H. D. Williams. Ditching Plow.

No. 120,690. Patented Nov. 7, 1871.

Fig. 1

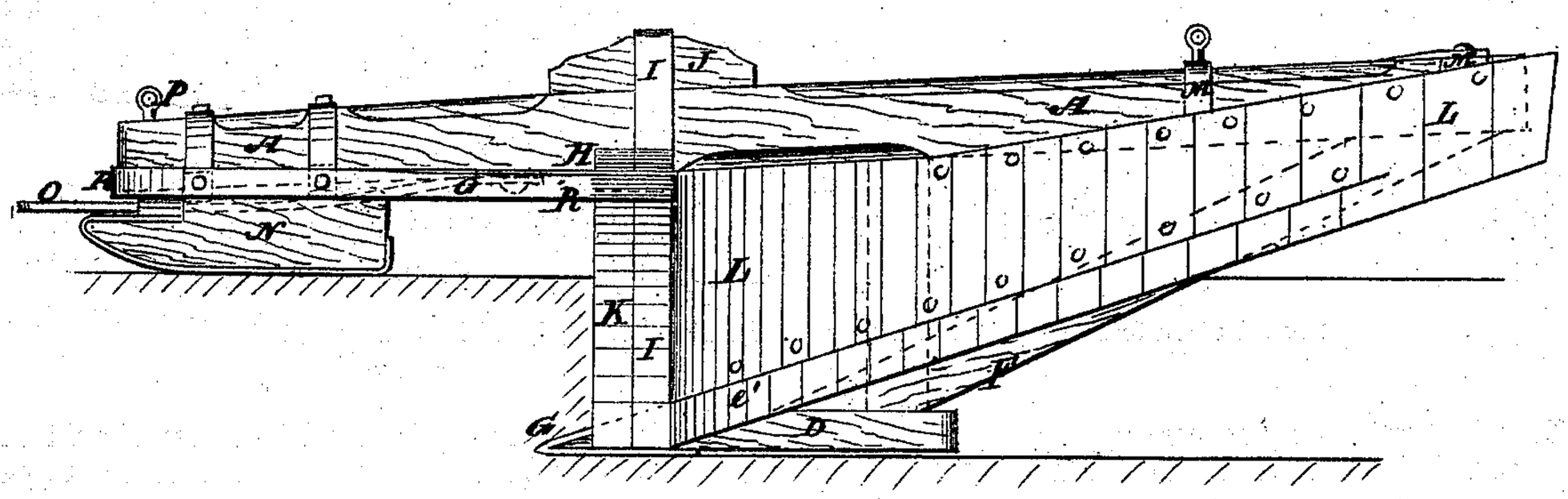


Fig. 2.

