

B. T. BABBITT.
Marine Condensers.

No. 142,665.

Patented September 9, 1873.

Fig. 1

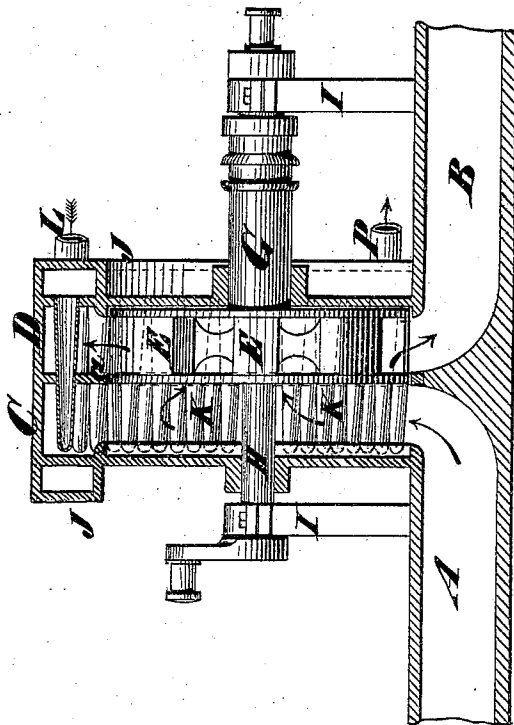
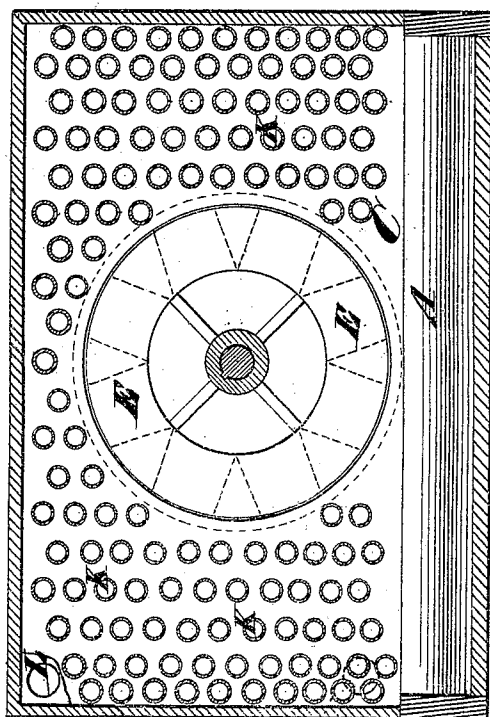


Fig. 2



Witnesses:
Michael Ryan
Fred Thompson

B. T. Babbitt
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

BENJAMIN T. BABBITT, OF NEW YORK, N. Y.

IMPROVEMENT IN MARINE CONDENSERS.

Specification forming part of Letters Patent No. **142,665**, dated September 9, 1873; application filed June 25, 1873.

To all whom it may concern:

Be it known that I, BENJAMIN T. BABBITT, of the city, county, and State of New York, have invented Improvements in Marine Condensers, of which the following is a specification:

This invention relates to the application of condensers in connection with the engines which are employed to drive that class of propellers by which the whole of the water displaced by the propulsion of the vessel is transferred through a casing surrounding the propeller. It consists in the peculiar construction of the condenser itself, whereby it is especially adapted to the situation above mentioned.

In the accompanying drawing, which represents the invention applied in connection with a propeller, which is the subject of my application for patent allowed February 18, 1873, Figure 1 is a section of the propeller and its water-ways taken transversely to the propeller-wheel, and Fig. 2 is a section taken at right angles to the same.

Similar letters of reference indicate corresponding parts in both figures.

A and B indicate two water-ways, which extend respectively to the bow and stern of the boat in which the propeller is arranged. C D indicate the wheel-box, with which the aforesaid passages communicate. This box is divided into two compartments, C and D, which are separated only by a partition, *a*, and communicate one with each of the passages A B. E is the wheel of a centrifugal pump, which is employed as a means of propulsion. It is of a suitable width to fit within either of the compartments C D, and it is arranged on a sleeve, G, which is locked to its shaft H by a feather. By this means the wheel may be slid longitudinally on its shaft to move from one compartment to the other.

The wheel may be of any suitable form, so long as there is a central opening to communicate with one compartment while the wheel is working in the other. Its shaft H is supported in bearings I I, and is furnished with cranks to afford means of rotating it.

By the rotation of the pump-wheel water is drawn from one of the passages, A B, and forced out of the other, and, according to which passage the water is expelled from, the boat moves forward or backward.

The condenser consists of two chambers, J J, arranged on the outer sides of the compartments C D of the pump-shell, and numerous taper-pipes K projecting from them into and across both compartments of the shell. These condenser-chambers are reversed in position, each extending along the reverse portion of their respective compartments from the other. Steam inlet-pipes L lead to the upper part of the chambers, and outlet-pipes P for the water of condensation lead from the lower portion of the chambers. The water passing through the pump is brought into immediate contact with the pipes of the condenser, and very effectually condenses the steam contained in them. The water, as fast as formed in the pipes, on account of their inclined sides, runs back into the chambers and is discharged through the outlet-pipes P.

What I claim as my invention is—

The combination of the water-box C D surrounding the propeller, the steam-chambers J with their inlet and outlet pipes, and the taper pipes K K, substantially as and for the purpose herein set forth.

BENJ. T. BABBITT.

Witnesses:

FRED. HAYNES,
CHAS. N. DAYTON.