(No Model.) 2 Sheets—Sheet 1.

O. DAHL.

DUMPING SCOW.

No. 533,582. Patented Feb. 5, 1895.

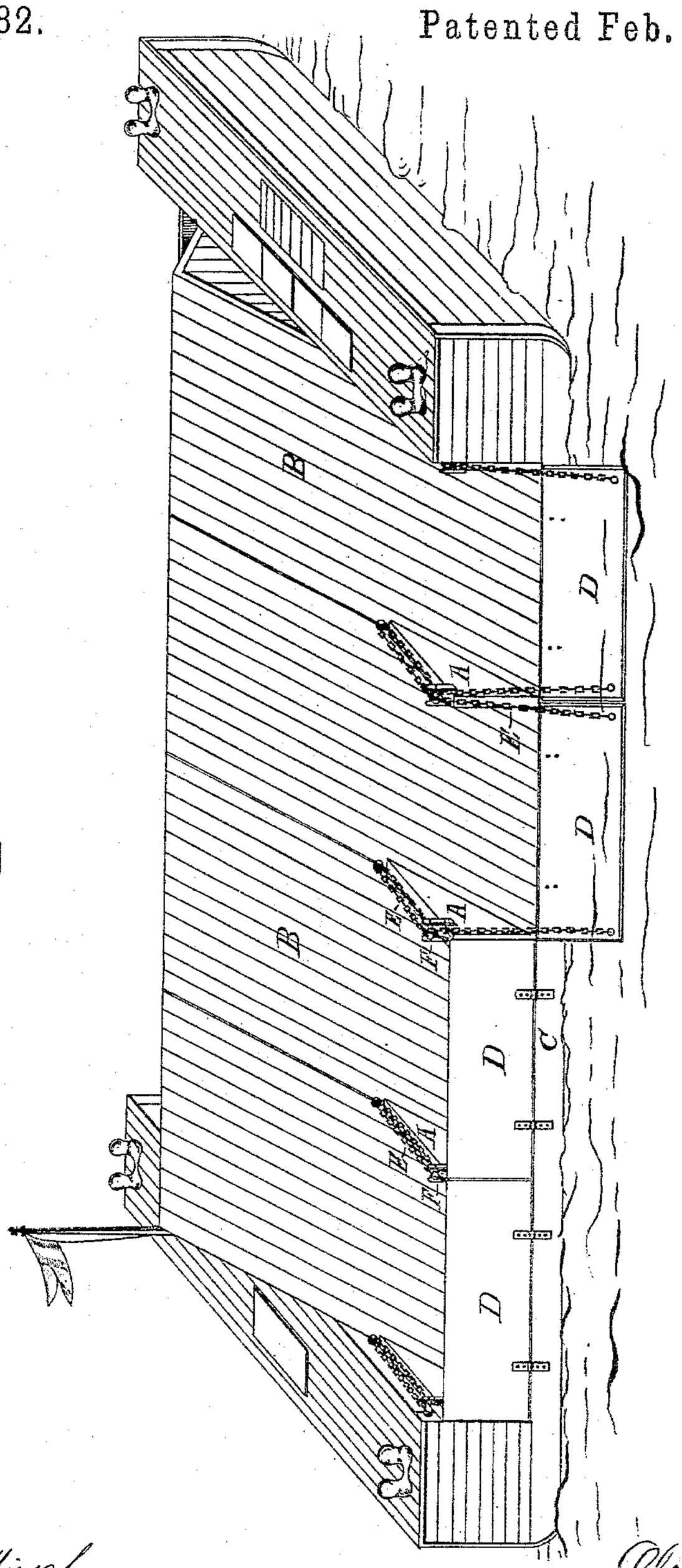

