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H. BACHMAN.

MEANS FOR PROPELLING AND STEERING OR GUIDING BOATS.

APPLICATION FILED DEC. 19, 1905.

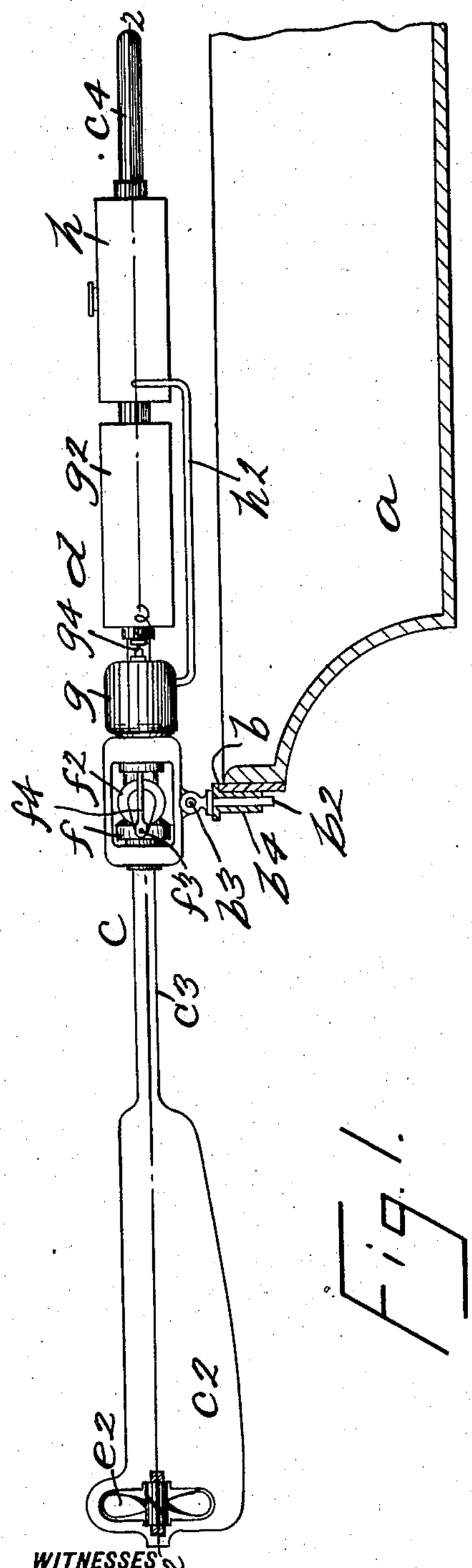

Fig. 1.

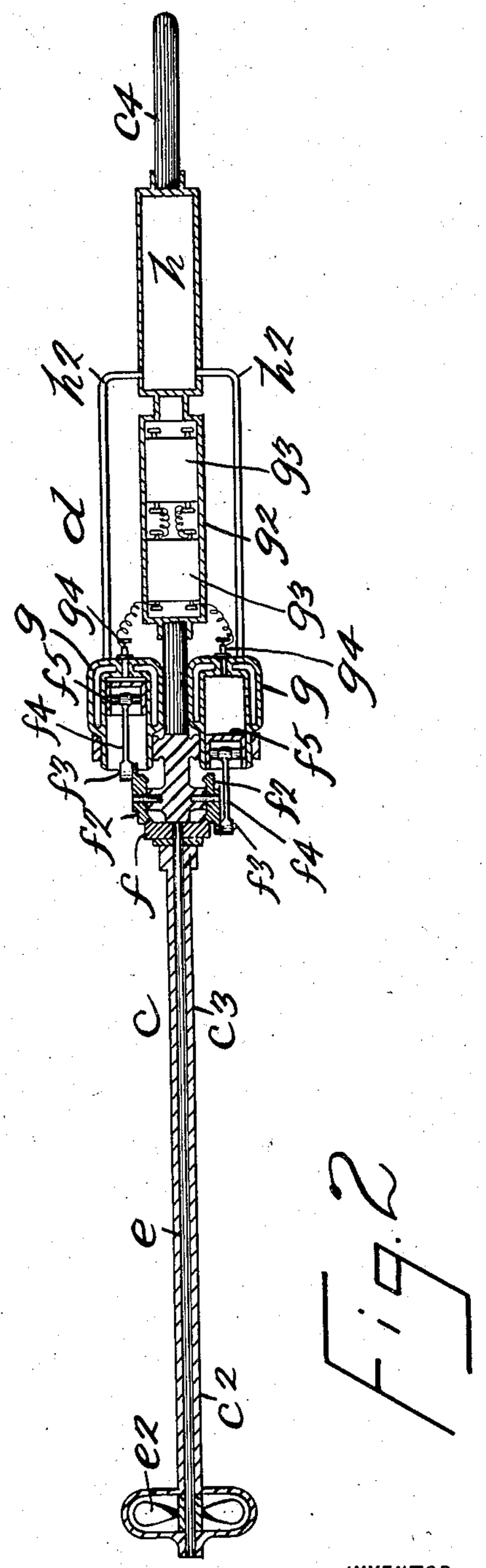

Fig. 2.

