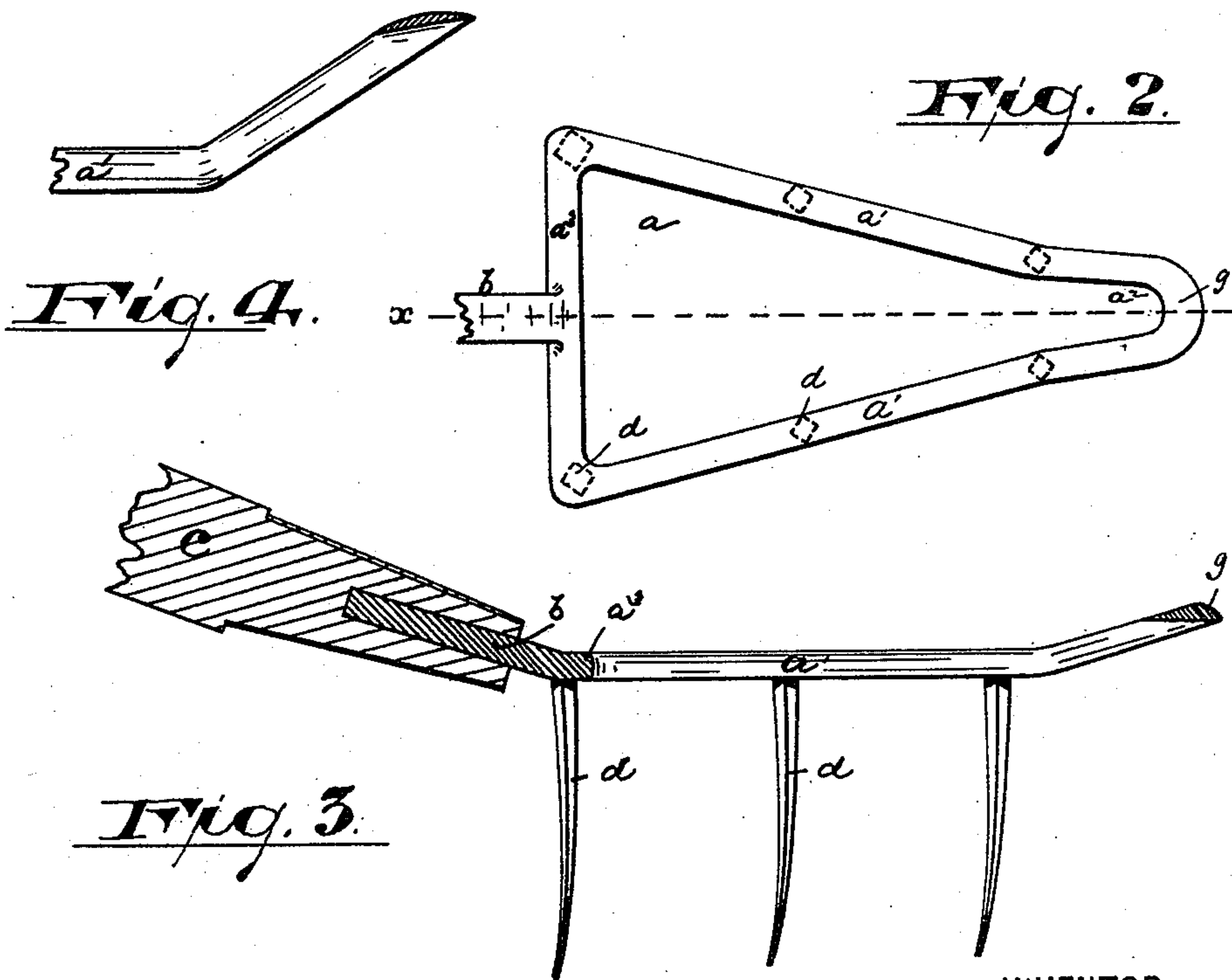