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

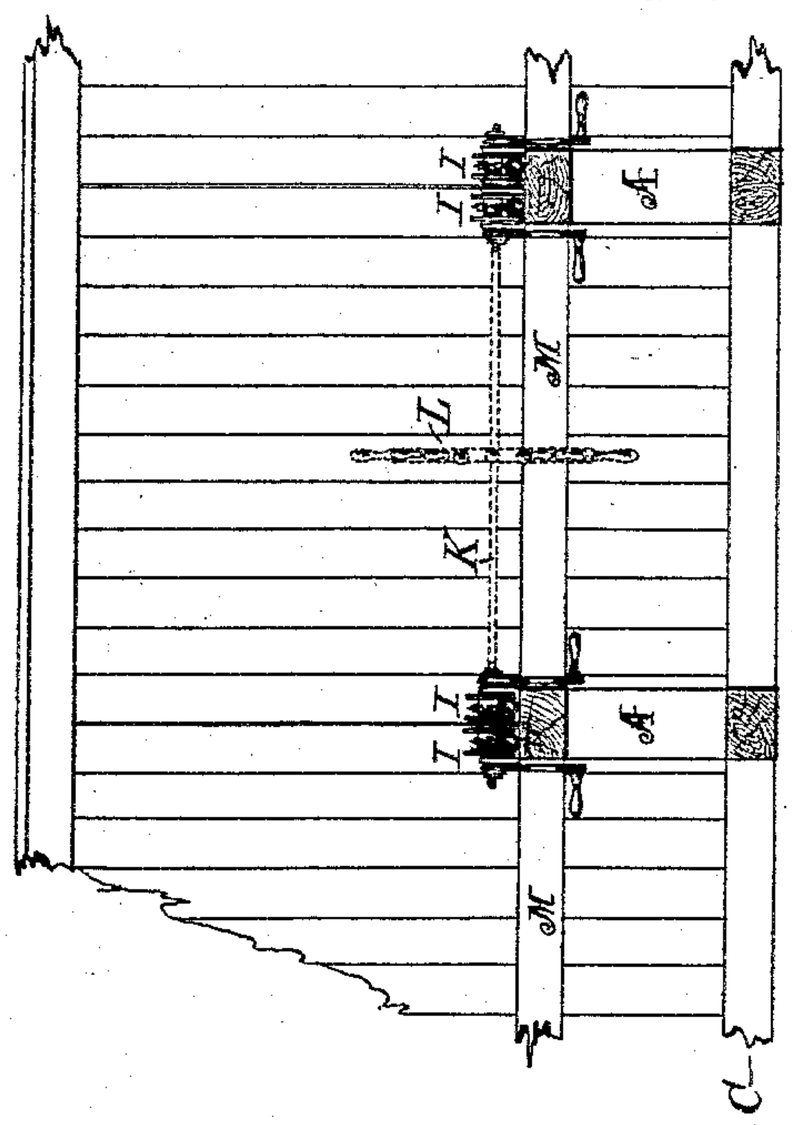
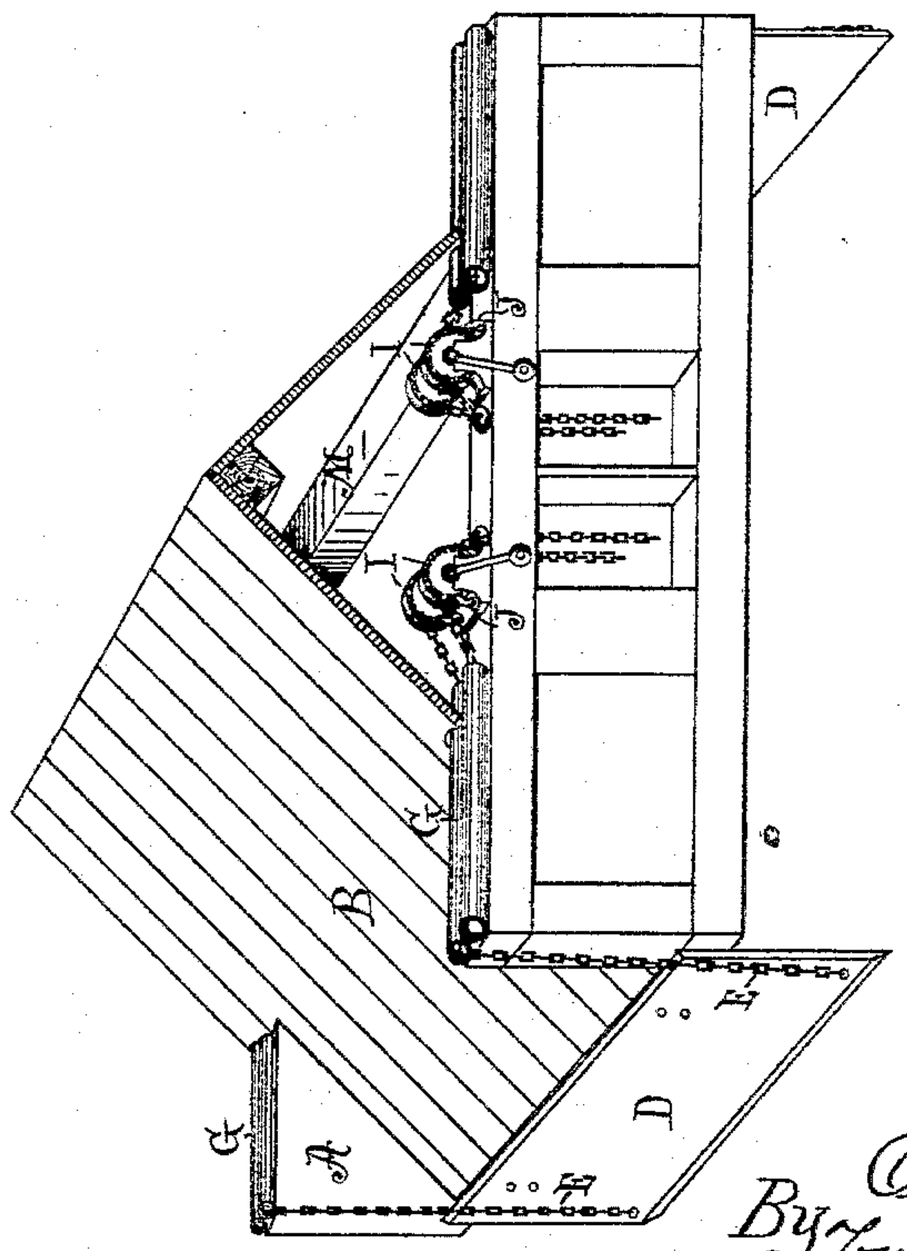