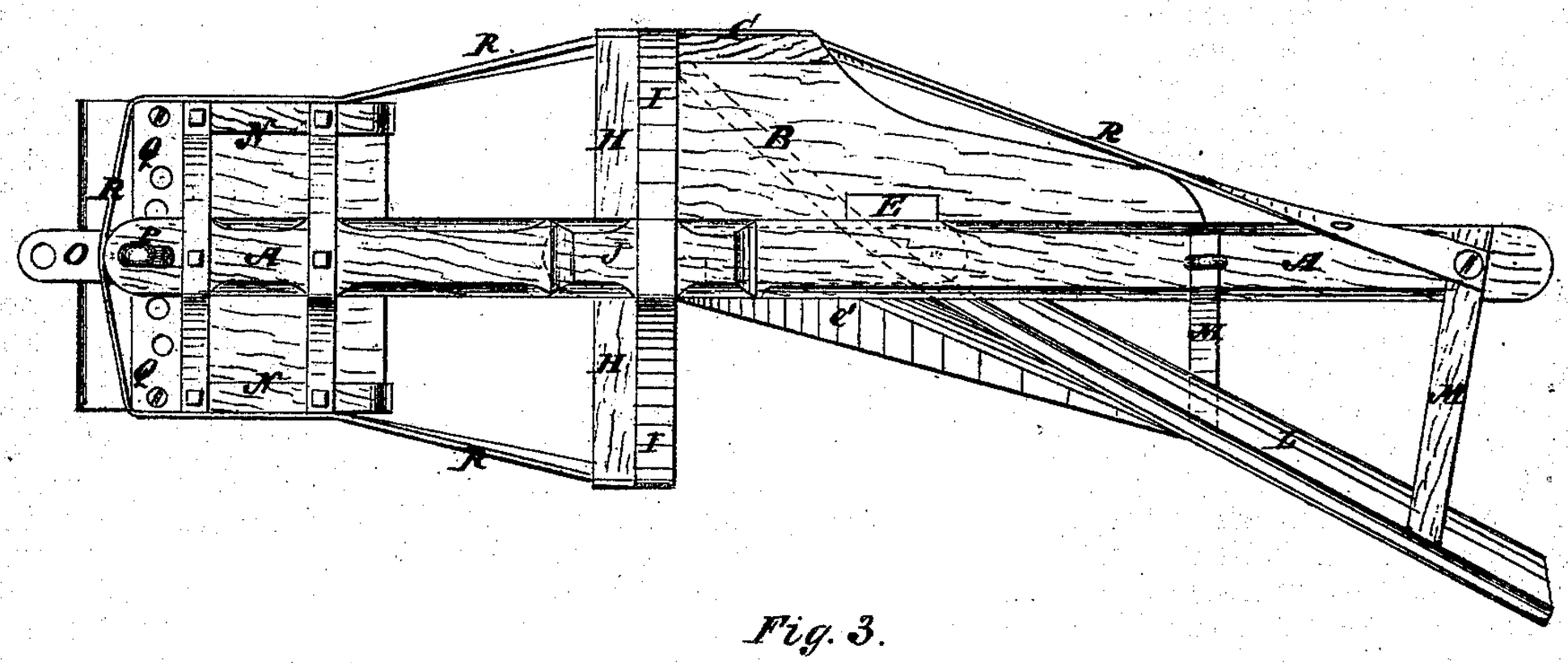
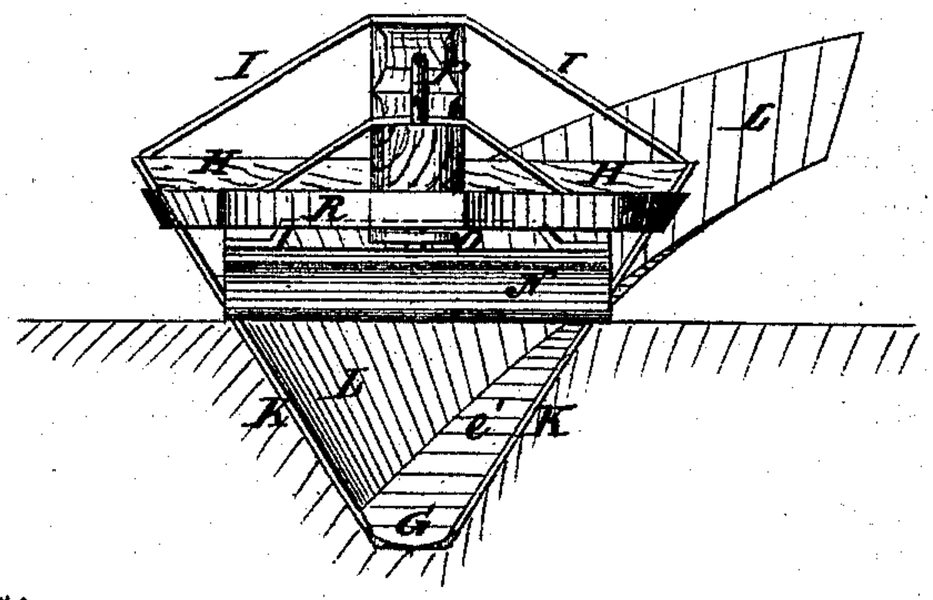


Fig. 3.



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UNITED STATES PATENT OFFICE.

