

(No Model.)

2 Sheets—Sheet 1.

W. H. WARREN.

CULTIVATOR.

No. 309,900.

Patented Dec. 30, 1884.

Fig. 1

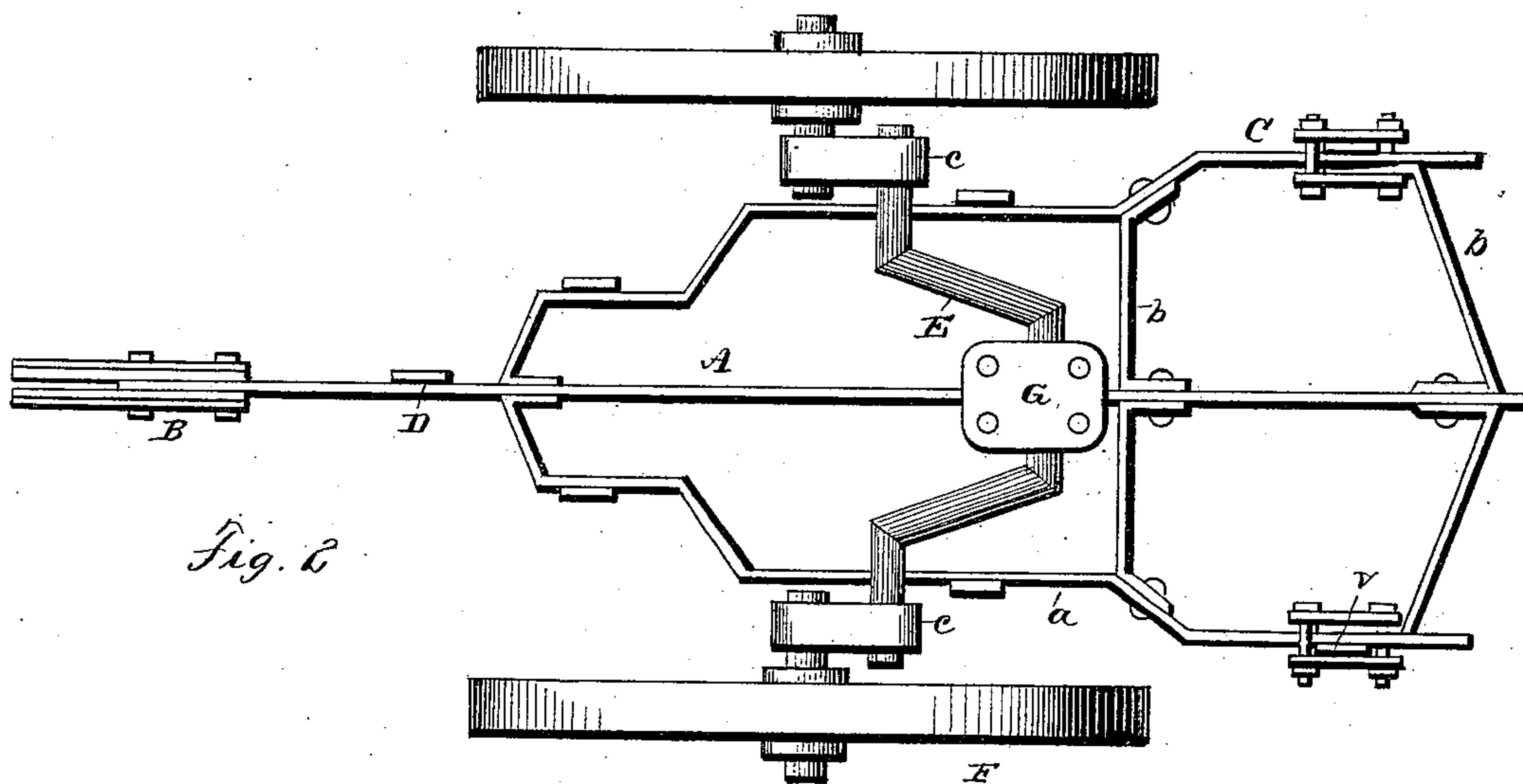
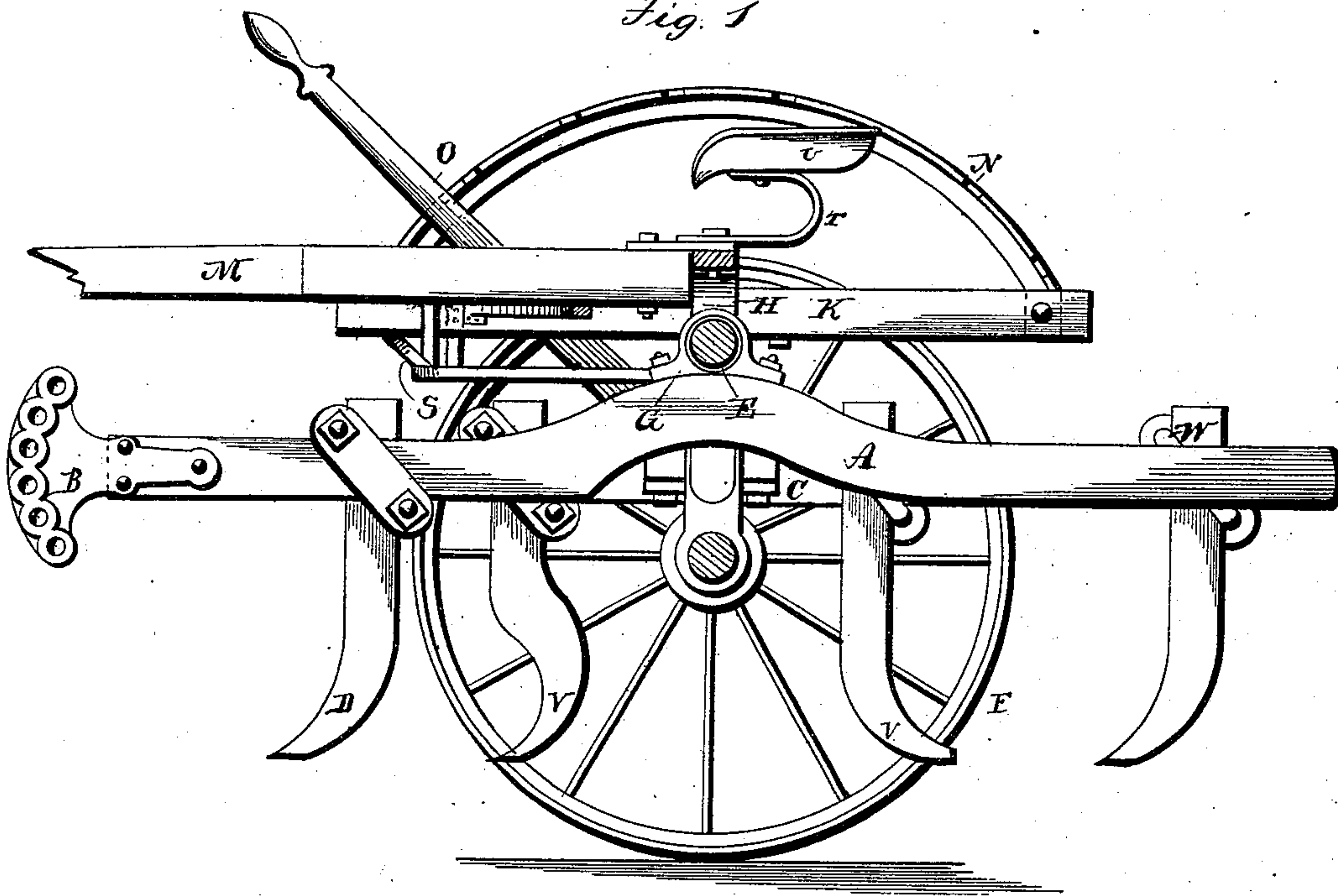


