

(No Model.)

C. H. SOUTHER & J. E. CHAPMAN.  
SCOW.

No. 459,420.

Patented Sept. 15, 1891.

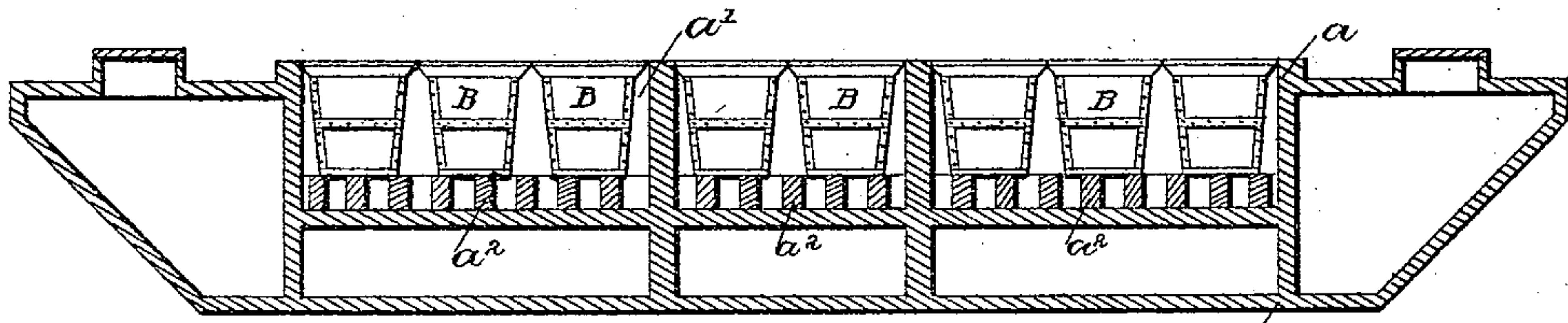


Fig. 1.

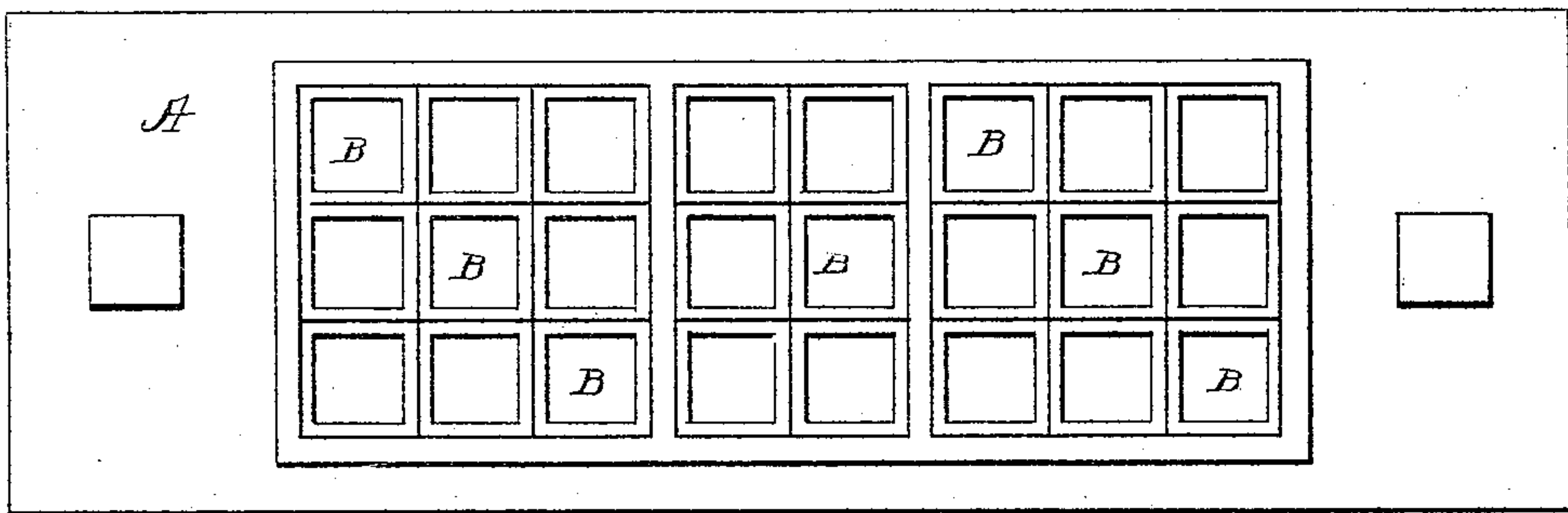


Fig. 2.

