(No Model.)

W. H. PATTON.

BOAT.

No. 424,817. Patented Apr. 1, 1890.

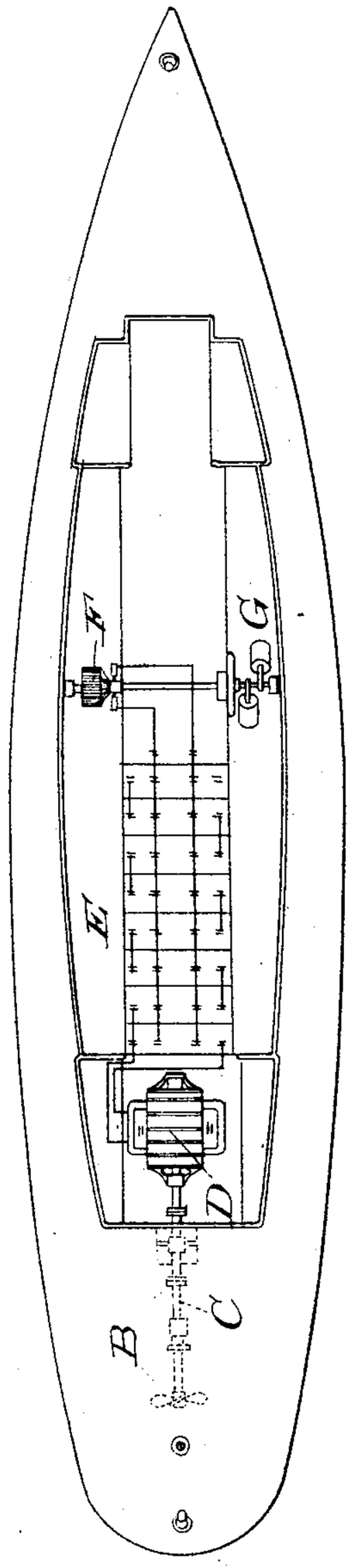

Fig. 1.

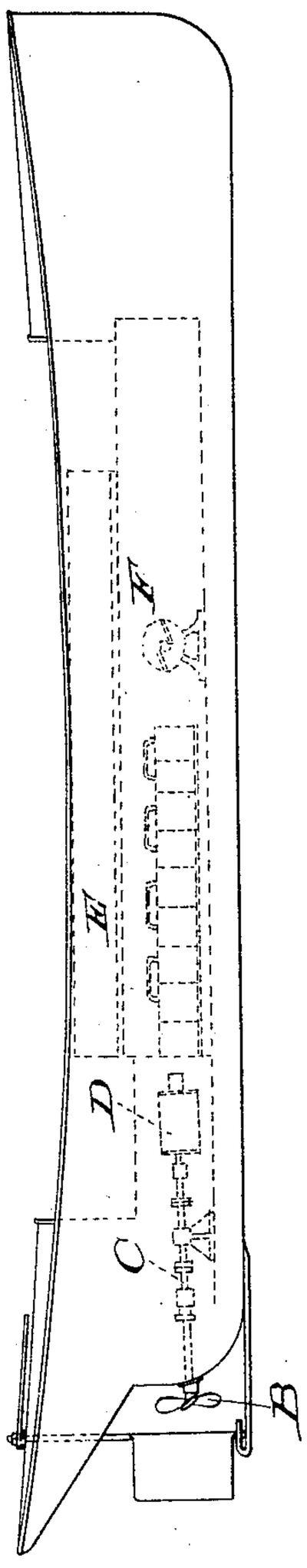

Fig. 2.

Witnesses:
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UNITED STATES PATENT OFFICE.

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BOAT.

SPECIFICATION forming part of Letters Patent No. 424,817, dated April 1, 1890.

Application filed August 12, 1889. Serial No. 320,482. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. PATTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Boats, of which the following is a specification.

My invention relates, more particularly stated, to the class of boats propelled by machinery; and the object of my invention is to provide an economically generated power and reliably operative form of mechanism for generating it which shall serve for application to the propelling purpose of all kinds and sizes of the class of boats referred to, and which may, as a desirable feature of the plan, be used without steam, thereby rendering unnecessary and enabling saving of the employment of a licensed engineer, since skill and experience are not prerequisites for proper care of the machinery.

My invention consists in the combination, in a boat, with the screw or analogous propelling means, of mechanism for actuating the latter, comprising an electric motor operatively connected with the propelling means, a storage-battery system connected with the motor to drive it, a dynamo-electric machine for charging the battery, and an engine (and, preferably, though not essentially, a gas-engine) for driving the dynamo.

In the accompanying drawings, Figure 1 represents a boat in plan view employing a propeller-screw for its locomotion and having indicated in operative position the combination of mechanism in which my invention consists for actuating the screw; and Fig. 2 is a view of the same in side elevation, with my improved mechanism indicated by dotted representation.

A is a boat, which may be of any suitable or well-known form and size, and which is shown to be provided with a propeller-screw B, in the usual position, for effecting its manner of locomotion, though other means for the purpose, as the common side wheels, may be employed instead.

C is the shaft of the propeller, properly supported and having suitably connected with it the rotary portion of an electric motor D, actuated from a system of storage-batteries E, which are charged from a suitable dynamo-electric machine F, driven by the power generated by an engine G, which, for the sake of economy in the maintenance, should be, and preferably is, the well-known gas-engine.

All the mechanism combined, as described, for actuating the propeller should be located in the hold of the boat, wherein it, and particularly the storage-battery system thereof, affords, incidentally, ballast.

The various features of my particular combination of devices being, if desired, of common and well-known construction to those skilled in such machinery, as also the matter of their particular co-operative connection for my purpose, it is unnecessary to show and describe herein the details of construction of the machines and of the adjustment together of the latter, especially since this forms no part of my invention, which consists in the particular combination for my purpose of the different kinds of mechanism herein set forth and represented.

With the well-known switch devices in common use for cutting in and out sections of the motor a pilot can alone control the boat as to its speed and stop and start it without assistance.

Other and important advantages resulting from my particular combination consist in the fact that the boat is never required to stop at certain periods to charge the batteries or "take on fuel," and that the motor D, of a required horse-power, can be readily operated from a dynamo of less horse-power, since the power to drive the motor will be supplied from both the dynamo and storage-battery, the latter being charged during stoppage of the boat, if desired.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a boat and its propeller, of an electric motor D, connected with the propeller-shaft, a storage-battery system E, electrically connected with the motor, a dynamo-electric machine F, for charging the battery and for driving the motor, and an engine G, connected with the dynamo, substantially as and for the purpose set forth.

2. The combination, with a boat and its propeller, of means located in the hold of the boat for actuating the propeller comprising an electric motor D, connected with the propeller-shaft, a storage-battery system E, electrically connected with the motor, a dynamo-electric machine F, for charging the battery and driving the motor, and an engine G, connected with the dynamo, substantially as and for the purpose set forth.

WILLIAM H. PATTON.

In presence of—
J. W. DYRENFORTH,
M. J. FROST.