

J. R. KNUTH.  
Dumping-Scow.

No. 227,019.

Patented April 27, 1880.

Fig: 1.

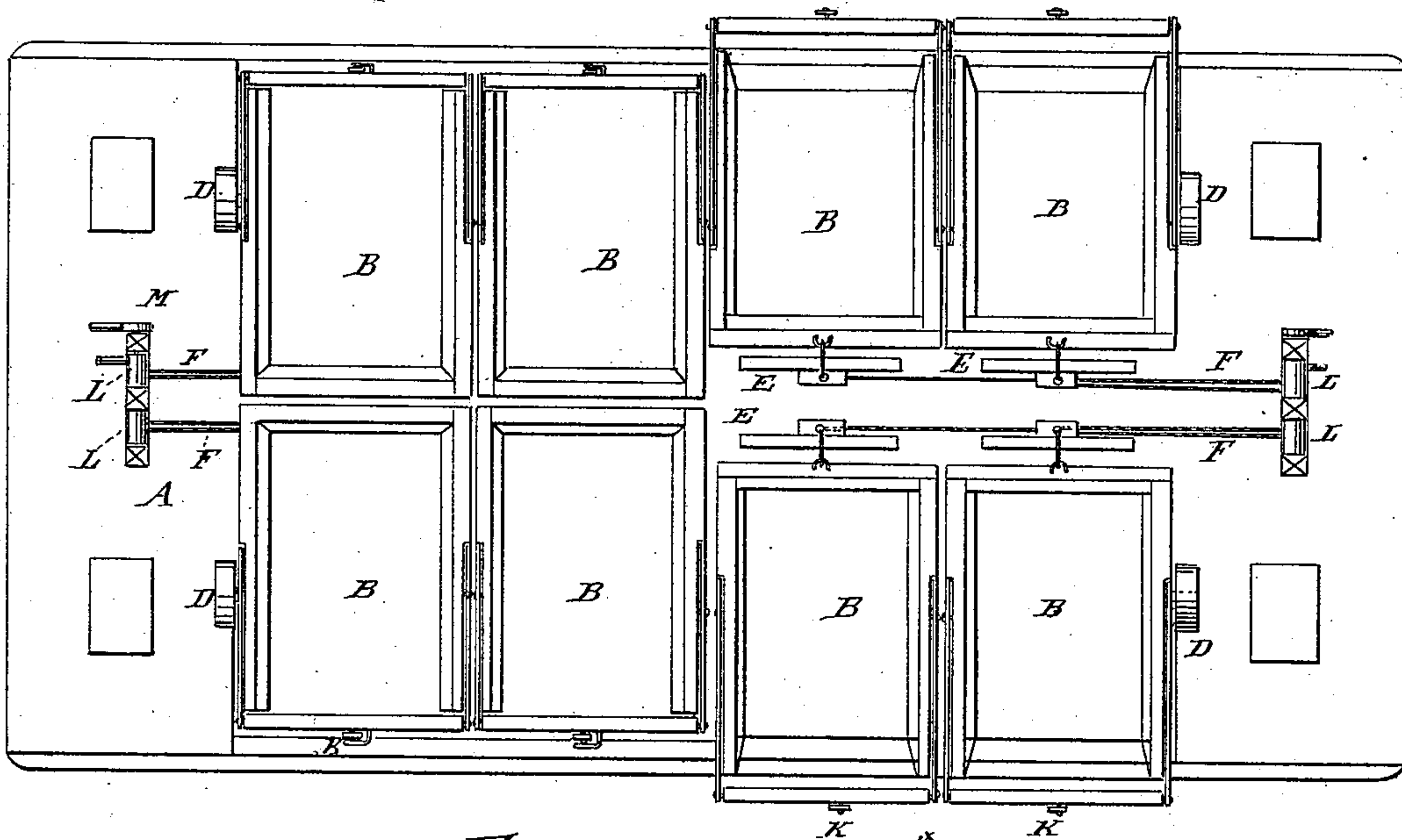


Fig: 2.

