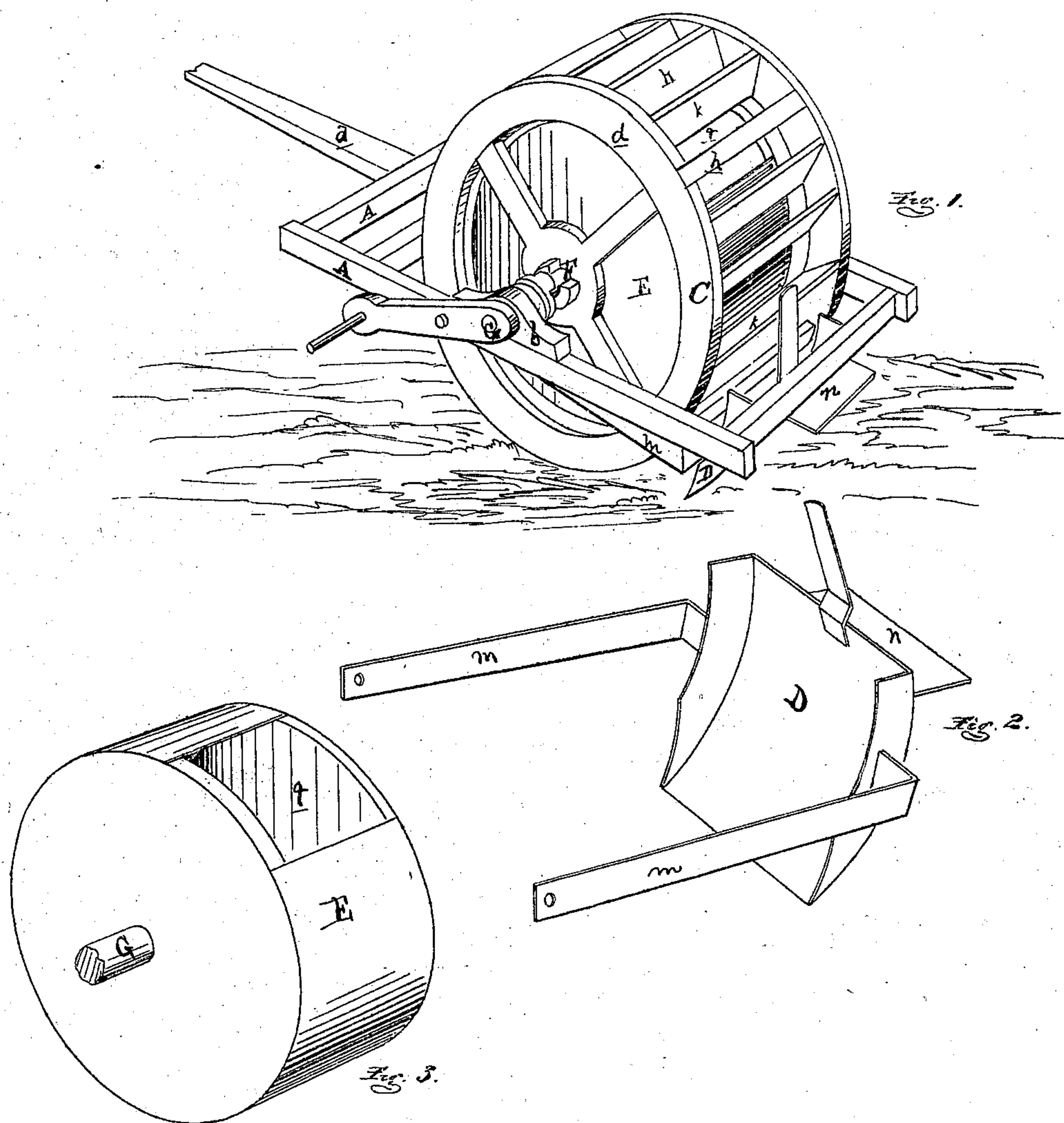


H. BOWEN & J. HANNA.

Earth Scrapers.

No. 133,825.

Patented Dec. 10, 1872.



ATTEST:

H. D. Everts
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INVENTORS

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UNITED STATES PATENT OFFICE.

HENRY BOWEN AND JAMES HANNA, OF ADRIAN, MICHIGAN.

IMPROVEMENT IN EARTH-SCRAPERS.

Specification forming part of Letters Patent No. 133,825, dated December 10, 1872.

To all whom it may concern:

Be it known that we, HENRY BOWEN and JAMES HANNA, of Adrian, in the county of Lenawee and State of Michigan, have invented a new and useful Improvement in Combined Excavator and Carrier; and we do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of our improved excavator and carrier; Fig. 2 is a detached view of the scraper; and Fig. 3 is a detached view of the cylinder-carrier.

Like letters refer to like parts in each figure.

The nature of this invention relates to an improved construction of an excavator and carrier so arranged that a scraper deposits the earth upon a rotating elevator, by which it is again deposited in the carrier, the latter so arranged that, when desired, it can be driven to any desired point and emptied, the rotating elevator forming, with the axle or shaft, a convenient carriage.

In the accompanying drawing, A is a frame to which the draft-pole A is secured. To this frame, by means of suitable boxes *b*, the axle or shaft is secured in the usual way. Rotating upon this axle is the elevator C, consisting of two wheels, *d*, secured together by cross-bars *h*. Between these wheels, and secured at each end to them, are the elevator-buckets *k*, set eccentrically to the shaft, and so arranged relatively to the scraper and the carrier that they will, in the forward rotation of the elevator, convey the earth taken up by the scraper and deliver the same into the carrier. D is the scraper, drawn by means of the

arms *m* from the axle and so arranged that it may be raised from or lowered into the ground, as desired. The scraper is provided with a foot-board, *n*, upon which, when the scraper is in use, a man should stand to keep the scraper in the ground. E is a cylinder or carrier rigidly secured to the axle or shaft within the elevator, and it is provided with an opening, *t*, through which the earth is deposited in the rotation of the elevator. F is a clutch, one-half of which is secured to the side of the elevator, while the other half is sleeved on the shaft in the usual manner.

When the carrier is full, and it is desired to empty the same in any particular place, the two parts of the clutch are engaged and the scraper elevated, when the elevator and carrier rotate together and the earth is emptied out of the latter when in its rotation the opening is presented downward or toward the ground. The clutch should not be engaged until the machine has reached the "dumping-ground," the elevator acting as a carriage.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The elevator C, consisting of the wheels *d* united by the cross-bars *h* and buckets *k*, the buckets being eccentrically arranged relatively to the shafts, as described.

2. In a machine of substantially the described construction, the combination of the elevator, constructed as described, with the scraper D, provided with the foot-board *n*, as and for the purpose described.

HENRY BOWEN.
JAMES HANNA.

Witnesses:

THOS. S. SPRAGUE,
J. W. BOWLER.