

(No Model.)

R. SIMPSON.
CULTIVATOR.

No. 441,382.

Patented Nov. 25, 1890.

FIG. 1.

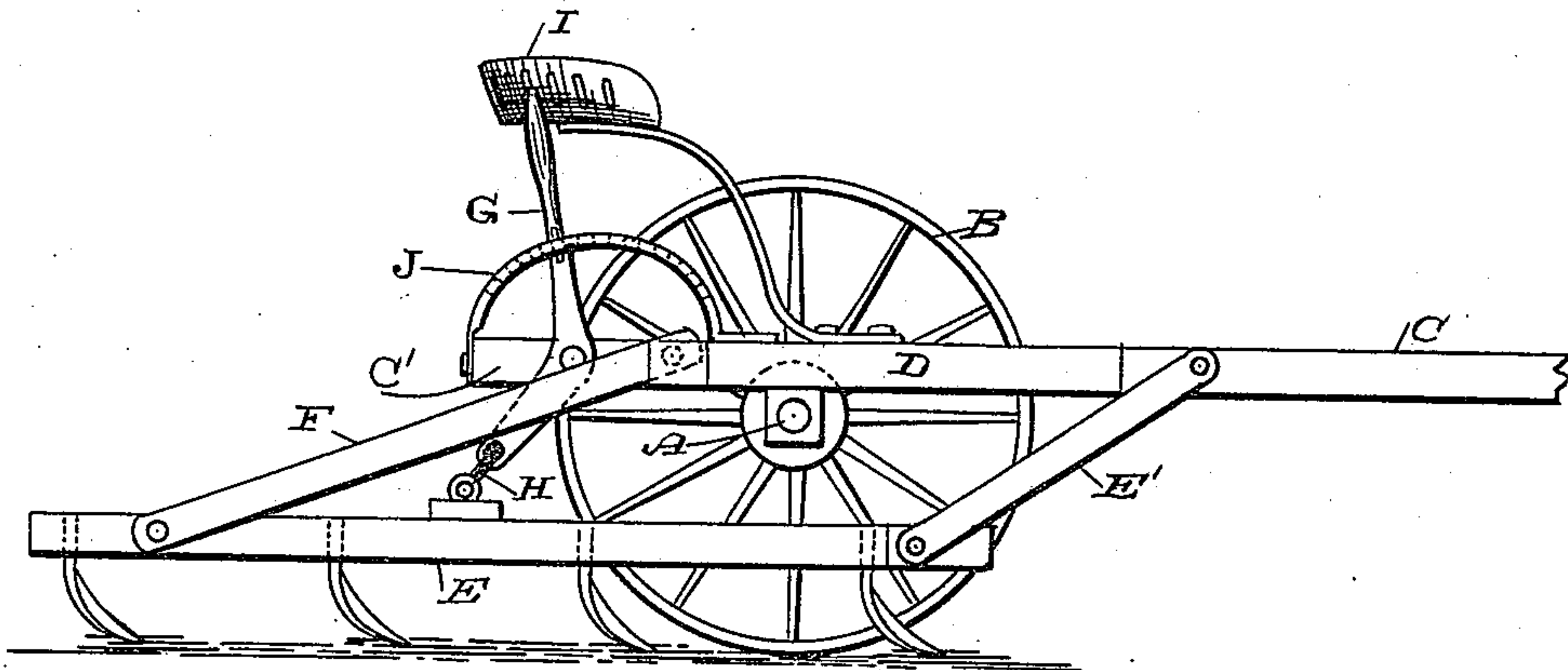
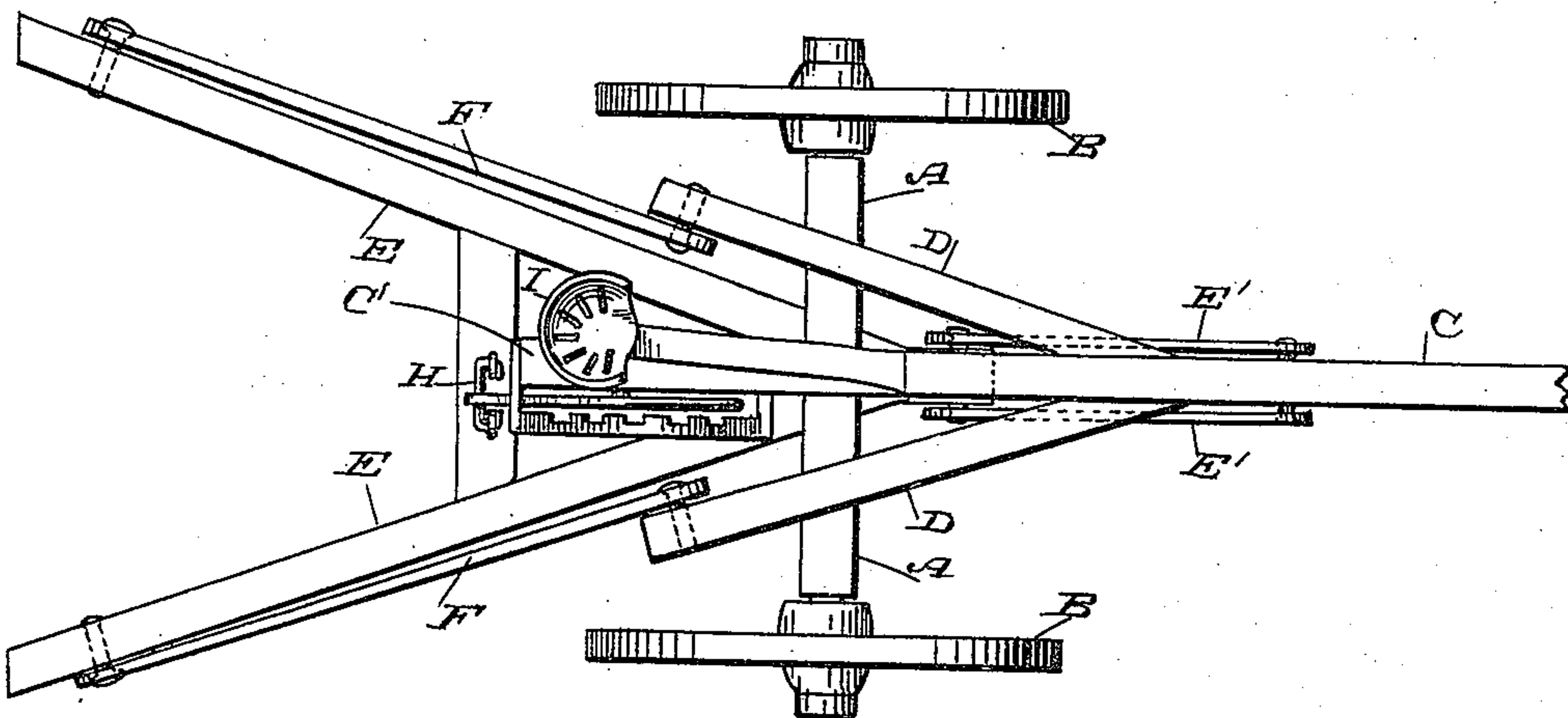


