

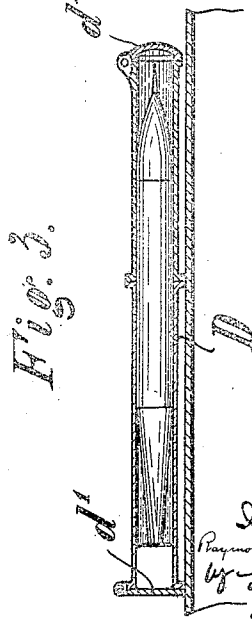
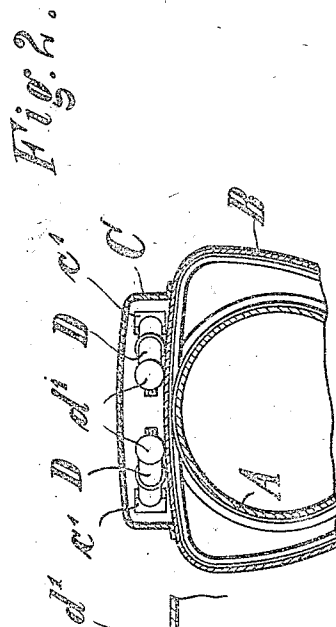
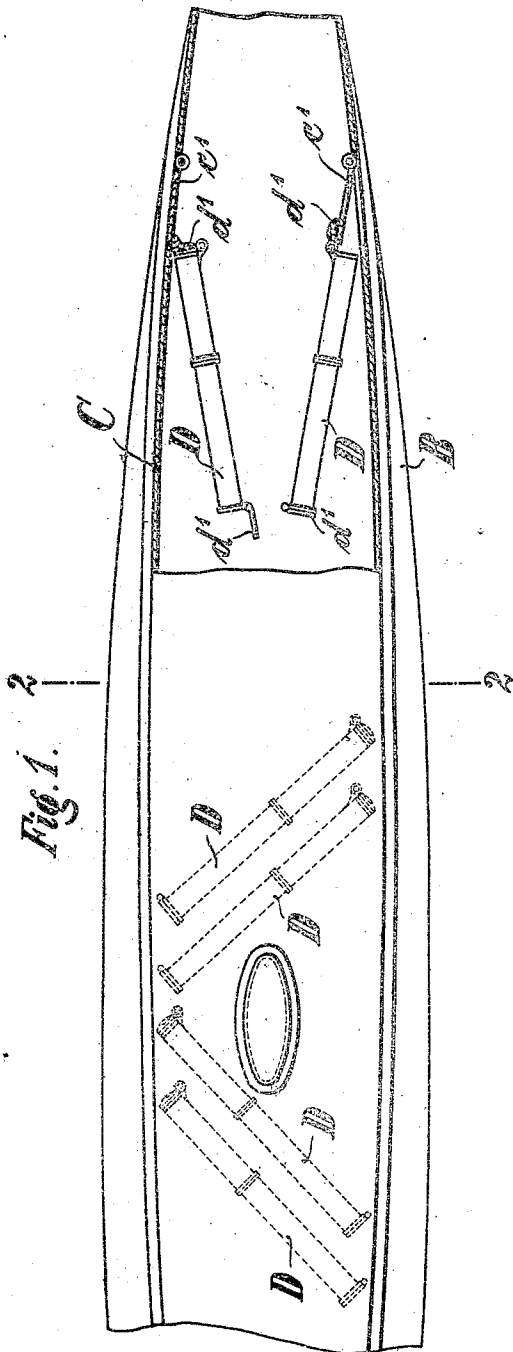
R. D'EQUEVILLEY-MONTJUSTIN.

SUBMARINE BOAT.

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948,605.

Patented Dec. 14, 1909.



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UNITED STATES PATENT OFFICE.

RAYMOND D'EQUEVILLEY-MONTJUSTIN, OF KIEL, GERMANY.

SUBMARINE BOAT.

943,605.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed June 11, 1908. Serial No. 437,911.

To all whom it may concern:

Be it known that I, RAYMOND D'EQUEVILLEY-MONTJUSTIN, a subject of the King of Spain, and a resident of Kiel, in the Empire of Germany, have invented certain new and useful Improvements in Submarine Boats, of which the following is a specification.

The present invention relates to submarine boats with ejecting tubes for torpedoes and the main feature of the invention is that the ejecting tubes are completely inclosed in a housing arranged exterior to the hull proper of the boat.

The accompanying drawings show one embodiment of the invention by way of example.

Figure 1 is a top view, partly in section, of a submarine boat; Fig. 2 is a section on line 2—2, Fig. 1, looking from the left, and Fig. 3 is a longitudinal section through one of the torpedo tubes, on an enlarged scale.

