

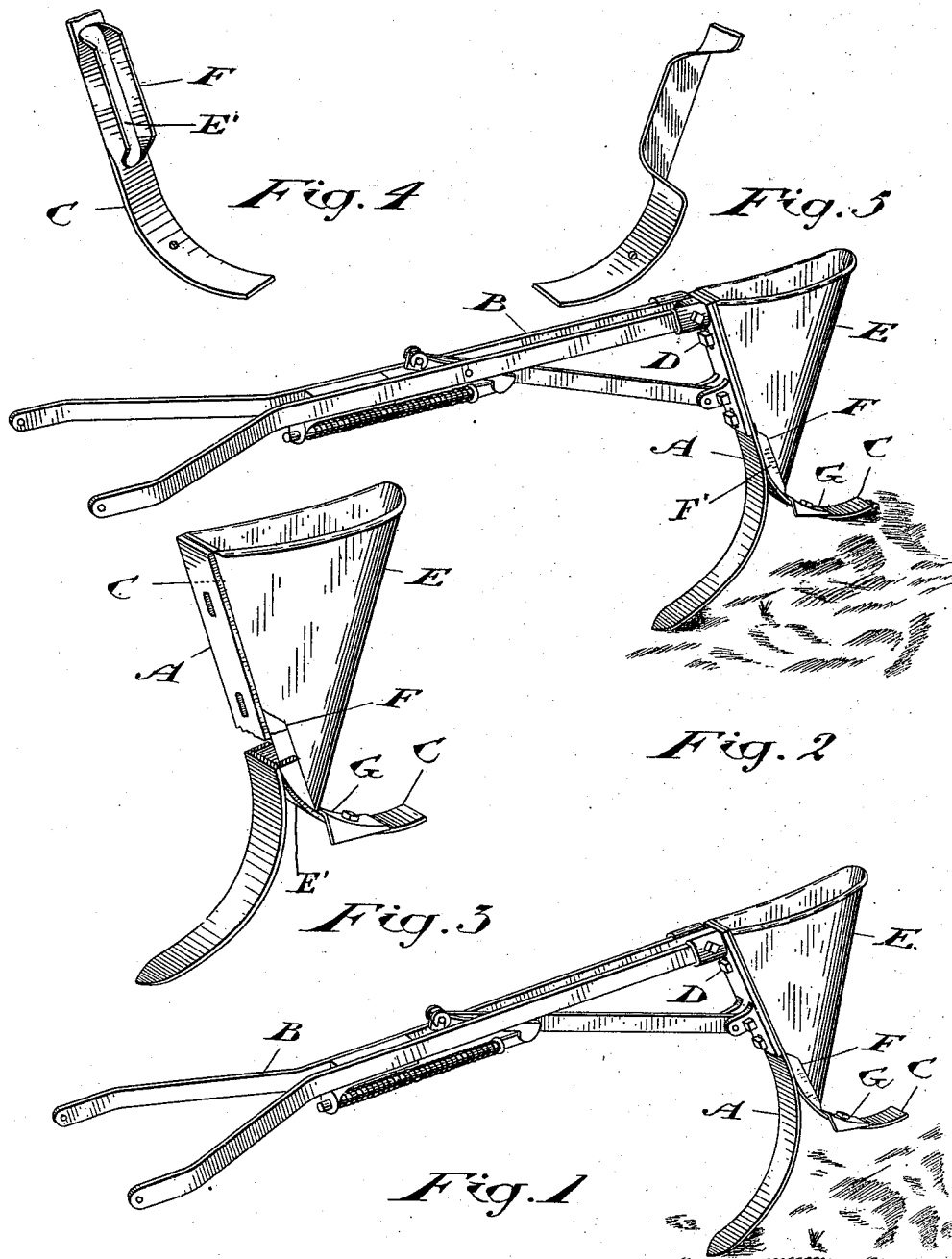
(No Model.)

J. MUIR.

COMBINED DRILL HOE AND CULTIVATOR TOOTH.

No. 490,833.

Patented Jan. 31, 1893.



Witnesses

J. Edw. Maybee
H. G. Millan

Inventor

John Muir
by Donald G. Ridout & Co
attys.

