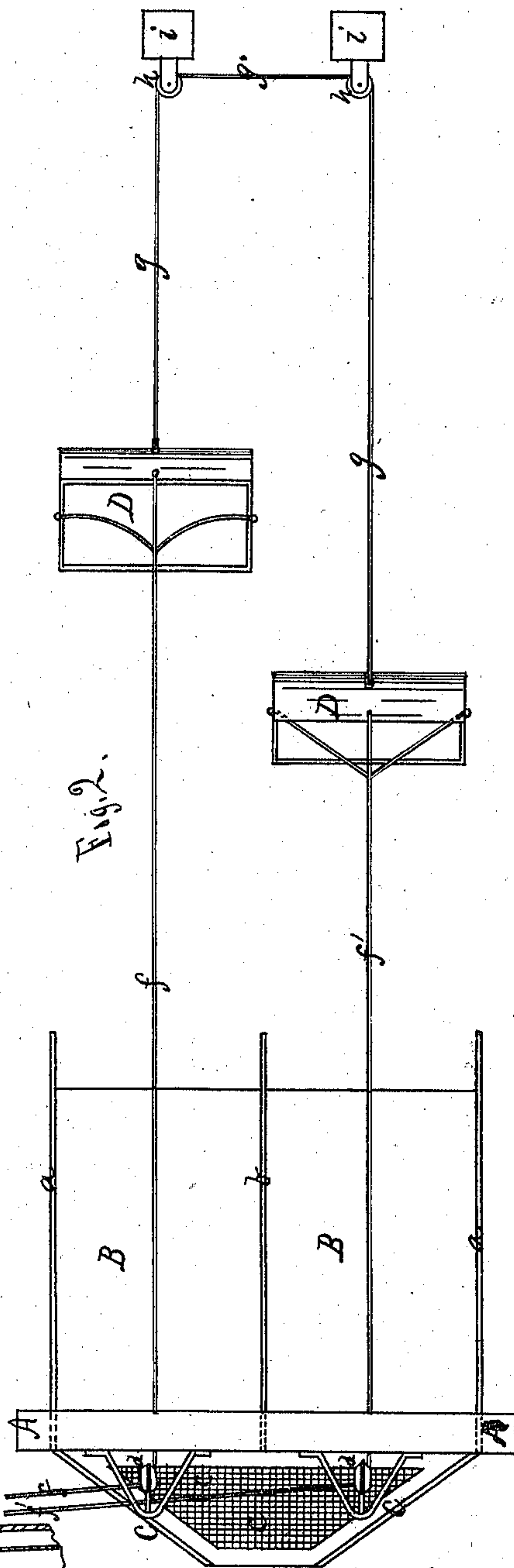
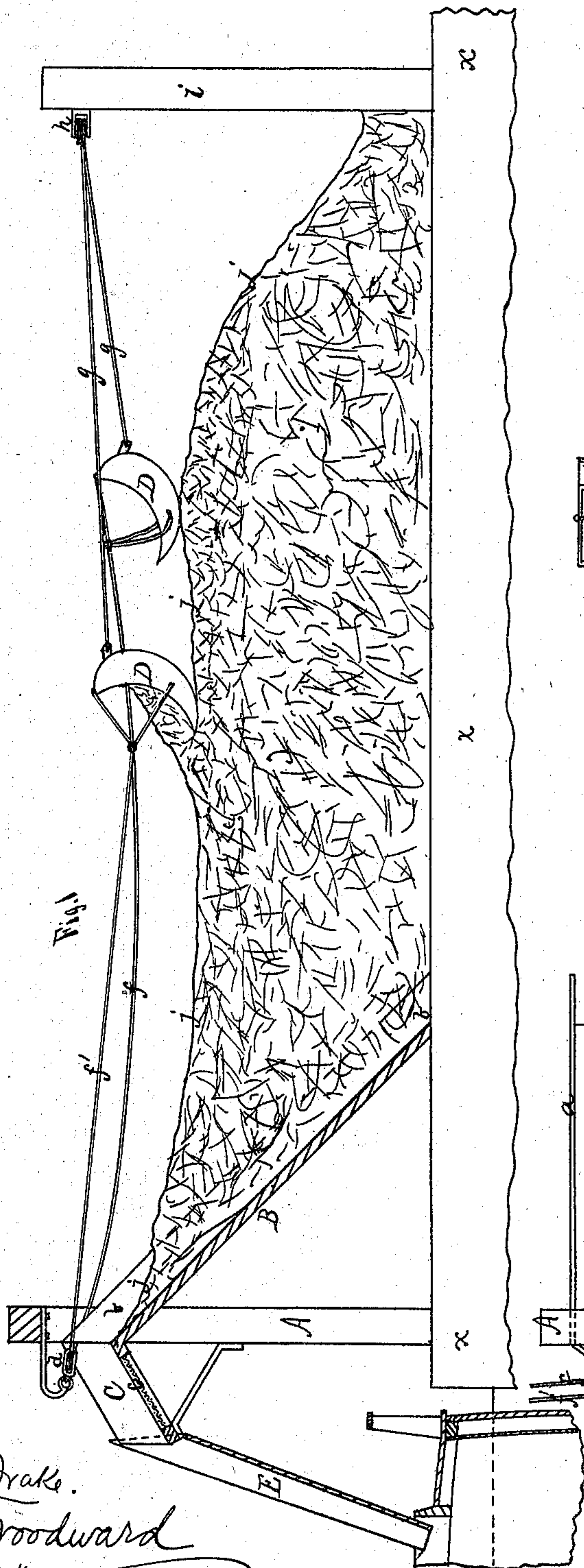


J. T. HOOLE.

Improvement in Coal Conveyer and Elevator.

