

UNITED STATES PATENT OFFICE.

VERNON RHODES, OF MEMPHIS, TENNESSEE.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 381,169, dated April 17, 1888.

Application filed January 11, 1888. Serial No. 260,430. (No model.)

To all whom it may concern:

Be it known that I, VERNON RHODES, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented a new and useful Improvement in Cultivators, of which the following is a specification.

My invention relates to improvements in cultivators for drilled crops, either in garden or field; and it has for its object to provide a device in the general form of a rake, with which the soil upon both sides of a drill or row may be cultivated at the same time.

A further object of the invention is to provide means whereby the soil may be drawn inward toward the drill, and thus slightly hilled up on opposite sides thereof.

My invention consists in a rake having a central portion of its head bowed upward to form an arch and the teeth arranged on both sides of this arch, so that the central portion of the rake passes over or spans the grain or plants in drill while the teeth cultivate on both sides thereof.

The invention consists, further, in a head having a central open or toothless space and wedge or triangular shaped teeth secured to the head, whereby the soil is drawn inward toward the drill and hilled up on opposite sides thereof.

The invention consists, further, in a head having an arch or bow at its center, the teeth arranged on both sides of the arch, and cutters at the back of the arch and at the ends of the head.

The invention consists, further, in certain novel details of construction and combination, which are hereinafter more fully set forth in connection with the accompanying drawings, wherein—

Figure 1 is a perspective view of the improved cultivator. Fig. 2 is a front view of the same. Fig. 3 is a bottom plan view. Fig. 4 is a detail view of one of the wedge shaped or triangular-shaped teeth.

Referring by letter to the drawings, A designates the head of the cultivator, which consists of a bar comprising the slightly downward-inclined arms B B and the central arch or bow, C, which connects the inner or adjacent ends of the said arms. The head is preferably formed of an integral bar of metal, the

arch being then formed by simply bending the central portion of the bar upward.

D D represent wedge or triangular shaped teeth, all of the same length, which are secured to the under side of the arms B, the arch C not being provided with teeth. Therefore it will be seen that a central toothless space, E, is arranged between the two series of teeth. The back of the arch is reduced or tapered to a cutting-edge, as seen at F, thereby forming a cutter, and the ends of the head are also provided with cutters G G, for a purpose to be hereinafter explained.

K K represent the first teeth on each side of the central toothless space, and they are arranged slightly in front of the line of the other teeth, so that they cut into the soil in advance of the other teeth. The teeth K are preferably of the ordinary round or angular shape.

L represents the handle of the cultivator, which is attached in any ordinary or preferred manner to the center of the arch; or, if preferred, the end of the handle may be provided with branches, which are secured to the arms B B at intermediate points of their length.

It will be seen from the foregoing description that the improved cultivator consists, essentially, of two rakes connected together at their inner ends by a toothless arch, which arch spans the drill or row of plants, while the teeth cultivate the soil on both sides thereof at the same time.

The teeth K which are adjacent to the central space, and therefore pass close to the drill which is being cultivated, cut into and loosen the soil in advance of the other teeth, and the teeth D, having their inner faces inclined toward the central space, draw the earth inward to fill the furrow formed by the teeth K. The earth is also hilled up slightly upon opposite sides of the drill.

The tool is used in the same manner as an ordinary rake, being drawn toward the operator, and the earth on both sides of a row of plants is loosened and hilled up against the plants.

The cutting-edge F, hereinbefore described as being arranged on the back of the arch C, is designed to enable grass and weeds to be cut or destroyed, and the cutters G G are for a similar purpose, they, however, being adapted for

use in cutting out the weeds and grass which grow between the plants in the drills. Thus the tool combines the advantages of a cultivator and hiller and a weeder.

5 As before stated, the arms of the head are inclined slightly downward toward their outer ends, while the teeth are all the same length. The object of this is to cause the earth to be cultivated deeper at a distance from the drill
10 than it is close to the same. The same result may be accomplished by making the arms of the head horizontal and making the teeth near the outer ends thereof longer than at their inner ends; but I prefer the construction which
15 is herein shown. The object in either case is to arrange the lower ends of the teeth so that those near the ends of the head cut deeper into the soil than those which are nearer to the plants.

20 Having thus described my invention, I claim—

1. In a cultivator, the combination of the head A, the teeth D, secured thereto on opposite sides of a central open space, E, and the
25 teeth K, adjacent to the space E and arranged in front of the line of the other teeth, substantially as specified.

2. In a cultivator, the combination of the head A, the transversely wedge-shaped or triangular teeth D, secured thereto and disposed
30 with their inner sides, or the sides toward the center, inclined inward toward the rear, and

their outer sides parallel with the line of motion of the cultivator, whereby the soil will be drawn inward toward the center, as and for
35 the purpose hereinbefore specified.

3. In a cultivator, the combination of the head having the central arch, C, provided on its back or upper side with a cutter, F, and the teeth secured to the lower side of the head on
40 opposite sides of the said arch, substantially as specified.

4. The improved cultivator herein described and shown, having a head provided with a central arch or bowed portion reduced or tapered
45 toward its upper edge or back to form a cutting-edge, F, for the purpose described, the teeth attached to the head, and the cutters arranged at the ends of the head, all constructed and arranged substantially as and for the purpose
50 specified.

5. In a cultivator, the head having a central bowed portion or arch provided at its back or upper side with a cutting-edge, F, and the teeth attached to the head, substantially as and
55 for the purpose specified.

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

VERNON RHODES.

Witnesses:

B. A. SHEPHERD,
H. S. SPINNING.