

J. T. MILLER.

Ditching Plow.

No. 62,215.

Patented Feb. 19, 1867.

Fig. 1.

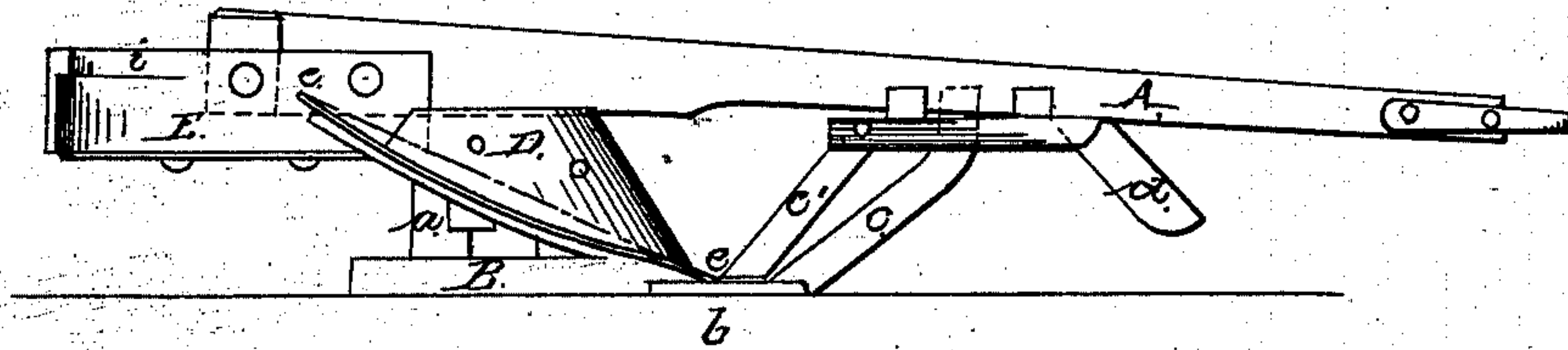


Fig. 2.

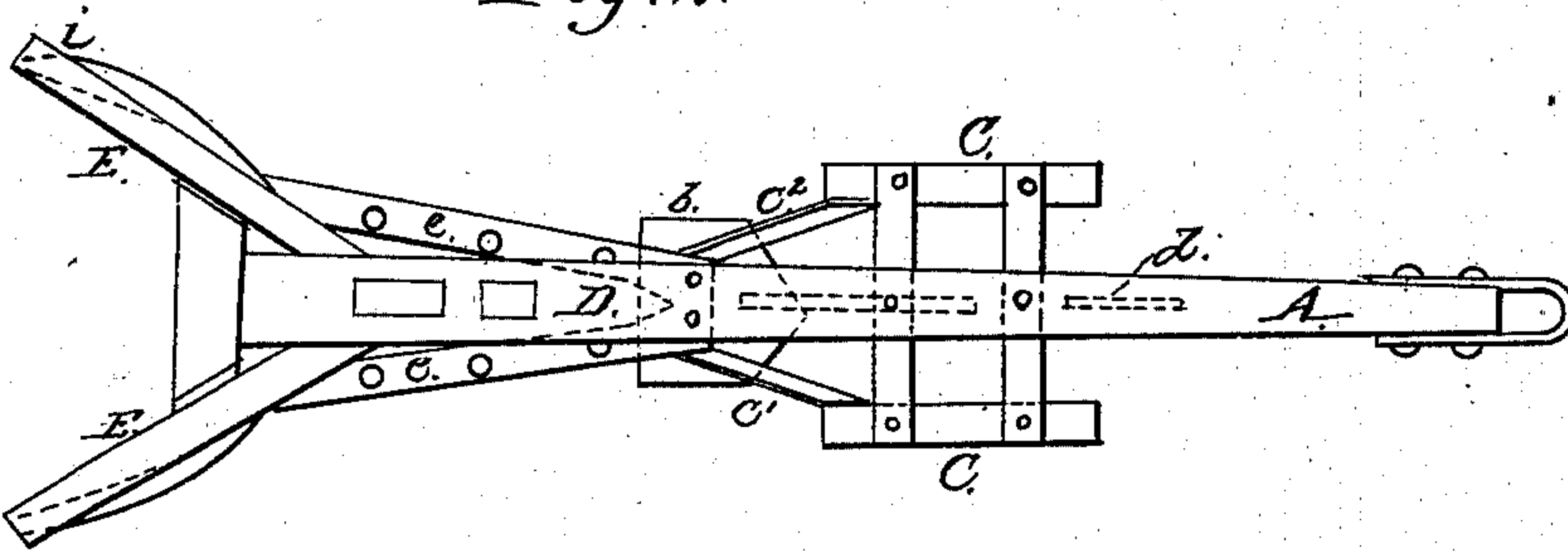
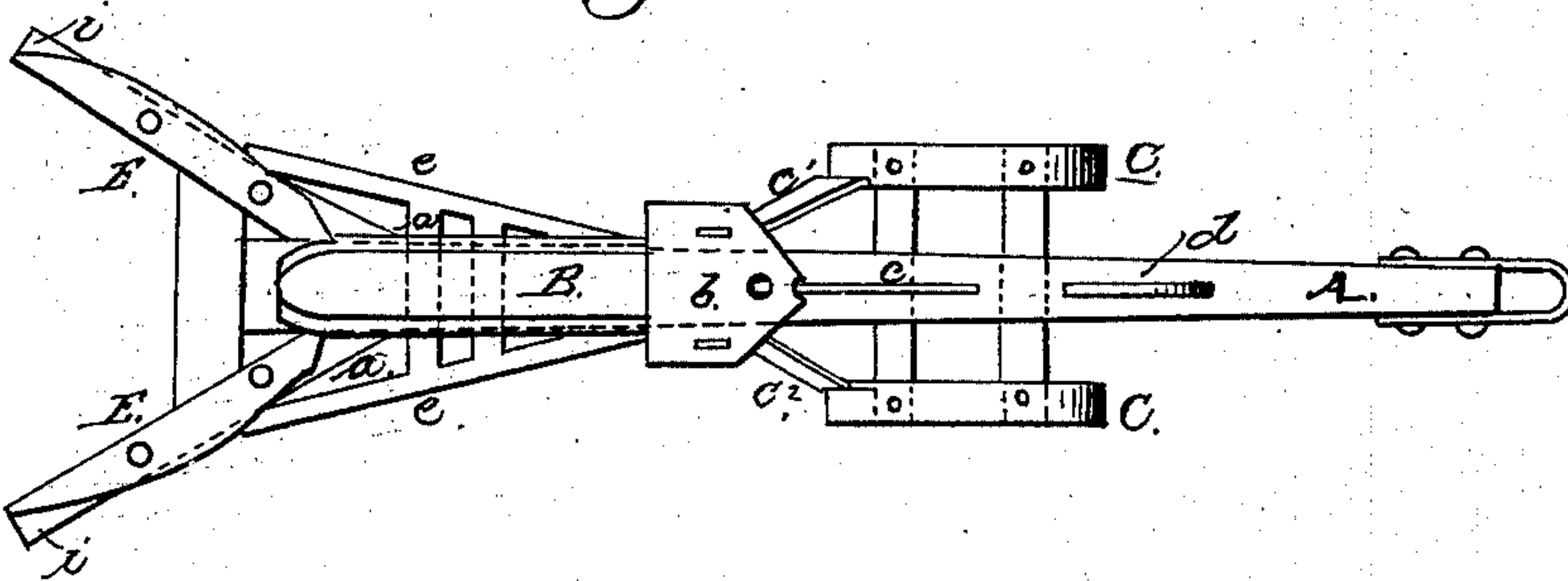


