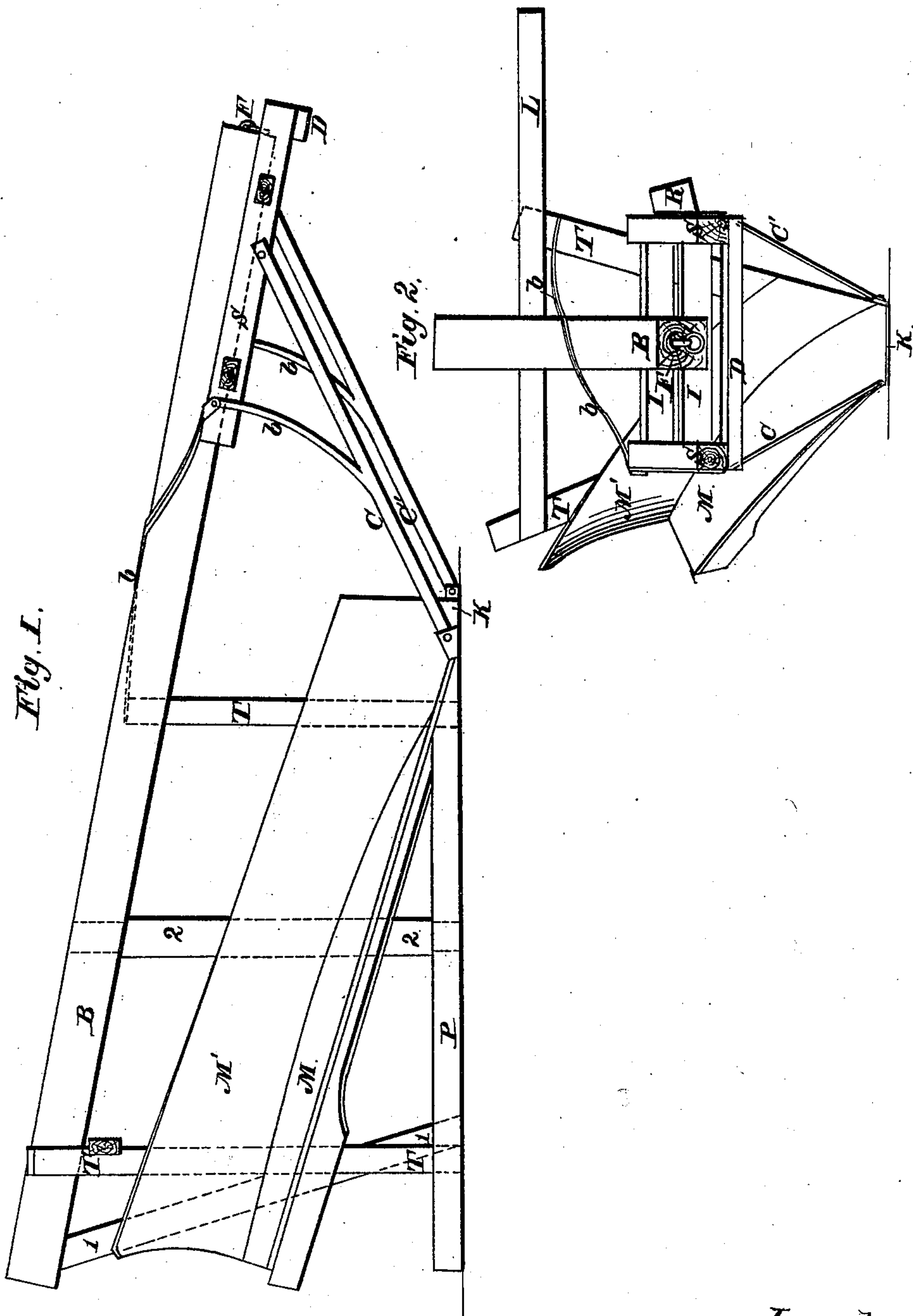


G. W. WIGGIN.

Ditching Plow.

No. 43,060.

Patented June 7, 1864.



Witnesses.
Geo. W. Gregory
David Calhoun.

Inventor:
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UNITED STATES PATENT OFFICE.

GEORGE W. WIGGIN, OF EXETER, NEW HAMPSHIRE.

