E. M. COX & J. S. GRANGE.

FURROWER.

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989,485. Patented Apr. 11, 1911.

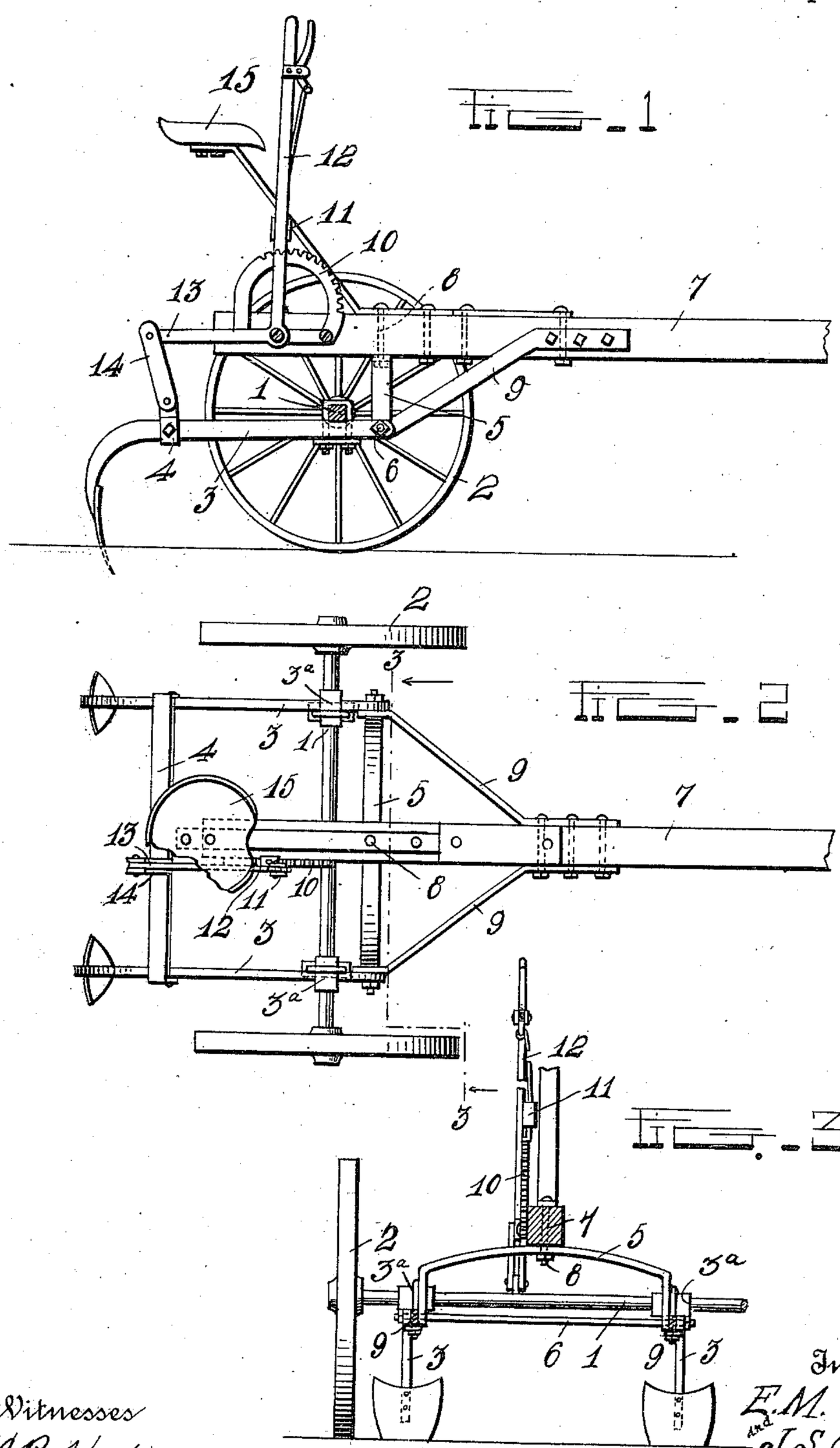

FIG. 1

FIG. 2

FIG. 3

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UNITED STATES PATENT OFFICE.

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FURROWER.

989,485. Specification of Letters Patent. Patented Apr. 11, 1911.

