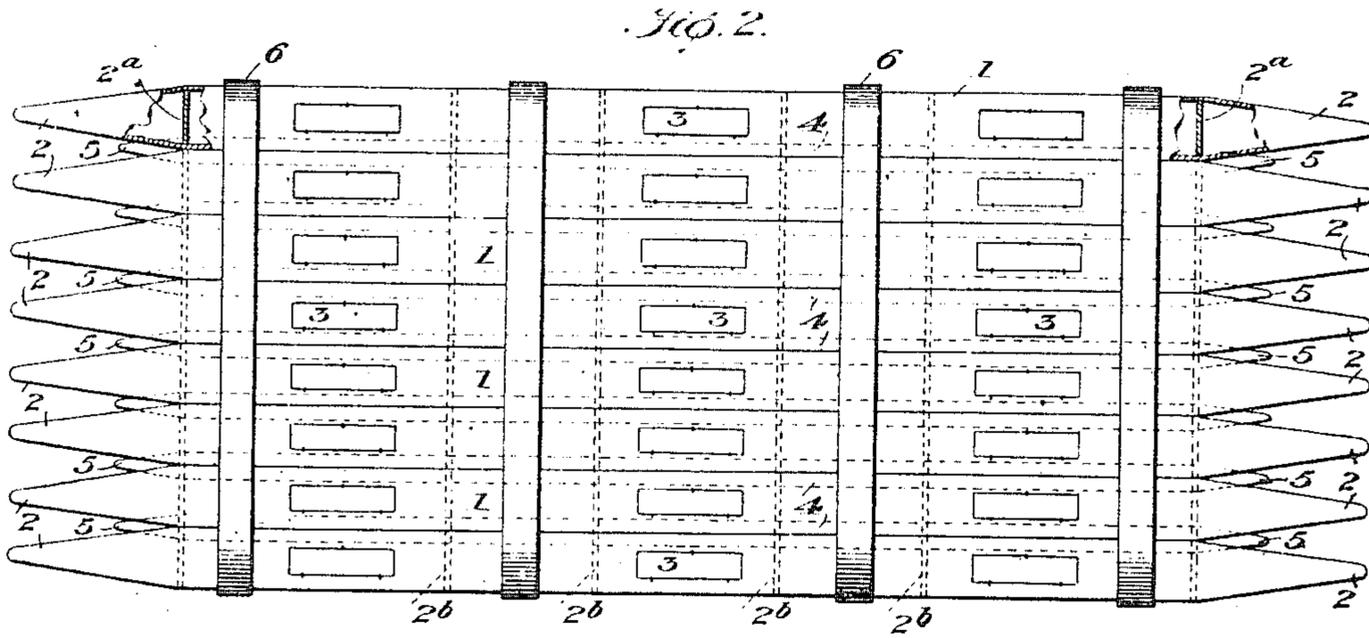
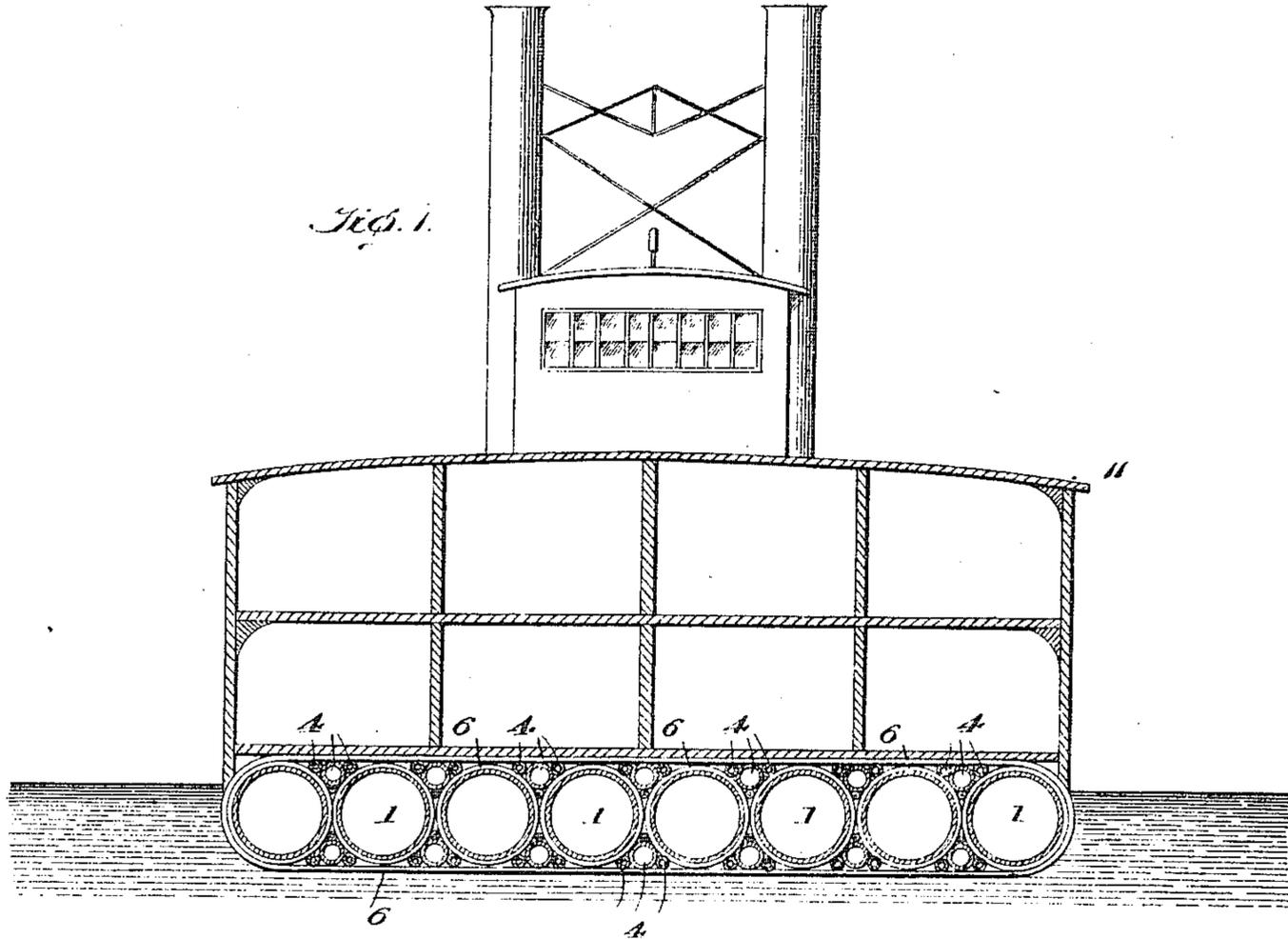