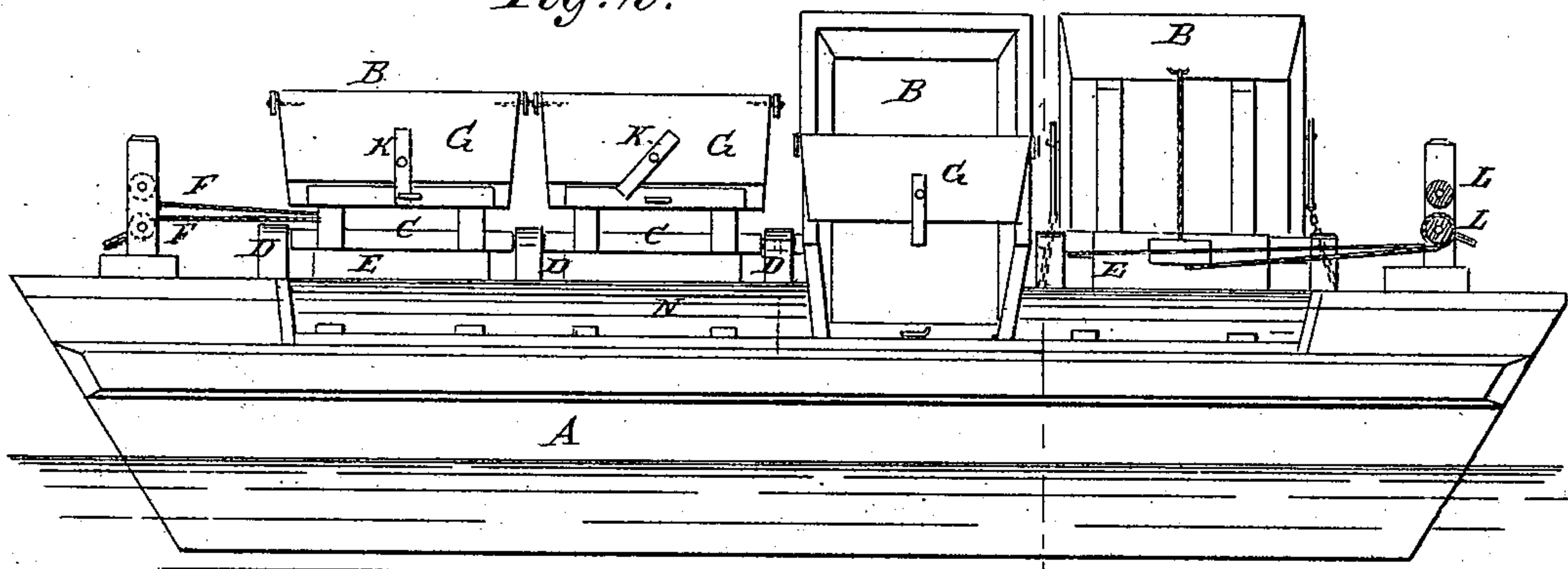
