O. Doolittle.

Excavator.

No. 36,511. Patented Sept. 23, 1862.

Fig. 3.

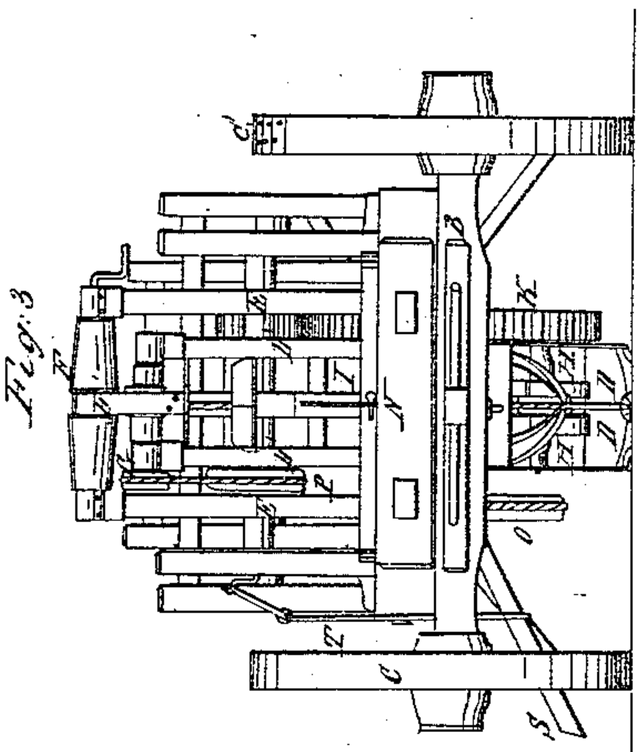


Fig. 4.

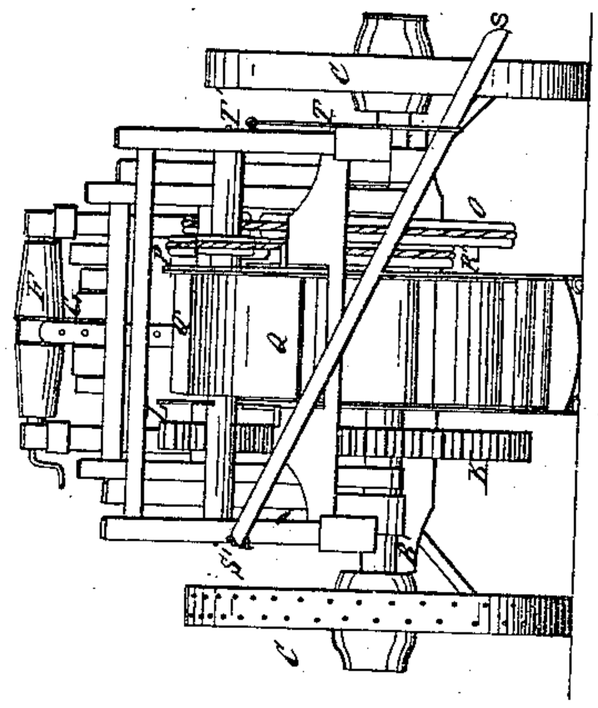


Fig. 1.

