2 Sheets—Sheet 1.

A. VREELAND.

SELF-LOADING CART.

No. 181,882. Patented Sept. 5, 1876.

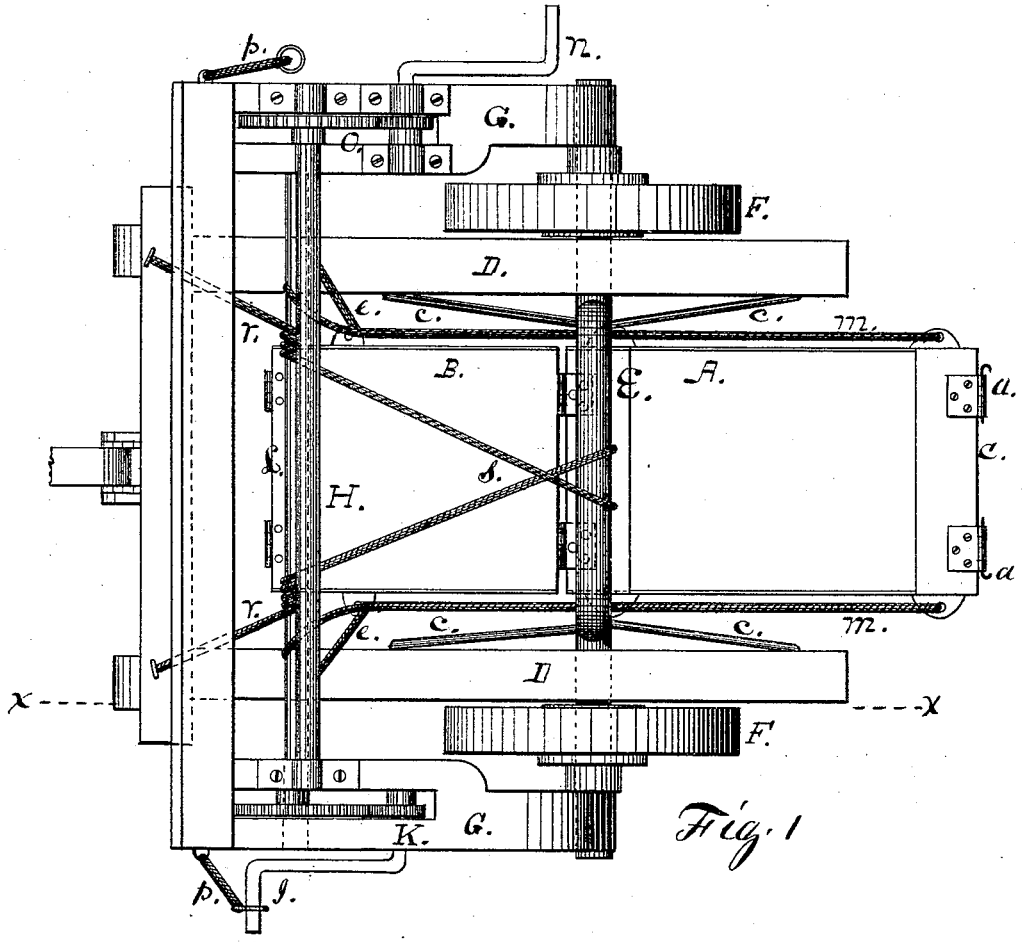

Fig. 1

Witness
Horace Harris
John C. Tunbridge.