Fig. 2

WITNESSES

George Cook
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INVENTOR

Wm H Warren
By [Signature] Attorney

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FIG. 3.

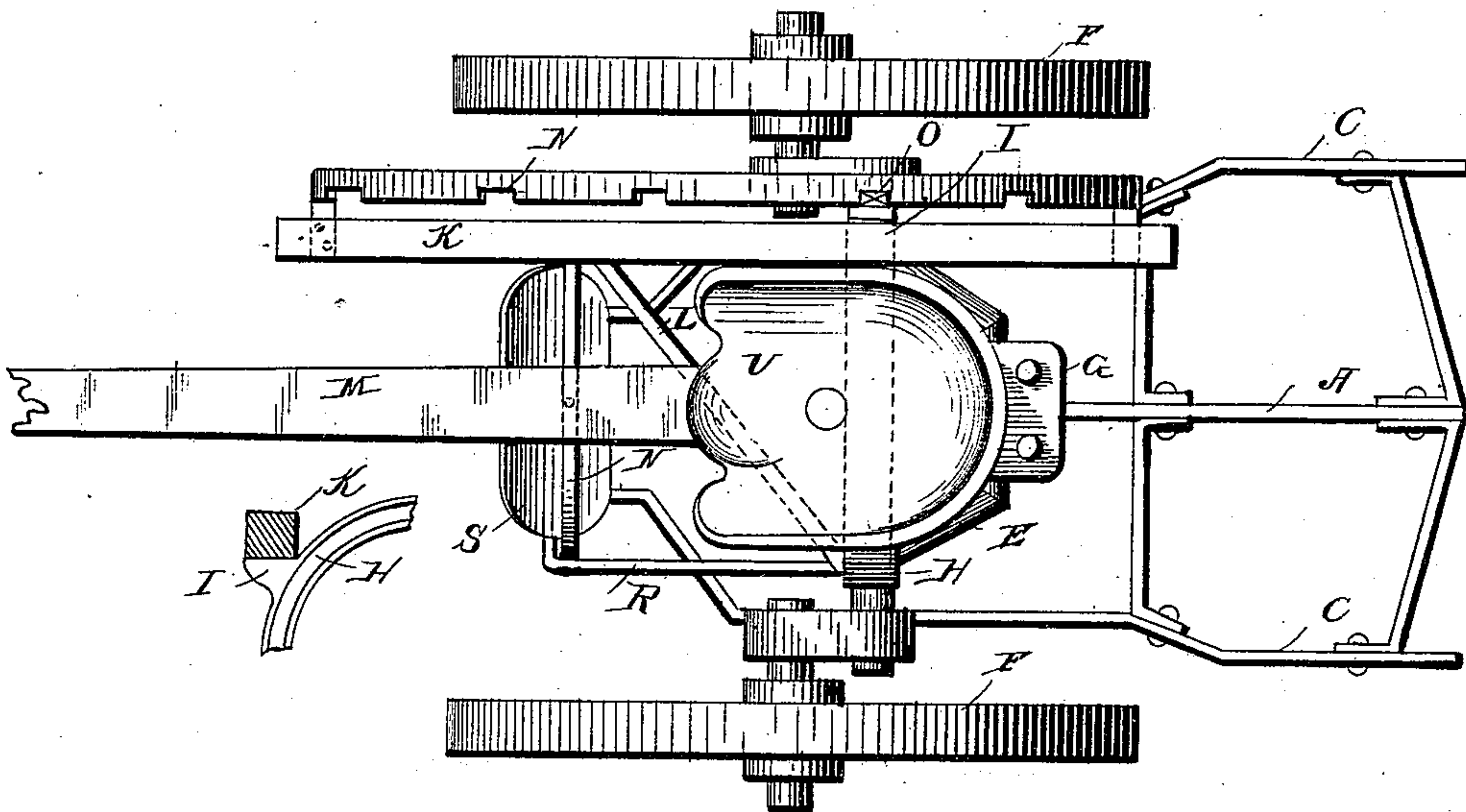
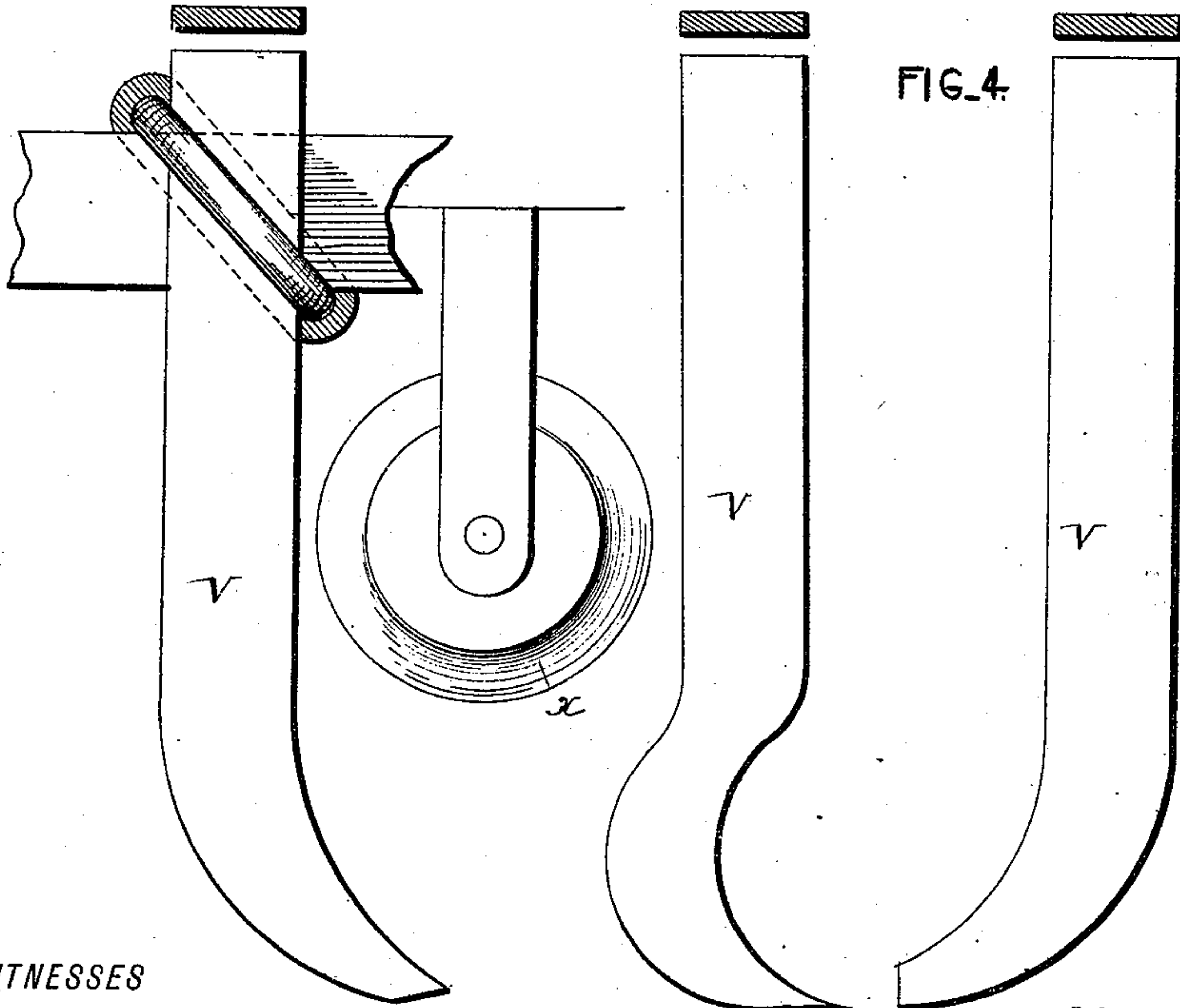


