July 12, 1927. J. H. TROMANHAUSER 1,635,730

APPARATUS FOR LOCATING, PLACING, AND LEVELING BERTH SEATS FOR CONCRETE CRIBS

Filed Feb. 25, 1926 2 Sheets-Sheet 1

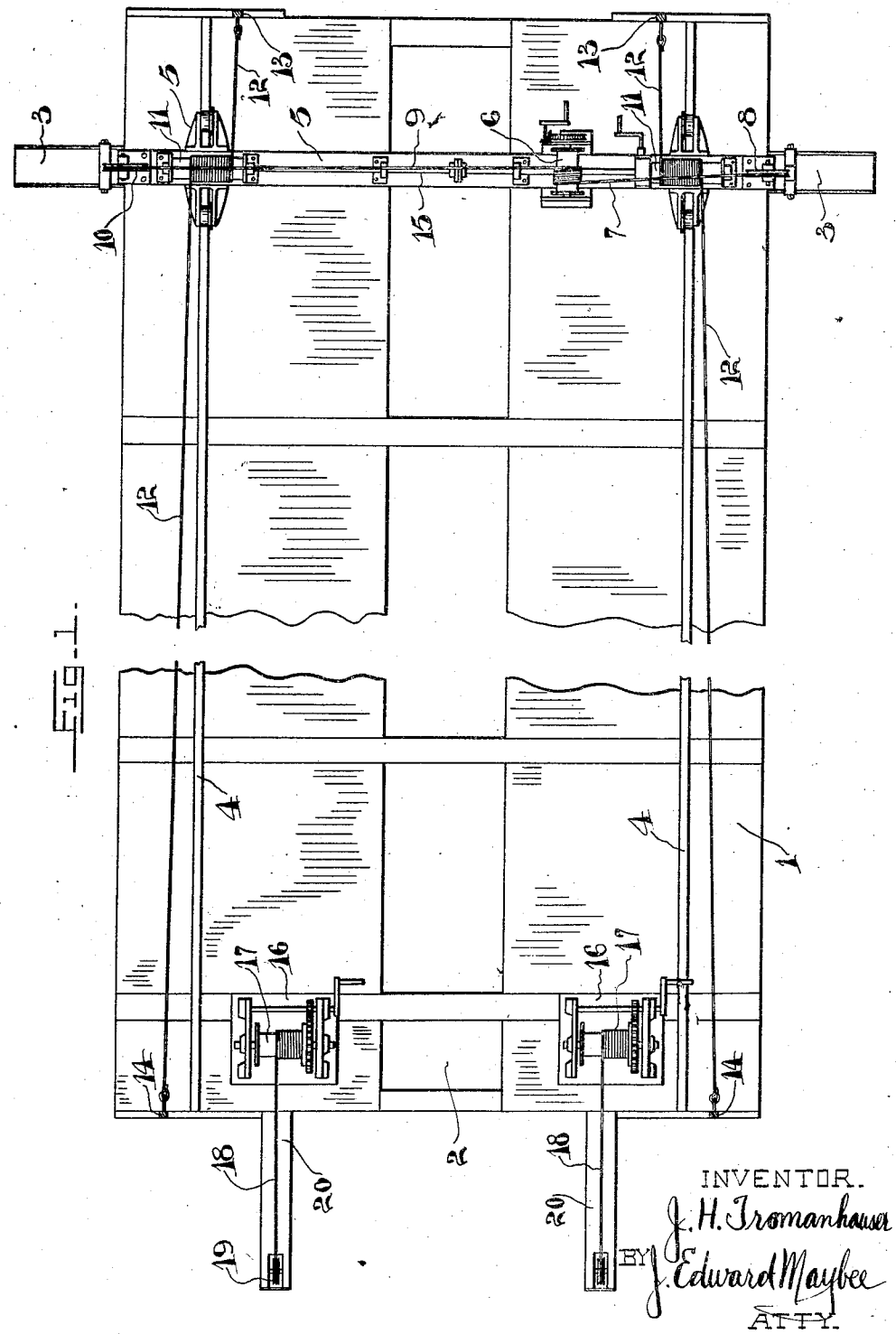


Fig. 1.

