to construct and use my invention, I will proceed to describe the same with particularity, making reference in so doing to the aforesaid drawings, in which—

Figure 1 represents a plan or top view of my invention; Fig. 2, a side view thereof, partly in section; and Fig. 3 is a rear view or elevation of the same.

Similar letters of reference in the different figures denote the same parts of my invention.

A represents the tongue or draft-pole of the machine, which is secured to a cross-bar, (marked B,) from each end of which extend down the vertical arms or supports, (marked C,) to the lower ends of which are attached, by suitable hinged connections, the plow-beams D, which have a vertical adjustment at their rear ends, but no lateral movement independent of the rest of the machine. The said supports are provided with two vertical slots, *c*, through which set-screws pass, securing the axles G thereto in such a manner as to be readily adjusted up and down by simply loosening the set-screws and sliding the same up or down upon the supports.

The seat S is attached to an adjustable support, E, as shown, which may be moved forward or back upon the tongue A, to balance the machine properly, by loosening the set-screws *a*, which pass through the slot in the support E and secure it to the draft-pole, as shown.

M represents the outer plow-standards, rigidly attached to the beams D, upon which are

secured the peculiar-shaped shovels hereinafter described, (marked N.)

L represents the inner standards, to which are attached the plows, as shown. These standards L are arranged in suitable recesses in the sides of the beams D, and are secured therein by a rod, *p*, which passes through the beams longitudinally and through the said standards, as shown, thereby giving said standards a swinging lateral motion. The upright levers F, which are attached to said standards L below the beams, as shown, pass up in similar recesses in the beams, and are pivoted by the same rod in like manner, so that by moving the said levers laterally, as indicated by the dotted lines, the plows are adjusted to conform with any crooks or irregularities in the rows. Upon the lower ends of said levers are stirrups *m*, by which to move the plows by the feet of the operator, and near the upper ends are arranged the knee-rests, (marked *l*,) whereby the operator, when seated, having his feet resting upon the plow-beams, may operate said levers and plows by means of his knees. The upper ends of the said levers F are connected by the cross-bar H, provided with holes, so that by drawing the ends of the levers together or moving them apart the inner plows may be made to run nearer to or farther from the row of plants, as desired. By the arrangement of the brace I the said levers may be made rigid and immovable.

To the rear end of the plow-beams D are attached the inclined arms J, whose lower ends rest and drag upon the ground to cause the plows to run at the desired depth. Upon the rear ends of said gages J may be attached, when desired, the removable bar T, provided with the shovels V, for the purpose of converting the cultivator into a machine for marking out the rows for planting. Said removable bar T is attached to the gages J by means of ordinary bolts and nuts, or in any known method by which it is made rigid.

P represents a fifth plow-standard, which may be used when the machine is to be employed for harrowing or plowing in grain. It is attached to the machine by means of the two cross-bars Q R, as shown, which are attached to the said standard rigidly. The bar Q has projections upon each end, which are adjusted in suitable sockets in the standards

L, and the bar R rests behind the upper ends of said standards L, thus firmly securing the same, while it may readily be removed when desired.

By the herein-mentioned mode of adjusting the seat upon the draft-pole it may be moved far forward, so that it is wholly out of the way of the operator when walking behind.

By raising the rear of the plow-beams up and securing one of the levers F upon the hook *d* upon the cross-bar B the machine may readily be moved from field to field.

N represents a horizontal plate of metal secured upon a suitable shank to be attached to the standard, which passes through beneath the surface of the ground, thus cutting off the weeds without disturbing the surface of the ground.

Having described my invention, I will now specify what I claim and desire to secure by Letters Patent:

1. The arrangement of the levers F, pivoted standards L, and plow-beams D, as described.
2. Pivoting the levers F and standards L to the plow-beams by means of the longitudi-

nally-arranged pins or rods *p*, as and for the purposes shown and set forth.

3. Providing said levers, when arranged with the standards L, as set forth, with the knee-rests *l*, as and for the purposes specified.

4. The combination of the hinged beams D, standards L, levers F, and hook *d*, arranged as described and shown.

5. In combination with the beams D and standards L, the arrangement of the adjustable standard P and cross-bars Q R, as described.

6. The combination of the cross-marking bar T, provided with shovels V, with the drags J, for the purposes set forth.

7. The combination and arrangement of the standards L P, the levers F, beams D, cross-bar H, and brace I, when arranged so as to render said standards L rigid, for the purpose of plowing-in grain, as shown and specified.

E. P. WHEELER.

Witnesses:

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