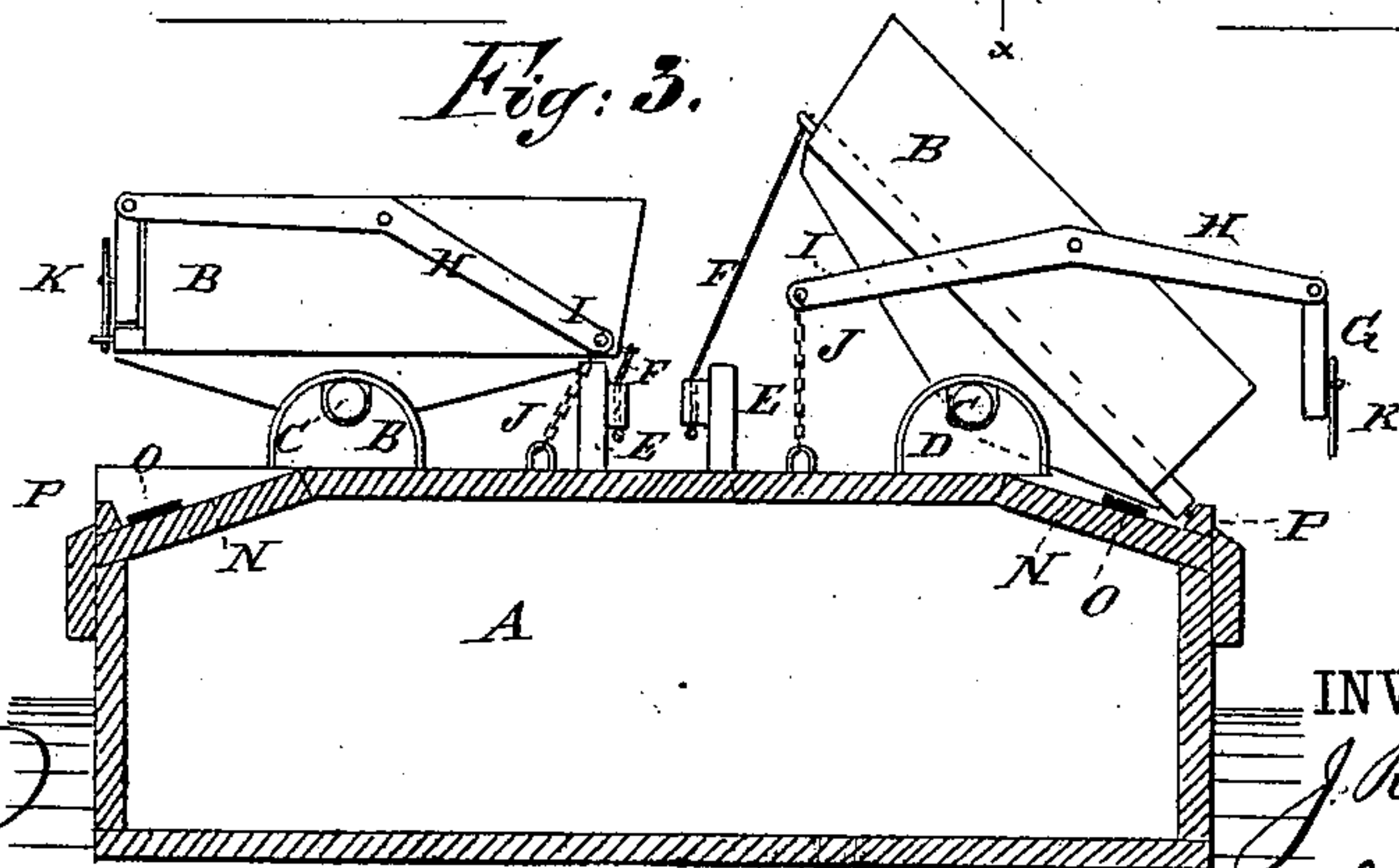