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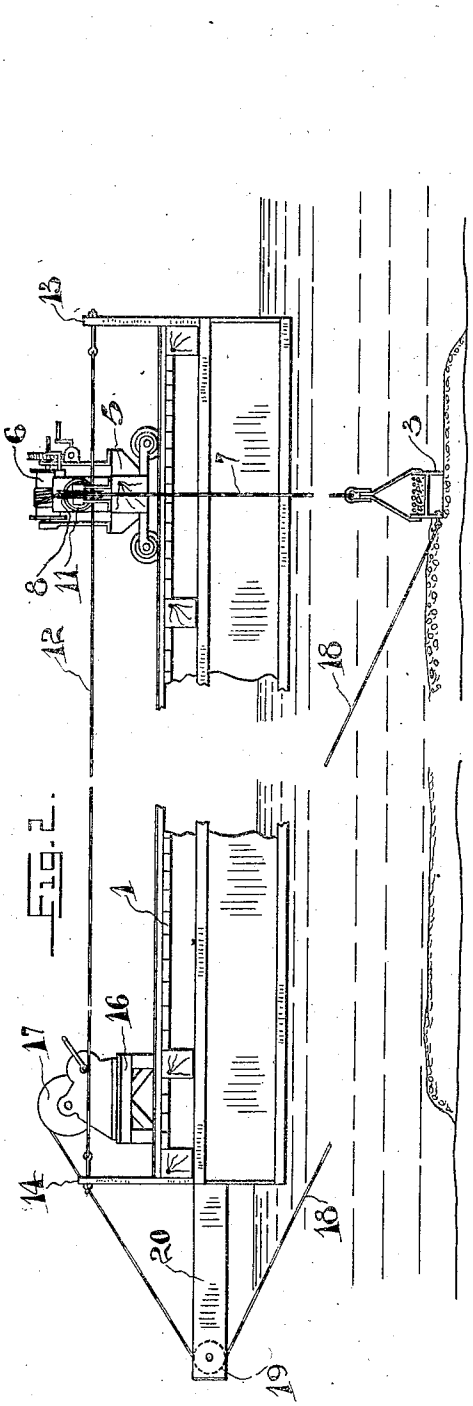


Fig. 2.

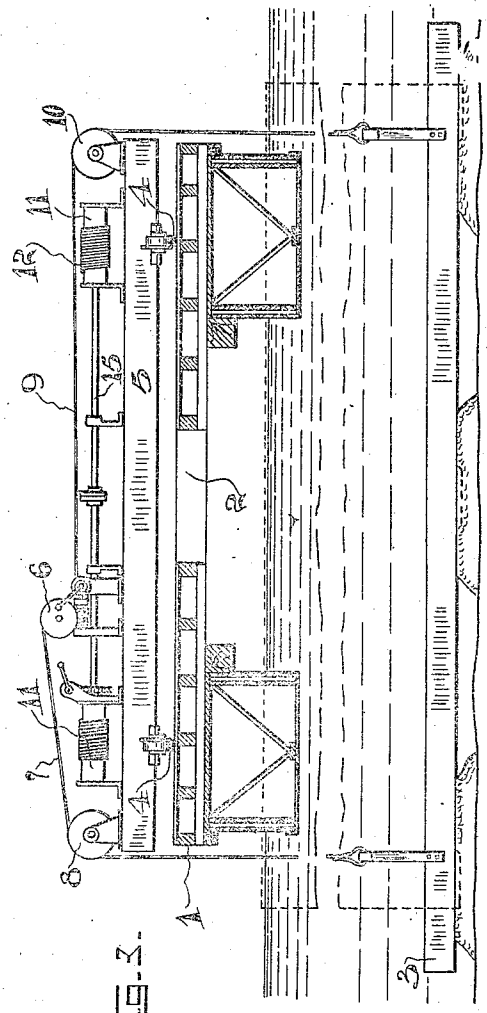


Fig. 3.

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UNITED STATES PATENT OFFICE.

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APPARATUS FOR LOCATING, PLACING, AND LEVELING BERTH SEATS FOR CONCRETE CRIBS.

Application filed February 25, 1926. Serial No. 90,510.

Before sinking concrete cribs it is necessary that a suitable berth seat be provided on which the crib may rest. Considerable difficulty has heretofore been experienced in providing such a berth seat which will be sufficiently level to provide a proper seat for the crib, and the object of my invention is to devise apparatus by means of which the berth seat may be very conveniently located, placed and leveled so that satisfactory seats are provided for the cribs.

I attain my object by means of the constructions hereinafter described and illustrated in the accompanying drawings in which—

Fig. 1 is a plan view, partly broken away, of my improved apparatus;

Fig. 2 a side elevation of the same; and

Fig. 3 an end view of the same, the position of a crib on the berth seats being indicated in dotted lines.

In the drawings like reference numerals indicate corresponding parts in the different figures.

1 is a pontoon template, which may be of any convenient construction. This pontoon template, however, is provided with one or more rows of openings 2, although in the drawing I show only one row. This pontoon template is positioned over the spot where the cribs are to be sunk and the crushed stone or other discrete material, of which the berth seat is usually formed, is discharged through the openings 2 and over the sides of the pontoon template. The openings will naturally be positioned to suit the disposition of the desired crib seats.