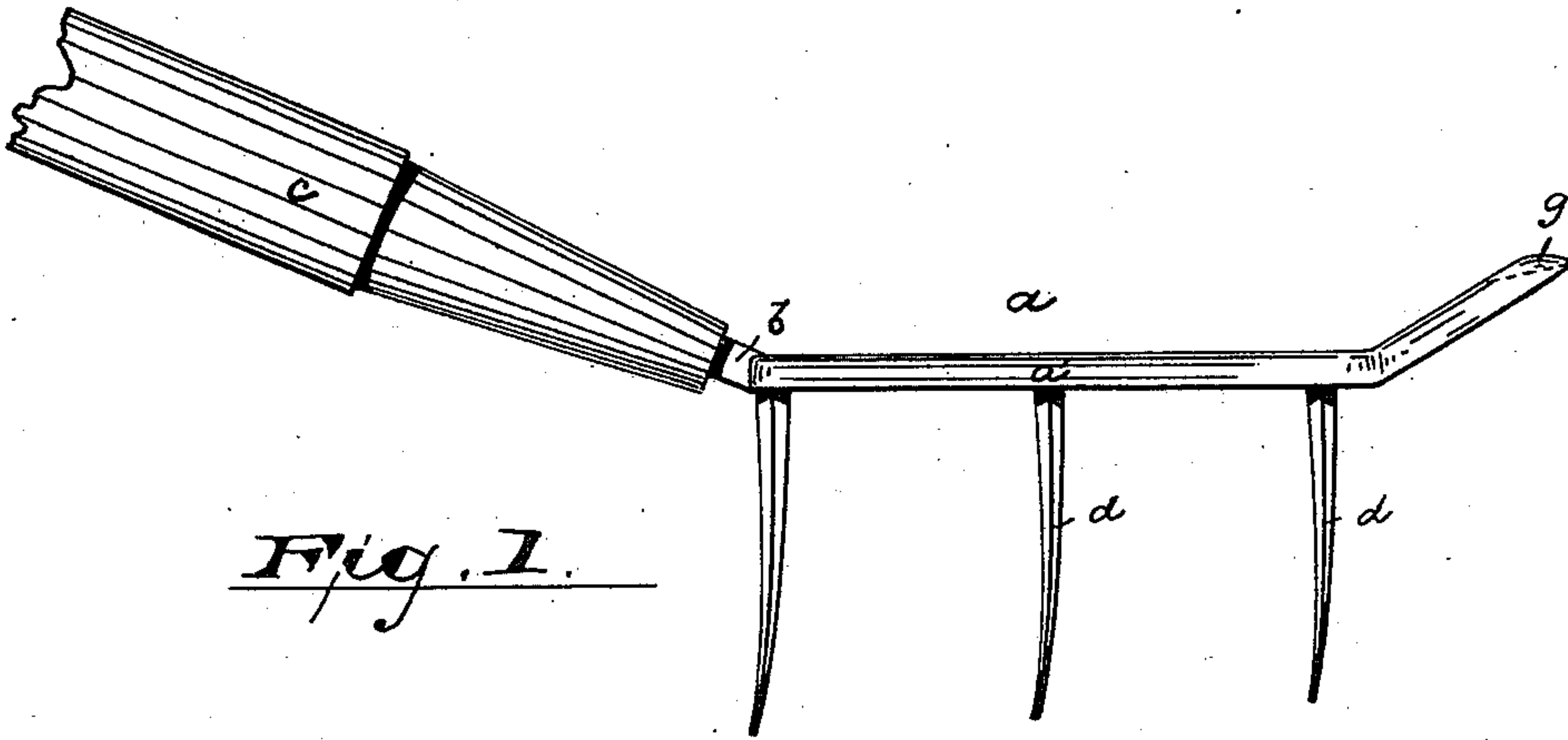


