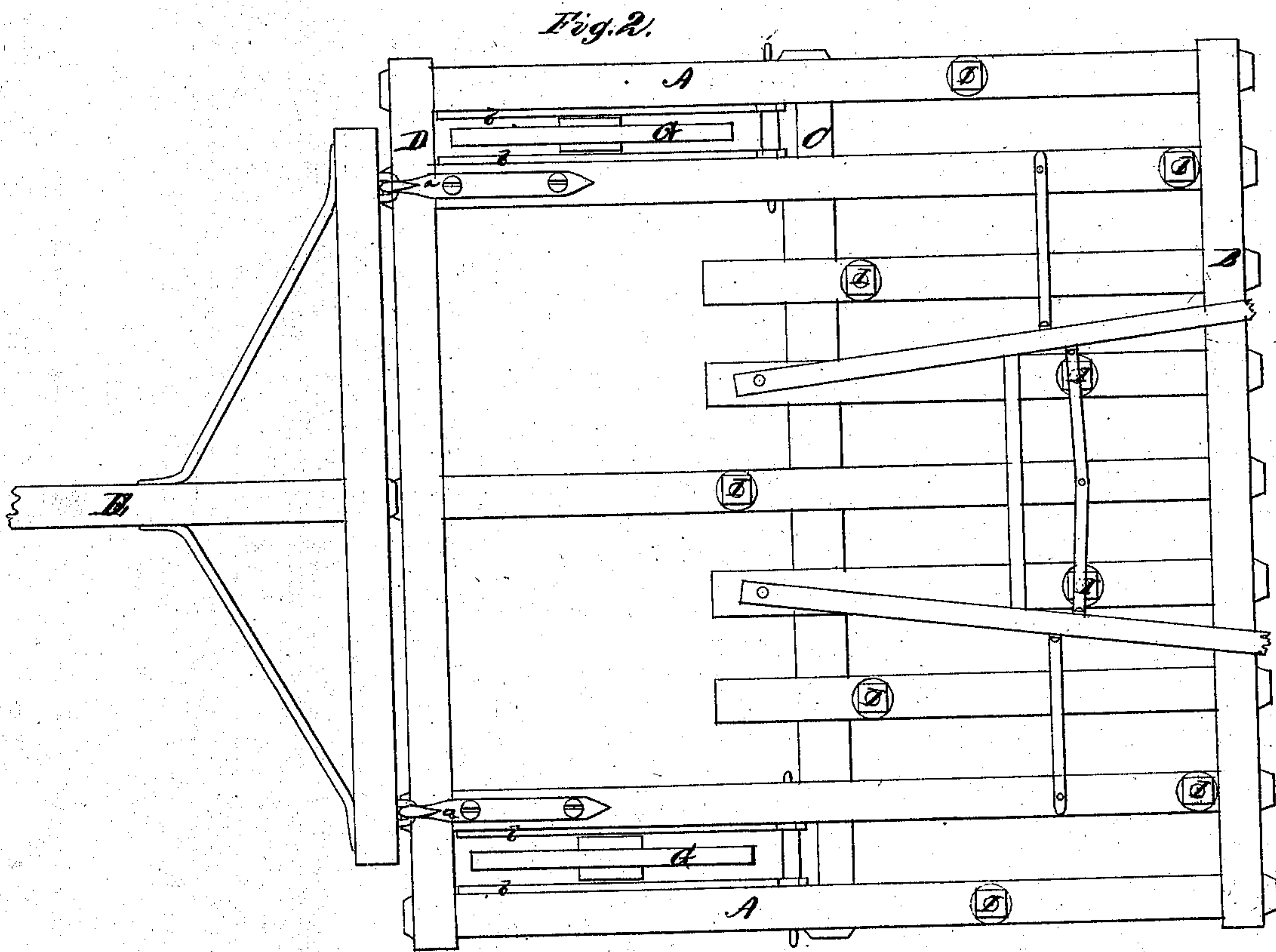
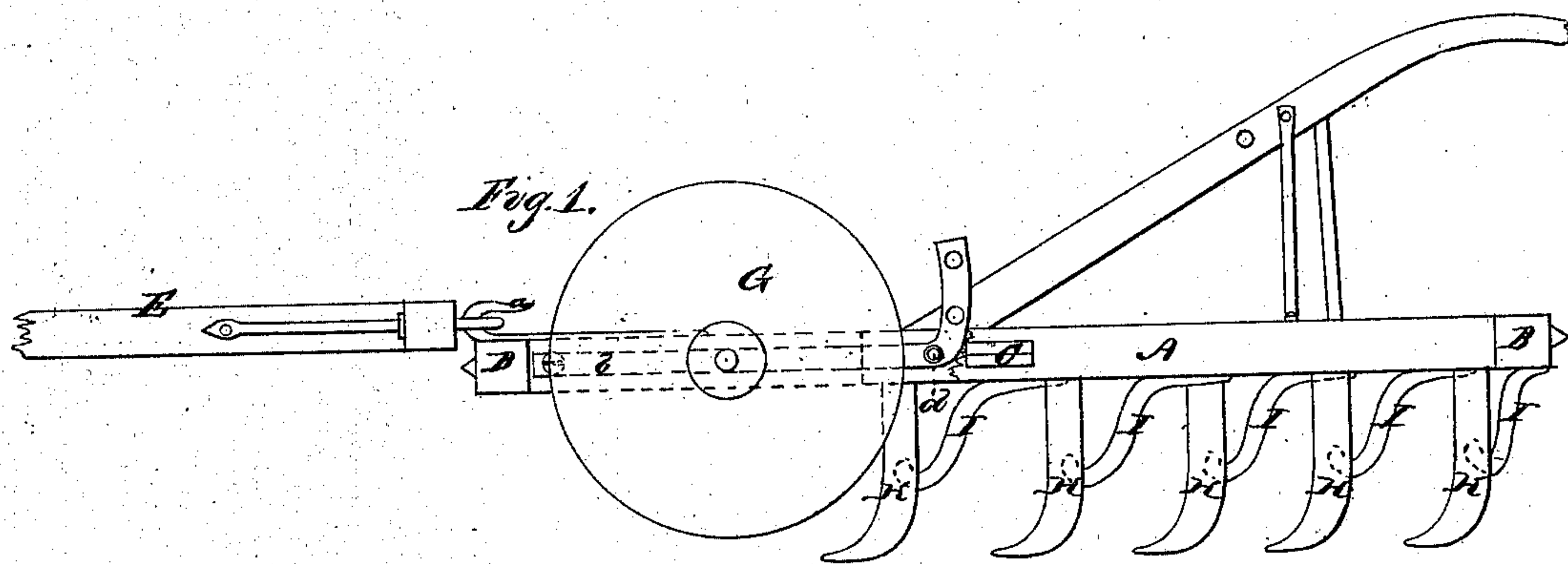


