

(No Model.)

W. T. FERGUSON.
HARROW AND LAND ROLLER.

No. 322,919.

Patented July 28, 1885.

Fig. 1.

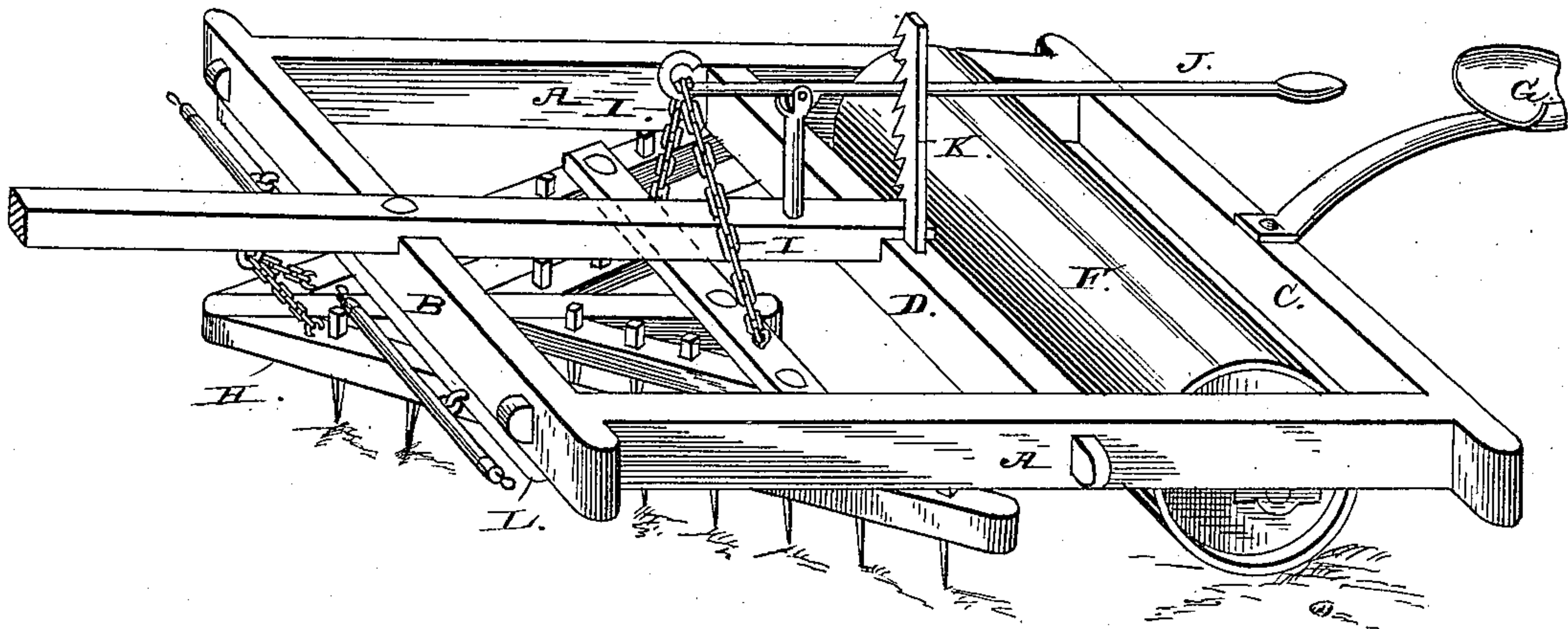
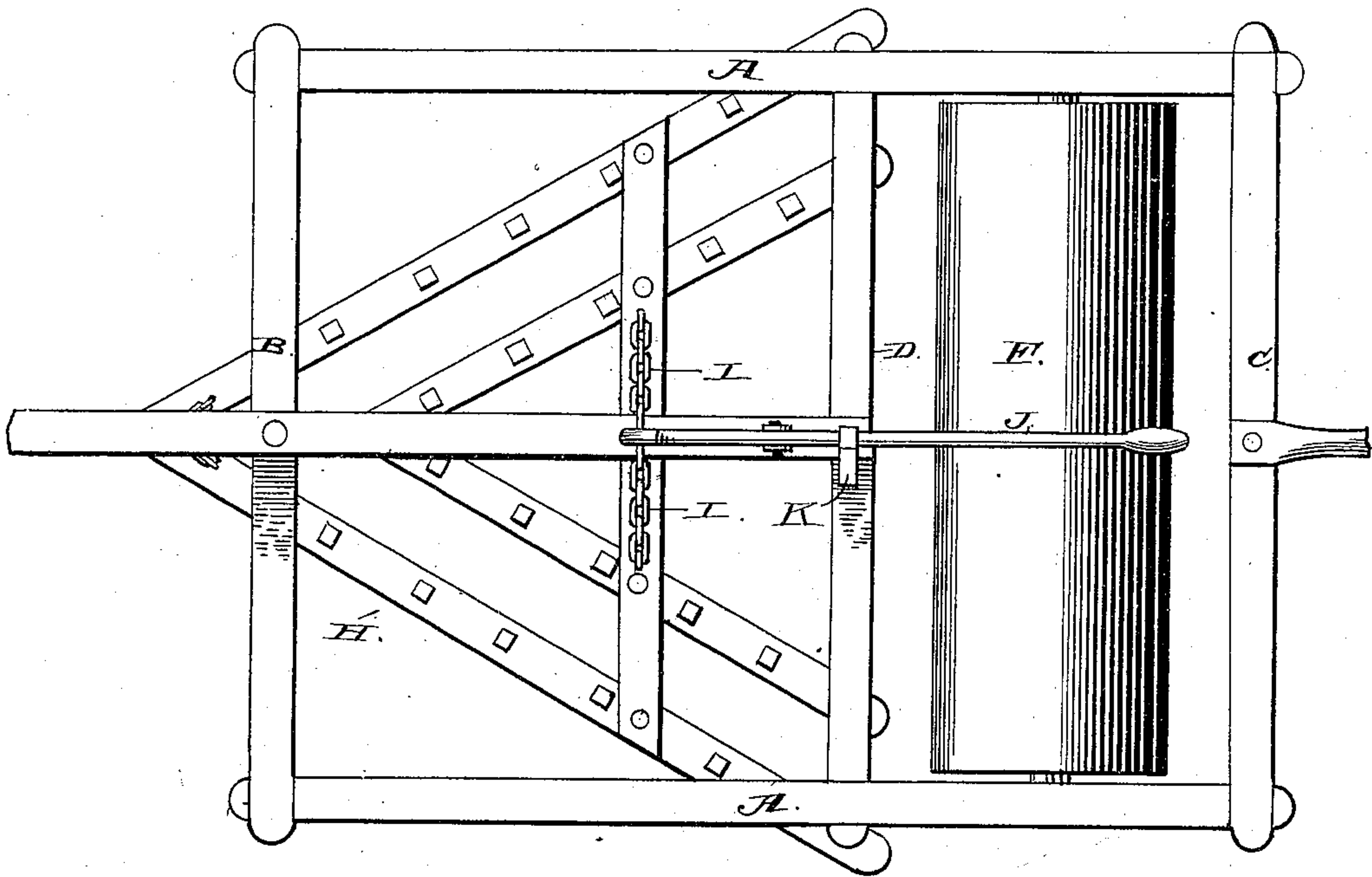