(No Model.)

K. VOIGT.
HAND CULTIVATOR.

No. 418,630.

Patented Dec. 31, 1889.



WITNESSES:

Alfred Gartner
H. Sykes

INVENTOR

Karl Voigt,

BY *Drake & Co.* ATTY'S.

UNITED STATES PATENT OFFICE.

KARL VOIGT, OF NEWARK, NEW JERSEY.

HAND-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 418,630, dated December 31, 1889.

Application filed February 15, 1889. Serial No. 299,932. (No model.)

To all whom it may concern:

Be it known that I, KARL VOIGT, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Hand-Cultivators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to a particular variety of that class of hand-cultivators illustrated by me in a contemporaneous application for a patent filed in the United States Patent Office June 7, 1887, Serial No. 241,840, the object of this improvement being to provide a cultivator of increased convenience in gardening.

The invention consists in the improved cultivator having the arrangements and combinations of parts substantially as will be hereinafter set forth, and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters indicate corresponding parts in each of the figures, Figure 1 is a side elevation of the improved hand-cultivator. Fig. 2 is a plan of the same devoid of the handle; Fig. 3, a section taken on line x of Fig. 2, and Fig. 4 a detail section of the cutting loop or blade.

In said drawings, a indicates a frame or metallic body portion, consisting of two flaring side parts or bars a' a' , connected together at the front of the cultivator and forming a rounded angle a^2 , (shown in Fig. 2,) from which the said bars or parts flare outwardly as they extend backward. At the rear they are connected by the cross-bar a^3 , which is integral with the flaring side parts. At the center of the cross-bar the same is provided with a shank b , which extends upward on an incline from the plane of the parts a' a' a^3 , so as to bring the pole or handle c into proper position to enable the gardener to use the cultivating-teeth to advantage. The said parts a' a' a^3 , united at their extremities, do not jut past the next adjacent parts to form

projections such as would tend to catch upon the tendrils and branches of the plant under cultivation, but, on the other hand, the parts form a continuous triangular bar devoid of lateral projections.

The flaring parts a' a' are provided on the under side with series of backwardly-turned teeth or cultivating-prongs d d , and thus as the device is drawn backward through the soil each tooth cultivates a distinct part or travels over an independent path through the said soil. The sides a' a' receive the draft from the prongs, and as a consequence tend to separate and break apart, but are prevented from so doing by the rear connection a^3 .

The single pole or handle c lies in the central longitudinal line of the cultivator in line with the forward angle a^2 . When the gardener, in his reciprocating operations by which he cultivates the soil, forces the cultivator forward between closely-adjacent plants, the small angular end enters first, and the flaring sides tend to separate the plants, acting as a wedge, and thus allow the forward teeth of the cultivator to be pushed downward into the ground without breaking leaves or otherwise injuring the plant, and in the backward or cultivating stroke provides a clear path. At the forward angle a^2 the bars a' a' are bent upward and curved, as shown, the curved extremity g being sharpened, as indicated in Figs. 3 and 4, to form a cutting edge or blade. The edge for cutting is at the forward extremity of the frame, so that the cut is produced by a forward thrust of the tool. By raising the forward extremity of the frame out of the plane of the body portion of the frame a recess or way is provided to allow the passage of small plants thereunder. Thus the prongs may be drawn through the ground, a series on each side of the plant, and the small plant be allowed to pass under the frame, or the frame to pass over the plant, without injury. By reversing the cultivator the curved blade serves as a convenient tool for cutting or digging out a weed from between plants, as will be understood.

Having thus described the invention, what I claim as new is—

1. The improved cultivator herein described, combining with a single handle a frame provided with cultivating-teeth and a blade ar-

ranged at the opposite side of said frame from
said teeth in line with the handle and pro-
jecting forward from said handle to enter into
operation by a forward stroke of the cultivator,
5 substantially as set forth.

2. The improved cultivator combining a
triangular frame having on one side or face
thereof backwardly-turned teeth, the forward
angle of said frame being arched, as de-
10 scribed, and having a forwardly-projecting

blade thereon, and a handle arranged on the
side of said frame opposite the arched angle,
substantially as set forth.

In testimony that I claim the foregoing I
have hereunto set my hand this 3d day of 15
January, 1889.

KARL VOIGT.

Witnesses:

CHARLES H. PELL,
E. L. SHERMAN.