Fig. 1.



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UNITED STATES PATENT OFFICE.

OLOF DAHL, OF BROOKLYN, NEW YORK.

DUMPING-SCOW.

SPECIFICATION forming part of Letters Patent No. 533,582, dated February 5, 1895.

Application filed October 9, 1894. Serial No. 525,442. (No model.)

To all whom it may concern:

Be it known that I, OLOF DAHL, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Dumping-Scow, of which the following is a specification.

My invention relates to dumping scows used for carrying any sort of material to deep-water dumping grounds and has special reference to a scow constructed for carrying and readily discharging bulky or light materials.

Dumping scows heretofore constructed have generally been designed for carrying heavy materials which by their own gravity can force their way by or around slight obstructions in the path of their discharge. For example, in one form of dumping scows, wherein the outwardly inclined dumping floor is used with gates at the lower edges thereof, said gates are hinged by their upper edges to beams running longitudinally of the scow just the width of the gates above said lower or discharge edges of the floor. In this construction, the gates when unlocked, are swung outwardly by the weight of the heavy material, such as cellar dirt for example, which presses down against them and easily forces its way under the gates. However, if several bowlders happen to slide along together they may block the passage by wedging between the beam and floor. Such scows when used for light or bulky material give a great deal of trouble because of such material not being able to force the gates fully open and because of clogging between the beams and the floor. In my invention I overcome these difficulties by so locating and mounting the gates that when open neither they nor the parts to which they are connected or by which they are operated shall be in the path of the discharging material.

