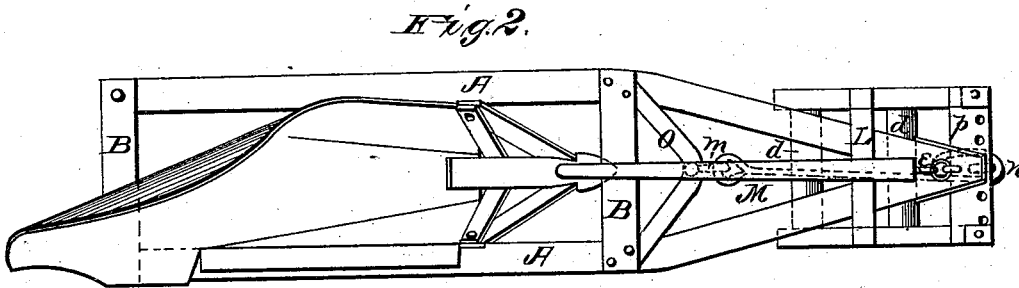
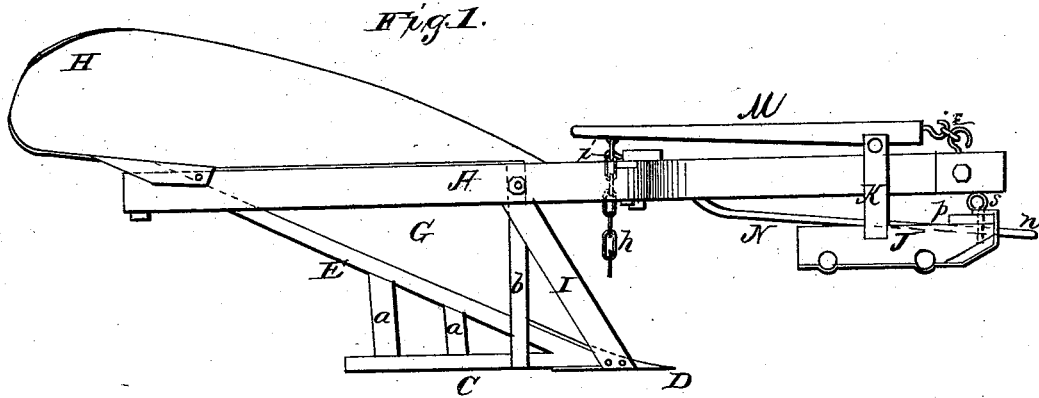


D. N. MAXWELL.  
DITCHING PLOW.

No. 187,400.

Patented Feb. 13, 1877.



WITNESSES  
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# UNITED STATES PATENT OFFICE

DAVID N. MAXWELL, OF AMES, IOWA, ASSIGNOR OF ONE-HALF HIS RIGHT  
TO GEORGE W. JONES, OF SAME PLACE.

## IMPROVEMENT IN DITCHING-PLOWS.

Specification forming part of Letters Patent No. 187,400, dated February 13, 1877; application filed  
July 17, 1876.

*To all whom it may concern:*

Be it known that I, D. N. MAXWELL, of Ames, in the county of Story, and in the State of Iowa, have invented certain new and useful Improvements in Ditching - Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a ditching-machine, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation, and Fig. 2 a plan view, of my machine.

A A represent two parallel beams of suitable dimensions connected together by cross-bars B B, as shown, and having their front ends bent toward each other and united together. Between the parallel portions of the beams or double beam A the plow is attached, so as to obtain a center elevation of the sod. *c* is the bottom-board of the plow, to which the plow-point D is secured. E is the inclined board, having its upper end secured in the center of the rear cross-bar B, and connected, by vertical posts *a a*, to the bottom board C. On the inclined board E is secured the scoop G, through which the sod and earth are carried up, the upper end thereof forming a perpendicular wing, H, to turn over the sod and earth, and discharge it at the side of the ditch, one side of the scoop being secured to the beam A. *b* is a stirrup, having its ends fastened to the beams A A, and passing around the bottom board C, for supporting the plow. I I are the side cutters, the lower ends of which are fastened to the front end of the plow, and the upper ends secured to the side beams A A by the same bolts that fasten the ends of the stirrup thereto. J represents a sled-frame, with rollers *d d*, and having two vertical standards, K K, erected thereon.

In the upper ends of these standards is placed a rocking bar; L, to which is secured a lever, M. The front end of the main frame of the machine, or, in other words, the united front ends of the beams A A, are passed between the standards K K, and the front end of the lever M is connected thereto by a link, *e*. To the rear end of said lever is secured a chain, *h*, which may be attached, by either one of its links, to a hook, *i*, on the front cross-bar B. This lever is used for regulating the depth at which the ditcher is to work. N is the draft-rod, the rear end of which is hooked into a clevis, *m*, attached to an angular brace, O, secured to the beams A A in front of the front cross-bar. The front end of the draft-hook forms a loop, *n*, and is passed between two horizontal perforated boards *p p* at the front of the sled-frame J, and a pin, *s*, passed through either hole, and through the loop *n*, so as to hold the draft-rod either in the center of the sled or more or less to either side thereof, as required.

This machine is simple and cheap of construction, easy to operate, and, being a double-beam machine with center elevation of the sod and earth, the running of the plow is equalized.

The lever M is also used to facilitate the operation of getting the plow out of the ground.

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

In combination with the ditching-frame A B, carrying the plow, the adjustable sled-frame J, provided with the rollers *d d*, the standards K, rocking bar L, lever M, perforated boards *p*, pin *s*, and laterally-adjustable draft-rod N, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of June, 1876.

DAVID N. MAXWELL.

Witnesses:

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