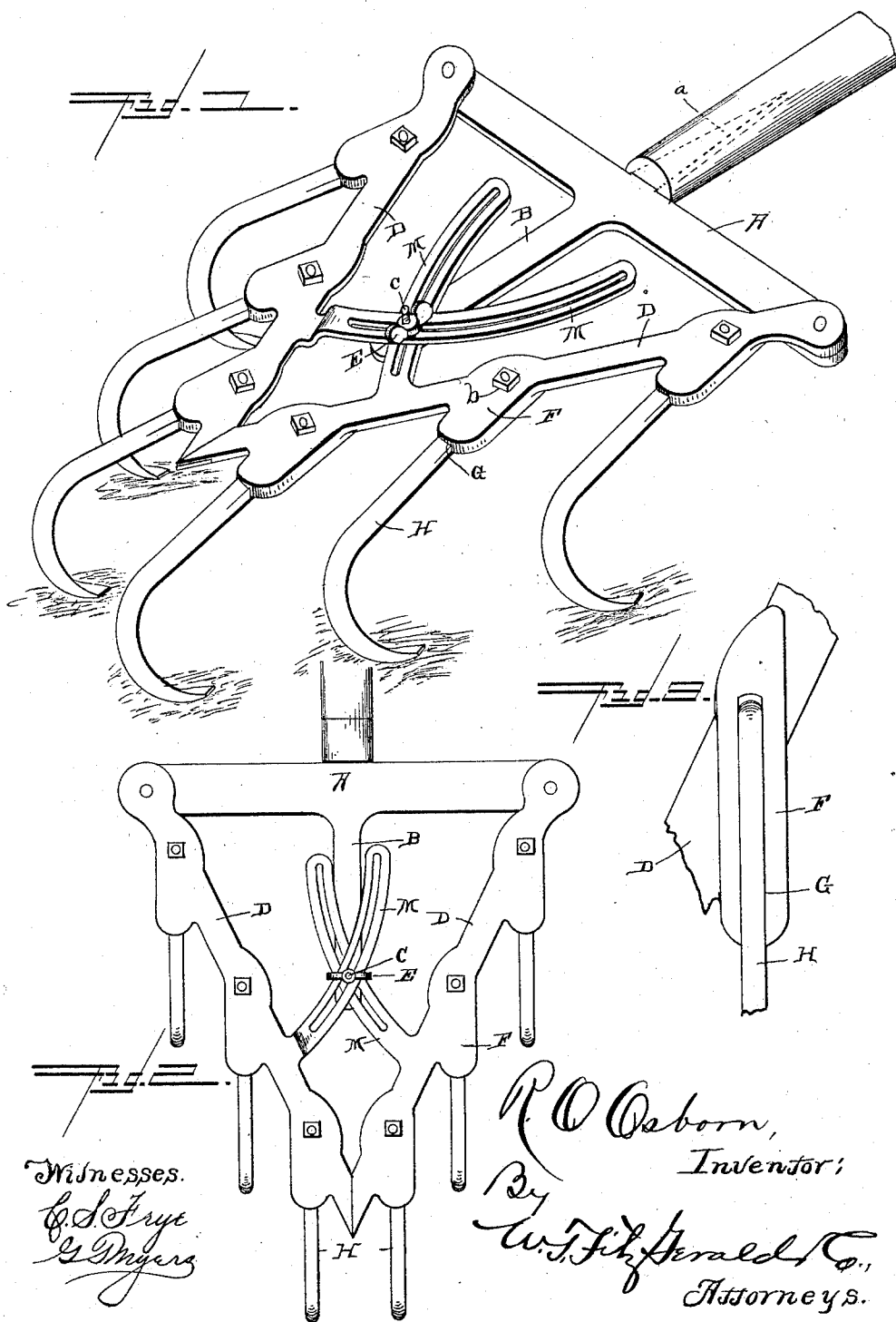


(No Model.)

R. O. OSBORN.
HAND CULTIVATOR.

No. 482,693.

Patented Sept. 13, 1892.



UNITED STATES PATENT OFFICE.

