3 Sheets--Sheet 1.

HENRY CARTER.

Improvement in Ditching Machines.

No. 125,167. Patented April 2, 1872.

Fig. 1.

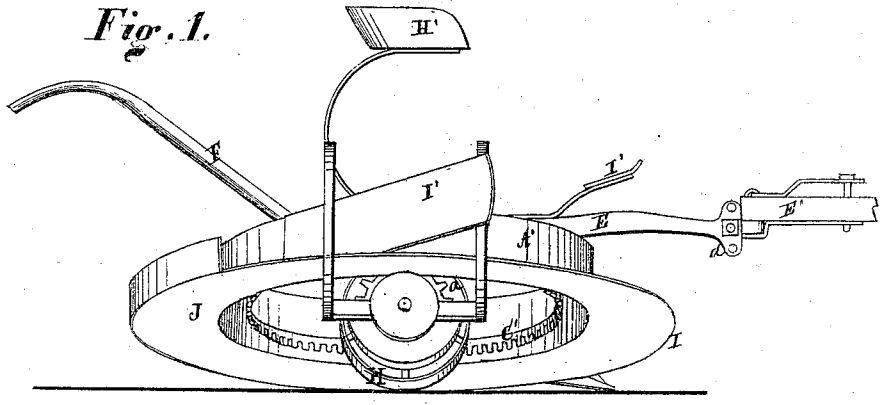


Fig. 2.

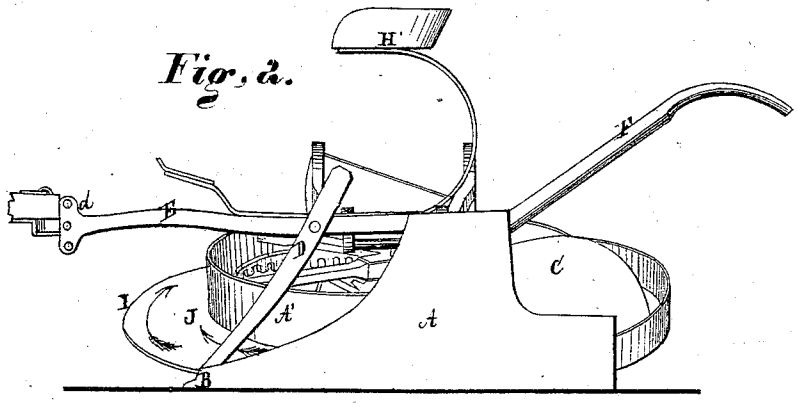
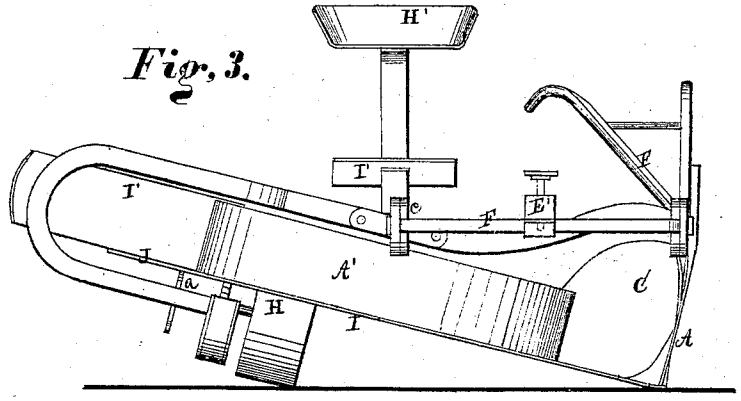


Fig. 3.



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3 Sheets—Sheet 2.

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Fig. 4.

