P. L. E. DEL FUNGA-GIERA.

SUBMARINE SUPPLY.

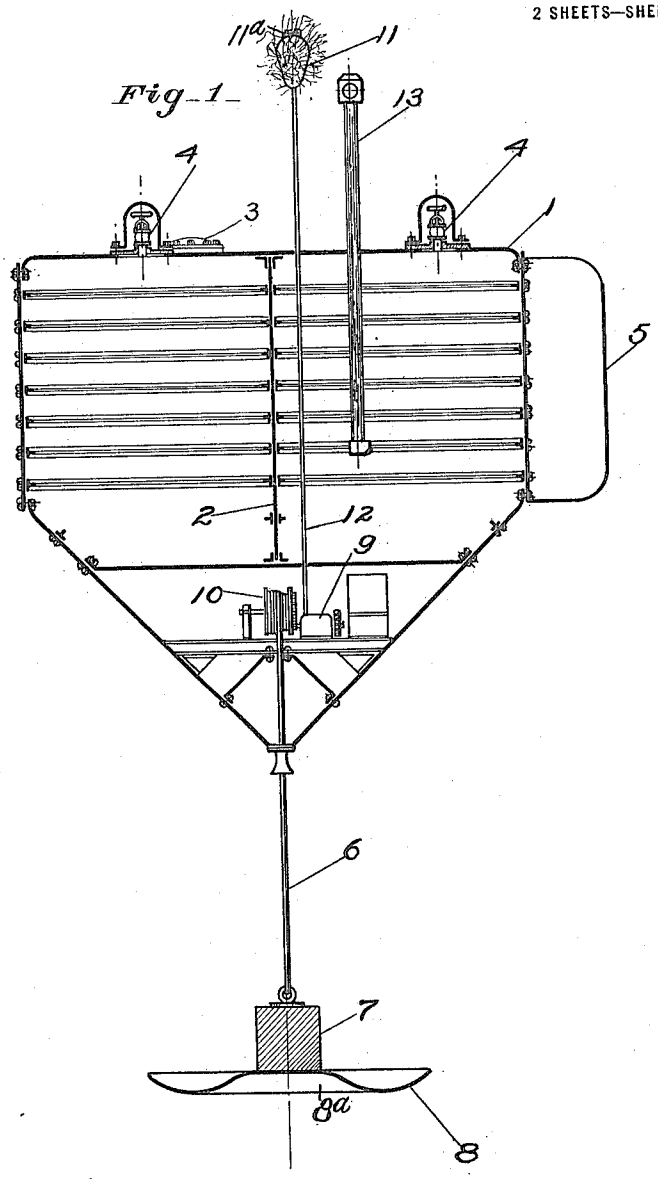
APPLICATION FILED AUG. 28, 1916.

1,220,825.

Patented Mar. 27, 1917.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:
Joseph Nagy.
J. E. Larsen

INVENTOR
Filippo L. E. del Funga-Giera

BY
ATTORNEY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

P. L. E. DEL FUNGA-GIERA.

SUBMARINE SUPPLY.

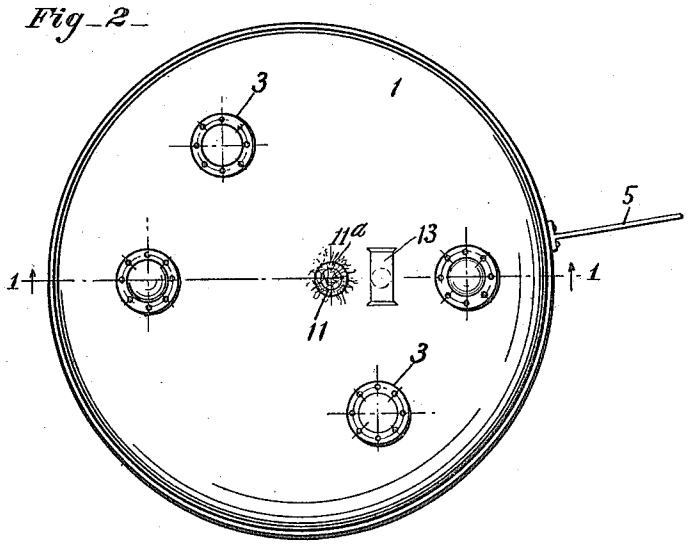
APPLICATION FILED AUG. 28, 1916.

1,220,825.

Patented Mar. 27, 1917.

2 SHEETS—SHEET 2.

Fig. 2.



WITNESSES:

Joseph Nagy

J. C. Larsen

INVENTOR

Filippo L. E. del Funga-Giera

BY

ATTORNEY

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PHILIPPO L. E. DEL FUNGA-GIERA, OF NEW YORK, N. Y.

SUBMARINE-SUPPLY.

1,220,825. Specification of Letters Patent. Patented Mar. 27, 1917.

Application filed August 28, 1916. Serial No. 117,196.

To all whom it may concern:

Be it known that I, PHILIPPO L. E. DEL FUNGA-GIERA, a citizen of the Republic of Switzerland, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Submarine-Supply, of which the following is a full, clear, and exact description.

