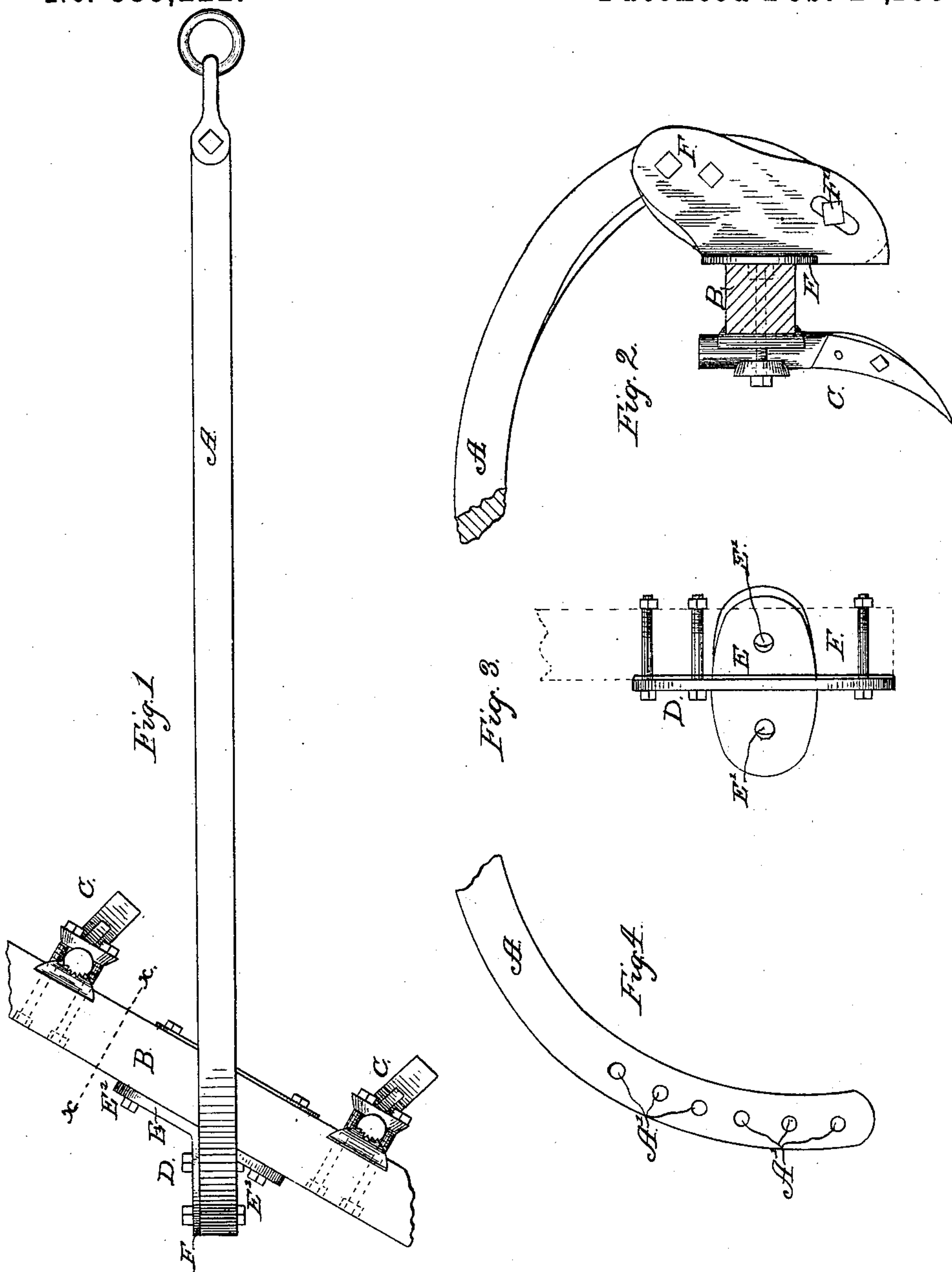


(No Model.)

F. M. HELMS.
CULTIVATOR.

No. 335,222.

Patented Feb. 2, 1886.



Witnesses.

R. W. Bishop.
Susie B. Seiler.

Inventor.

Francis M. Helms.
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His Attorneys.

UNITED STATES PATENT OFFICE.

FRANCIS M. HELMS, OF VEEDERSBURG, INDIANA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 335,222, dated February 2, 1886.

Application filed November 16, 1885. Serial No. 182,990. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS M. HELMS, a citizen of the United States, residing at Veedersburg, in the county of Fountain and State of Indiana, have invented certain new and useful Improvements in Cultivators; and I do 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 the letters and figure of reference marked thereon, which form a part of this specification.

My present invention is an improvement on the cultivator for which Letters Patent No. 301,409 were granted to C. C. Trinkle on July 1, 1884; and its object is to remedy certain defects in the method of securing the tooth-bar to the cultivator-beam.

To that end it consists in the improved construction of the angle-iron or T-head, and in certain other novel features, all of which will be hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of a single beam and a portion of one tooth-bar provided with my improvements. Fig. 2 is a side elevation, the front or draft end of the beam being broken away. Fig. 3 is a rear elevation of the angle-iron, the end of the beam being indicated in dotted lines; and Fig. 4 is a detail view of the end of the beam.

A represents the beam, and B the tooth-bar.

C designates the cultivator-teeth, which are constructed, preferably, after the manner of the tooth patented to me and C. C. Trinkle, May 12, 1885, Letters Patent No. 317,780.

The back end of the beam is bent downward, as shown in Letters Patent No. 301,409, hereinbefore mentioned, and in carrying out my present invention I provide said end of the beam with a series of bolt-holes, A', as shown. I use an angle-iron, D, to secure the tooth-bar to the beam, which is shown in the annexed drawings, and as will now be described. It consists of a flat bearing-plate, E, which is provided with two bolt-holes, E', near its ends, as shown most clearly in Fig. 3. The angle-iron is secured to the tooth-bar by bolts E² passed

through the bolt-holes E' and the tooth-bar, as will be understood. A wing, F, is provided on the bearing-plate E midway its ends, as shown. This wing is made integral with the bearing-plate, and is formed at an angle thereto corresponding to the angle between the beam and the tooth-bar. It is wider at its upper than at its lower end, and is provided with two bolt-holes, as will be understood from Fig. 2. Near its lower end I provide a slot, F'. The beam is secured to the wing F by bolts passed through the bolt-holes A' in the lower end of the beam, and the bolt-holes in the upper end of the wing, and slot F' in the lower end of the same.

From the foregoing description it will be seen that the tooth-bar may be readily adjusted to different heights on the beam by means of the series of bolt-holes in the lower end of the beam. The slot in the lower end of the wing of the angle-iron is provided to facilitate the adjustment of the angle-iron along the curved lower end of the beam.

The angle-iron shown in the accompanying drawings, and which I have just described, is more easily attached than the T-head shown in the Letters Patent No. 301,409 hereinbefore mentioned, and when applied gives a much more solid fastening than the T-head, and will prevent the tooth-bar dropping and allowing the teeth to drag, as is the case with the fastening shown in the aforesaid patent, No. 301,409.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The combination of the tooth-bar, the beam provided with a series of bolt-holes in its lower end, and the angle-iron secured to the bottom of the beam, consisting of a bearing-plate and a wing made integral with said plate and placed midway its ends and at an angle thereto, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRANCIS M. HELMS.

Witnesses:

THOMAS FISHERD,
WM. H. MALLORY.