Fig: 3.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN R. KNUTH, OF NEW YORK, N. Y.

## DUMPING-SCOW.

SPECIFICATION forming part of Letters Patent No. 227,019, dated April 27, 1880.

Application filed February 24, 1880.

*To all whom it may concern:*

Be it known that I, JOHN RUDOLPH KNUTH, of the city, county, and State of New York, have invented a new and Improved Dumping-Scow, of which the following is a specification.

The object of my invention is to provide a new and improved scow from which the load can be dumped conveniently and rapidly and in a simple manner.

The invention consists in a scow having its deck beveled and provided with rubber cushions along the longitudinal ends, upon which scow a number of compartments or sections are mounted on an axle pivoted on chucks, and are provided with tail-boards held between two bent arms which are pivoted to the sides of the sections and have their rear ends connected with the deck by means of a piece of rope or chain. The rear ends of the sections are held by chains passing to windlasses, so that when the said chains are loosened the outer ends of the sections drop down upon the cushioned inclined part of the deck, and the tail-boards are moved upward and outward from the ends of the sections, thus permitting the contents of the sections to slide into the water.

In the accompanying drawings, Figure 1 is a plan view of my improved scow. Fig. 2 is a side elevation of the same. Fig. 3 is a cross-sectional elevation of the same on the line  $x x$ , Fig. 2.

Similar letters of reference indicate corresponding parts.

The scow A has a series of sections, B, mounted thereon, each of which sections rests on a shaft, C, fastened to the bottom of the section a short distance in front of the center of the same, and is journaled upon two or more chucks, D D, which are fastened to strong bulk-heads in the scow. The inner ends of the sections rest on supports E, having iron sheave-blocks, through which the chains F pass, attached to the inner sides.

Each section B is provided with a tail-board, G, held at the upper edge between two bent arms, H H, which are pivoted to the center of the outer sides of the sections, at the upper edges of the same, and have their rear ends, I, connected with the deck of the scow by means of chains or ropes J J, fastened in an

eye or ring at the end of the arm H and in a staple or hook on the deck. The tail-board G is provided with a pivoted latch, K, catching in a hook in the bottom of the sections, or with some other suitable locking device.

The chains F F are attached to the inner ends of the floors of the sections B B, and then pass to windlasses L, provided with a locking device, M, which may be a pawl and ratchet, a friction-brake band, or the like. One windlass is provided for each chain F, and preferably the windlasses are arranged at the two ends of the scow, so that half of the sections can be operated at each end.

The longitudinal sides of the vessel are cut out about to the depth of one foot, and the deck is beveled from a point a short distance in front of the center line of the sections downward, so that a flat deck, inclined at the sides, is formed. The inclines N thus formed are provided with a number of cushions of rubber, O O, or springs, upon which the ends of the sections drop when the same are dumped.

The inclines N are provided with a ledge, P, along the lower edge, inside of which ledge the lower ends of the sections pass when they are dumped, as shown.

The advantage of the arrangement of the deck as shown and described is, that the sections need not be mounted a high distance above deck, but yet will be very much inclined when dumped; but at the same time the frame of the scow need not be cut out as deep as the incline N, for, as the section passes to the inside of the ledge P, the frame of the scow need only be cut out to the top of the ledge.

The operation is as follows: The chains F F are all drawn tight, so that the sections rest horizontally upon their supports, and all the tail-boards G are locked by means of the latches K K. The sections can now be filled in any suitable manner, and the scow is then towed to its destination. As soon as it has arrived there the latches K K are opened and the chains F of the sections that are to be dumped are loosened. As the shafts C are slightly to the inside of the center of the section, the outer ends of the same will be heavier, and will descend, and will strike onto the cushions O O, which diminish the effects of the blow and prevent

damage to the scow or section. If the outer end of the section descends, the entire section will rotate on the shaft C, and consequently the arms H H will be moved forward; but as  
5 their inner ends are held by the chains J J, the outer ends by which the tail-board G is held cannot descend, and consequently the same remains suspended above the end of the section, permitting the contents of the same  
10 to slide down the inclined bottom of the section into the water. As soon as all the sections have been emptied their chains are wound upon their respective windlasses, thereby bringing the sections into their proper hori-  
15 zontal position, ready for a new load.

Any desired number of sections may be mounted on one scow, and the several parts may be made of any desired or suitable material.

20 The chains F are let down gradually till within a foot of striking by means of the brakes on the windlasses.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

1. The sections B, journaled in chucks D, 25 and having rear ends, I, connected with a chain and windlass, in combination with a scow having inclines provided with the cushions O and the ledges P, as and for the purpose specified. 30

2. In a dumping-scow, the combination, with the pivoted sections B B, of the bent arms H, pivoted thereto, the tail-board G, held between said arms, the chains J, connecting the inner 35 ends of said arms with the deck, the chains F F, holding down the inner ends of the sections, and the windlasses L L, upon which the chains are wound, substantially as herein shown and described, and for the purpose set 40 forth.

JOHN R. KNUTH.

Witnesses:

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