(Model.)

A. S. HUGHES.

DITCHING AND TILE LAYING MACHINE.

No. 265,085. Patented Sept. 26, 1882.

Fig 1

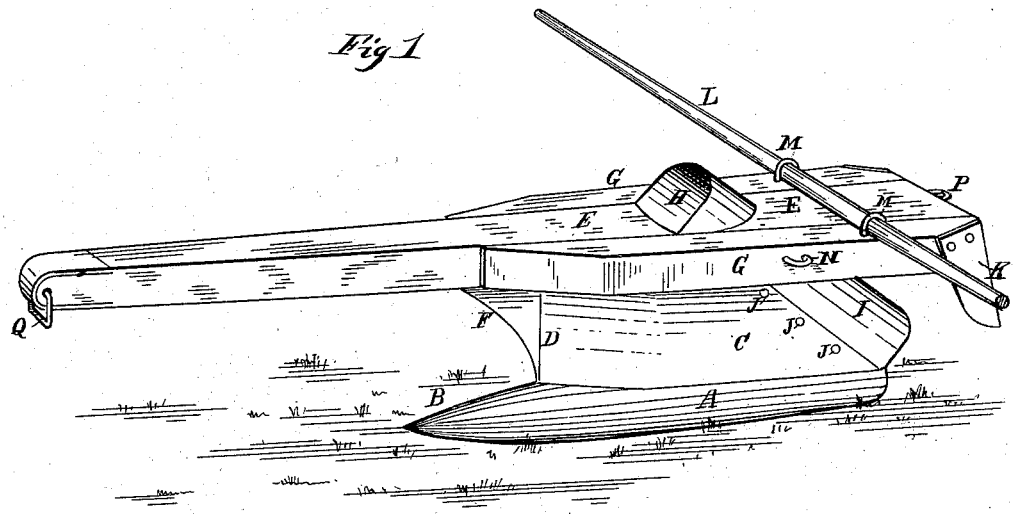
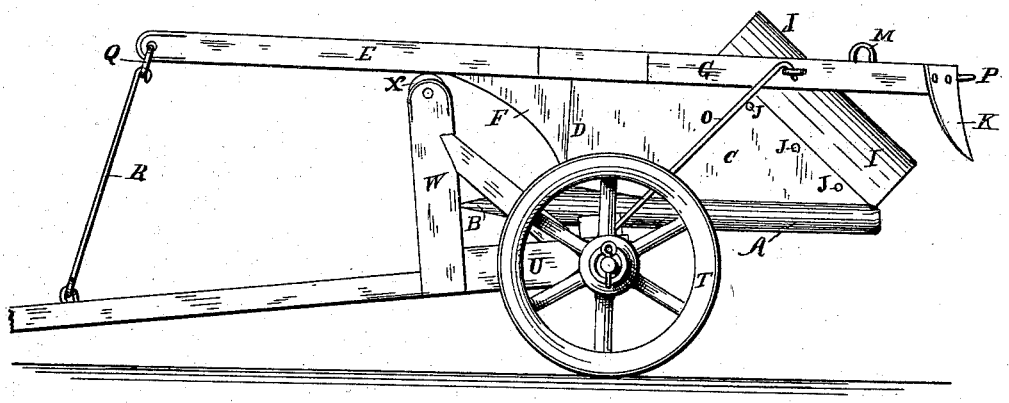


Fig 2



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ANDREW S. HUGHES, OF ELDORA, IOWA.

DITCHING AND TILE-LAYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 265,085, dated September 26, 1882.

Application filed April 4, 1882. (Model.)

To all whom it may concern:

Be it known that I, ANDREW SYLVESTER HUGHES, of Eldora, in the county of Hardin and State of Iowa, have invented a new and Improved Ditching and Tile-Laying Machine, of which the following is a full, clear, and exact description.

The object of my invention is to provide an improved machine for laying tile; and to this end the invention consists in a novel construction and arrangement of parts, as hereinafter described, and pointed out in the claim.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a perspective view of my improved ditching and tile-laying machine, and Fig. 2 is a side elevation of the same as loaded upon a truck for being carried about.

A represents a cylindrical ditch-opener, of metal or other approved material, having a point, B, of one end suitable for being drawn along through the ground under the surface, the cylindrical part being the size of the required ditch.

C represents one of the steel blades, connected along the lower edge with the surface of the opener A, beginning over the center of said opener at its front end, D, but diverging therefrom rearward along the side of said opener. A like blade is similarly arranged on the opposite side of the opener A, and both blades C being as wide above the opener as the required depth of the ditch to be made. These blades are secured along their upper edges in any approved way to the beam E, and at the front they are supplemented with a single short blade, F, for a colter, and to aid in securing the said blades C to the beam. About over the middle of the ditch-opener the beam is cut apart for the mouth of the chute H, through which the tiles are to be shoved down into the ditch as the machine moves along, and it is spliced by the short timbers G, attached one to each of its sides, both before and behind the chute. The cut through the beam slants rearward, and the chute H, slanting therefrom over the rear end of the opener, is formed by a cover, I, of sheet metal, in the inverted trough-shaped form shown, inserted through the cut of the beam between the timbers G, and riveted at the edges to the rear ends of the blades C along the line of rivets J, the said rear ends being constructed on the required inclination for the chute. Below the under side of the beam E the space between the blades C is filled in with timber or other suitable filling to form the bottom of the chute. The tiles are to be delivered into the chute by an attendant as the machine slowly moves along, and shoved or pressed in by him, so that they descend to and lie in continuous line upon the bottom of the ditch.

K represents a pair of scrapers attached to the rear corners of the machine, for scraping the earth from each side of the furrow made by the blades back into it, for filling in what the furrow may lack of fullness by failure of earth falling in behind the machine to fill it.

L represents a pole fixed across the top of the machine, and secured by staples M or other means suitable for use by a couple of attendants to balance and guide the machine.

N represents staples in the sides for balancing the machine by braces O when loaded on a truck.

P is a staple at the hind end for hitching the truck on behind when the machine is at work.

Q is a ring or clevis at the front end of the beam, for hitching on the rope or chain by which the power of a windlass, capstan, or other motive power to work the machine is applied. Ring Q is also utilized for securing the machine to the truck by a rod, R, as shown. For moving the machine about over the ground, a truck of two wheels, T, and a strong frame, U, with uprights W, having a roller, X, in the top, is employed, and it is loaded on said truck by removing the wheels and letting the frame down upon the ground in front of the machine, so that the rope hitched to beam E will draw over roller X. The power is then set in motion, and it pulls the machine out of the ground and up onto the axle of the truck, in the position represented in Fig. 2, when it is made fast by the braces O and rod R. The truck-frame is then raised by means of levers or other suitable devices, and the wheels put on. To remove the machine from the truck, the wheels are taken off and the frame of the truck is lowered to the ground and pulled from under it.

The advantages of the machine for making

the ditch and laying the tile without opening the ditch and filling it again are apparent, as well as the simplicity of the construction of the machine.

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

The combination, with the beam E, the side bars, G, the cylindrical and pointed opener A B, the diverging blades C, the colter F, the inclined chute H I, and the scrapers K, of the balancing-pole L, secured to the upper surface of the side bars at right angles to the line of draft and projecting beyond the sides of the same, substantially as and for the purpose set forth.

ANDREW SYLVESTER HUGHES.

Witnesses:
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