Application filed March 28, 1910. Serial No. 552,063.

To all whom it may concern:

Be it known that we, EDWIN M. COX and JOSEPH S. GRANGE, citizens of the United States, residing at Orangeville, in the county of Emery and State of Utah, have invented certain new and useful Improvements in Furrowers; and we 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.

This invention relates to agricultural implements and has special reference to machines for forming furrows for irrigation.

The object of the invention is to provide a simple and efficient device which may be quickly and easily adjusted to form furrows of any desired depth and which will be constructed of few parts so arranged as not to be easily broken or damaged.

With this cited object in view, as well as minor objects which will hereinafter appear, the invention resides in certain novel features of the device illustrated in the accompanying drawings, which will hereinafter be first fully described and then more particularly pointed out in the annexed claim.

In the annexed drawings, Figure 1 is a side elevation of our improved furrower with one of the supporting wheels removed. Fig. 2 is a plan view of the same. Fig. 3 is a transverse section on the line 3—3 of Fig. 2.

In carrying out our invention we employ an axle 1 and supporting wheels 2 revolubly mounted thereon. A plurality of spaced plow beams 3 are arranged longitudinally between the wheels and are rigidly secured intermediate their ends to the axle by means of boxes or bearings 3^a. Adjacent their rear ends, the plow beams 3 are braced and suitably connected to each other by means of a cross bar 4 while suitable blades or plow shares are secured to the rear extremities of the beams. The forward ends of the plow beams project in front of the axle and are pivotally mounted on the ends of an auxiliary axle or rod 6 which is pivoted in a yoke or truss 5, said yoke or truss extending upwardly from the forward ends of the beam and being secured to the draft tongue 7 approximately centrally of the same. The plow beams are further suspended from the tongue by diagonally disposed braces or rods 9 having their rear extremities fitted on the auxiliary axle 6 between the forward ends of the plow beams,

Suitably secured upon the draft tongue 7, adjacent its rear extremity, is a segmental rack 10 which may be engaged by a ratchet 11 carried by the adjusting lever 12 which is pivotally mounted upon the tongue. This lever 12 has a rearwardly extending arm 13, the extremity of which is connected by a link 14 with the cross bar 4. A standard rises from the draft tongue directly over the truss 5 and extends rearwardly to support a seat 15 for the driver.

It is to be noted that in our device the draft tongue is not secured to the axle but is connected therewith only directly through the plow beams. It is also to be noted that the axle does not revolve with the wheels but that relative movement may occur between the wheels and the axle.

When the driver takes his position in the seat and releases the ratchet 11 from the rack 10, the weight of the driver will be borne principally by the rod or auxiliary axle 6 so that the front ends of the plow beams tend to swing downwardly about the axle 1 as a center which turns in the hubs of the wheels 2, said wheels remaining stationary until the machine is drawn over the field. Inasmuch as the length of the plow beams is nearly all in the rear of the axle, very slight movement of the axle will impart considerable movement to the plow shovels or blades and the lever may be easily swung backward or forward to adjust the shovels to the desired depth or to raise them entirely clear of the ground. The tendency of the machine to swing bodily around the axle as a center is resisted by the connection of the front end of the tongue to the yoke on the necks of the draft animals, and when the lever is locked to the rack 10, the weight of the driver will be borne principally by the rear ends of the plow beams and will aid in holding the shovels to their work. The plow beams will respond instantly to the movement of the lever 12 through the link 14 and the arm 13 of the lever, a forward movement of the lever tending to raise the plow shafts and a rearward movement of the lever tending to lower the same.

Having thus described our invention, what we claim is:

A furrower comprising an axle with wheels thereon, a plurality of oppositely disposed beams secured to the axle, a cross bar secured to the rear ends of the beams, an auxiliary axle for pivoting the forward ends of the beams, braces for suspending the forward ends of the beams, a yoke extending upwardly from the beams, in which the ends of the auxiliary axle is pivoted and having a tongue secured thereto, a lever provided with a rearwardly extended arm, a link for suspending the rear portions of the beams said link having one end pivoted to said arm, its outer end connected to said cross bar, and means connected to said arm for raising and lowering said beams.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

EDWIN M. COX.
JOSEPH S. GRANGE.

Witnesses:
EDWARD L. PEACOCK,
J. K. REID.