I. MILLER.
Cultivator.

No. 105,828.

Patented July 26, 1870.



Witnesses
Jno. A. Ellis.
J. B. White.

Inventor
Isaac Miller,
Per
J. H. Alexander
Att'y

UNITED STATES PATENT OFFICE.

ISAAC MILLER, OF WORTH, MICHIGAN.

IMPROVED CULTIVATOR.

Specification forming part of Letters Patent No. **105,828**, dated July 26, 1870.

To all whom it may concern:

Be it known that I, ISAAC MILLER, of Worth, in the county of Tuscola and State of Michigan, have invented certain new and useful Improvements in Cultivators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a cultivator, as will be hereinafter fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation, and Fig. 2 a plan view, of my machine.

The frame of my machine consists of a series of bars, A A, placed parallel and a suitable distance from each other, said bars being all at their rear ends connected by a bar, B, and near their front ends another bar, C, passes through mortises in them. The center one of the bars A, as well as two other bars at each side, extend a suitable distance in front of the other, and are connected by a bar, D, on which are secured hooks *a a* to attach the tongue E.

Between the front ends of the projecting side bars, A A, are pivoted two metal bars, *b b*, the rear ends of which are curved upward and perforated. In these bars *b* the axle of the wheel G has its bearings, and said bars are held in

position by a pin, *d*, passing through one of the holes in their curved rear ends, and also through the side bars, A A. By changing the pin *d* in the different holes in the bars *b b* the wheel G is thrown up or down, as may be desired, thus regulating the depth at which the cultivator is to work.

The cultivator-teeth H H are attached at suitable points on the under side of all the parallel bars A A, the shanks of said teeth passing up through the bars and secured by nuts on their upper ends.

Braces I I are attached one in rear of each tooth, the lower ends of said braces being in the shape of the hook-catches in the rear side of the tooth, and not only braces it, but also holds it up firmly against the bar A in its proper position.

Handles J J are suitably attached on the upper side of the frame.

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

The arrangement of the frame A B C D, hooks *a a*, tongue E, wheels G G, bars *b b*, pins *d*, teeth H H, braces I I, and handles J J, all constructed and operating substantially as and for the purposes herein set forth.

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

ISAAC MILLER.

Witnesses:

D. G. SLAFTER,
M. C. GRAVES.