With this end in view my invention consists in a dumping scow provided with a floor inclined outwardly from the middle of the scow and having doors or gates hinged by their lower edges at the ends of said inclines and with chains attached to the upper edges of said gates and passing over winches or windlasses within the scow for raising and holding the gates in their normal position.

My invention further consists in the construction and combination of parts hereinafter specified and pointed out in the claims.

In the accompanying drawings forming a part this specification; Figure 1, represents in perspective my improved scow, a couple of the gates being shown down as at the time of dumping and the remainder being shown up in normal position. Fig. 2, represents a sectional perspective view showing the preferred manner of operating the gates; and Fig. 3, shows a longitudinal vertical section through a portion of the scow representing the arrangement of the operating mechanism for the gates.

In the drawings; A, represents the bulk-heads which divide the scow transversely and act as partitions for the bins, as abutments for the gates and as supports for the chains and winches.

B, represents the floor of the bins, which floor is outwardly inclined to the sides of the scow where it terminates upon the sills C, at a short distance from the water line. To these sills the gates D, are hinged at their lower edges so that when opened or lowered they will fall over onto the water.

To the upper corners of the gates, chains E, are attached which pass over suitable guides, as the rollers F, shown in Fig. 1, or through pipes G, shown in Fig. 2, to winches or windlasses located on the bulk-heads within the hold of the scow under the floor B, where the operators may stand while lowering or raising the gates. The chains after taking the necessary turns around the winches pass into suitable pockets or lockers formed in the bulk-heads. Any sort of winch or windlass may be used and for simplicity in illustration I have simply shown ordinary reels I, provided with pawls J. With a winch for each chain each gate would require two operators but when compound or double purchase winches are used they may extend from one bulk-head to another and take a chain at each end, so that only one man would be required to operate a gate. This construction is typified in Fig. 3, wherein, by dotted lines, two reels I, are shown connected by a rod K, which is provided with a hand wheel L.

To lower the gates it is only necessary to trip the pawls J, and let the load in the bins which rests against the gates force them over.

As is obvious from the construction shown nothing remains to obstruct the free discharge of the load when the gates are dropped.

When the load has been discharged the pawls are thrown upon their ratchets and the chains reeled in until the gates are brought up against the ends of the bulk-heads. To lessen friction the rollers or pulleys F, may also be used in connection with the pipes G.

To strengthen the scow longitudinally extra heavy beams M, extend from end to end thereof and so make up for the absence of the beam which in the form of scow referred to above extend from end to end of the scow along the outer upper corners of the bulkheads.

For admitting operators to the hold of the scow hatches may be placed in the forward and after decks or in the gables formed by the inclined floors, as best suits the ideas of the builders.

Many changes may be made in the details of construction without departing from my invention which mainly resides in the construction by which the gates and their supports and operating mechanism are in dumping entirely out of the path of the discharging material.

What I claim as my invention is—

1. In a dumping scow, the combination with the bulkheads, of a floor inclined from the middle of the scow to the edges thereof and constituting the bottom of bins, a gate hinged by its lower side at the lower edge of each incline and forming the outer end of its respective bin, and means for raising and holding the gates against said bulkheads to form portions of the sides of the scow, substantially as described.

2. In a dumping scow, the combination, of a floor inclined from the middle of the scow to the edges thereof, bulkheads extending transversely of the scow and dividing the floor space into bins entirely open at their lower ends, gates forming portions of the sides of the scow and hinged by their lower sides at the lower edges of the inclines, and means for raising and lowering them and holding them up against the ends of said bulkheads, substantially as described.

3. In a dumping scow, the combination, of the floor inclined from the middle of the scow to the edges thereof, transverse partitions dividing the floor space into bins entirely open at their lower ends, a gate at the lower end of each bin hinged by its lower side at the edge of the floor thereof, winches within the scow, shields passing therefrom along the upper edges of the partitions, and chains attached to the upper corners of the gates and passing through said shields to the winches, substantially as described.

Signed at New York, in the county of New York and State of New York, this 3d day of October, A. D. 1894.

OLOF DAHL.

Witnesses:
WM. H. CAPEL,
WM. LAURITZEN.