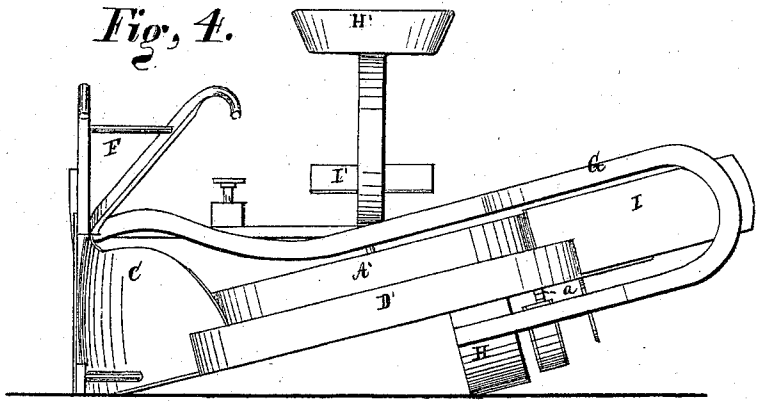
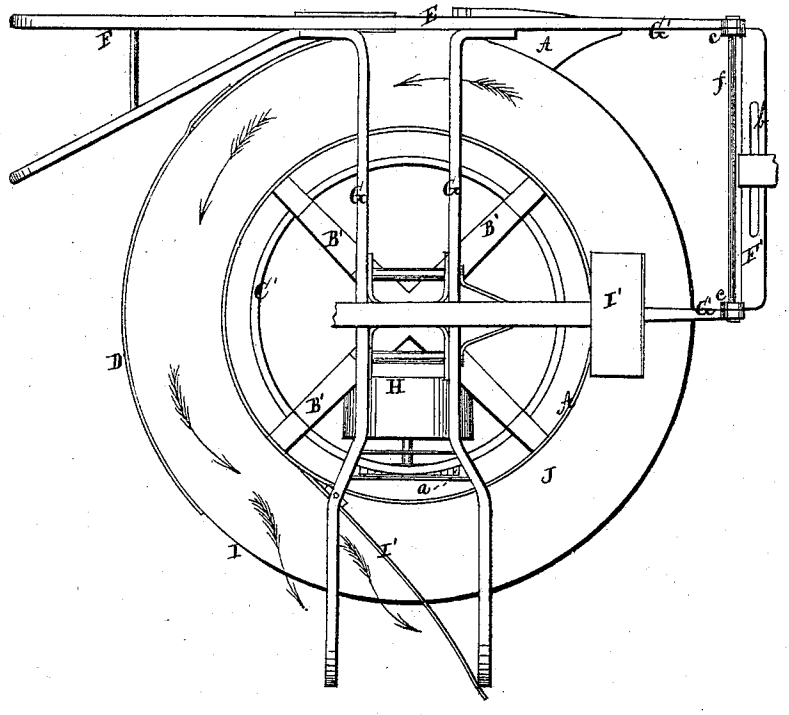


Fig. 5.



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3 Sheets--Sheet 3.

HENRY CARTER.

Improvement in Ditching Machines.

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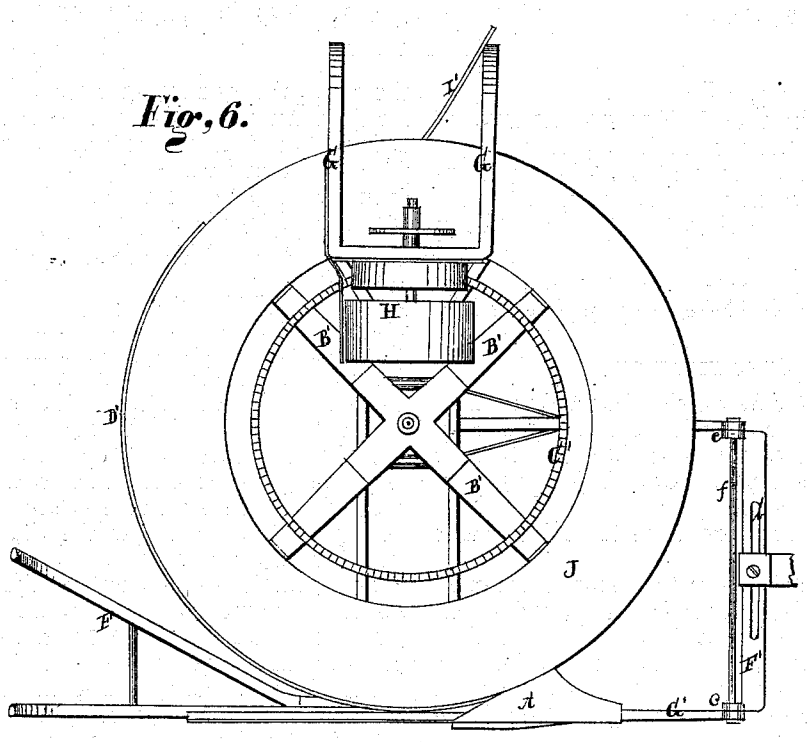
Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY CARTER, OF AYLMER, CANADA.

IMPROVEMENT IN DITCHING-MACHINES.

Specification forming part of Letters Patent No. 125,167, dated April 2, 1872.

