S. W. Soule.

Excavator.

No. 13,234. Patented Jul. 10, 1855.

Fig. 1.

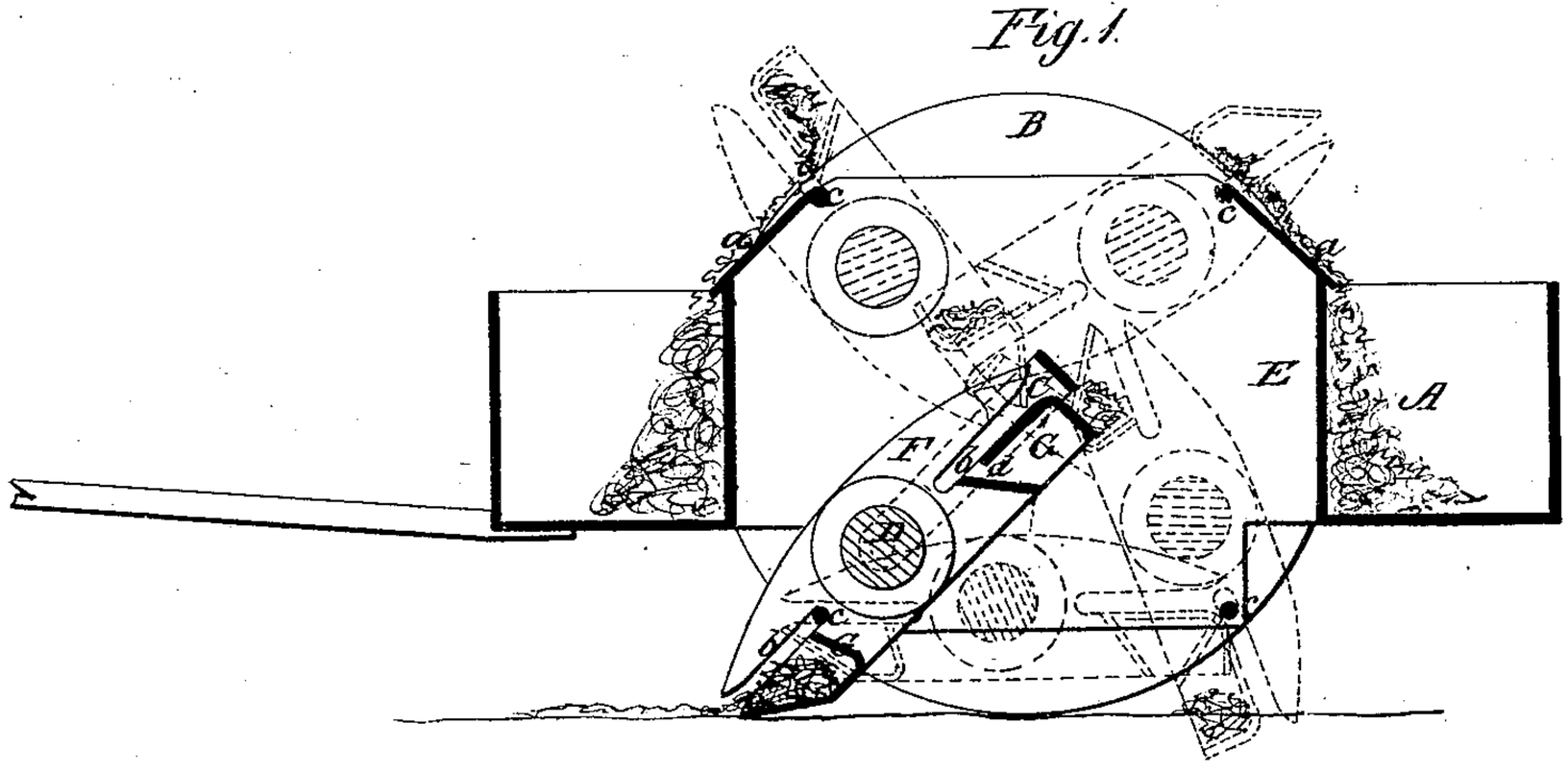
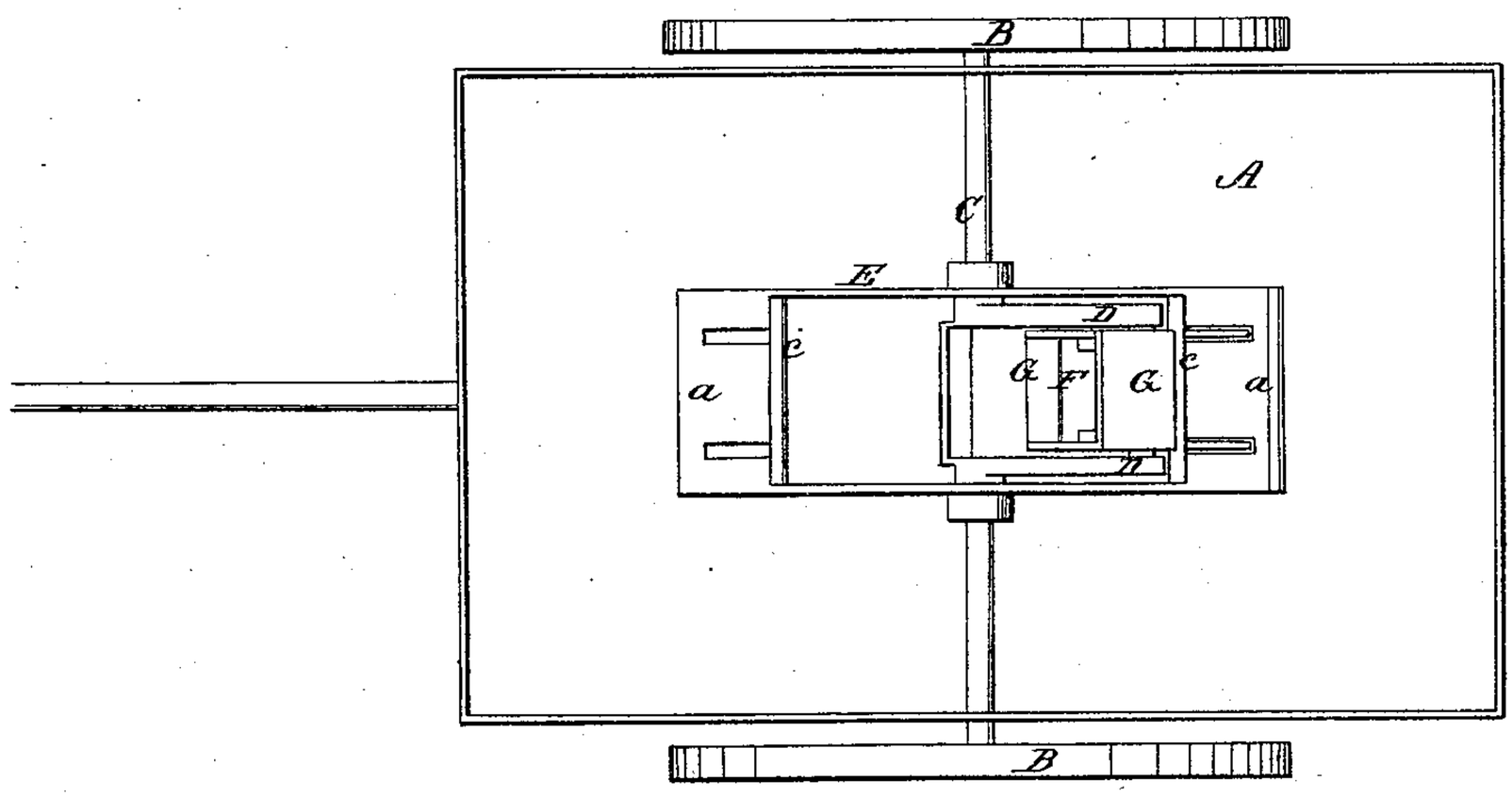


