

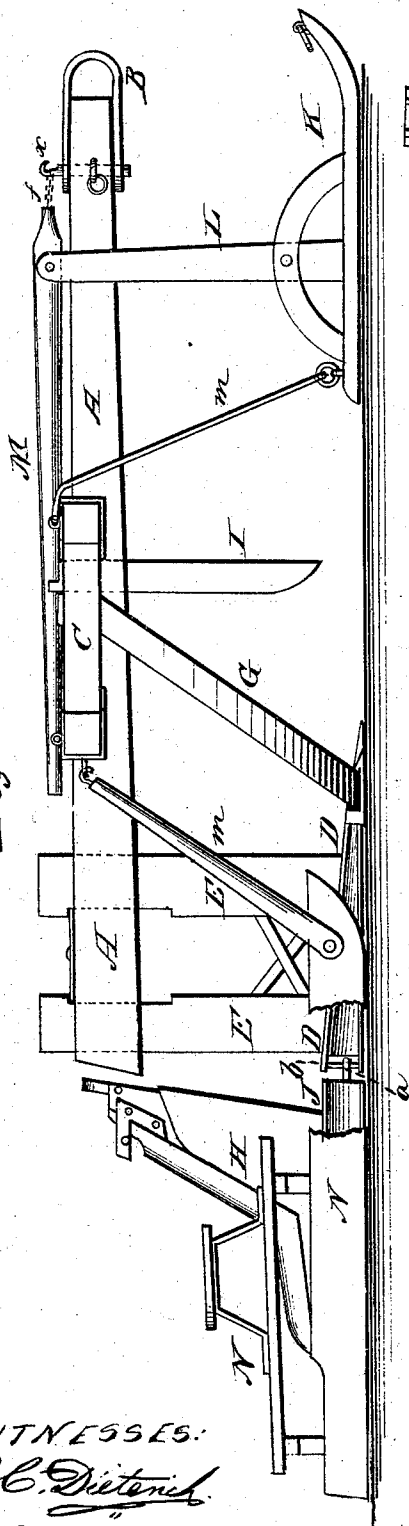
M. H. CRITCHET.

DITCHING AND TILE-LAYING MACHINE.

No. 173,911.

Patented Feb. 22, 1876.

Fig. 1.



WITNESSES:
P. C. Dietrich
H. C. Dr. Arthur

Fig. 3.

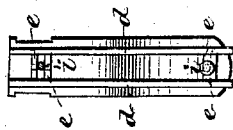
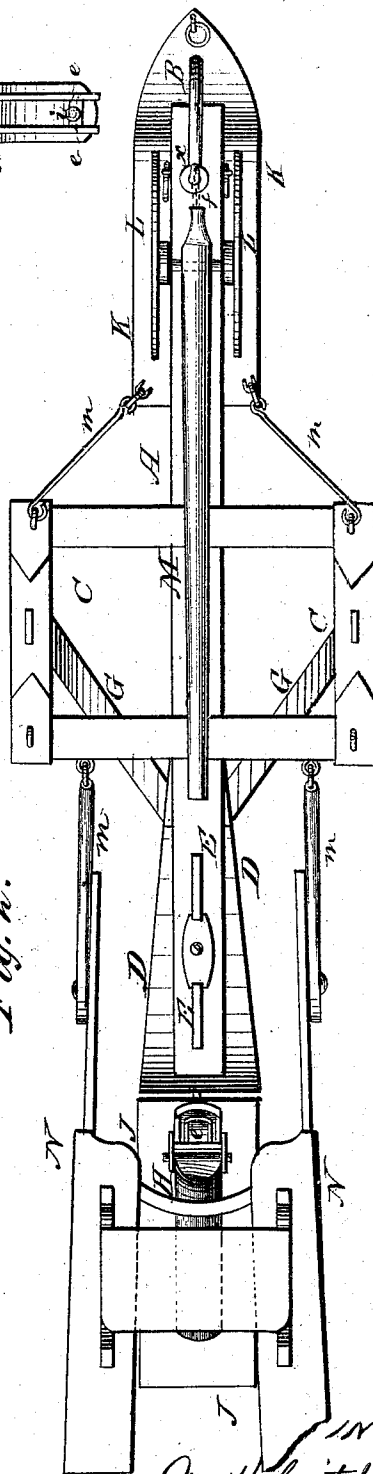


Fig. 2.



per.

INVENTOR
M. H. Critchet.
 per. *J. H. Alexander*
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UNITED STATES PATENT OFFICE.

MATTHEW H. CRITCHET, OF NEWAY, OHIO.

IMPROVEMENT IN DITCHING AND TILE-LAYING MACHINES.

Specification forming part of Letters Patent No. **173,911**, dated February 22, 1876; application filed January 10, 1876.

To all whom it may concern :

Be it known that J. M. H. CRITCHET, of Neway, in the county of Licking and State of Ohio, have invented certain new and useful Improvements in Ditching and Tile-Laying Machines, and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

The nature of my invention consists in certain improvements on the Ditching and Tile-Laying Machine for which Letters Patent No. 156,451 were granted to me November 3, 1874, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a side elevation. Fig. 2 is a plain view; and Fig. 3 is a detail of my invention.

A is the plow-beam, with clevis B and top frame C. D is the plow, and E G I the colters, all constructed and arranged substantially in the manner described in my former patent, above referred to. The tile-tube in my former machine was made a part of or rigidly secured to the back end of the plow, which was found to be objectionable for various reasons, but more especially because it made the plow necessarily so long that it was with difficulty it could turn in the ditch. To obviate this difficulty, I now make it separate, and form the tile tube H with a shoe or runner, J, which has a hook, *a*, at its front end to connect with a vertical rod, *b*, at the rear end of the plow, and thus forming a joint between the plow and tile-tube which allows them to turn any curves or bends in the ditch. *d d* are the tile-guides

within the tube H, forming the sides of the tube, which guides are provided with inward-projecting ears *e e*, slotted and fastened with screws *i i*, by which means the guides may be adjusted closer together or farther apart as required for the thickness or size of the tile. Under the beam A, in front of the plow D, is a shoe, K, provided with two vertical standards L L, suitably braced, and passing up, one on each side of the plow-beam, and having a lever, M, pivoted between its upper ends. The front end of this lever is by a short chain, *f*, connected with a hook, *x*, on the top of the clevis B. By this means the plow can be raised or lowered so as to run on top of soft or muddy ground, and to grade the ground which is not smooth, and keep the plow on the grade. Behind the machine is a sled or tender, N, which answers to put the tile on, and also for a man to sit on to feed the tile into the tile-tube. The runners of the sled are made wider apart at the front end than at the rear, so as to scrape the loose dirt into the ditch. The shoe K and sled N are connected by rods *m m* to the frame C on top of the plow-beam.

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

The combination, with a ditching-plow, A D, of the tile-tube H, hinged to the rear of the plow, the sled N, shoe K, with standards L and lever M, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

MATTHEW HARNY CRITCHET.

Witnesses:

T. H. GRAVES,
S G. DE CROW.