WITNESSES:

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MEANS FOR PROPELLING AND STEERING OR GUIDING BOATS.

No. 827,202. Specification of Letters Patent. Patented July 31, 1906.

Application filed December 19, 1905. Serial No. 292,438.

To all whom it may concern:

Be it known that I, HENRY BACHMAN, a subject of the German Emperor, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Means for Propelling and Steering or Guiding Boats, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to means for propelling and steering or guiding small boats; and the object thereof is to provide an improved device of this class which is designed to be mounted in the rear end or stern of a boat, in the manner of an oar, so as to swing both in horizontal and vertical planes and which is provided with a propeller and means for operating the same.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which—

Figure 1 is a side view of the stern portion of a boat provided with my improved propelling and steering device, part of the construction being in section; and Fig. 2, a horizontal section of the propelling and steering device on the line 2 2 of Fig. 1.

In the drawings forming part of this specification I have shown at *a* a part of the rear or stern end of a boat on which is pivoted at *b* a propelling and steering device *c*. The propelling and steering device *c* is mounted and operated in the manner of an ordinary steering-oar and is adapted to swing both in vertical and horizontal planes and comprises a blade c^2, having a shank member c^3 and provided at the end opposite the blade c^2 with a handle c^4, the shank member c^3 of the blade c^2 and the handle c^4 being rigidly connected by a shaft-propelling mechanism *d*, which operates a shaft *e*, passing longitudinally through the blade c^2 and the shank member c^3 thereof and provided at the end of the blade c^2 with a propeller e^2.

In the form of construction shown the propeller-shaft *e* is provided at the end thereof adjacent the shaft-propelling mechanism *d* with a bevel gear-wheel *f*, which forms a part of said mechanism, and at the opposite sides thereof are beveled gear-wheels f^2, which mesh with the bevel gear-wheel *f* and each of which is provided in the form of construction shown with a crank-pin f^3, and connected with the crank-pins f^3 are piston-rods f^4, which are connected with pistons f^5, movable in the oppositely-arranged cylinders *g* of an ordinary gasolene or other motor. The shaft-propelling mechanism *d* also comprises in the form of construction shown a storage-battery casing g^2, in which are placed storage batteries g^3, which are in electrical connection with the sparking plugs g^4 of the cylinders *g*, and in the form of construction shown the shaft-propelling mechanism also comprises an oil or gasolene tank *h*, which is also placed in connection with the cylinders *g* by means of pipes h^2.

It will be observed that the oil or gasolene engine, storage-battery casing g^2, and the oil and gasolene tank *h* are all arranged in horizontal line in the order named, and in practice said parts are all rigidly connected and also rigidly connected with the shank c^3 of the blade c^2, so that said parts all taken together form a propelling and steering device in the form of an oar having a handle c^4.

The mounting of the combination propelling and steering oar at *b* is made by means of a pin b^2, pivoted to the casing of gasolene or oil motor at b^3 in such manner that the combination propelling and steering oar is free to swing in a vertical plane, and the pin b^2 passes vertically through a keeper b^4, secured to the boat in such manner that said combination propelling and steering oar is also adapted to swing in a horizontal plane.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A combination steering and propelling device for boats adapted to be mounted on the stern of the boat in the manner of an oar and to swing in vertical and horizontal planes, said device comprising an oar-blade member provided with a tubular shank, a handle member and a framework or casing connecting the tubular shank of the oar-blade member and said handle member, a shaft mounted in the oar-blade member and provided at its outer end with a propeller and at its inner end with a beveled gear-wheel, two cylinders mounted in the opposite sides of the framework or casing and provided with pistons and piston-rods geared in connection with said bevel gear-wheel, and means for operating said pistons.

2. A combination steering and propelling device for boats adapted to be mounted on

the stern of the boat in the manner of an oar and to swing in vertical and horizontal planes, said device comprising an oar-blade member provided with a tubular shank, a handle member and a framework or casing connecting the tubular shank of the oar-blade member and said handle member, a shaft mounted in the oar-blade member and provided at its outer end with a propeller and at its inner end with a beveled gear-wheel, two cylinders mounted in the opposite sides of the framework or casing and provided with pistons having piston-rods, supplemental gear-wheels mounted in the opposite sides of the framework or casing and geared in connection with said first-named beveled gear-wheel and with which said piston-rods are connected, and means for operating said pistons.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 16th day of December, 1905.

HENRY BACHMAN.

Witnesses:
F. A. STEWART,
C. E. MULREANY.