Fig. 2.



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UNITED STATES PATENT OFFICE.

SAMUEL W. SOULE, OF OSWEGO, NEW YORK.

EXCAVATOR.

Specification of Letters Patent No. 13,234, dated July 10, 1855.

To all whom it may concern:

Be it known that I, SAMUEL W. SOULE, of Oswego, in the county of Oswego and State of New York, have invented a new and Improved Excavating-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical section of my improvement, the plane of section being through the center. Fig. 2, is a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in the two figures.

The nature of my invention consists in having a revolving frame, provided with a bucket at each end, and attached to a crank on the axle of the wheels of a cart. The revolving frame works within a box or chest which is provided with transverse pins or rods, arranged as will be presently shown, so as to give the proper movement to the frame and cause the buckets to fill and also to discharge their contents in the body of the cart.

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

A, represents the body of a cart.

B, B, are the wheels and C, is the axle.

D, is a crank on the axle C, at about its center, and E, is a box at the center of the body of the cart, which box is of such a size as to inclose the crank during every point of its sweep or revolution. The top and bottom of the box E, is open, and the upper parts of the end pieces of the box are inclined, as shown at *a*, *a*, see more particularly Fig. 1.

F, is a frame transversely through the center of which the crank D, passes. The frame is fitted loosely on the journal of the crank, so that it may turn thereon. At each end of the frame F, there is a bucket G, placed on the frame in a reverse manner, that is, the upper or open end of one bucket is opposite or on a line with the bottom of the other, see Fig. 1. Each end of the frame F, is provided with slots or recesses *b*, as shown clearly in Fig. 1, and the box E, has four transverse pins or rods *c*, placed within it, two at its upper and two at its lower end. The pins or rods *c*, are placed at equal distances apart, at the angles of a square.

When the cart is moved along the crank D, throws the slots or recesses *b*, over or on the pins or rods *c*, and each pin or rod causes the frame to turn one quarter of a revolution as the crank D, rotates, as they hold or stay the ends of the frame which the crank is moving. The two lower pins or rods cause the buckets to fill as the frame is turning upon them, and the two upper pins or rods, cause the buckets to discharge their contents in the body A, of the cart as the frame is turning on them. The filling of the buckets and the discharging of their contents into the body of the cart will be clearly understood by referring to Fig. 1, in which the several positions of the frame are shown in black and colored lines, for instance, the bucket represented in black lines is turning on the lower front pin or rod *c*, and is in the act of filling. This bucket turns over the upper back pin or rod *c*, and is discharged at the back end of the box E, as shown in red dotted lines. The other bucket turns over the back pin or rod *c*, as shown by red solid lines, and fills and is discharged while turning on the upper front pin or rod *c*, as shown in blue. This latter bucket has a slot or opening *d*, through its bottom at its back end, through which the contents of the bucket pass, while in the position as shown in blue.

The cart it will be seen is filled as it is moved along, the wheels B, giving motion to the crank D, but in certain cases the body A, may be stationary, and the axle C, or shaft as it would then be, driven by horse, steam or any other power.

Although four pins or rods *c*, are represented and described, still three only may be used, but not so advantageously as four, as only one bucket could be used with three pins or rods. One or more frames F, may be used. If two are used they may be placed on reverse cranks.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is,

The frame F, placed on the crank D, of the axle or shaft C, said frame being provided with buckets G, G, one at each end, and inclosed by a box E, provided with transverse pins or rods *c*, substantially as herein shown for the purpose set forth.

SAMUEL W. SOULE.

Witnesses:

JOS. GEO. MASON,

WM. TUSCH.