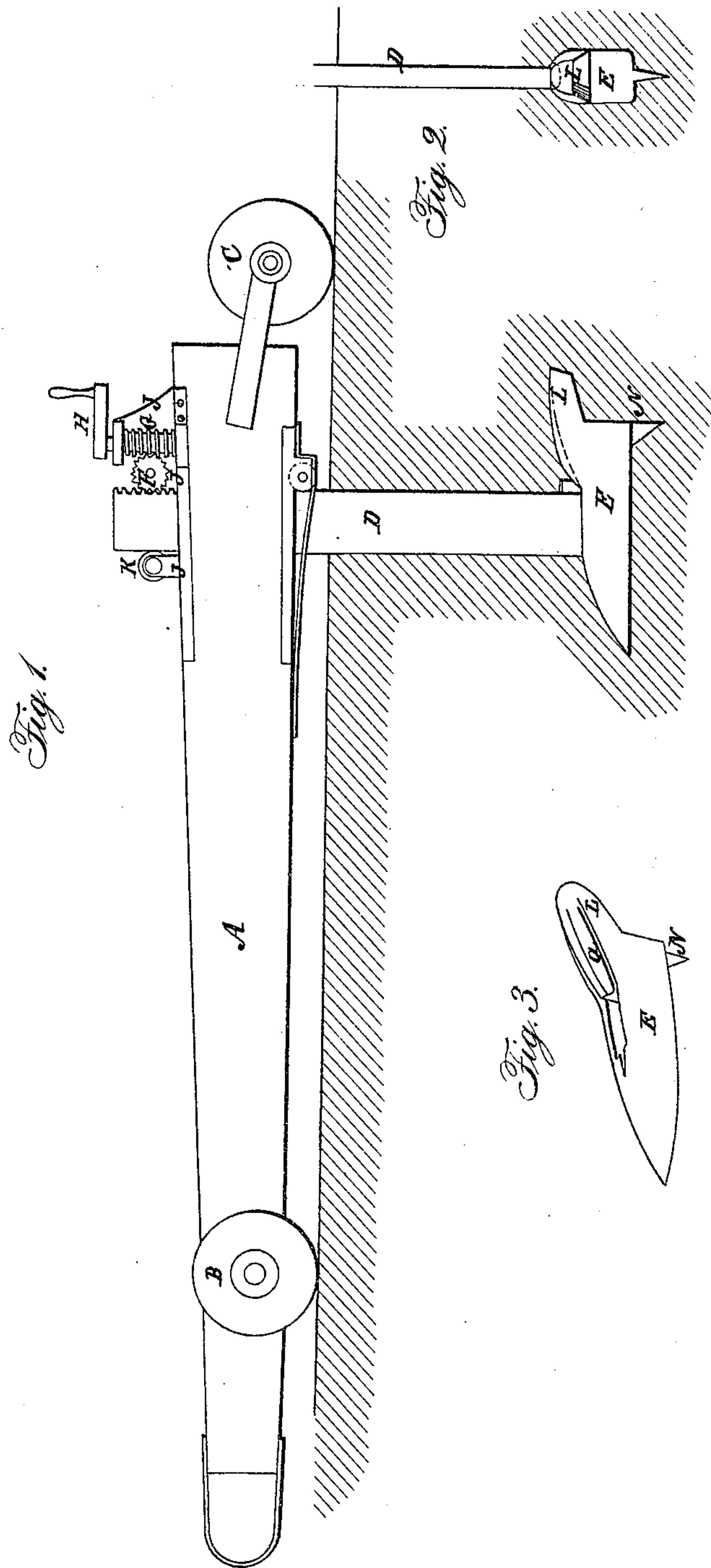


A. HAMMOND.

Mole-Plow.

No. 25,114.

Patented Aug. 16, 1859.



Witnesses:

*H. Magill*  
*Lathrop Hammond*

Inventor:

*A. Hammond*

# UNITED STATES PATENT OFFICE.

A. HAMMOND, OF JACKSONVILLE, ILLINOIS.

## IMPROVEMENT IN MOLE-PLOWS.

Specification forming part of Letters Patent No. 25,114, dated August 16, 1859.

*To all whom it may concern:*

Be it known that I, A. HAMMOND, of Jacksonville, in the county of Morgan and State of Illinois, have invented a new and useful Improvement in Mole-Plows; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and the letters of reference marked thereon, of which—

Figure 1 represents a side elevation of the plow, showing the shoe and standard sunk in the ground. Fig. 2 is an end view of the shoe and standard. Fig. 3 is a perspective view of the shoe detached from the standard.

My invention is an improvement upon the shoe or tooth of the mole or drainage plow; and it consists in extending a portion of the tooth out behind the standard and forming a furrow or groove in the upper surface of the same, diminishing as it reaches the extreme end, for the purpose of closing up the opening left by the standard, to prevent the ditch from filling up again. It also consists in forming or affixing in any suitable way a fin or angular-shaped knife to the sole of the shoe to open a place along the bottom of the ditch for allowing the water to pass up into the same and be drained off from below the ditch, described and represented as follows.

A represents a beam, of the usual length and strength, resting upon wheels B C, two placed in front and one extending out from the rear. The wheels serve to steady the beam and to prevent it from sinking in the ground during the operation of ditching.

Near the rear end of the beam A is an adjustable standard, D, having its front edge beveled like a knife's edge for the purpose of cutting through the sods freely as the machine is drawn forward. This standard carries on its lower end the shoe or tooth E, and is adjusted so as to raise or depress it from the surface of the ground by a small pinion spur-wheel, not shown in the drawings, meshing into rack-teeth on the standard, which is fixed to a shaft carrying on one end a spur-wheel, F, which latter is operated by an endless screw, G, turned

by a crank-handle, H, the whole being mounted in a standard, J.

In front of the standard D is a friction-roller, K, which bears the standards up against the pinion-wheel, and on the under side of the beam a similar roller is pivoted, against which the standard presses during the operation of ditching. These rollers allow the standard to be raised or depressed while in the ground with as little friction as possible.

The slide E which constitutes the essential feature of my invention and improvement, is so formed that it will pass through the ground with comparatively very little friction. At the same time it will close up the opening left by the standard and prevent the ditch filling up; and also that a slit or opening will be made along the bottom of the ditch, through which water from below the ditch can enter, and in this way drain the water off for some depth below the surface. For this purpose the sole of the shoe is made to pass through the ground parallel with the standard, it being straight and flat.

The shoe tapers from the heel to the point, as shown by the drainings, Figs. 1 and 3, and has a projection, L, extending out and up from the heel, which has a channel or groove, a, in its upper surface, as clearly shown by Fig. 3. The effect of this projection is to press the wet earth up and completely close the opening left by the standard.

N is a fin or knife projecting down from the heel of the shoe, the function of which is to cut a channel in the center of the ditch, as above explained.

What I claim as my invention, and desire to secure by Letters Patent, is—

The shoe E, provided with a knife, N, and projection L, when they are arranged and operate in the manner and for the purposes herein set forth.

A. HAMMOND.

Witnesses:

F. MAGILL,  
LATHROP HAMMOND.