My invention relates to a new system of carrying such auxiliary supplies as is necessary for the proper maintenance of submarine vessels or other surface or under-sea craft, and is characterized by a tank or tanks constituting a container or containers so equipped as to permit of the supplies being removed at will at the surface, and having anchoring means whereby the containers may be positioned in convenient localities.

The apparatus is characterized also by an internal arrangement whereby a container or magazine may be caused to rise to the surface or to be lowered in the water to any desired submergence to maintain it out of sight or out of range.

The invention involves also a novel marking buoy floating on the surface and disguised in practice, the cable of the buoy being arranged for the connection with a source of electric power on the boat so that connection may be made with an electric motor in the tank or magazine for the winding and unwinding of the anchoring cable in effecting the raising and lowering of the magazine.

Other distinctive features of the invention as well as the construction and operation will appear as the description proceeds.

Reference is to be had to the accompanying drawings forming a part of this specification in which similar reference characters indicate corresponding parts in all the views.

Figure 1 is a central vertical section on the line 1—1, Fig. 2; and

Fig. 2 is a plan view.

In the illustrated embodiment of my invention given as one example thereof, the shell 1 of the container is in practice of standard marine construction, divided into any number of compartments for containing lubricating and fuel oils, food, water, tools, machinery, and extra parts. In the present instance a single vertical partition 2 divides the container or magazine into two compartments. Several manholes indicated at 3 are provided to afford access to the compartments.

The numeral 5 indicates a fin projecting laterally and ranging vertically at the exterior of the shell 1 and properly fastened thereto, to prevent the rotation of the container. The fin 5 also has a function in preventing the container from the twisting off of the cable 6 which is connected with an anchor 7. The anchor is in the form of a cast iron weight and is provided with a reversed, mushroom-shaped, steel disk 8 presenting a concavo-convex annular rim portion and a central suction cup 8^a at the under side. Thus a suction will be created at the under side of the shell to increase the holding effect of the anchor while the added weight of the disk is availed.

The cable 6 winds on a drum 10 within the container and may be payed out through the lower tapered end thereof. To actuate the drum the same is geared to an electric motor 9 which in practice is compound wound and equipped with a starting, braking, and controlling attachment to operate the drum 10 in either direction, whereby to lower the tank to any desired degree of submergence or to permit the same to rise to the surface.

A marking buoy 11 disguised with seaweed, kelp, etc., is connected by an armored cable 12 with the motor 9 and has a suitable cap 11^a whereby connection may be established between the cable and a source of electric power on the boat to be supplied.

The numeral 13 indicates a periscope which in practice is of the collapsible type. The provision of the periscope allows of the temporary occupation of the tank or magazine by human beings and allows of observations being taken during submergence. In operation, a submarine or other marine vessel having located the marking buoy according to nautical charts, the buoy cap may be removed and connection made between the electric power on the vessel and the electric cable 12 leading to the motor and by actuating the latter, the drum is turned, and thereby releasing the magazine and permitting it to rise to the surface of the water as the mooring cable is payed out. The magazine having been raised, access may be had to the different compartments through the

manholes 3. Upon the necessary supplies having been taken from the magazine, the electric power of the submarine is again caused to operate the motor 9 and by rewinding the mooring cable the magazine is submerged to any desired depth. The buoy 11 is then disconnected and the crew again decoys or masks the buoy so that it will be invisible to any one not knowing the nautical location.

The particular character of the anchor gives a mooring capacity to hold the tank or magazine under any conditions of weather or water in any desired location, the weight, the suction cup and the sand receiving rim all contributing to the holding action.

Suitable valve inlets 4 may be provided in the top to serve various purposes.

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

1. A submersible container, comprising a casing having a cylindrical upper portion and a conical lower portion, a horizontal partition dividing said casing into upper and lower compartments, a vertical partition sub-dividing said upper compartment, a horizontal partition sub-dividing said lower compartment into a motor chamber and a water chamber, an anchor, a cable leading therefrom to said motor chamber, and means in said motor chamber for adjusting the length of said cable to control the degree of submergence of said container.

2. A submersible container, comprising a casing having a cylindrical upper portion and a conical lower portion, a horizontal partition dividing said casing into upper and lower compartments, a vertical partition sub-dividing said upper compartment into storage and habitable chambers, a periscope extending from said habitable chamber, a horizontal partition sub-dividing said lower compartment into a motor chamber and a water chamber, an anchor, a cable leading therefrom to said motor chamber, and means in said motor chamber for adjusting the length of said cable to control the degree of submergence of said container.

3. A submersible container, comprising a casing having a cylindrical upper portion and a conical lower portion, a horizontal partition dividing said casing into upper and lower compartments, a horizontal partition dividing said lower compartment into motor and water chambers, a bell-shaped bracing and water resisting partition in said water chamber, an anchor, a cable leading therefrom to said motor chamber, and means in said motor chamber for adjusting the length of said cable to control the degree of submergence of said container.

PHILIPPO L. E. DEL FUNGA-GIERA.

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