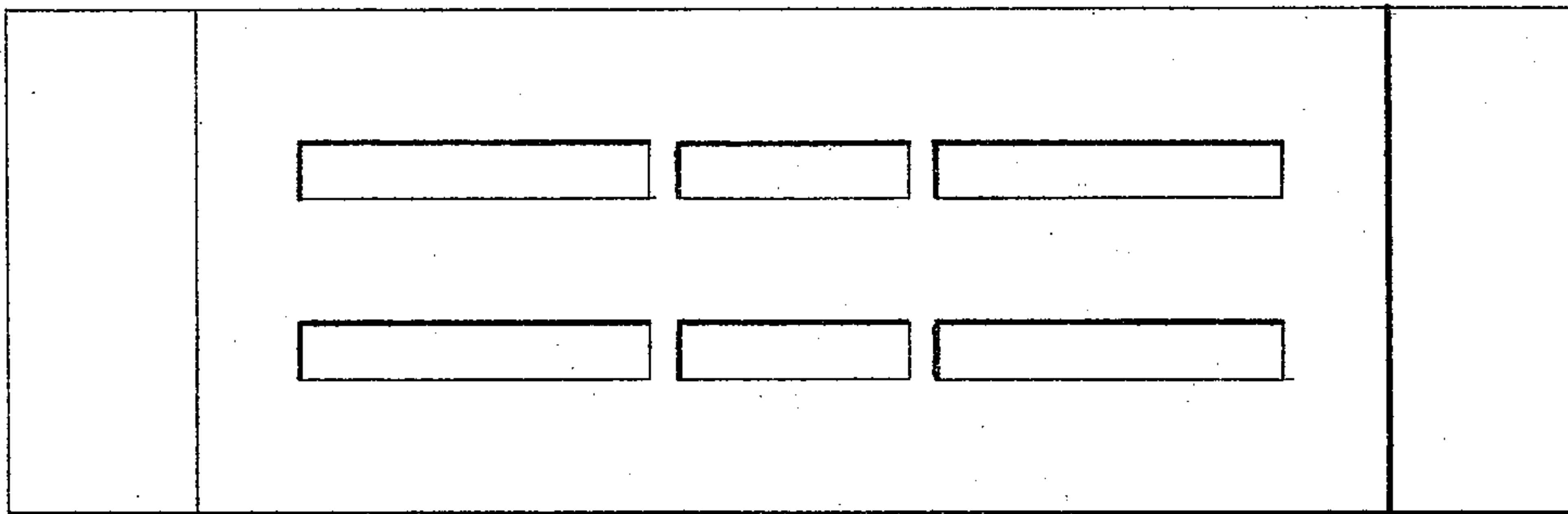


Fig. 3.

