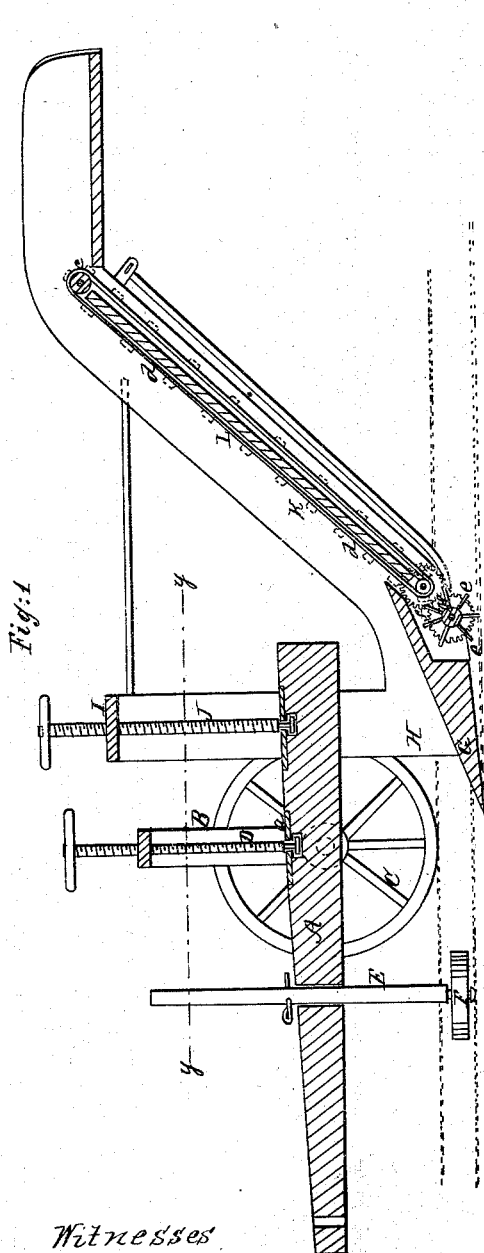


W. H. Dalbey.

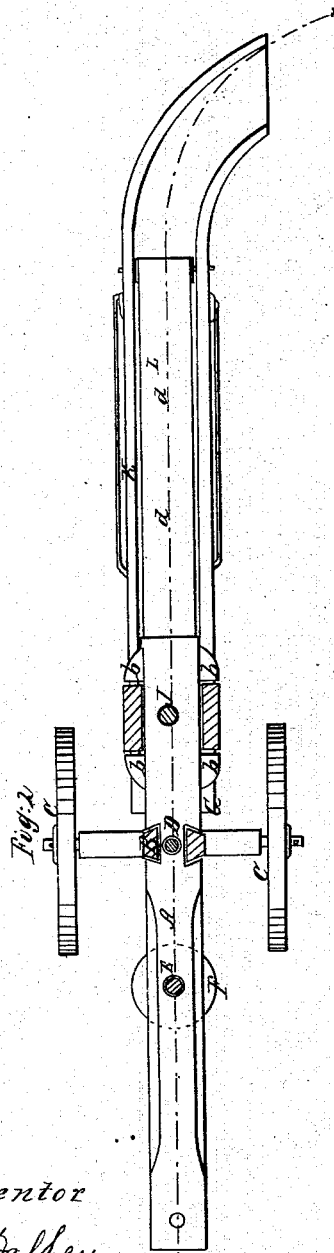
Excavator.

No. 49,239.

Patented Aug. 8, 1865.



Witnesses
Wm. Brown
Geo. Tushy



Inventor
W. H. Dalbey
By [Signature]

UNITED STATES PATENT OFFICE.

WM. H. DALBEY, OF CLARKSBURG, INDIANA.

IMPROVED DITCHING-MACHINE.

Specification forming part of Letters Patent No. 49,239, dated August 8, 1865.

To all whom it may concern:

Be it known that I, WILLIAM H. DALBEY, of Clarksburg, in the county of Decatur and State of Indiana, have invented a new and Improved Machine for Cutting Drains and Ditches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a horizontal section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a new and improved machine for cutting drains and ditches; and it consists in the employment or use of cutters and an elevator arranged with a beam mounted on wheels, as hereinafter fully shown and described, whereby the work may be done very expeditiously and in a perfect manner.

A represents a beam, to which the team or draft-animals are attached; and B is a yoke, which is fitted on said beam in such a manner that the latter may rise and fall within it, the sides of the yoke fitting in dovetail grooves in sides of the beam. The lower part of this yoke has wheels C C attached to it; and D is a screw which passes vertically through the top of the yoke, and has its lower end fitted in a plate, *a*, on the top of the beam, as shown in Fig. 1, the lower end of the screw having a groove made circumferentially in it, in which the plate *a* is fitted to form a connection between the screw and the beam.

E represents a rod, which passes vertically through the beam A, and has a horizontal roller or wheel, F, on its lower end.

G is a cutter, which is somewhat inclined from a horizontal position and forms the bottom cut of the drain or ditch; and H H are two vertical side cutters, which extend upward from each side of G, the plates of said cutters extending above the beam A and connected at their upper ends by a plate, I, through which a screw, J, passes, the lower end of the latter being connected to the beam in the same way as the screw D of the yoke B.

The plates of the cutters H are fitted between guides *b* at the sides of the beam A.

K represents an inclined box, the lower end of which is attached to the rear of the cutter

G and to the rear of the lower parts of the cutters H H. This box contains an inclined elevator, L, which may be constructed of an endless india-rubber belt working over rollers *c c'*, and having steel bars *d* attached to it at equal and suitable distances apart. Motion is given this elevator by means of a drum, M, which is underneath the rear part of the cutter G, and is armed with spikes *e*, which, as the machine is drawn along, penetrate into the earth and insure the rotation of M, from which motion is communicated to the lower roller, *c'*, of the elevator by gearing *f*. (Shown in Fig. 1.)

The wheels C C run at each side of the cut, and the depth of the latter is regulated by means of the screw D.

Temporary adjustments may be effected through the medium of the screw J, in order to admit of the cutters passing over rocks or other obstructions, and also to compensate for the inequalities of surface over which the wheels C C may pass.

The wheel F serves to prevent any side surging of the machine, as it will come in contact with the sides of the drain or ditch cut, and the earth cut by the cutters is carried upward by the elevator L, which is made to move with a speed rather faster than the draft movement of the machine, and is discharged through a curved spout, N, to one side of the drain or ditch.

The beam A may be of wood; the sides of the elevator-box K of steel plates, with a hardwood bottom.

The cutters should, of course, be of steel; but I do not confine myself to any particular material for any of the parts.

I claim as new and desire to secure by Letters Patent—

1. The beam A, having the mounted yoke B applied to it, as shown, in connection with the cutters G H H, box K, and inclined elevator L, all arranged to operate in the manner substantially as and for the purpose herein set forth.

2. The toothed drum M, armed with teeth *e* and connected to the roller *c'* of the elevator L by gearing *f*, for the purpose of driving the elevator, as set forth.

WILLIAM H. DALBEY.

Witnesses:

JESSE MILLER,
SOLOMON SHARP.