B. TOBIAS.

Ditching Plow.

No. 35,403. Patented May 27, 1862.

Fig. 2.

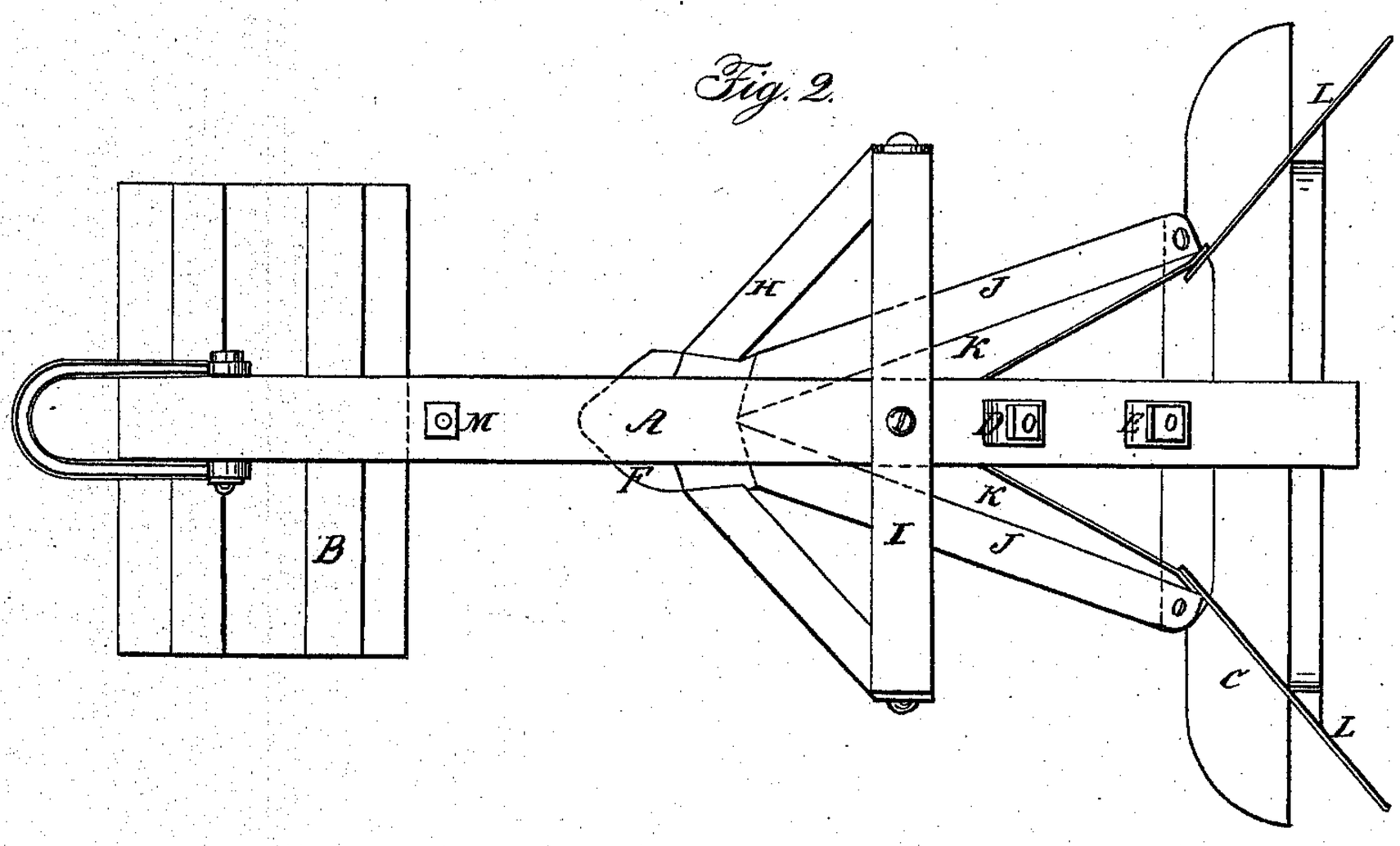
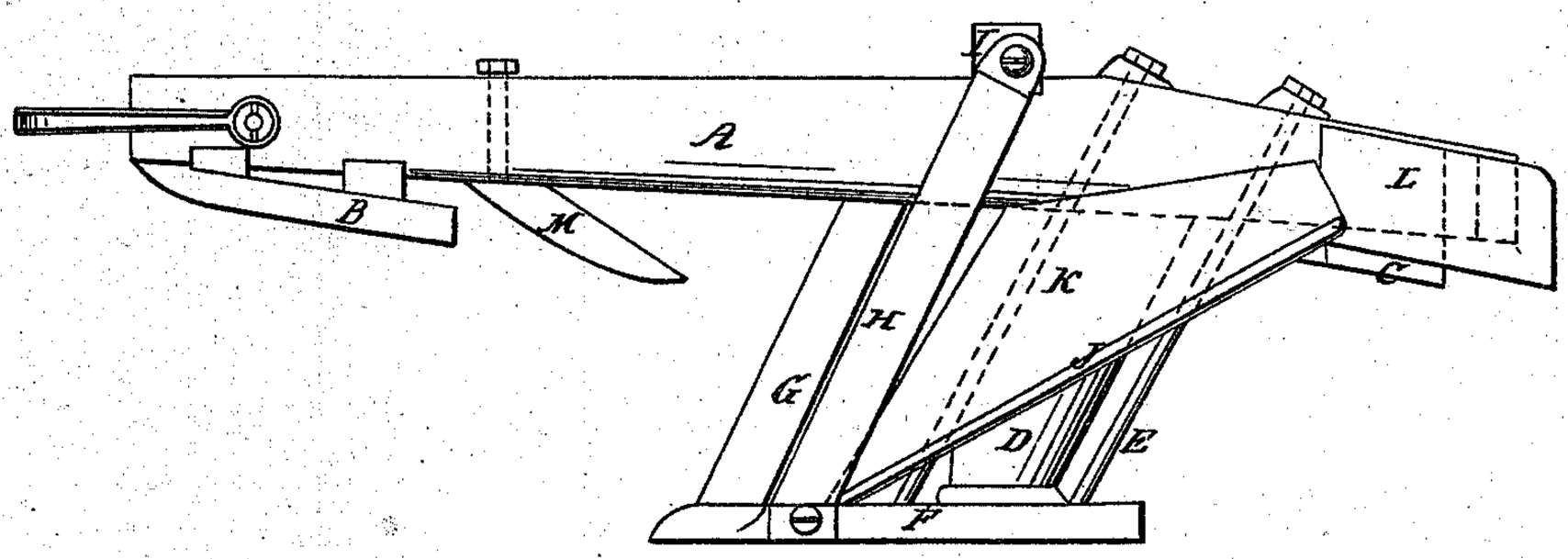