Inventor
Aaron Vreeland

2 Sheets—Sheet 2.

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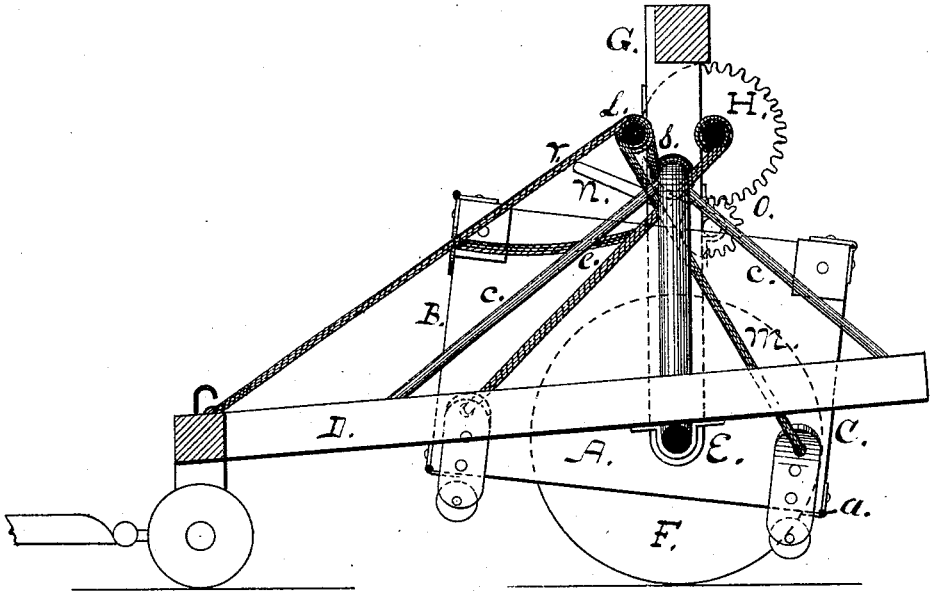

Fig. 2

Witness
Horace Havens
John C. Tinbridge

Inventor
Aaron Vreeland

UNITED STATES PATENT OFFICE.

AARON VREELAND, OF MONT CLAIR, NEW JERSEY.

IMPROVEMENT IN SELF-LOADING CARTS.

Specification forming part of Letters Patent No. **181,882**, dated September 5, 1876; application filed July 31, 1876.

To all whom it may concern:

Be it known that I, AARON VREELAND, of Mont Clair, in the county of Essex and State of New Jersey, have invented a certain Improvement in Excavators, of which the following is a specification:

My invention consists in the reversible scoop or cart-body, having the open front and rear ends, and in the mode of hanging and operating the same.

Figure 1 is a plan view. Fig. 2 is a sectional elevation from the line of *x x*.

I construct a cart or excavator body, A, by hinging both end pieces, so that they may swing open. The front one, B, is hinged at the bottom, and is arranged to be let down, to be used in the form of a scraper, to gather up the earth into the body when the cart is drawn along. The rear end C is hinged at the top, and is held closed at the bottom by the pins *a*. When the body is full the pins may be removed, and the front of the body being raised, the earth will push this end open and slide out; but this rear end may be hinged at the bottom, the same as the front end, and accomplish substantially the same result. The pins being withdrawn, the earth will pass out over it.

In my improvement I attach the draft-frame D to the axle E, on the inside of the wheels F, and I attach the windlass-frame G to the axle outside of the wheels, the better to equalize the strain on the axle. The axle is thrown up in center to allow the body to carry under it, and the axle is stayed by the braces *c*, attached to the frame D.

Fig. 1 shows the body with the front end B thrown down, and the machinery in condition for excavating, and when drawn along for filling, the chains *e*, attached to the front end of the body, and to the windlass H, will gage the depth of the draft.

When the body is filled the crank I, turned over forward, will, by the connecting-gear K turning the windlass L, wind up the chains *e*, before named, and the chains *m*, attached to the rear end of the body. This winding continued will close up the front end and raise the body for carrying; but when it is desirable to dump the cart, the crank *n* is turned in the same direction, which, by the connecting-gear *o* turning the windlass H, will wind up the chains *e* farther, and elevate the front of the body, when, the pins *a* being taken out, the earth will slide out the rear end of the body. It follows, that to reverse the motion of the cranks, first the crank *n* and then crank I, the front of the body will be let down as at the first. In unwinding the crank I the chain *r*, attached to the front of the frame D, will wind up and draw the windlasses down to this frame, where it will rest until the body is again filled; but when the crank I is turned over forward, as at first described, the chains S, connected with the axle and wound up on the windlass L, will draw the frame G up to an upright position, as seen in Fig. 2.

The cranks, when not in use, as at a carrying position, will be held by the chains and loop *p*. Therefore,

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

1. In an excavator, the reversible body A, gathering the earth by a forward motion, having the front and rear end pieces B and C, jointed to swing open, and the chains *e* and *m* connecting it with the windlasses H and L, substantially as and for the purposes specified.

2. The draft-frame D, connected with the axle E on the inside of the wheels F, and the windlass-frame G on the outside of the wheels, substantially as and for the purpose set forth.

AARON VREELAND.

Witnesses:

HORACE HARRIS,

JOHN C. TUNBRIDGE.