HENRY D. WILLIAMS, OF FAIRVIEW, IOWA.

IMPROVEMENT IN DITCHING-PLOWS.

Specification forming part of Letters Patent No. 120,690, dated November 7, 1871.

To all whom it may concern:

Be it known that I, HENRY D. WILLIAMS, of Fairview, in the county of Jones and State of Iowa, have invented a new and useful Improvement in Ditching-Plows; 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 drawing forming part of this specification, in which—

Figure 1 is a side view of my improved ditching-plow. Fig. 2 is a top view of the same. Fig. 3 is a front view of the same.

Similar letters of reference indicate corresponding parts.

My invention consists in improvements upon ditching-plows, as hereinafter described and subsequently pointed out in the claim.

A is the beam, with which all the other parts of the machine are connected, and to the forward end of which the draft is applied. To the right-hand side of the middle part of the beam A is attached the edge of a plank, B, to the outer edge of which is attached the upper edge of the land-side C, the plank B being made of such a width that the land-side C will have the exact inclination desired for the side of the ditch. The lower edge of the land-side C is securely attached to the shoe D, which is placed directly beneath the beam A, and the rear end of which is attached to the lower end of the stud E, the upper end of which is attached to the beam A, and which is further strengthened by the brace F that extends from the lower end of the said stud to the rear end of the beam A. To the forward end of the shoe D is attached a steel point or shear, G. The upper edge of the land-side C is attached to the plank B, the forward end of which is attached to the cross-bar H, which crosses the beam A at right angles, and the middle part of which is attached to the under side of the said beam A, almost on a plane with the beam. The forward end of the shoe D is further supported, and the whole machine securely bound together, by the iron band I, which passes around the forward part of the shoe D, over the ends of the cross-bar H, and over the beam A, a block, J, being interposed between it and the said beam to give more inclination to the upper part of said band and cause it to bind more firmly. K are the cutters, the lower ends of which are secured to the sides of the shoe D and their upper ends to the ends of the cross-bar H, the said cutters K having the exact inclination required for the sides of the ditch. L is the mold-board, the forward edge of which coincides with the forward edge of the land-side C. The mold-board L is curved, as shown in the drawing, so as to guide the soil raised and deposit its sod downward upon the ground about eighteen inches from the edge of the ditch. The base *l'* of the mold-board L is made flat, as shown in Figs. 1, 2, and 3, to support the soil while passing up and out of the ditch. The land-side C and mold-board L *l'* are faced with zinc, which does not corrode, keeps always smooth and bright, and to which the soil will not adhere, thus adapting the machine for working with equal facility in wet and dry soils without the aid of water. The rear end of the mold-board L is supported by braces M, extending from the said mold-board to the rear part of the beam A. To the forward end of the beam A is attached a wide slide, sled, or shoe, N, which rests upon the surface of the ground, supports the forward end of the beam A, and enables the machine to be more easily guided and controlled when at work. O is the draft-bar, the rear end of which is pivoted to the under side of the beam A, as shown in dotted lines in Fig. 1. The forward part of the draw-bar O is adjustably secured in place by a pin or bolt, P, that passes through a slot in the said bar O and through a hole in the forward end of the beam A, or through one or the other of the holes in the cross-bar Q attached to the said beam A, and to the shoe N.

This construction enables the draw-bar to be so adjusted as to draw the machine forward in a straight line, or to cause it to move to the right or left to pass obstructions or change the direction of the ditch without its being necessary to change the position of the capstan for that purpose. The draft-strain upon the cutters K is supported, and the whole machine bound together

and strengthened, by the strap or band R, which passes from the rear end of the beam A along the upper edge of the land-side C, the end of the cross-bar H, around the forward end of the beam A, and its other end is attached to the rear side of the other end of the cross-bar H.

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

Bottom cutter G and the two inclined side-cutters K K, combined, as described, with the single elongated mold-board L and the base *l'*, to cut, carry, and throw all the dirt on one side of the ditch.

HENRY D. WILLIAMS.

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