I. C. PRATT.

Mole-Plow.

No. 26,708

Patented Jan. 3, 1860.

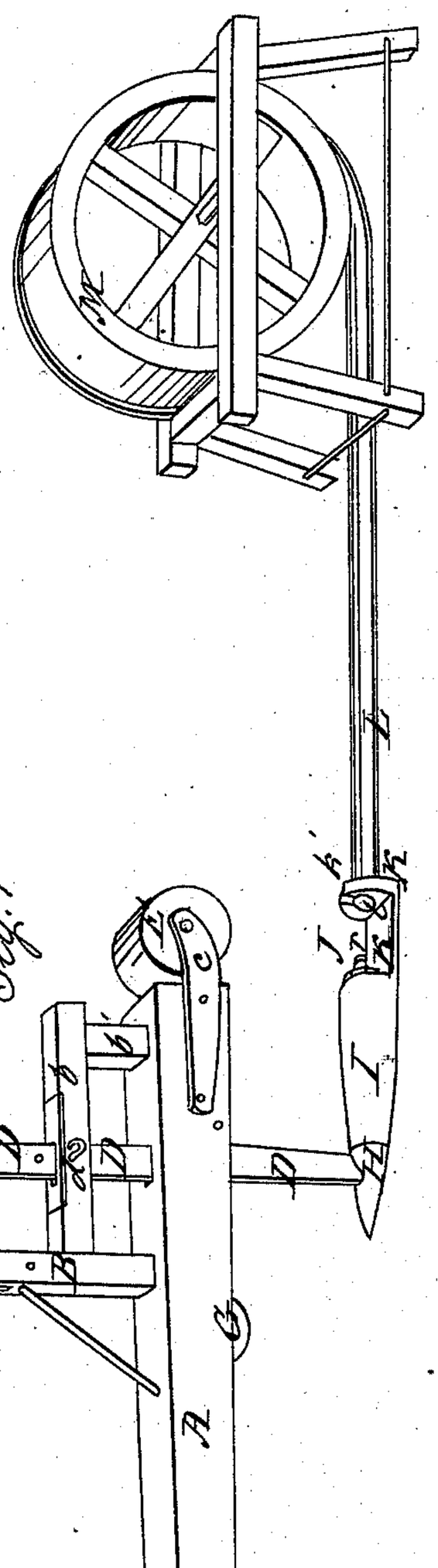

Fig. 1

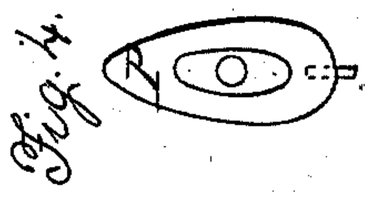

Fig. 4.

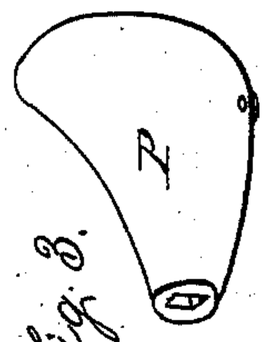

Fig. 3.

