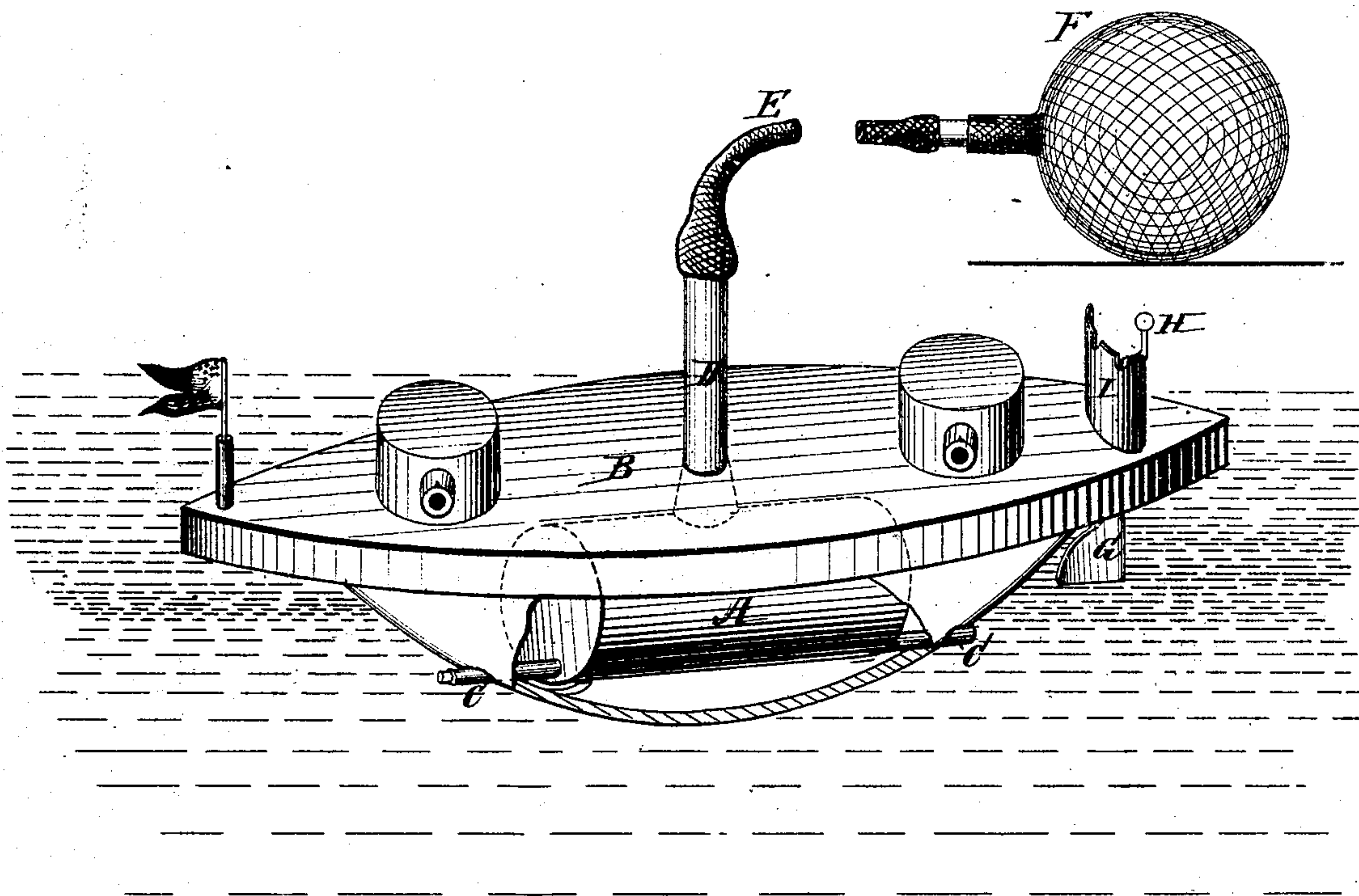


G. W. JONES.
Toy-Propellers.

No. 144,767.

Patented Nov. 18, 1873.



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UNITED STATES PATENT OFFICE.

GEORGE W. JONES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN TOY PROPELLERS.

Specification forming part of Letters Patent No. **144,767**, dated November 18, 1873; application filed October 30, 1873.

To all whom it may concern:

Be it known that I, GEORGE W. JONES, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Direct-Acting Air-and-Water Toy Propeller; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which is represented a perspective view of a boat with part broken away to show the arrangement of the air-chamber and tubes connected therewith.

The object of my invention is to furnish a new and improved toy propeller, which may be driven by the compression and expansion of an elastic bulb or air-receiver, effecting thus the corresponding expulsion and admission of a volume of water from and into a cylinder or chamber located within the hull of vessel to be propelled, as hereinafter described.

In carrying out my invention, I place a cylinder, A, within the hull of a boat, B, and provide the same with an extension or tube, C, leading out through the stern at the lowest draft-line, or thereabout. A pipe, D, leads up through the deck from the cylinder, and projects sufficiently to allow of suitable connection with an elastic tube, E, to the other end of which an elastic or compressible bulb, F, is attached.

To operate the propeller, it is placed in the water and the bulb F compressed by the hand. Its expansion creates a vacuum, which causes the water to enter the tube C and fill or partially fill the cylinder A, when the bulb is again compressed, which causes the water to be ejected through the same passage by which it entered, and, acting thus on the body of water

surrounding the stern of the boat, the result is a rapid propulsion of the same.

To enable the boat to be propelled, either in a straight line or in circles of greater or less diameter, I employ a rudder, G, whose tiller H engages with a semicircular notched plate, I. This enables the rudder to be set at any desired angle to the longitudinal axis of the boat.

I preferably arrange a tube to lead out through the bow of the boat also, in order that it may be used either end forward. In such case, of course, the tube not in use requires to be closed by a plug or otherwise.

I may also dispense, in some instances, with the elastic tube, and arrange a compressible air-receiver on the deck of the boat and compress it by mechanical means. The invention is thus applicable to propulsion of pleasure-boats and others.

On deck I propose to arrange a toy cannon and turrets, or such other appliances as will give the boat the appearance of a monitor or other naval vessel, and enable fire-crackers, squibs, rockets, &c., to be fired therefrom by the juveniles without danger and to their great delight.

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

The combination, with a toy boat or vessel, of a compressible air-bulb, F, or its equivalent, a connecting-tube, and an air-and-water cylinder or chamber communicating with the end of the boat or vessel, substantially as shown and described.

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