Fig. 1.



Witnesses:

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G. W. Reed

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Attys.

UNITED STATES PATENT OFFICE.

BENJAMIN TOBIAS, OF WASHINGTON, ILLINOIS.

IMPROVEMENT IN DITCHING-MACHINES.

Specification forming part of Letters Patent No. **35,403**, dated May 27, 1862.

To all whom it may concern:

Be it known that I, BENJAMIN TOBIAS, of Washington, in the county of Tazewell and State of Illinois, have invented a new and Improved Ditching-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a side elevation of my invention. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the several figures.

To enable others skilled in the art to make and use my invention, I will proceed to describe it with reference to the drawings.

The beam A is constructed and shaped similar to the beam of an ordinary plow. It rests in front on a small board or platform, B, and in the rear on a cross-bar, C, the lower surfaces of said board and cross-bar being so arranged that the same slide easily on the ground.

Secured to the beam A by means of the standard D and brace E is the shoe F, the depth of the ditch being determined by the depth of the shoe below the lower surfaces of the platform B and cross-bar C. The point of the shoe is rounded off and made to cut toward both sides, and from its center rises the central knife, G, which is placed in an inclined position, as clearly shown in Fig. 3 of the drawings, its lower end being secured to the shoe and its upper end to the beam, and which is intended to divide the dirt into two equal parts.

The sides of the ditch are formed by two inclined flaring cutters, H, the lower ends of which are secured to the sides of the shoe, while their upper ends are fastened to a cross-bar, I, that is firmly secured to the beam A, as clearly shown in Fig. 2. These cutters are flaring from the bottom upward, so that the sides of the ditch become inclined at angles of about sixty degrees, more or less, according to the nature of the soil, and by these cutters the width of the ditch is determined.

The dirt cut out between the flaring cutters H and divided in two halves by the central knife G drops upon the inclined planes J, that extend from the shoe up to the cross-bar C, as clearly shown in Fig. 1, and which are separated by the flaring wings K. These wings spread from one common edge a little ways behind the central knife, G, and through their action, combined with the action of the inclined planes J, the dirt is carried up to the deflecting-plates L, which deposit the same on the sides of the ditch.

The operation of the machine is facilitated by a sod-cutter, M, which is secured to the beam A in front of the central knife, G. By this cutter the sod and other obstructions—such as small roots or twigs of trees—are divided and a choking of the machine is prevented.

The dirt which is thrown out by the action of the inclined planes J and deflecting plates L is piled up on both sides of the ditch and increases its depth, and the ends of the cross-bar C are rounded off and brought down to a sharp edge, so that the same will readily pass through under the dirt thrown out by the inclined planes and deflecting-plates, and that said ends do not carry any of the dirt along with them and back into the ditch.

It is obvious that with little additional expense this machine might be so arranged that it can be set to cut ditches of different depth.

I am aware that ditching-plows with inclined lifting-edges on each side of the plow have before been used, as in Horace Cleveland's patent, 1842. I claim none of the parts presented in said patent; but,

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

The combination of the deflecting-plates L and bar C with the inclines J, cutters G H H, standard D, and shoe F, when the said parts are arranged and operate together as herein shown and described.

BENJAMIN TOBIAS.

Witnesses:

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