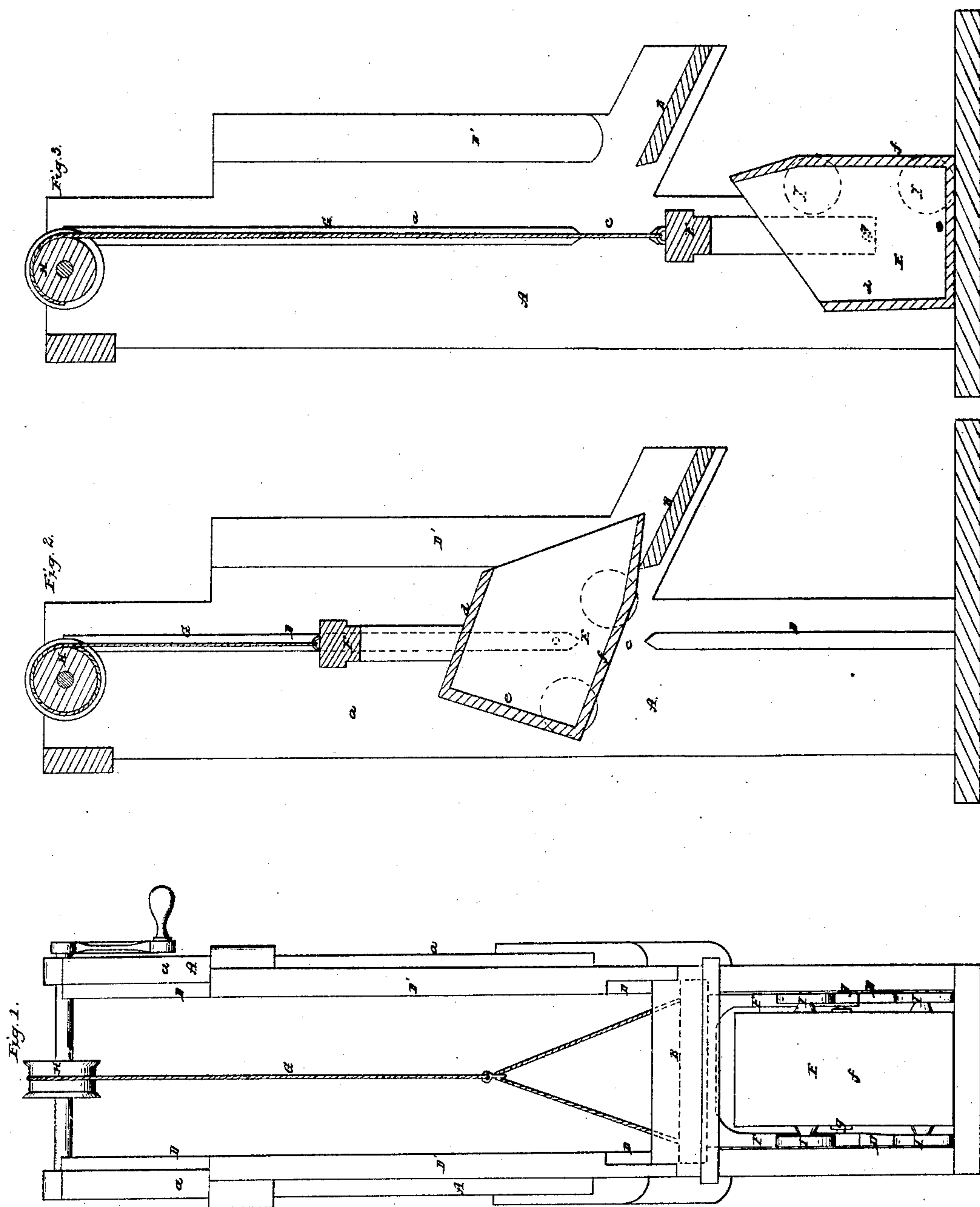


G. Martz,

Elevator,

N^o 21,431,

Patented Sept. 7, 1858.



UNITED STATES PATENT OFFICE.

GEO. MARTZ, OF POTTSVILLE, PENNSYLVANIA.

HOISTING AND DUMPING APPARATUS.

Specification of Letters Patent No. 21,431, dated September 7, 1858.

To all whom it may concern:

Be it known that I, GEORGE MARTZ, of Pottsville, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Improvement in Machines for Hoisting and Dumping Dirt, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a front view of a hoisting and dumping machine constructed after my invention. Fig. 2, is a vertical longitudinal section of the machine as it appears in being loaded. Fig. 3, is a similar section of the same as it appears in being dumped.

Similar letters of reference in each of the several figures indicate corresponding parts. The nature of my invention consists in the combination of the car hung and controlled in its up and down movements in the peculiar manner hereinafter specified, with the sliding gate and stationary frame which are constructed and arranged in the peculiar manner hereinafter specified, all for the purposes set forth, this arrangement enabling me to make a very simple, cheap and compact machine which is adapted for hoisting dirt out of deep ravines and places where carts, &c., cannot possibly be employed.

To enable others skilled in the art to make and use my invention I will proceed to describe its construction and operation.

A, represents a stationary frame formed of two broad upright boards *a, a*, and suitable cross ties for uniting the uprights firmly together.

B, is an inclined chute arranged on the front of the frame a short distance below the center of its height.

D, D, are two main guides projecting from the inner sides of the uprights of the frame. The guides D, D, extend from the bottom of the frame to the top of the same with the exception of a portion of each being cut away at *c*, for a purpose presently set forth.

E, is the car. It has its top and back closed in completely by boards *d, e*. Its bottom boards *f*, are considerably longer than the top ones *d*, in order that it may overhang the chute B, and thus have a rest while dumping its load. The load also dumps more freely by having the top board

short. This car is pivoted at *g*, to a sliding gate F, which is arranged within the frame A, to slide over the tongues or guides D, D, being furnished with grooves which receive said guides. This gate is attached to a windlass rope G, and is raised and lowered by means of a windlass shaft H, arranged at the top of the frame A, and having the rope G, attached to it.

The car E, has four or more wheels I, I, I, I, two on each side, near its bottom, which serve to prevent friction as the car moves up and down and changes from the position shown in Fig. 3 to the position shown in Fig. 2. These wheels also serve to insure the tilting of the car when it arrives over the chute, and as stops to hold the car in proper position or from vibrating in or outward while having its load dumped.

It should be particularly noticed that when the car rises to the position shown in Fig. 2, its front comes in contact with the back edge of the chute, and from the peculiar location of the fulcrum on which it is hung and turns, it rests there while the back end is elevated and the load dumped as illustrated in Fig. 2. In the ascent of the hind end the front wheels dart between the top of the chute B, and the lower end of auxiliary guides D¹, D¹, while the hind wheels dart through the space *c*, of the main guides as shown in Fig. 2. In again lowering the car the hind end descends first by reason of the superior gravity of the gate and owing to the front end resting upon the chute, and the hind wheels consequently pass again through the space *c* and in connection with guides D, D, hold the car in the position shown in Fig. 3 ready for loading and hoisting.

This machine is exceedingly simple and yet very perfect in its operation.

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

The combination of the car hung and controlled in its up and down movements in the peculiar manner herein specified, with a sliding gate and stationary frame which are constructed and arranged in the peculiar manner herein specified, substantially as and for the purposes set forth.

GEORGE MARTZ.

Witnesses:

G. YORKE ATLEE.

A. E. BEACH.