2 Sheets—Sheet 1.

J. I. & W. J. METTLER.

Tile Laying Machine.

No. 201,548. Patented March 19, 1878.

Fig. 1.

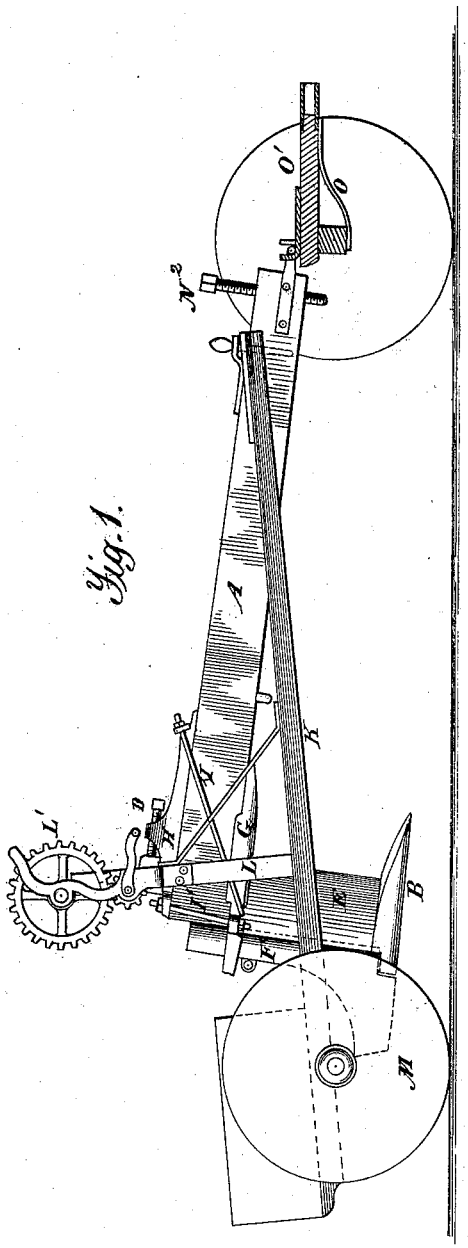
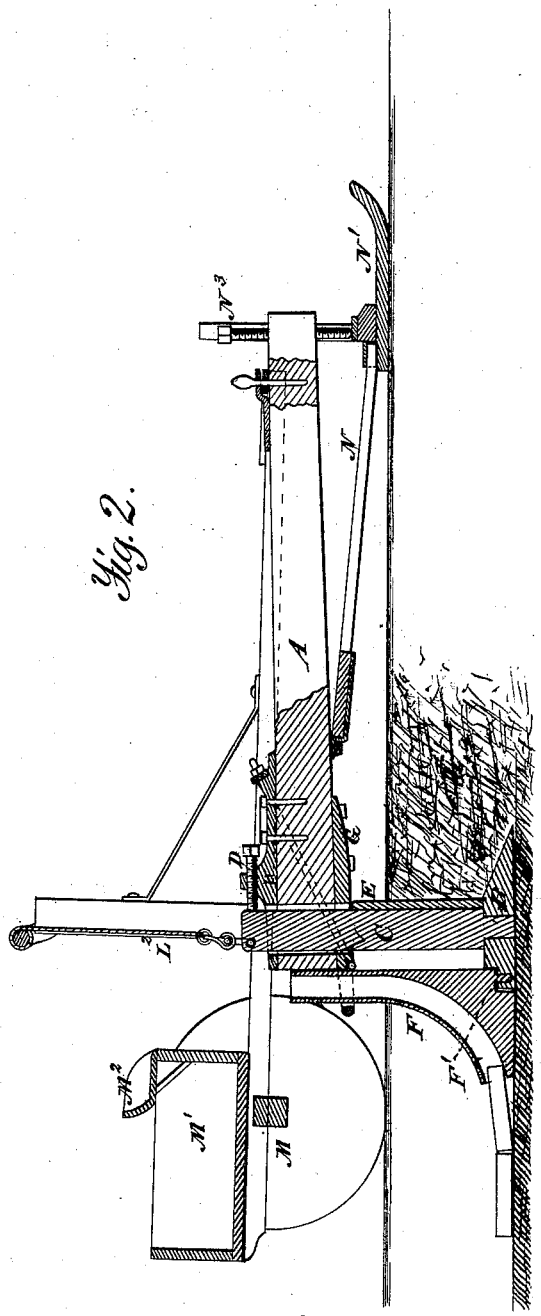


Fig. 2.



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2 Sheets—Sheet 2.

J. I. & W. J. METTLER.

Tile Laying Machine.

No. 201,548. **Patented March 19, 1878.**

Fig. 3.