The outer wall A of the hull proper is surrounded by a second wall B. On the top of the wall B is arranged a superstructure C which extends throughout the entire length of the boat and which is filled with sea-water during the travel below the surface. The superstructure C has an outer shape which guarantees stability of the craft and offers the least possible resistance to the travel of the boat.

Within the superstructure C a plurality of ejecting tubes D are arranged in such a manner that torpedoes can be ejected in any direction without necessitating any great turning of the boat. The ejecting tubes are completely inclosed in the housing C. The number of ejecting tubes is equal to the number of torpedoes to be carried along. The ejecting tubes are provided with hinged flaps d^1 which permit the introduction of the torpedoes into the ejecting tubes and the superstructure is provided with hinged flaps c^1 which permit the ejection of the torpedoes. The free space of the ejecting tube loaded with a torpedo is constantly filled with a liquid, such as heavy oil, which does not attack the wall of the torpedo and is of a density which is as nearly as possible equal to that of the sea-water. As furthermore the weight of the torpedo is also approximately equal to the weight of the sea-water, the sea-water which enters the ejecting tube after the ejection of a torpedo will have a weight which is approximately equal to the weight

of the ejected torpedo and of the oil which passes out with the torpedo. It is, therefore, unnecessary to provide special devices for compensating for the weight of an ejected torpedo. The invention furthermore presents the advantage that a greater number of torpedoes are at any time ready for ejection and that special compartments in the interior of the boat for storing the torpedoes are done away with. As compared with the known submarine boats in which the ejecting tubes are arranged exterior to the hull proper the arrangement of the ejecting tubes in a superstructure presents the advantage of less resistance to the travel of the boat and makes it possible to eject the torpedoes also during surface-travel. Furthermore, the herein-described arrangement of the ejecting tubes makes it possible to more heavily arm a submarine boat of a given tonnage. Finally, the ejecting tubes may, also in small submarine boats, be arranged in such a manner that it is possible to eject the torpedoes toward the sides of the boat.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:—

1. A submarine boat having an inner hull, an outer hull inclosing said inner hull and spaced therefrom, a housing arranged above and exterior to said outer hull, and torpedo tubes arranged within and inclosed by said housing.

2. A submarine boat having spaced inner and outer hulls, a superstructure on said outer hull, and a plurality of torpedo tubes arranged within the superstructure at different oblique angles to the longitudinal axis of the boat, whereby torpedoes may be discharged in a plurality of directions.

3. In a submarine boat, the combination with the inner hull; of an outer hull inclosing said inner hull and spaced therefrom; a superstructure mounted upon said outer hull and adapted to be filled with sea water when the boat is submerged; torpedo tubes mounted within the superstructure at oblique angles to one another and to the longitudinal axis of the boat, said tubes being adapted to store the torpedoes in positions ready for firing.

4. In a submarine boat, the combination with the inner hull; of an outer hull containing said inner hull; a water containing superstructure extending throughout the

length of the boat and conforming to said outer hull; and tubes for storing and ejecting torpedoes mounted in said superstructure, so as to cause them to fill with sea water to replace the torpedoes ejected therefrom.

5. A submarine boat having inner and outer hulls, a superstructure surmounting the outer hull and extending throughout the length of the hull, and torpedo tubes arranged within and inclosed by the superstructure.

6. In a submarine boat having inner and outer hulls and a liquid-containing superstructure on said outer hull, a torpedo tube within the superstructure, said tube containing a torpedo and having the space not occupied by the torpedo, filled with a liquid.

7. A submarine boat having inner and outer hulls, a housing exterior to the outer hull, and torpedo tubes arranged within and inclosed by, said housing; the space in the tubes not occupied by the torpedoes being filled with a liquid of a density approximately equal to the density of sea-water.

8. A torpedo tube containing a torpedo and a liquid surrounding the torpedo, said liquid being of a density approximately that

of sea water and non-reactive as to the material of the torpedo and the tube.

9. In a submarine boat having inner and outer hulls and a superstructure on said outer hull; a torpedo tube within the superstructure, said tube containing a torpedo and having the space not occupied by the torpedo filled with a non-corrosive liquid; the combined weight of the torpedo and the liquid being approximately equal to the weight of the same volume of sea water.

10. A torpedo tube containing a torpedo and having the space not occupied by the torpedo filled with a non-corrosive liquid of a density approximately equal to the density of sea-water.

11. A torpedo tube containing a torpedo and having the space not occupied by the torpedo filled with a liquid which is inert to the wall of the torpedo and is of a density approximately equal to the density of sea-water.

The foregoing specification signed at Kiel, Germany, this 14th day of May, 1908.

RAYMOND D'EQUEVILLE-MONTJUSTIN.

In presence of—

JULIUS RÖPKE,

OTTO LAU.