UNITED STATES PATENT OFFICE.

JOHN MUIR, OF BRANTFORD, CANADA.

COMBINED DRILL-HOE AND CULTIVATOR-TOOTH.

SPECIFICATION forming part of Letters Patent No. 490,833, dated January 31, 1893.

Application filed August 5, 1892. Serial No. 442,258. (No model.)

To all whom it may concern:

Be it known that I, JOHN MUIR, of the city of Brantford, in the county of Brant, in the Province of Ontario, Canada, have invented
5 a certain new and Combined Drill-Hoe and Cultivator-Tooth, of which the following is a specification.

The object of the invention is to make a tooth which may be used either as a drill hoe
10 or a cultivator tooth, so that there shall be no necessity to change the tooth for the different purposes of a combined machine, and it consists, essentially, of a cultivator tooth connected to a drag bar and having a grain
15 boot attached to it, in combination with a rearwardly-curved shoe fixed to the tooth and having a hole through it where it passes below the bottom of the boot, the hoe being otherwise arranged substantially as hereinafter
20 more particularly explained.

Figure 1, illustrates my improved tooth, set to act as a cultivator tooth. Fig. 2, is a view of it set to work as a drill hoe. Fig. 3, is an enlarged view of the tooth partially broken
25 away to show the manner in which the hole through the shoe is made. Fig. 4, is a perspective detail of the shoe. Fig. 5, is an alternative view.

In the drawings, A represents a cultivator tooth, which may be of any ordinary construction and connected to the drag bar B, in the usual manner.

C is a curved plate, which I term a shoe. This shoe is secured to the cultivator tooth
35 A, by means of the bolts D, which pass through elongated holes made in the tooth A, or shoe C, or through both so that the shoe and the tooth A, may be longitudinally adjusted with each other.

E, is a boot preferably made of sheet metal and fastened to the plate forming the shoe C, as indicated in the drawings. At the bottom of the boot E, I form a hole E' through the shoe C, in such a manner that the metal
45 F, punched aside to make the hole, forms the bottom of the sides of the boot as indicated at F' in the drawings.

When the device is to be used as a cultivator, the drag-bars are set as indicated in
50 Fig. 1, so that the tooth A, shall work in the ordinary manner, the boot having no effect upon the working of the tooth. When it is to be used as a drill hoe the drag-bars are set as shown in Fig. 2, the end of the shoe C,

resting on the ground. In this application, 55 the point of the cultivator tooth A, acts as the point of a hoe and the end of the shoe C, acts on the earth to cover up the seed sown through the boot E, the plate G, acting as a coverer to turn over and spread the earth over the seed. 60

From this description, it will be seen that I secure a serviceable cultivator tooth capable of being used as a drill hoe, and that it can be adapted for either one or the other without detaching any part of it from the machine. 65

I may mention here that I prefer to make the shoe C, with a hole through it made in the manner described, but at the same time I do not wish to confine myself entirely to this
70 form, as it would be possible to twist the shoe in the manner shown in Fig. 5, so that the grain from the boot E, can fall past the said shoe.

What I claim as my invention is:—

1. A cultivator tooth connected to a drag-bar and having a grain boot attached to it in combination with a rearwardly curved shoe fixed to the tooth and having a hole through it where it passes below the bottom of the
80 boot; substantially as and for the purpose specified.

2. A rearwardly curved shoe connected to the back of a cultivator tooth and having a hole punched through it so that the metal
85 punched from the hole shall form the lower portion of the sides of the boot extending from the shoe; substantially as and for the purpose specified.

3. A rearwardly curved shoe connected to
90 the back of a cultivator tooth, a boot attached to the tooth or plate, a hole made through the shoe at the bottom of the boot, in combination with a coverer attached to the curved shoe; substantially as and for the purpose
95 specified.

4. A cultivator tooth connected to a drag bar and having a grain boot attached to it in combination with a rearwardly curved shoe fixed to the tooth and formed so that it will
100 leave a passage way below the bottom of the boot, substantially as and for the purpose specified.

Toronto, July 9, 1892.

JOHN MUIR.

In presence of—

C. M. NEFF,

J. EDW. MAYBEE.