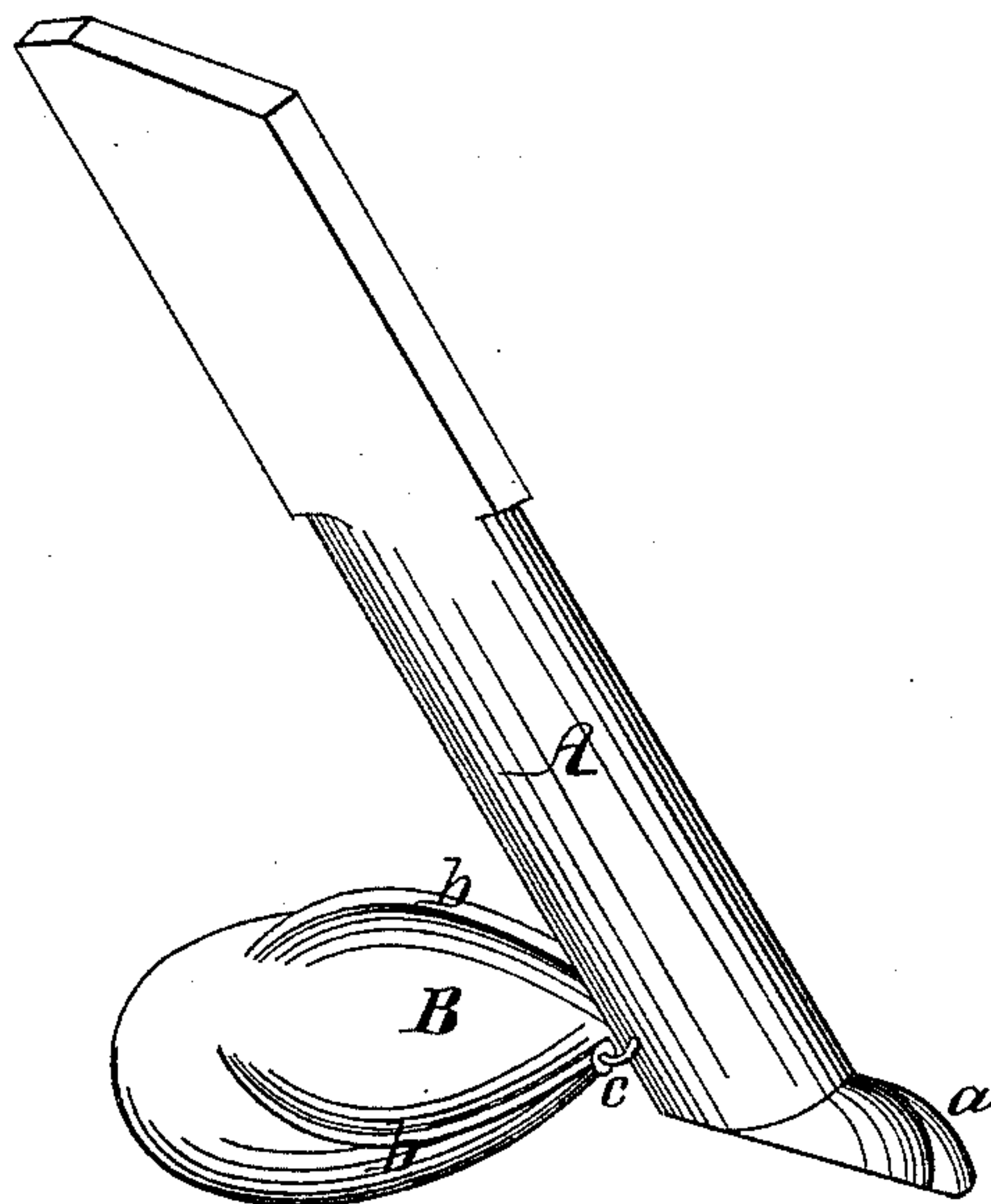


WALL, ROBERTS & CARTER.

Mole Plow.

No. 27,751.

Patented Apr. 3, 1860.



Witnesses.

J. A. C. Tauberschmitt
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UNITED STATES PATENT OFFICE.

A. L. O. WALL, G. ROBERTS, AND M. S. CARTER, OF DECATUR, ILLINOIS.

IMPROVEMENT IN MOLE-PLOWS.

Specification forming part of Letters Patent No. 27,751, dated April 3, 1860.

To all whom it may concern:

Be it known that we, A. LITTLE ONE WALL, GEORGE ROBERTS, and MILO S. CARTER, all of Decatur, in the county of Macon and State of Illinois, have invented a new and useful Improvement in Mole-Plows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, which makes part of this specification, and which represents in perspective our improved mole, together with the shank or colter to which it is attached.

In forming subterranean drains by means of a mole-plow the shank which carries the mole must necessarily extend from the drain to the surface of the ground, in order that it may be attached to the motive power by which it is carried through the soil to form the drain. This necessity being unavoidable, it becomes a great desideratum to devise some means by which the slit thus made could be effectually closed after the passage of the colter, for if this is not done the drain soon becomes choked up or destroyed by the percolation of the surface water into it causing the roof or sides of the drain to crumble and fall. Numerous devices have been employed for the attainment of this end, but yet none of them, it seems, have succeeded in accomplishing the object in as perfect a manner as we deem desirable. We have therefore invented an instrument which attains this result in a highly satisfactory manner; and our invention consists in making the mole of the plow of an ovoid shape, it being caused to advance small end foremost through the ground, and inserting into its upper side, near its forward end, two crescent-shaped ribs or flanges, as shown in the drawing, whereby a small portion of earth is scooped from the sides of the drain and carried backward to the large end of the mole, by the action of which it is pressed by a trowel-like motion into the slit left by the shank or colter, which slit is thereby effectually closed. The flanges, moreover, serve the additional purpose of counteracting the tendency of the mole to rise to the surface. We have also demonstrated by experiment that a mole of the configuration employed by us can be operated with an expenditure of power much less than that required by one of any other form with which we are acquainted.

In the accompanying drawing the shank or colter and mole only are shown.

The shank A may be secured to the beam of the plow in any suitable manner. We prefer to make this colter with a slight projection or flange, *a*, at its bottom, having found such form to answer a very good purpose.

The mole B is of an ovoid shape, and its smaller end is connected to the heel of the colter A by a flexible link, C, of sufficient strength to preserve the union between the two under all circumstances. Crescent-shaped ribs *b* are inserted into, cast on, or otherwise secured to the mole in the manner shown in the drawing.

The operation of the machine is as follows: Motion is communicated to the shank A by means of any of those devices well known to persons skilled in the construction of subterranean drains. As the colter advances through the soil it draws the mole after it and leaves a slit behind it extending from the bottom of the drain to the surface. The mole crowds the loose earth away from its path and compacts it against the sides of the perforation which it makes during its progress. The ribs prevent any tendency on the part of the mole to rise, giving it what is technically called "suck." They also tend to prevent any lateral deviation of the mole from its path, and as it advances scoop out a small portion of the earth and convey it loosely backward and upward to the larger diameter of the mole, by the action of which it is pressed closely into the slit, which is thus closed effectually, and the percolation of the surface water almost entirely prevented.

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

The ovoid-shaped mole, in combination with the scooping-flanges, substantially as herein described, for the purposes set forth.

In testimony whereof we have hereunto subscribed our names.

A. L. O. WALL.
GEORGE ROBERTS.
M. S. CARTER.

Witnesses:

JAMES MCWILLIAS,
ISAAC FREESE, Jr.