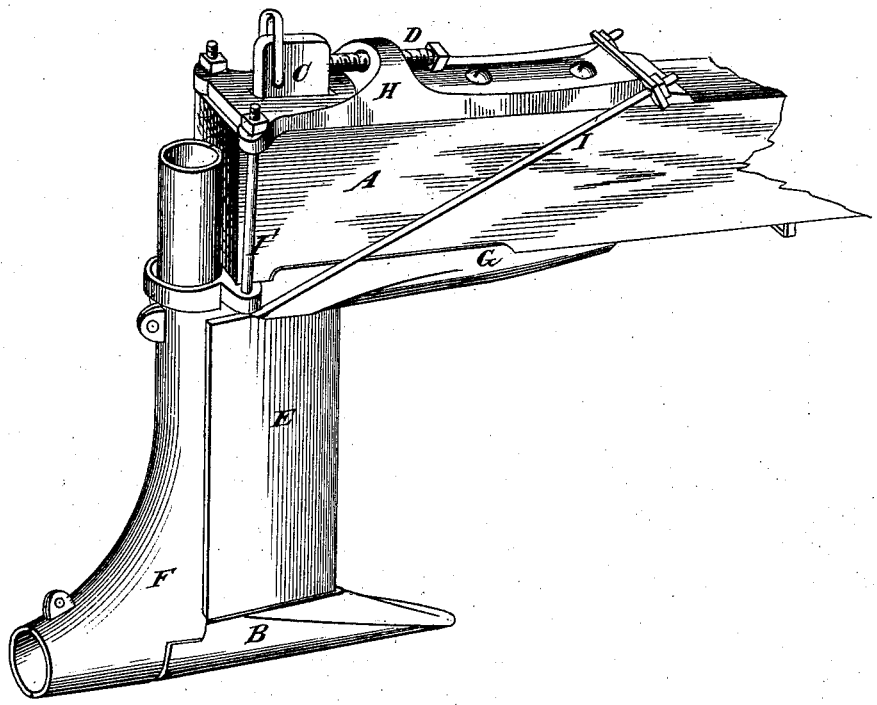
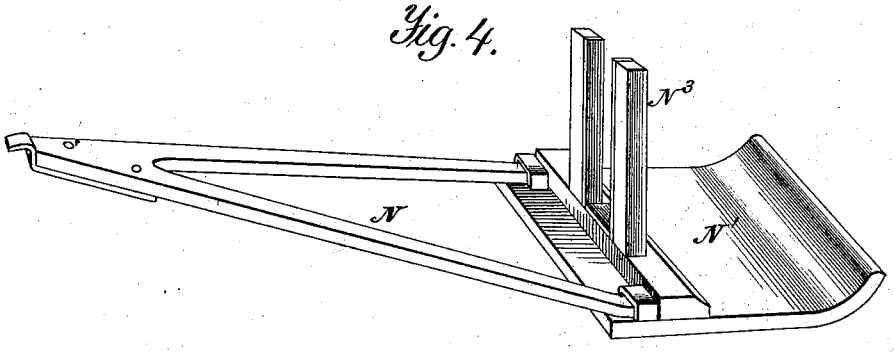


Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES I. METTLER AND WILLIAM J. METTLER, OF MENDOTA, ILLINOIS.

IMPROVEMENT IN TILE-LAYING MACHINES.

Specification forming part of Letters Patent No. **201,548**, dated March 19, 1878; application filed January 22, 1877.

To all whom it may concern:

Be it known that we, JAMES I. METTLER and WILLIAM J. METTLER, of Mendota, in the county of La Salle and State of Illinois, have invented new and useful Improvements in Tile-Laying Machines, of which the following is a specification:

This invention belongs to that class of machines in which a mole-plow opens a channel in the soil, in the bottom of which tile are deposited immediately behind the mole as it is drawn forward, by means of a tube hinged to and immediately in rear of the mole and standard.

The character of the improvements will be indicated in the following description and claims.

In the annexed drawings, making part of this specification, Figure 1 is an elevation of the machine fitted for transportation. Fig. 2 is a sectional elevation of the machine at work. Fig. 3 is a perspective view of the rear end of the beam, mole, and standard, and tile-dropper. Fig. 4 is a perspective of the shoe prepared for supporting the front end of the beam when at work.

The same letters are employed in all the figures in the indication of the same parts.

A is the beam, to which the mole B is attached by means of the standard C, which is controlled in its position by the set-screw D, which regulates the position of the mole in relation to the plane of the surface of the ground. E is a casing attached to the mole and inclosing the standard.

On the rear of the standard and casing is hinged a tube, F, made of two pieces of metal, connected by screws, the tubular opening being curved, so as to deliver a tile received vertically into the space left behind the mole horizontally.

The tile-tube is formed with a hole, which receives a corresponding pin, F′, formed on the heel of the mole, on which the tube swings, and is supported above by the cast-iron piece G, which is bolted to the under side of the rear end of the beam. On top of the beam is the cast flock H, from which the brace-rods I J′ extend to the piece G, firmly supporting the tube.

Shafts K are bolted to the beam near the front end, and support the frame L, carrying the wheel and axle L′, from which a chain extends to the standard C, as clearly shown in Fig. 2. By means of this chain the mole may be raised or lowered.

Near the rear ends of the shafts K is attached the axle-tree of wheels M, carrying a cart-body, M^1, for transporting the tile, and having a seat, M^2, for the attendant, who supplies the tile to the tube F.

The bifurcated brace N is attached to the beam, and carries the runner N^1, which supports the front end of the beam by means of the screw N^2, passing down through a threaded nut in the beam, and determining its position. Side braces N^3 on each side of the beam control the position of the runner laterally.

For the transportation of the plow, the front end of the beam is carried upon a truck, O O′, to which horses may be attached.

The construction and mode of attaching the tile-tube protect it against the friction of the earth on the sides as it lies recessed in the casing E, and permits it to be easily detached and taken apart for scouring it when necessary.

The slotted piece G, while it gives the necessary freedom of motion to the tube, also permits the standard passing through its slot to be adjusted at will, thus allowing the due adjustment of the parts while it supports them.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In combination with the beam A and mole B, the standard C, and casing E, inclossing the standard, and tube F, hinged to the shoe and beam in rear of the standard, and within the overlapping sides of casing E, substantially as set forth.

2. The beam and tubular tile-deliverer, and means for lifting the rear end of the beam, in combination with the truck M, swinging behind the beam, so as to perform the double function of a truck for transporting the beam and the tile-carrier for supplying when the machine is in operation, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES I. METTLER.
WILLIAM J. METTLER.

Witnesses:
LEWIS B. REX,
STEPHEN ARNOLD.