WILLIAM BROWN & WALTER BROWN.

DREDGER.

APPLICATION FILED JAN. 19, 1916.

1,240,932.

Patented Sept. 25, 1917.

3 SHEETS—SHEET 1.

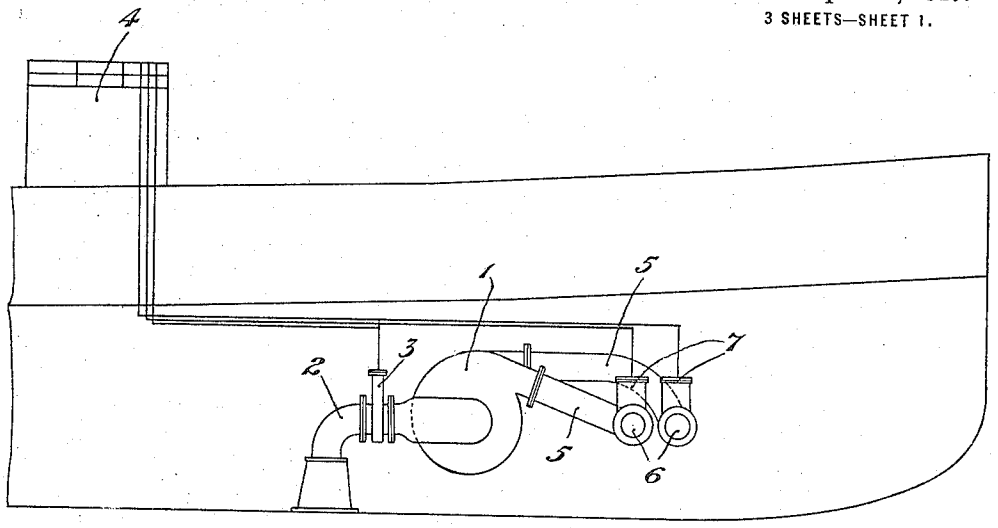


FIG. 1.

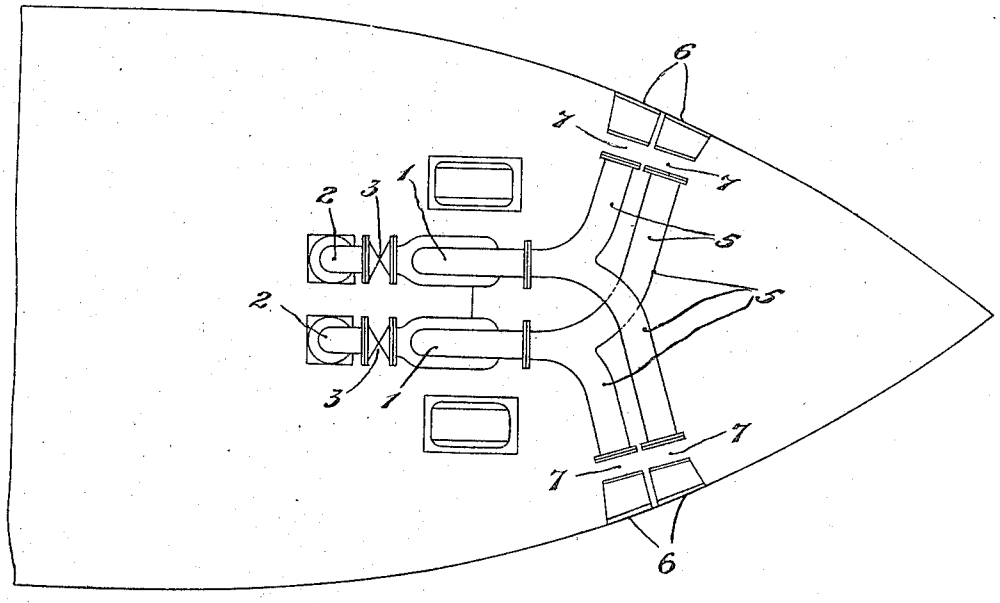


FIG. 2.

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3 SHEETS—SHEET 2.