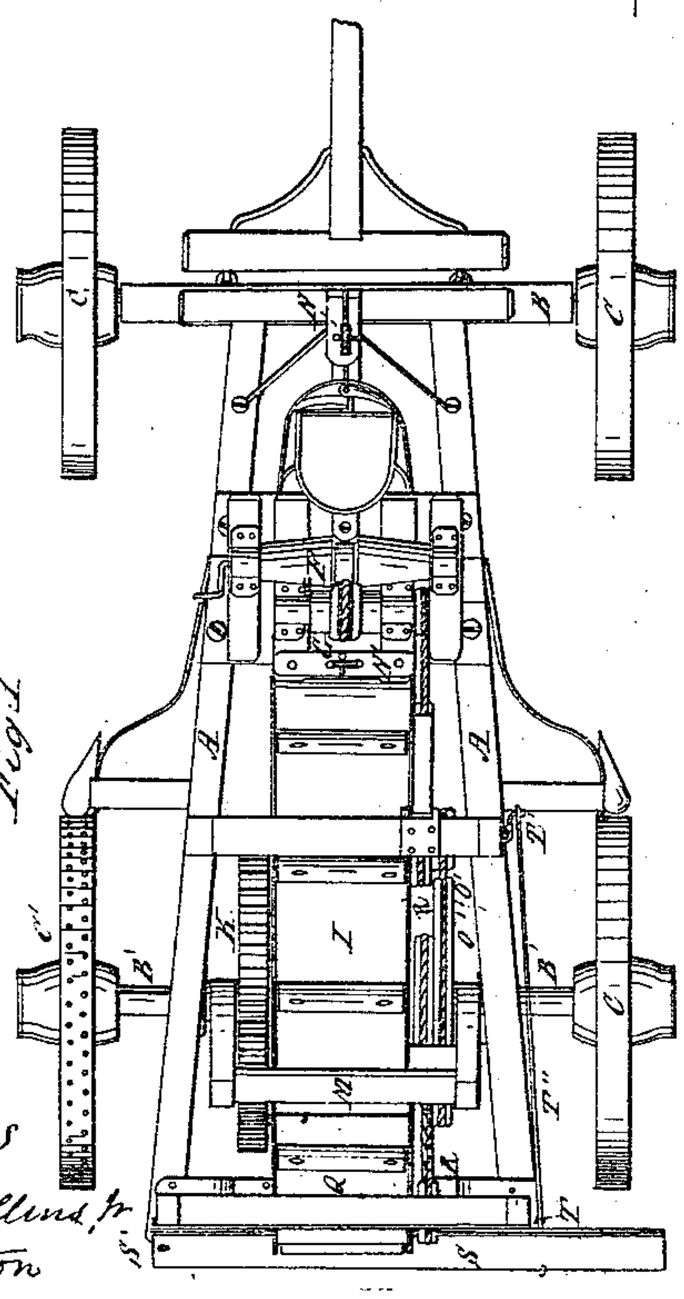
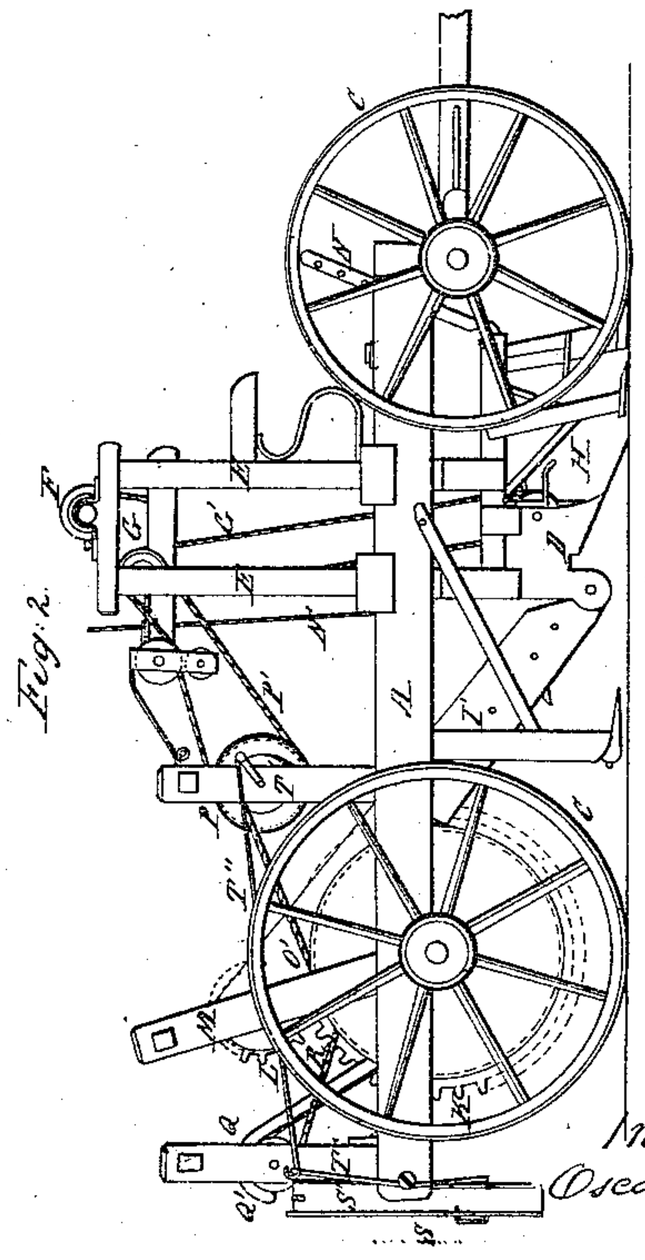


Fig. 2.