A. J. PEBBLES.
 FREIGHT VESSEL.
 APPLICATION FILED MAR. 3, 1908.

995,557.

Patented June 20, 1911.

2 SHEETS—SHEET 1.



Inventor

August John Peebles

Witnesses

Wm. J. Fisher
Geo. A. Havelin

By

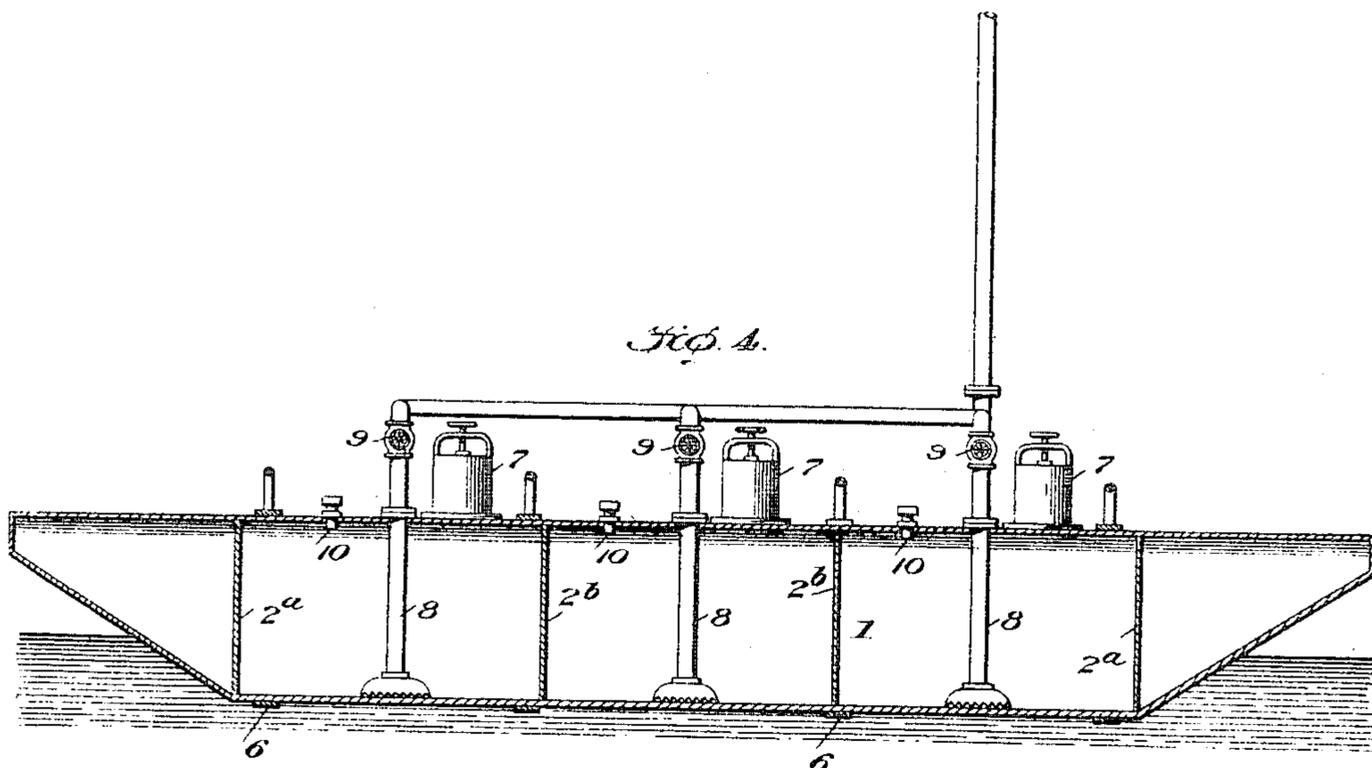
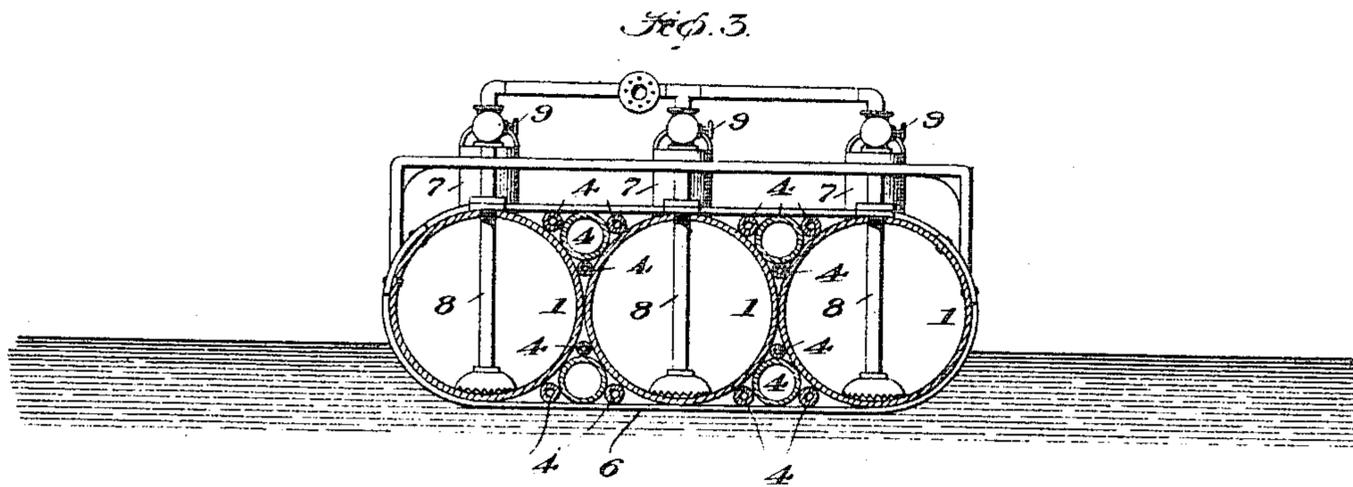
Henry M. Kopp
 Attorney

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2 SHEETS-SHEET 2.



Inventor
August John Peebles

Witnesses
[Signature]
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By *Henry N. Capps*
 his Attorney

UNITED STATES PATENT OFFICE.

AUGUST J. PEEBLES, OF MOLSON, WASHINGTON.

FREIGHT VESSEL.

995,557.

Specification of Letters Patent. Patented June 20, 1911.

Application filed March 3, 1908. Serial No. 419,042.

To all whom it may concern:

Be it known that I, AUGUST JOHN PEEBLES, a citizen of the United States, residing at Molson, county of Okanogan, and State of Washington, have invented certain new and useful Improvements in Freight Vessels, of which the following is a specification.

This invention relates to freight vessels for the transportation of such materials as are fluid, like oil, or grain in bulk, which are adapted for handling more cheaply by pumps, air compressors or elevators, than by hand or truck.