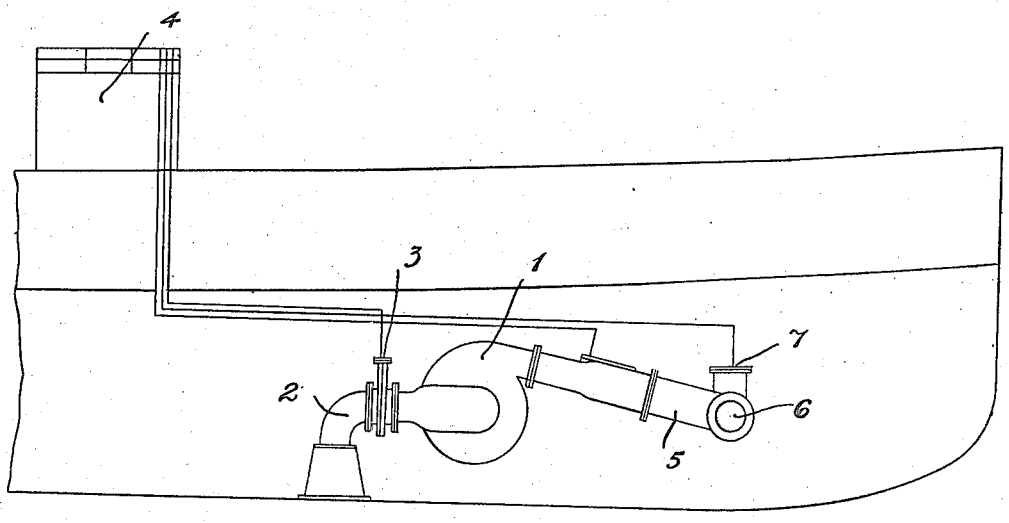


Fig. 3.

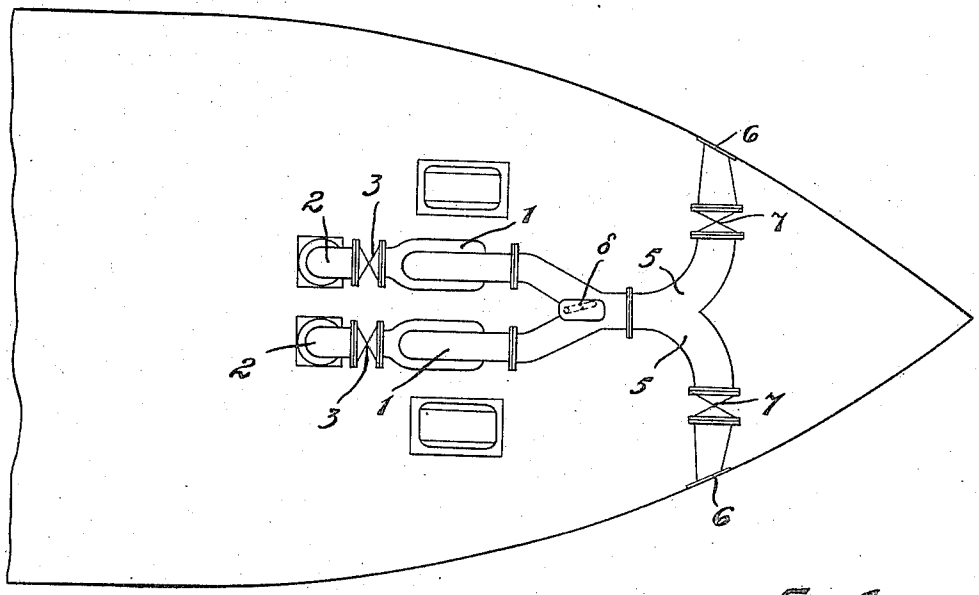


Fig. 4.

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3 SHEETS—SHEET 3.

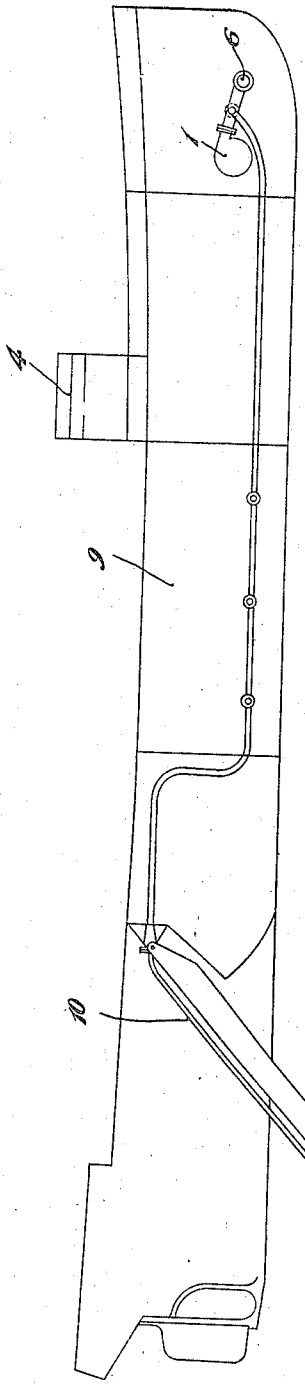


FIG. 5.