FIG. 2.



Witnesses,
Geo. H. Strong
J. H. House

Inventor,
Robert Simpson
By Dewey & Co.
attys

UNITED STATES PATENT OFFICE.

ROBERT SIMPSON, OF HANFORD, CALIFORNIA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 441,382, dated November 25, 1890.

Application filed June 13, 1890. Serial No. 355,357. (No model.)

To all whom it may concern:

Be it known that I, ROBERT SIMPSON, a citizen of the United States, residing at Hanford, Tulare county, State of California, have invented an Improvement in Cultivators; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to certain improvements in cultivators.

It consists in the combination, with a wheel-shaft and a suspended cultivator, of a rigid pole, and guides and supports for holding the cultivator in place and preventing it from swinging from side to side, and for raising and depressing it, as will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation with the inner wheel removed. Fig. 2 is a plan view.

A is an axle, and B B the bearing-wheels at each end of said axle.

C is the pole, which is rigidly fixed to the axle and has an extension C' to a considerable distance behind the axle.

DD are the bracing-timbers diverging from the pole rearwardly across the axle, to which they are also fixed.

E is a harrow or cultivator, which I have shown in the present case of the ordinary V form, and it is suspended from the tongue as follows:

E' E' are rearwardly-inclined links, the upper ends of which are pivoted to the tongue a short distance in front of the axle and the lower ends are similarly pivoted to the front of the cultivator. F F are similar links approximately parallel with E, and having their upper ends pivoted to the rear ends of the diagonal bars or braces D, and their lower ends are pivoted to the rear ends of the diverging timbers of the cultivator. The angles of divergence of the timbers D and of the side timbers of the cultivator are about the same as shown in the plan view, so that the rear suspending links F are easily fitted to the sides of the cultivator and to the timbers D.

G is a lever fulcrumed to the rear extension of the pole, and its lower end inclines backward and downward to a point where it is connected by a link H with the central portion of the cultivator-frame. The upper end of

this lever extends to a sufficient height to be within easy reach of the driver, who sits upon the seat I.

J is a curved rack with which the lever may be engaged to hold it in any desired position.

The suspending links E F, by which the harrow is connected with the tongue and its frame-work, serve by their relative positions to firmly brace the cultivator, so as to prevent any lateral or side swing or motion outside the line of the wheels, and at the same time to allow a free upward and downward motion when it is desired, the movement being similar to that of a parallel ruler.

The lever serves as a means by which the driver may raise the cultivator-frame and its teeth entirely out of the ground when going to and from the field, or in turning around, and when the cultivator-teeth are in the ground. If it is desired to hold them firmly, it is done by latching the lever into the rack, this being convenient and necessary when the ground is hard. The inclination of that portion of the lever below the fulcrum corresponds with that of the links E F, and as it is parallel with them the movement in raising or lowering the cultivator is similar to that of a parallel ruler.

By means of the bracing position of the links which hold the cultivator it is kept in its place, so that it will not sway outside the line of the wheels, and is prevented from jumping from one side to the other and catching the teeth against trees or vines. It is thus easy to control the cultivator by slightly turning the team to avoid a root or tree, or by raising it, if necessary, so as to prevent its catching on any thing outside the line of the wheels, and it may be held at any desired depth in the ground by the rack and latch lever, as before described. It will be manifest that this lever may be so bent as to be operated by the foot instead of the hand, if desired, without materially altering the character of the invention.

It will be observed that the draft-pole and its braces are rigidly secured to the axle, and that the cultivator or harrow is suspended directly from the draft-pole and its connections, so that all the drawing-strain is brought upon the pole, and the axle is relieved from this strain.

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

The axle mounted upon bearing-wheels, a
5 draft pole or tongue rigidly attached to said axle extending rearwardly therefrom, the diverging braces extending across the axle and secured thereto, a cultivator suspended beneath the pole, having a front end connected
10 therewith by the inclined links E' E', and the rear end by the correspondingly-inclined diverging links F F, whereby lateral motion of the cultivator is prevented, and an inclined

lever pivoted to the rear of the pole, having its lower end connected with the cultivator, 15 the upper end forming a handle whereby the cultivator may be raised or depressed about the pivotal points of the swinging links, and a holding-rack, substantially as herein described.

In witness whereof I have hereunto set my hand. 20

ROBERT SIMPSON.

Witnesses:

HIRAM NYSWONGER,
ROBERT LEE ELLIS.