Witnesses
Ed Collins, Jr.
S. S. Cotton

Inventor
Oscar Doolittle

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

OSCAR DOOLITTLE, OF DANSVILLE, NEW YORK.

IMPROVEMENT IN DITCHING-MACHINES.

Specification forming part of Letters Patent No. **36,511**, dated September 23, 1862.

To all whom it may concern:

Be it known that I, OSCAR DOOLITTLE, of Dansville, in the county of Steuben and State of New York, have invented new and useful Improvements in Ditching-Machines; and I do hereby declare that the following is a full, and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a top view. Fig. 2 is a side view. Fig. 3 is a front view, and Fig. 4 is a rear view.

Like letters refer to like parts in the several views.

The nature of my invention relates, first, to such an arrangement of the main carrying-band or elevator in relation to the scoop that in depressing and elevating the latter the elevator needs no adjustment as regards length; second, in placing a stationary elevator in the rear of the adjustable one, for receiving the dirt from the excavation, and inclosing each in a trough to prevent the dirt from falling off; third, in the receiving-spout at the rear end of the machine, so constructed and arranged that it will deliver the dirt outside of the wheel-track; and, fourth, to the gage-bars connected with the scoop and sliding frame, so as to gage the depth to be cut at each passage of the machine.

This machine being an improvement upon a former patent granted to me under date of February 12, 1861, I shall confine my present description to those parts directly involved in the improvement, giving only a mere outline of the machine in general. This consists in a frame-work, A, supported upon two axle-trees, B B′, and four wheels, C, C, C, and C′, one of the wheels, C′, being secured to the axle-tree B′, which rotates with it and gives motion to other parts of the machine, hereinafter to be described.

The scoop D is attached to a sliding frame, D′, which can be moved up and down in guides placed between the posts E, of which there are four. Upon the top of these posts is secured the windlass F, by means of which and the strap F′ the scoop is raised and lowered, according to the desired depth of the ditch. The pulley G is attached to the top of the sliding frame D′, and which by means of a band, G′, Fig. 2, gives motion to the rotating fingers H, which scrape the dirt from the scoop D to the carrying-band or elevator I, Figs. 1 and 3, and which is inclosed in the trough I′, Fig. 2.

K is a cog-wheel situated upon the axle-tree B′ and gearing into the pinion L, thus giving motion to the elevator I, which passes around the shaft of the pinion L. The shaft of the pinion L is supported upon an articulating-frame M, Figs. 1 and 2, and which has its point of articulation concentric with the cog-gear K. Consequently the frame M and pinion L can be brought forward and downward without being thrown out of gear with the wheel K. Consequently the scoop can be raised and lowered at pleasure without the necessity of lengthening or shortening the elevator I. The elevator is held in any desired position by means of the gage-rods N N′, which are secured at the desired point by means of pins passing through the holes made for that purpose.

O is a pulley situated upon the shaft B′, and by means of a band, O′, gives motion to the pulley P and by the band P′ to the pulley G, Fig. 2.

Q is a stationary elevator placed at the rear end of the machine to receive the dirt from the adjustable elevator I. This stationary elevator is put in motion by a band, R, which passes around the pulley R′. The dirt as it falls from the top of the elevator I falls upon the stationary elevator Q, and is carried upward to the top Q′ and discharged as follows:

S is a spout placed in an inclined position in the rear of the machine, and into which the dirt is delivered from Q′. The upper end of the spout is supported by a pin, S′, and the lower end is suspended by a rod, T, and a shaking motion given to it by the crank T′ and connecting-rod T″, and by means of the spout S the dirt is deposited outside of the wheel C, Fig. 4.

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

1. The combination of the articulating-frame M with the elevator I and scoop D, as set forth.

2. The combination of the elevators Q and I, constructed and arranged as and for the purpose herein described.

3. The gage-rods N N′, in combination with the sliding frame D′, rotating fingers H, and scoop D, as and for the purpose herein described.

OSCAR DOOLITTLE.

Witnesses:

GEO. COLLINS, Jr.,

S. S. COTTON.