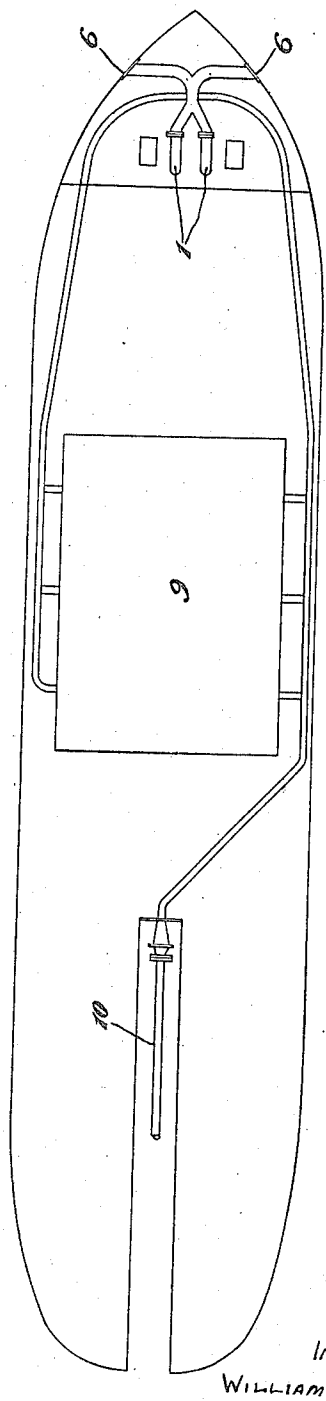


FIG. 6.

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UNITED STATES PATENT OFFICE.

WILLIAM BROWN AND WALTER BROWN, OF RENFREW, SCOTLAND.

DREDGER.

1,240,932. Specification of Letters Patent. Patented Sept. 25, 1917.

Application filed January 19, 1916. Serial No. 72,948.

To all whom it may concern:

Be it known that we, WILLIAM BROWN and WALTER BROWN, subjects of the King of the United Kingdom of Great Britain and Ireland, and residing at Renfrew, Renfrewshire, Scotland, have invented a certain new and useful Improvement in Dredgers, of which the following is a specification.

This invention relates to suction dredgers and consists in a dredger provided with steering jets dependent for their water supply on a set of pumps located at the bow in immediate proximity to the jets, with valves operable from the bridge of the dredger for controlling the supply to the jets.

The invention is illustrated in the accompanying drawings in which Figures 1 and 2 show one embodiment in plan and elevation, respectively, Figs. 3 and 4 are similar views of a further embodiment and Figs. 5 and 6 represent in elevation and plan, respectively, a dredger equipped with the improved jet system.

As shown, there is fitted in the bow of the dredger a set of pumps 1, *e. g.*, two pumps, preferably centrifugal pumps, the inlet connections 2 of the pumps 1 merging into perforations in the ship's hull and being provided with valves 3 preferably controllable from the bridge 4 as indicated conventionally in the drawings. The outlet pipes 5 connecting the pumps 1 with the jet nozzle 6 are fitted with valves 7 controllable from the bridge, such valves 7 being arranged to open one at a time or one set at a time. It will be seen that the closure of one outlet valve or set of outlet valves and corresponding opening of the valve or valves on the opposite side of the ship will be accompanied by movement of the ship's head away from the side at which the valves are open. It follows that, when the dredger is to be steered toward the starboard side, it is requisite only to open the valves on the port side.

In the embodiment shown in Figs. 1 and 2 each pump is provided with a separate inlet pipe and an outlet pipe leading to separate nozzles, while in the embodiment illustrated in Figs. 3 to 6, the outlet branch of each pump merges into a conduit branching into the several nozzles, a diaphragm or deflector 8, in the latter instance, serving, in the event of operation of one pump only, to prevent rush of water in the direction of the inoperative pump. The pumps 1 preferably also serve for the supply of water jets to the hopper 9 and to the pipe 10 leading to the suction head.

What we claim is:—

In a dredger, in combination, nozzles located one at each side of the bow, a pair of pumps located adjacent to said nozzles, pipe connections leading from the discharge side of each pump to both nozzles, water supply pipes connected to the inlets of said pumps and penetrating the bottom of the dredger hull, valves operable from the dredger bridge to control the supply and outlet pipes and to determine which nozzle will be supplied with water, and a common diaphragm for cutting off communication between either pump and said nozzles, substantially as and for the purpose set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WM. BROWN.
WALTER BROWN.

Witnesses:
WALLACE CRANSTON FAIRWEATHER,
HENRY MASON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."