Fig. 3.



Witnesses:  
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# United States Patent Office.

JOHN T. MILLER, OF IOWA FALLS, IOWA.

Letters Patent No. 62,215, dated February 19, 1867.

## IMPROVED DITCHING PLOUGH.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN T. MILLER, of Iowa Falls, in the county of Hardin, and State of Iowa, have invented a new and improved Ditching Plough; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of the plough.

Figure 2 is a top view of the same.

Figure 3 is a bottom view of the same.

Similar letters of reference indicate like parts.

This invention consists in an arrangement of the cutters and wings of a plough or machine for cutting trenches in wet land, forming, by one application of the draught of a powerful team, a ditch about two feet deep, thirty inches wide at top, and twelve inches wide at bottom, while the sod and earth removed from the ditch are laid up in a ridge or embankment on both sides by the wings of the plough. The whole construction is strong, simple, and cheap, and especially adapted to the use of the farmers on the western prairies.

A is a long plough-beam, fitted upon a strong block-frame, *a*, for supporting the sole B, which is made of hard-wood plank about four inches thick. On the under side of the front end of the sole B is fastened a flat, sharp-edged steel plate, *b*, made twelve inches wide, and terminating in a point forward, to which is fastened a flat, sharp-edged steel cutter or sword-coulter, *c*, that runs with a straight edge forward and upward at an angle of about forty-five degrees to the beam A, to which it is secured; and on the outer edges of the sole B are also fastened similar cutters *c*<sup>1</sup> *c*<sup>2</sup>, which run forward and upward at about the same angle, and also flare outward, so that their upper ends shall be about thirty inches apart, which upper ends are secured to a cross-frame, C, built on the beam A. The cutters are made adjustable, to raise or lower, if desired. Forward of the cross-frame C, on the under side of the beam A, is placed an ordinary coulter, *d*, for breaking the sod in front of the cutter *c*. D is a flat, two-sided iron mould-board, the front edge of which forms an acute angle that runs backward up to the beam A at a high angle. It is based on curved or concave inclines *e e*, which rise on both sides from the steel plate *b*, and run backward at a low angle to the height of about thirty inches, the whole being fastened on the block-frame *a*. Behind the mould-board D, and on a level above the upper ends of the inclines *e e*, are placed plank wings E E, which flare out backwards at an angle of about forty-five degrees on both sides of the beam A, to which they are attached in any suitable way, either permanently or for adjustment of the angle of divergence. The face of the wings E E is made curved or tapering from the middle part to the rear ends, leaving a shoulder, *i*, projecting on the upper side; and on the under side of the wings are fastened iron plates *k k*, projecting about four inches beyond the face, for the purpose of running under the earth as it leaves the mould-board at the top of the ditch, to hold the earth up and aid in throwing it back into a ridge away from the edge of the ditch, and also to steady and keep the plough down to its work more effectually.

The operation of this ditching plough is manifest without explanation.

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

1. I claim a ditching plough, constructed, arranged, and operating substantially as herein described.
2. The sole B, with its plate *b*, supporting the sword-coulter *c*, cutters *c*<sup>1</sup> *c*<sup>2</sup>, secured to the cross-frame C, the inclines *e*, and mould-board D, combined and arranged substantially as described for the purpose specified.

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Witnesses:

JOHN M. AIRY,

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