No. 131,683.

Patented Sep. 24, 1872.



WITNESSES.

J. R. Drake.
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UNITED STATES PATENT OFFICE.

JOSEPH T. HOOLE, OF BUFFALO, NEW YORK.

IMPROVEMENT IN COAL CONVEYERS AND ELEVATORS.

Specification forming part of Letters Patent No. 131,683, dated September 24, 1872.

To all whom it may concern:

Be it known that I, JOSEPH THOMAS HOOLE, of Buffalo, in the county of Erie and State of New York, have invented an Improved Coal Conveyer and Elevator, of which the following is a specification:

It is the object of my invention to afford facilities for moving coal on docks, in yards, and other situations, and to place it on board of vessels or cars by mechanical power, thereby dispensing with manual labor in shoveling and wheeling; and it consists in the arrangement of scoops or shovels in connection with ropes or chains and pulley-bearings, in combination with an inclined plane or planes, screen, and chute or pockets, whereby, with suitable power applied, one scoop or series of scoops advances and deposits its or their load or loads on the screen or in the pockets, while another scoop or series thereof simultaneously recedes to receive another load or loads, all as hereinafter fully described.

In the drawing, Figure 1 is a sectional side elevation, and Fig. 2 is a plan view.

As shown in the drawing, *x* represents a wharf, on which are erected two upright posts or standards, *A A*, or other suitable frame-work, on which is supported the elevated end of an inclined plane or floor, *B*, having vertical sides *a a'* and a central longitudinal partition, *b*, (best shown in Fig. 2.) Connected with the elevated end of this incline is a reverse inclined chute or spout, *C*, which forms the upper part of the main chute *E*. The bottom of the chute *C* is composed of a movable wire-cloth screen or sifter, *c*, over which the coal is separated from the dust and dirt, which falls through its meshes while the coal passes over into the chute *E*. On either side of this screen and above it are arranged two pulleys or blocks, *d d'*, through which ropes or chains *f f'* run, and to which are connected two or more buckets or scoops, *D D*. Attached to the back of one bucket is another rope or chain, *g*, the opposite end of which passes back over two pulleys, *h h'*, each pulley being attached to an upright post or strong frame-work, *i i'*, as shown; the rope *g* then extends forward to, and is connected with, the other bucket. This arrangement of the ropes or chains *f f'* and *g g'* forms, as it were, an endless belt with

the buckets attached. The standards *i i'* can be set at any distance from each other and from the frame-work *A A* that may be required to comprehend the coal or ore to be worked on, by employing a length of chain or rope corresponding with such distance.

It will readily be seen that if the rope *f* is pulled in a direction toward the chute the bucket to which it is attached will be drawn along the surface of the pile *J J*, and will scoop up and fill with the coal and draw it up the inclined plane, where it will discharge either into a coal-"pocket" or on the screen, as may be required, the coal so discharged being conveyed by the "chute" into the vessel or other receptacle. The ropes or chains and buckets being geared in the manner described, it is obvious that the act of drawing one bucket forward simultaneously moves the other bucket back. The shape of the buckets is such that in moving backward they pass freely over the coal without filling. The rope and buckets are operated by a stationary engine or other power, placed in any suitable position, to which the ropes *f f'* extend, as shown in Fig. 2, and the motion is reversed when the bucket of one side has discharged its contents on the screen *C* and the other advances with its load. Thus each bucket loads, discharges, and returns alternately in succession. The division *b* in the incline plane is for the purpose of keeping a clear way for each bucket as it advances and recedes. If it should be required to move the coal in the opposite direction it is easily accomplished by reversing the buckets *D D*. The action of the buckets in moving backward or forward is shown by the line *J J*, which indicates the top of a coal-pile.

This device is of great importance and utility to coal-shippers and others, as it dispenses with the labor of many men in shoveling and wheeling the coal on a level and hoisting it to drop it into "pockets," "chutes," &c. The incline *B* leads directly to the pocket or chute, and coal drawn up by this method falls at once into either, as desired, saving thereby greatly in labor, time, and expense of handling.

What I claim as my invention, and an improvement in machinery for moving and elevating coal, is—

The scoops D D, and ropes or chains $f f' g$ g' , arranged in connection with the pulley-bearings $d d'$ and $h h'$, and suitable power to alternately advance and recede, in combination with the incline B and screen C and pocket or chute E, substantially as and for the purpose set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

J. T. HOOLE.

Witnesses:

J. R. DRAKE,
A. J. HOOLE.