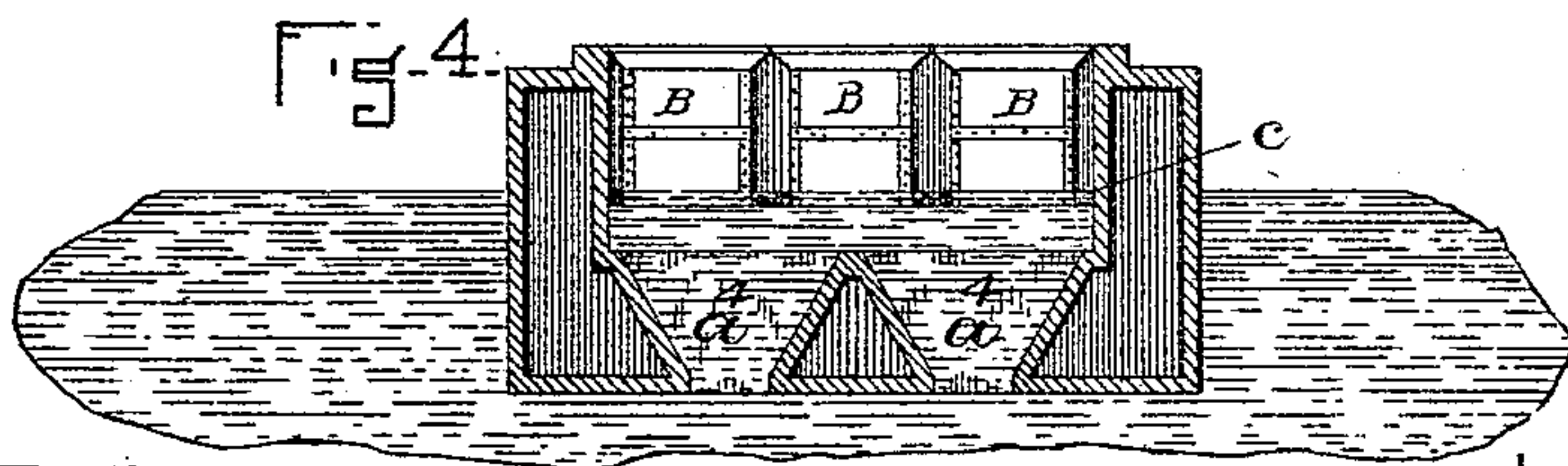
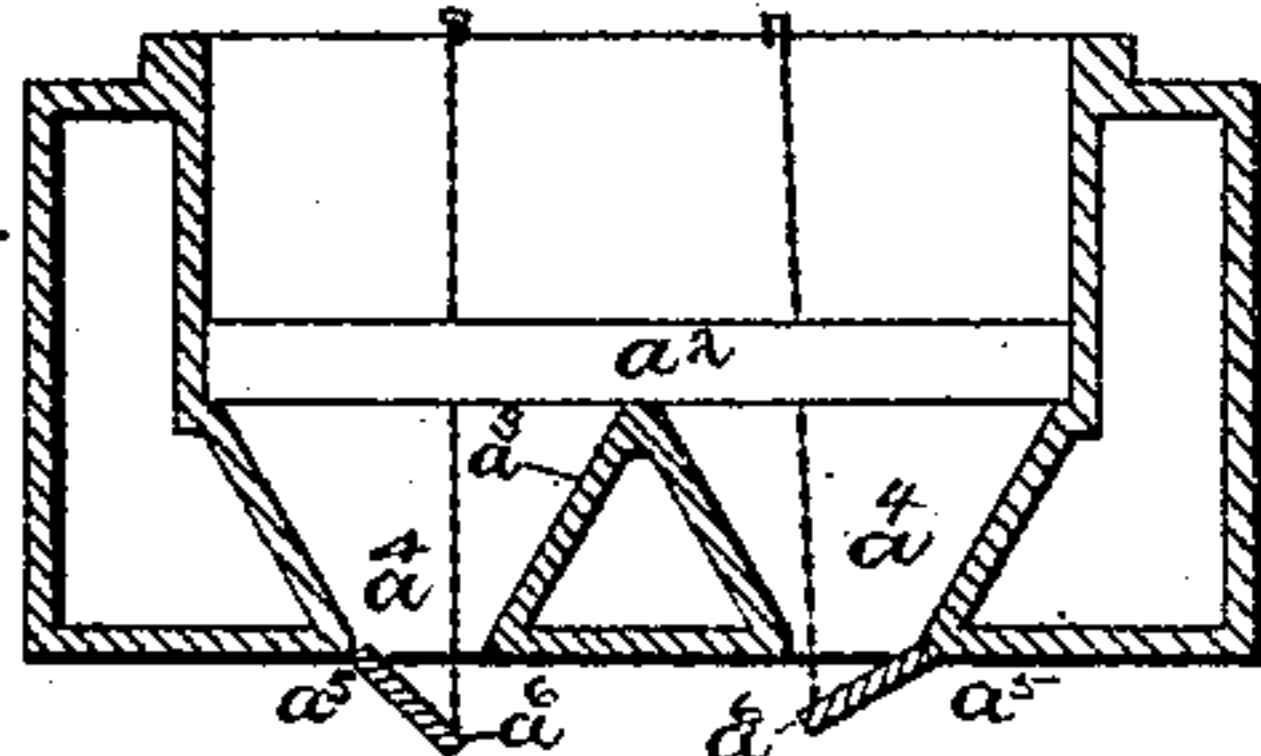


Fig. 4.

WITNESSES.

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Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## SCOW.

SPECIFICATION forming part of Letters Patent No. 459,420, dated September 15, 1891.

Application filed May 31, 1890. Serial No. 353,776. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES H. SOUTHER, of Boston, in the county of Suffolk and State of Massachusetts, and JAMES E. CHAPMAN, of Needham, in the county of Norfolk, in said State, citizens of the United States, have invented a new and useful Improvement in Scows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to a scow for the transportation of large buckets for transferring earth or other material from a dredge or similar machine. Buckets employed for this purpose are, when loaded with material, very heavy, and often when unloaded are of very considerable weight, and in the act of filling or placing them material very often escapes from them into the scow. They are generally filled when in position in the scow, but not necessarily so, and they are generally removed from the scow by a crane to some other position, and emptied by releasing their hinged bottoms. It is therefore necessary to provide in the scow proper suitable supports for the buckets to rest upon and receptacles or compartments to receive and hold the material which escapes from the buckets. It is also necessary that the scow-space and the buckets be so shaped that the buckets may be easily placed and removed without injury to each other or the scow; and we have obtained these ends by forming or providing the scow with a bucket-holding section or compartment, an open-work or grated bucket-support, and one or more wells or receiving-chambers beneath the grating to receive the material which accidentally escapes from the buckets or dredge in the act of loading, which preferably are closed normally by covers in the bottom of the scow arranged to be opened when desired to permit the contents of such compartments to escape; by forming the buckets with two sides which are inclined from the top downward and placing the buckets in the scow so that these inclined sections are next each other when in line, thereby insuring an entrance-space for the bottom of each bucket which shall be wider than the bottom of the bucket and permit of its enter-