IMPROVED DITCHING-MACHINE.

Specification forming part of Letters Patent No. 43,060, dated June 7, 1864.

To all whom it may concern:

Be it known that I, GEORGE W. WIGGIN, of Exeter, in the county of Rockingham and State of New Hampshire, have invented a new and useful Machine for Forming Ditches for Drainage and other Purposes; and I do hereby declare that the following, when taken in connection with the drawings which accompany and form part of this specification, is a description of my said invention sufficiently full and exact to enable those skilled in the art to practice it.

The nature of my invention consists in organizing or combining together knives or cutters which cut the bottom and sides of the ditch, a peculiarly-formed incline which elevates the soil to be removed from its normal position, another incline which gives the soil to be removed a sidewise direction, a means for gaging the depth of cut, and a guide which moves upon the bottom surface of the cut, so that all together form a ditching machine or plow which, in its onward passage and at one cut or operation, forms a deep and well-defined groove in the soil and deposits the portion displaced at a suitable distance from the edge or side of said groove or ditch.

In the drawings, Figure 1 represents a side view of a ditching-plow embodying my invention, and Fig. 2 is a front end view of the same.

The foundation or sole plate is marked P, and is of the width of the bottom of the ditch intended to be formed.

Above the bed-plate, and joined thereunto at its front end, is the mold-board, (marked M,) which at said end is brought to an edge and shod with metal in front, so as to constitute the knife marked K, which cuts the bottom of the ditch, said mold-board rising from the plane of the sole-plate on any suitable angle—say about twenty-five degrees. This mold-board twists or turns to one side as it rises from the plane formed by the movement of the knife K, care being taken, however, that the outer edge of the mold-board M shall not extend beyond the plane in which the side cutter, C, is located, except at such part of the length of the mold-board M as rises above the surface of the ground operated upon. The front end of the mold-board is in a horizontal plane; but from this end to the rear it is

twisted till at the rear end there is a considerably greater elevation of M at its inner than at its outer edge, which inclination facilitates the falling off from said mold-board upon the surface of the ground the soil which it elevated. The inclination of the mold-board M to one side should be sufficient to overhang the edge of the ditch some convenient distance—say about eighteen inches.

From the mold-board M, rising from it at its front end, on of the angle the cutter C', is a guard or fender, which acts to give a side movement to the soil elevated on and by M and to prevent it from falling off from M into the excavation made, M' being curved sidewise to conform to the sidewise curvature of M. The pieces marked T are framed into the sole-plate on the angles of the sides of the ditch, which are those of the side cutters, C C', and serve, together with the sole-plate, to guide and steady the plow while in the act of operating to form a ditch, the sole-plate bearing on the bottom and the side pieces T taking a bearing on the sides of the ditch. The uprights 1 and 2 are also framed into the sole-plate, and serve to support at a suitable distance above it the draft-beam B, which I prefer to have set on an angle upward, from front to rear of the sole-plate, of about twelve degrees.

At the front end of the draft-beam and extending across it on either side are cross-pieces, (marked I,) to which side beams marked S are framed. The cutters which form the sides of the ditch extend from the outer corners of knife K upward and forward to the sides of beams S, to which they are secured, their forward inclination being about an angle of forty-five degrees, and their sidewise inclination being about twenty-two degrees outward from the perpendicular.

The cross-beam L, which connects the rear pieces T, extends beyond the plow on one side, so as to form a lever, by which the plow may be in some degree controlled by hand. Straps of metal marked b are also so arranged as to stiffen the side cutters and the side beams, S.

The fender marked D is a cross-bar under and fastened to the front of the side beams, S, and when the plow is in motion may rest upon the ground or upon a plank placed on the surface of the ground; or the plank may be se-

cured to the machine and drag upon the surface of the ground.

Wheels or rollers might be used, instead of the devices named, to keep the plow from entering too deeply into the soil; but as these embed in most soils where this plow is applicable, I prefer to use the plank as described.

I claim—

In ditching-plows, the combination of a sole-

plate, P, mold-boards M M', curved and inclined as set forth, cutters C, C', and K, and beams S S and fender D, or their equivalents, substantially as and for the purpose herein described.

GEORGE W. WIGGIN.

Witnesses:

THOS. CONNER,

CHARLES H. BELL.