The object of the present invention is the provision of a freight vessel of the class set forth, wherein a novel hold-structure will be provided for containing fluids, such as oil, grain in bulk, sand, or any other fluid or material in bulk, which will be associated with buoyant devices in a novel fashion, whereby the vessel will be rendered entirely stable and seaworthy, without danger of sudden shifting of its cargo, and will also be most satisfactorily buoyant, have great storage capacity without interfering with the superstructure of the vessel, will be rendered non-sinkable, and which may be of any type of craft desired and propelled by side wheels, stern wheels, or screw propellers.

The invention is set forth fully herein-after and its novel features are recited in the appended claims.

In the accompanying drawings: Figure 1 is a cross-section of a vessel equipped with my improvements which is particularly intended for carrying grain and like materials; Fig. 2 is a plan view thereof with the superstructure removed; Fig. 3 is a cross-section of the invention as adapted for transporting liquids, such as oil, etc.; and Fig. 4 is a longitudinal section thereof.

The superstructure of the vessel may be of any desired type and is not limited to that herein shown and described, as my invention has particular reference to the storage and buoyant understructure adapted for use in conveying grain, liquids, or other material, fluids or substances, which are more readily handled by elevators or pumping or by compressed air than by hand.

The numeral 1 designates a plurality of elongated or tubular tanks which may be conical or conoidal at their ends 2, where they are formed into air-tight buoyant com-

partments by the provision of air-tight bulk-heads 2^a, and these tanks are completely closed except in their upper part where they have hatches 3 for the filling or emptying of the grain, or other material. These tanks are of metal of suitable thickness according to the size of the vessel and the capacity of the tanks themselves, and they have air-tight bulk-heads 2^b located at intervals, which divide them into air-tight compartments.

Interposed between the tanks 1 (although said tanks are, by preference, in contact side by side) and located above and below them, are air tubes or floats 4 which are also pointed on their opposite ends as at 5. These tubes 4 being air-tight, are very buoyant and constitute air-tight compartments, as it were, and their disposition and number gives a general balancing buoyant effect to the tanks 1 and on the superstructure of the vessel.

The tanks and the air tubes are firmly connected together by metal fastenings 6 of any preferred kind, and others than those shown may be used so long as they render the tanks and tubes secure and seaworthy.

In Figs. 3 and 4 I have shown the tanks as specially adapted for containing oil and other liquids. The tanks have air-tight manholes 7 in place of the hatches 3 and they are provided with supply and suction pipes 8 for pumping the oil into or out of the tanks. Each pipe has its own valve 9 so that the tanks can be independently filled or emptied; the tanks also have air vents 10.

Dividing the tanks into compartments by separate air-tight bulk-heads, prevents sudden shifting of the oil or grain from one end of the tank to the other on sudden stopping or starting of the vessel and enables the vessel to maintain its equilibrium. This arrangement also prevents danger of sinking if a tank is punctured or leaks.

The submerged tanks will be practically fire-proof as the oil is below the waterline and they are rendered non-sinkable as the oil being lighter than water, will remain on top if any water should enter and thus prevent water coming in at the bottom, even though a leak should occur.

The air tubes, owing to their location, are protected except on the bottom and when connected by pipe with an air-pump or compressor capable of raising the pressure inside of the tubes above that of the atmospheric and hydrostatic pressures, render the

vessel non-sinkable as the higher pressure in the air tube will tend to force the water out at any opening or puncture that might occur in such tubes.

5 The superstructure 11 of the vessel may be of any type, that shown being of the ordinary river boat style with side or stern wheels. However, the present invention can be used in connection with whale-backs for
10 deep water navigation or with any type of stern wheel, side wheel, or screw propeller.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

15 1. A freight vessel having a plurality of storage tanks extending side by side lengthwise thereof, and buoyant tubes associated with and located in the intervening spaces above and below said tanks.

20 2. A freight vessel having a plurality of storage tanks extending side by side length-

wise thereof, and buoyant tubes arranged in a general alternate manner in relation to the tanks and extending lengthwise thereof.

3. A freight vessel having a plurality of
25 storage tanks located side by side and extending lengthwise thereof and adapted for partial or entire submergence, and buoyant tubes located between the storage tanks and
30 extending lengthwise thereof.

4. A freight vessel having a storage tank provided with independent non-communicating compartments, independent air valves for the compartments, and independent suction and supply pipes for the compartments.
35

In testimony whereof, I hereunto affix my signature in presence of two witnesses.

GUS J. PEEBLES.

Witnesses:

V. J. GOWEN,
E. P. RONUCK.