To level the stone I provide the drag bar or leveling beam 3, which is of a length to extend sufficiently beyond the sides of the pontoon template to level the stone discharged over the sides. This leveling beam is supported and actuated by means of the following mechanism.

Running on tracks 4 arranged longitudinally of the pontoon template 1 is a travelling carriage 5. On this carriage is mounted a winch 6 of any suitable construction, on the drum of which is wound two cables, one cable 7 passing over a guide pulley 8 located at one end of the carriage 5 and having its end connected adjacent one end of the leveling beam. The other cable 9 passes over a guide pulley 10 located at the other end of the carriage and has its other end connected with the other end of the leveling beam. By rotating the drum of the winch the cables 7 and 9 may be wound or unwound to raise or lower the leveling beam as desired.

The travelling carriage is provided with a winch 11, on the drum of which is wound two cables 12. The end of one of these cables is secured to a post 13 at one end of the pontoon template, while the end of the other cable 12 is made fast to a post 14 at the other end of the pontoon template. By rotating the drum of the winch, one cable is wound upon the drum, while the other is being unwound, and the travelling carriage may thus be moved back and forth longitudinally of the pontoon template.

In the drawing, as the pontoon template is comparatively wide, I show two winches 11 employed, one at each end of the carriage, although the drums of both winches will preferably be actuated simultaneously by means of the shaft 15.

The cables 7 and 9 being flexible, there is a tendency for the leveling beam, which has to travel through the water, to be held back thereby and consequently travel somewhat above the desired level. I therefore provide means whereby the leveling beam may be retained in its proper position relative to the travelling carriage. For this purpose I mount on suitable platforms 16, one at each side of the pontoon template, two winches 17, on the drums of which may be wound cables 18, the other ends of which are connected with the leveling beam. These winches may, of course, be actuated by common or separate means. Suitable guide pulleys 19 are provided for the cables 18, and to avoid the cables rubbing against the under side of the pontoon template, these pulleys 19 are preferably mounted on beams 20 extending outwardly from the end of the pontoon template.

The apparatus is operated as follows. The pontoon template is placed in proper position and the crushed stone for the berth seat dropped over the sides thereof and through the openings 2. The leveling beam 3 is then positioned over the stone at one end thereof, the cables 7 and 9 being let out so that the leveling beam lies at the proper level. The leveling beam is then moved forwardly by means of the travelling carriage, and the position of the beam relative to the carriage is controlled by means of the

winches 17 and cables 18. When the travelling carriage and leveling beam have reached the limit of travel in the forward direction, the beam is raised by means of the winch 6 and the travelling carriage moved rearwardly. The beam is again lowered and then drawn forward as before. The operation is repeated as often as may be necessary to satisfactorily level the stone.

It will be evident, of course, that many variations may be made. For example, winches similar to the winches 17 might be provided at the opposite end of the pontoon template and cables connected to the other side of the leveling beam, and thus leveling could be effected during the return movement of the beam as well as during the forward movement.

From the above description it will be seen that I have devised apparatus which will satisfactorily attain the object of my invention as set out in the preamble of the specification.

What I claim is:

1. In apparatus of the character described, the combination of a floating support adapted to be definitely positioned over an area to be leveled; a travelling carriage movable horizontally on said support; guide pulleys on said carriage; winding mechanism mounted on said carriage; cables connected by one end to said winding mechanism and passing over said pulleys; a leveling beam beneath the support and secured to the other ends of said cables; winding mechanism on said floating support; and a cable having one end secured to said winding mechanism and its other end connected with said leveling beam.

2. In apparatus of the character described, the combination of a floating support adapted to be definitely positioned over an area to be leveled; a travelling carriage movable horizontally on said support; leveling means beneath said support carried by and movable with said travelling carriage; means for actuating said carriage comprising winding mechanism carried by the carriage; and a pair of cables adapted to be wound on said winding mechanism, one of said cables having one end secured to a fixed part at one end of the support and the other of said cables having one end secured to a fixed part at the other end of the support.

3. In apparatus of the character described, the combination of a floating support adapted to be definitely positioned over an area to be leveled; a travelling carriage movable horizontally on said support; leveling means suspended from said carriage below said support; and means for moving said leveling means to retain it in substantially the same vertical plane as the carriage as the latter is moved.

4. Apparatus for forming crib seats on the sea bottom comprising a floating support adapted to be definitely positioned over an area to be leveled and provided with openings positioned in accordance with the disposition of crib seats desired and through which discrete material may be dropped to form the seats: a travelling carriage movable horizontally on said support; means below said support and suspended from said carriage for leveling said discrete material; and means for moving said leveling means to retain it in substantially the same vertical plane as the carriage as the latter is moved.

Signed at Toronto, Canada, this 5th day of February, 1926.

JESSE H. TROMANHAUSER.