Fig. 5

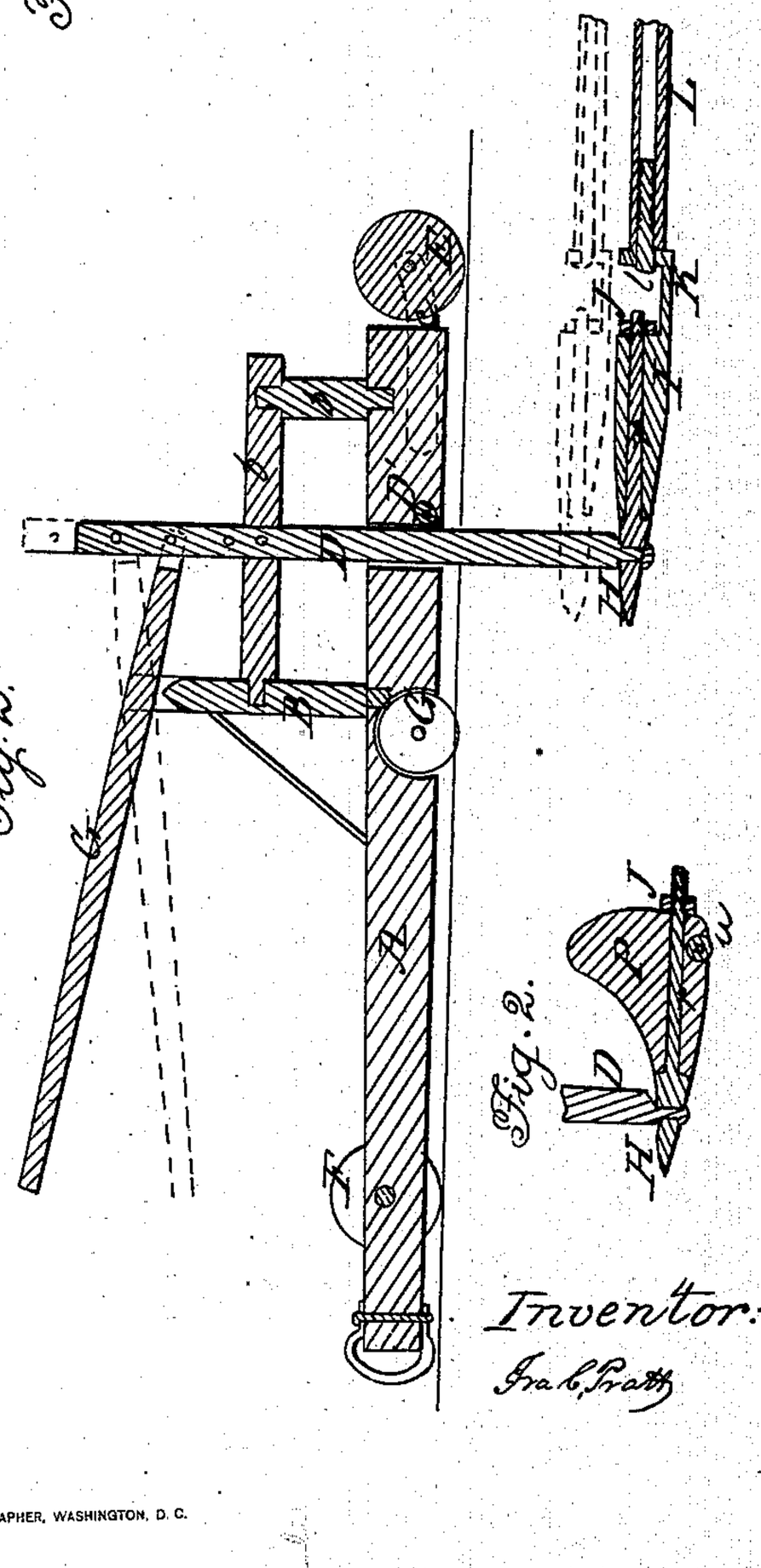

Fig. 2.

Fig. 2.

Witnesses:
Joseph B. Babcock
James Deans

Inventor:
Ira C. Pratt

UNITED STATES PATENT OFFICE.

IRA C. PRATT, OF MORTON, ILLINOIS.

IMPROVEMENT IN DRAINING AND PIPE-LAYING MACHINES.

Specification forming part of Letters Patent No. **26,708**, dated January 3, 1860.

To all whom it may concern:

Be it known that I, I. C. PRATT, of Morton, in the county of Tazewell and State of Illinois, have invented a new and useful Improvement in Ditching and Pipe-Laying Machines; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The object of my invention is the construction of a machine by means of which an underground drain may be made and a lead or other flexible pipe laid therein in one combined operation; and the nature of my invention relates, first, to the mode of constructing the mole-point so that it may be secured to the proper mole or device for perforating the ground; second, to a mode of securing the mole-point to an adjustable cutting-shaft; third, to the employment of a screw or its equivalent in effect for securing the pipe in such manner that said pipe may be properly drawn within the perforation; and, fourth, the employment of a rotary cutter arranged at the bottom of the mole or other perforating device, as hereinafter specified and represented.

In reference to the accompanying drawings, Figure 1 is a side elevation, and Fig. 2 a vertical sectional elevation, of my improved ditching and pipe-laying machine. Fig. 3 is a perspective view of a mole or perforating device provided with a rotary cutter. Fig. 4 is an end or rear view of said mole. Fig. 5 is a top view of the device which I prefer for conducting the pipe under ground. Fig. 6 is a sectional view, showing the mode of securing the mole or perforating device to the mole-point.

A represents the beam of the machine, provided near its forward end with two rollers, F, and at its rear end with a roller, E, and also near its center with a rotating cutter, G, by means of which the surface of the ground may be cut or slit for the entrance of the cutting-shaft D. The said shaft D is made to pass through the beam A in front of the friction-roller D′, thence upward through the bar *b*, to which it may be secured by means of a pin, *d*. The said shaft D is adjustable vertically by means of the lever C, as is clearly shown in Fig. 1, in such manner that the foot of the cutter or shaft D and mole-point H may be adjusted at any desired depth in the ground.

The mole-point H is constructed with a screw-rod, *r*, which is provided with a nut, J, by means of which a mole of any desired size or form may be securely attached to the mole-point, as is clearly represented in Figs. 2 and 6. The foot of the shaft D is made to pass loosely through the mole-point H in such manner as to form a pivot upon which the point H may turn freely, by means of which the making of curves or deviations from a straight line is facilitated. The mole I is made with a shank, K, and flange *k*. In said flange *k* is a slot, *k′*, which is adapted to receive the screw *l*, by means of which the pipe L may be secured in such manner as to be drawn within the ground, as fully shown in Fig. 2. (*u* shown clearly in Fig. 6) is a rotary cutter arranged at the bottom of the mole P, by means of which a slit may be cut in the bottom of the drain to allow the passage of water. The said cutter may be used with the mole I with the same facility as with the mole P.

M is a reel, upon which pipe may be wound to facilitate the operation of laying the same.

Having described the construction of my invention, its operation may be briefly described as follows: A proper excavation being made in the ground to receive the mole I, the shaft D will be adjusted, as before desribed, in such manner that the pipe may be laid at the proper distance below the surface of the ground. The screw *l* will then be inserted firmly within the said pipe. The screw will then be adjusted in the slot *k′* of the flange *k*, as shown in Figs. 1 and 2. The machine will then be moved forward by means of a capstan or other suitable device until any desired length of pipe has been drawn within the ground.

I do not claim anything for the form of the perforating device, as I am aware that moles of various forms have been used for the purpose of making subterranean drains; but,

Having described the construction and op-

eration of my invention, what I claim as my invention, and desire to secure by Letters Patent, is—

1. Pivoting the mole-point on the adjustable cutter D, for allowing lateral motion in said point, and the mole attached thereto, substantially as described.

2. The screw *l*, or its equivalent, in combination with the mole I K *k k'*, for securing the pipe in such manner that it may be drawn within the perforation made by the mole I, substantially as described.

IRA C. PRATT.

Witnesses:

JAMES DELANE,

JOSEPH B. BABCOCK.