Fig. 2.



WITNESSES

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WILLIAM T. FERGUSON, OF CORNING, KANSAS.

HARROW AND LAND-ROLLER.

SPECIFICATION forming part of Letters Patent No. 322,919, dated July 28, 1885.

Application filed April 11, 1885. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. FERGUSON, a citizen of the United States, residing at Corning, in the county of Nemaha and State of Kansas, have invented a new and useful Improvement in Harrows and Land-Rollers, of which the following is a specification, reference being had to the accompanying drawings.

This invention is an improvement in combined harrows and rollers.

The invention consists in a main frame, a roller journaled in the rear end thereof, a harrow-frame suspended loosely from said frame in advance of the roller, and a tongue rigidly connected to the frame, together with a rack and lever and connections between the latter and the harrow-frame.

The invention consists, further, in certain novel constructions, combinations, and arrangements of parts, which will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view taken from the front end of my machine, and Fig. 2 is a top plan view of same.

The main frame of my machine is composed of the side beams, A, A, the front beam, B, the back beam, C, and the cross-beam D, extending between the beams A and at about one-third the distance between beams C B. The tongue is fixed rigidly to the main frame, and by preference extends back to and is bolted on the cross-beam.

The roller F extends from side to side of the main frame, and is journaled to the beams A centrally between the beams C D. This roller serves to smooth the surface after it has been harrowed up by the harrow-teeth. On the back beam I mount the driver's seat G, so that the driver's weight will increase the pressure of the roller.

The harrow-frame H has its forward end suspended loosely by chains, or in similar manner, and its rear end is also similarly suspended; but the rear suspension-chains I connect with the resistance end of an elevating-lever, J. This lever is pivoted on an upright mounted on the main frame, and a rack, K, is provided, by which its rear end may be held at any desired point. I extend this lever rear-

wardly into convenient reach of the driver. By means of this lever the rear portion of the harrow-frame may be elevated. It will be noticed that the chain or connection between the lever and the harrow joins the harrow at a point in advance of the rear end thereof, also that the rear end of the harrow extends out under the side beams, A. Thus when the lever is operated to raise the harrow-frame the rear ends of such frame are first brought up against the under side of the beams A A. These rear ends then serve as a fulcrum, and the operation of the lever being continued, the forward end of the harrow is raised until the whole of said frame is above the ground, when the machine may be conveniently turned or transported from point to point. When the harrow is so raised, the driver's weight in rear of the roller partly counterbalances the weight of the harrow.

By connecting the tongue rigidly to the main frame the team will support the harrow-frame when such frame is raised from the ground.

The double-tree L is preferably supported on the under side of the front beam, B. By thus arranging the double-tree low down I secure a lifting-draft, which takes a large portion of the weight off the necks of the team in the operation of the machine.

My machine is especially designed for use in harrowing corn, though it will also be found useful for preparing land for planting corn and other seed. By suspending the harrow loosely such frame is free to swing laterally, and the lateral jars given by obstructions do not exert so great a strain on the team.

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

1. The combination, with the main frame, of the roller journaled in the rear end thereof, the tongue rigidly secured to the top of the frame, the double-tree L, attached to the under side of the frame at the front end, the A-shaped harrow, having its rear ends extended out under the side beams of the frame, the lifting-lever, the chain connecting the latter with the harrow in advance of its rear end, and chains

connecting the forward ends of the harrow to the tongue, as set forth.

2. The combination, with the main frame, of the roller, the rigid tongue, the V-shaped harrow suspended loosely below the frame and extended at its front end beyond the latter, to connect by chains with the tongue, and also having its rear ends extended out under the side beams, a lifting-lever, and chains connecting the latter with the harrow in advance of its rear end, whereby the operation of the lever causes the rear ends of the harrow to be

brought up against the under side of the main frame, and thus act as a fulcrum to allow the raising of the front end of the harrow above the ground, as set forth.

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

WILLIAM T. FERGUSON.

Witnesses:

J. T. ALLENSWORTH,
L. JOHN BEEKER.