ROBERT OSCAR OSBORN, OF PARIS, MISSOURI.

HAND-CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 482,693, dated September 13, 1892.

Application filed December 21, 1891. Serial No. 415,740. (No model.)

To all whom it may concern:

Be it known that I, ROBERT OSCAR OSBORN, a citizen of the United States, residing at Paris, in the county of Monroe and State of Missouri, 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.

My invention has relation to improvements in hand-cultivators, and is designed as an improvement upon the cultivator covered by Letters Patent granted to J. R. Evans and F. T. Levick, dated December 9, 1890, and numbered 442,518.

The present invention consists in the peculiar construction, certain novel combinations, and the adaptation of parts hereinafter described, and particularly pointed out in the claims appended.

In the accompanying drawings, Figure 1 is a perspective view of my improved cultivator. Fig. 2 is a top plan view of the same; and Fig. 3 is a detail inverted plan view of a portion of one of the adjustable frame-bars, illustrating a portion of one of the teeth connected thereto.

Referring by letter to the said drawings, A indicates the transverse head-bar of my improved cultivator-frame, which is preferably provided adjacent to its middle with a rearwardly-extending shank *a* for the connection of a handle, which may be of the ordinary or any approved form.

Preferably formed integral with the head-bar A and extending forwardly therefrom is a tongue B, which is provided adjacent to its forward end with a threaded post C, for a purpose presently disclosed.

Pivottally connected at one end to the head-bar A of the frame, at or adjacent to the ends thereof, are the adjustable frame-bars D, which have their free ends recessed, as illustrated, so as to render the frame more rigid when said ends are thrown into engagement with each other.

Preferably formed integral with the adjustable frame-bars D and extending inwardly therefrom are lateral branches M, which are preferably curved slightly, as illustrated, and

are slotted for the greater portion of their length to enable them to receive the post C, of the tongue B, upon which they are adjusted. 55

Mounted on the threaded post C, above the branches M, is a wing-nut E, which serves in practice to bind upon the branches M and fix said branches and the adjustable frame-bars D in their adjusted positions. 60

Formed upon the outer edge and bottom of the adjustable frame-bars D, at suitable intervals apart, are the laterally-oblique projections F, which are provided with longitudinal slots G to receive the end portions of the teeth H, which are provided at their inner ends with upwardly-extending branches which take up through vertically-disposed apertures *b*, formed in the bars D at the inner ends of the slots G, and are secured therein by being riveted or in any other suitable manner. By this construction it will be readily perceived that a strong and durable connection of the teeth to the frame bars is effected and lateral play or shaking of said teeth is effectually prevented. 75

By the provision of the lateral branches M on the adjustable frame-bars D and the tongue, post, and set-screw it will be perceived that the adjustment of said bars may be readily effected, and that they may be as readily fixed in their adjusted positions. 80

Although I have specifically described the construction and relative arrangement of the several elements of my improved cultivator, yet I do not desire to be confined to the same, as such changes or modifications may be made as fairly fall within the scope of my invention. 85

Having thus described my invention, what I claim, and desire to secure by Letters Patent is— 90

1. In a cultivator substantially as described, the combination, with the head-bar, the tongue extending forwardly from said head-bar, and the threaded post rising from said tongue, of the adjustable frame-bars pivottally connected to the head-bar and carrying teeth, the lateral branches extending inwardly from the adjustable frame-bars and having longitudinal slots to receive the threaded post of the tongue, and a nut for fixing said branches and the adjustable bars with respect to the head-bar and 100

the threaded post, substantially as and for the purpose set forth.

2. In a cultivator substantially as specified, the combination, with the frame-bars, the
5 laterally-oblique projections formed on said bars, the slots G, formed in the under side of said projections, and the vertical apertures formed in the bars at the inner end of said
10 slots, of the teeth having their inner portions seated in the slots G and having angular branches at their inner ends taking up

through the apertures in the bars, and a suitable means for securing the ends of the teeth in the apertures of the bars, substantially as specified.

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

ROBERT OSCAR OSBORN.

Witnesses:

S. M. REILY,
G. E. GRIMES.