To all whom it may concern:

Be it known that I, HENRY CARTER, of Aylmer, in the county of Elgin, Province of Ontario, and Dominion of Canada, have invented a certain new and Improved Machine for Subsoiling, Ditching, &c.; and I do hereby declare that the following is a full, clear, and complete description thereof, reference being had to the accompanying drawing making part of the same.

SPECIFICATION.

Figure 1 is a side view of the machine. Fig. 2 is a view of the opposite side of Fig. 1. Fig. 3 is a front view. Fig. 4 is a view of the rear end. Fig. 5 is a plan view. Fig. 6 is a view of the under side.

Like letters of reference refer to like parts in the several views.

The purpose of this invention is to cut trenches in which to lay tile for drainage; and which invention consists of a plow having attached thereto a revolving elevator, whereby the loose dirt thrown up by the plow is conveyed out of the trench and deposited along the side thereof.

Of said invention the following is a more full and complete description.

In the drawing, Fig. 2, A represents the plow, (the land-side thereof;) B, the point; C, the mold-board; D, the colter; E, the beam; F, the handles; all of which are firmly connected to one end of the iron frame G, Fig. 4, extending across the top of the machine, and curving downward and under thereof, as shown in said Fig. 4. To the extreme of the curved end of said frame is attached a wheel, H, Figs. 3 and 4, upon which the outer side of the machine is supported and carried. From the center of the frame is hung an elevator, I, consisting of a broad circular ring, J, Figs. 2 and 5, provided on its inner edge with a deep flange, A′, inclosing the arms B′ attached thereto, and whereby the elevator is suspended from the frame. Within the compass of the flange A′, and to the arms B′, is secured a toothed wheel, C′, Fig. 6, which is made to engage a pinion, *a*, Fig. 1, secured to the shaft of the wheel H, whereby it is operated, as and for a purpose presently shown. It will be observed that the outer edge of the ring J of the elevator fits closely into the mold-board side of the plow, the two being respectively curved for their mutual adaptation, as shown in Fig. 5, and that from the end of the mold-board proceeds a guard, D′, Fig. 4, which reaches around nearly to the frame, the use of which will hereinafter be shown. F′, Fig. 1, is the pole to which the team is geared for drawing the machine. Said pole is attached to the machine by a cross-piece, F′, having a slot, *b*, therein, in which the end of the pole may be adjusted either way from the middle, as the draft of the machine may require. The cross-piece F′ is connected to the arms G′ by ears *c*, Fig. 3, having holes therein, whereby it is bolted to the ears *d* of the arms, having corresponding holes for the admission of the bolt *f*, by which means the cross-piece and pole can be adjusted vertically, as the working of the machine may demand.

The practical operation of the above-described machine is as follows: The machine is placed on the ground in the position shown in Fig. 3, with the plow A on the line in which the trench is to be cut. The driver takes his place on the seat H′, resting his feet on the step I′. As the machine moves forward the plow turns up the dirt and throws it upon the elevator I, which, on being made to rotate by the wheel and pinion H *a*, it is thereby carried up in direction of the arrows, Fig. 5, and thrown off upon the ground along the side of the trench. The guard D′ prevents the dirt from falling off in the rear of the machine, and the flange A′ restrains it from falling into the machine, whereas the guard I′, Fig. 5, prevents it from being conveyed around down to the plow.

The first cut or furrow having been made, a second one is then turned in like manner by the plow going through the furrow again, and so on until the required depth of the trench is obtained.

In consequence of the inclined position of the machine the trench cut will be of a V-shape, so that the tile when laid therein will have firm and solid walls of dirt against which to lie, and which can be laid without special care being taken to have them in line, as each piece of tile will assume a straight direction in consequence of the angle of the trench.

The above-described machine, though intended for trenching for tiles, is well adapted for

cutting open drains, subsoiling, and grading, and for which purposes it can be worked with excellent results.

Claims.

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

1. The revolving elevator I, as constructed and arranged in relation to and in combination with the plow A and guard D to co-operate conjointly therewith, in the manner substantially as described, and for the purpose specified.

2. The revolving elevator I, flange A′, and cog-wheel C′, as arranged in combination with the pinion *a* and wheel H, substantially in the manner and for the purpose set forth.

3. The arrangement and combination of the plow A E, frame G, revolving elevator I, guard I′, and wheel H, in the manner substantially as described, and for the purpose specified.

HENRY CARTER.

Witnesses:
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J. C. GILLY.