ing such space as it comes to rest without injury to itself, the scow, or the adjacent buckets, and by partially filling the scow with water to a point above the grating, so that the water shall act as a cushion in receiving the first blow of the bucket as it is lowered into position upon the grating.

Referring to the drawings, Figure 1 is a view in longitudinal central section of the scow with the buckets in place therein. Fig. 2 is a plan view thereof. Fig. 3 is a view in plan of the scow inverted. Fig. 4 is a section taken through the scow with the buckets in place, and Fig. 5 is a section through the scow with the buckets removed and with the gates to the wells or compartments beneath the bucket-supporting grating properly opened.

A represents the scow. It has any desired number of water-tight compartments. It has two sides  $a$ , which form a large well or bucket-holding space  $a'$ . Horizontally across this space extends the grating  $a^2$ , upon which the bucket B rests. The grating may be supported by its edges only or at its center also by the section  $a^3$  of the scow. Beneath the grating are one or more wells or receptacles  $a^4$ , according to the shape of the scow, which well or wells have openings  $a^5$ , through which their contents are discharged through the bottom of the scow, the openings being closed normally by the hinged covers  $a^6$ . The buckets B are arranged in lines across the scow, their inclined sides in line, as represented in Fig. 1. The scow contains water to about line  $c$ , which, being above the grating, acts as a cushion in deadening the blow of the bucket as it is lowered to place upon the grating.

In use the buckets are filled by the dredger, excavator, or elevator with the material dredged, excavated, or elevated, and any escaping from the dredge, excavator, elevator, or bucket into the compartment of the scow passes through the interstices of the grating into the cavity below, and this prevents the waste from collecting upon the grating and interfering with the proper level resting of the buckets upon it. The buckets having been filled, the scow is transferred to a discharging position and the buckets then removed from the scow, their contents discharged, and then returned empty to the scow to be again trans-



ferred with it to the dredger or elevator and again filled.

It will be seen that by constructing the scow with the section  $a^3$  greater buoyancy and stability are given.

Having thus fully described our invention, we claim and desire to secure by Letters Patent of the United States—

1. An improved scow for the transportation of buckets of the character specified, provided with one or more large walled compartments extending across the scow from side to side, and the bottom of which compartment is provided with a grating, upon which the buckets rest and in which are openings of sufficient size to permit the escape of material which does not enter the buckets or which may escape therefrom, as and for the purposes described.

2. A scow having a large compartment or well for the reception of a number of buckets of the character specified, the open-work support  $a^2$  in said compartment for supporting said buckets, and one or more waste-receiving receptacles below said open-work support, each of which has an opening through the bottom of the scow and a cover for each receptacle, as and for the purposes described.

3. A scow for the transportation of material in buckets, having a large well or compartment adapted to receive a number of buckets in row, the grating or open-work support  $a^2$  in said compartment and upon which the buckets rest, and the central grating-support  $a^3$ , as and for the purposes described.

4. A scow for carrying buckets for holding material in line, which buckets have two straight sides and two inclined sides provided

with one or more compartments for holding said buckets in line, each of which compartments has two of its sides inclined to substantially the inclination of the inclined sides of the bucket and two of its sides straight, as and for the purposes described.

5. A scow for the transportation of dredged material in buckets having one or more walled compartments open at the top and containing or holding water, and a support in each of said compartments upon which the buckets rest, placed in the water below the upper surface thereof, whereby a body or cushion of water to receive the impact of the buckets upon their downward movement to the supports is provided above the surface of the supports and the supports thereby protected from injury, substantially as described.

6. A scow for the transportation of dredged material, comprising a boat having a number of large compartments extending across the same of a size to receive a given number of buckets, a grated or open-work bottom for each compartment, and removable buckets for holding dredged material, each of which has two of its sides straight and two inclined, whereby its bottom is made smaller than its top, and it is thereby more easily and readily inserted into its holding-space in the compartment, and which buckets are arranged in lines or rows in said compartments, as and for the purposes described.

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