FIG. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM H. WARREN, OF AUGUSTA, GEORGIA.

CULTIVATOR.

SPECIFICATION forming part of Letters Patent No. 309,900, dated December 30, 1884.

Application filed April 16, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WARREN, of Augusta, in the county of Richmond and State of Georgia, have invented certain new and useful Improvements in 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 relates to an improvement in cultivators, the object being to provide a device of this character which shall be simple and economical in construction, and at the same time durable and efficient in use; and with these ends in view my invention consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in longitudinal section of a cultivator embodying my improvement. Fig. 2 is a top plan view with the operator's seat and other parts removed. Fig. 3 is a top plan view showing the seat and parts omitted in Fig. 2. Fig. 4 is a detached view showing several forms of teeth or knives and the manner of attaching them to the frame.

A represents the cultivator-beam, to the front end of which is secured the clevis B, said beam also forming a part of the frame C, and to which is secured the cultivator-teeth D, near the front end of the machine. The frame C is composed of the beam A, to which are secured the side pieces, *a*, and cross-pieces *b*, said frame being adapted to carry the cultivator-teeth, to be hereinafter described.

E is the crank or arched axle carrying the wheels F, said axle being formed in sections, the cranks *c* being formed of cast metal and rigidly secured to the axle, and to which are secured spindles on which the wheels F are journaled. By forming the cranks separate from the axle it avoids again bending the axle at that point, which would tend to weaken it, and which would require much more time and expense to form it.

The beam A, forming part of the frame C, is curved upwardly at or near its center, and is provided at said upwardly-curved portion with the bearing G, by means of which it is journaled to the axle E.

The seat-supporting arch H is curved substantially as shown, and is loosely secured at its opposite ends to the axle E, on opposite sides of the arch thereof, and is provided on one side (preferably on the right hand of the driver) with a laterally-projecting seat, I, (shown in dotted lines in Fig. 3,) on which is rigidly secured the bar K, which latter runs parallel to the tongue M, and is secured thereto and to the arch H by the diagonal brace L. This bar is also secured by a vertical brace to the horizontal frame R, which latter is simply a metallic bar bent U shape and rigidly secured at its rear ends to the seat-arch H.

To the bar K is rigidly secured the sector-bar N, with which the lever O, rigidly secured to the axle E, engages, for the purpose of holding the plow-frame either in elevated or lowered positions. The frame R, which supports the foot-rest S, is also strengthened and supported at its front end by a vertical brace, N', which connects with the tongue M and with the bar K. Thus it will be seen that by means of braces the seat-supporting arch, tongue, bar K, and frame R are rigidly secured together and form a structure well adapted to withstand the strain exerted thereon.

T is a spring, one end of which is bolted to the arch or rear end of the tongue, the opposite end carrying the seat U. By this construction it will be seen that when the lever O is moved the axle is also moved up or down, thereby raising or lowering the frame, which may be retained in any desired adjustment by inserting the said lever in the notches in the sector-bar.

To the frame C is secured the teeth or knives V, the lower ends of which are curved, as shown in Fig. 4 of the drawings, the lower forward edge of said teeth or knives being sharpened.

The knives are secured to the frame by means of clamps W, thereby adapting them to be removed or replaced when desired.

Instead of employing the knives X-shaped, as shown, circular knives may be used in lieu thereof, thereby adapting the machine for leveling or cutting weeds, cotton, cornstalks, &c.

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

1. The combination, with an arched axle

having cranked ends, a plow or plow-frame journaled to the arched portion of said axle, a seat-supporting arch journaled at its free ends to said axle, a seat mounted on said arch, and
5 a tongue connected at its rear end to the center of the seat-supporting arch, of a bar secured to one side of the seat-supporting arch, a sector secured to said bar, braces connecting the tongue and bar with the seat-supporting
10 arch, and the lever secured to the axle and adapted to engage the sector, substantially as set forth.

2. The combination, with an arched axle having cranked ends, the wheels journaled on
15 said cranked ends, and a plow or plow-frame loosely journaled to the arched portion of the axle, of the seat-supporting arch journaled at its free ends to the axle, a seat secured to the

central portion of said arch, a tongue the rear end of which is secured to the arch, the bar 20 centrally secured to a seat formed on one side of the seat-supporting arch, a sector secured to said bar, a lever secured to the axle and adapted to engage the sector, and the frame R, secured to the seat-supporting arch and projecting forwardly under the tongue, and braces connecting said frame with the tongue and bar, substantially as set forth. 25

In testimony whereof I have signed this specification in the presence of two subscribing 30 witnesses.

WILLIAM H. WARREN.

Witnesses:

HENRY S. JORDAN,
JAS. C. C. BLACK.