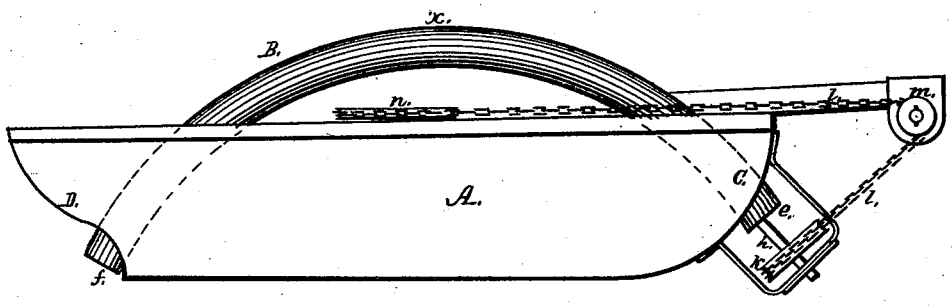
EMILY E. TASSEY.

PROPULSION OF VESSELS.

No. 184,997. Patented Dec. 5, 1876.

Fig. 1.



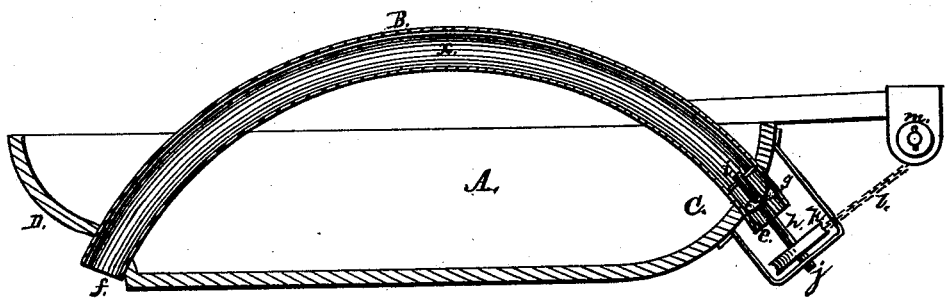


Fig. 2.

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EMILY EVANS TASSEY, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN PROPULSION OF VESSELS.

Specification forming part of Letters Patent No. **184,997**, dated December 5, 1876; application filed April 25, 1874.

To all whom it may concern:

Be it known that I, EMILY E. TASSEY, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a certain new and useful Improvement in Apparatus for Propelling Boats; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the combination of a siphon-formed tube with a propeller-wheel, for the purpose of gaining an increase of power for the propelling of boats and the operating of machinery.

To enable others skilled in the art with which it is most nearly connected, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification, Figure 1 is a side elevation of my improvement as applied to a boat for the purpose of propelling it. Fig. 2 is a vertical and longitudinal section of the same.

In the accompanying drawings, A represents the hull of a boat of ordinary construction. B represents a curved tube, which extends from the bow C to the stern D of the boat. The end *e* of the tube B is on a higher plane than the end *f*, whereby the tube B, when filled with water through the medium of the propeller-wheel *g*, will act as a siphon, drawing water from in front of the bow C, and discharging at the stern D of the boat with an increased force commensurate with the highest point and diameter of the tube B, and the column of water passing through it. Within the mouth of the tube B is pivoted a propeller-wheel, *g*, the axis *h* of which has its bearing at *i* and *j*, and is provided with a driving-pulley, *k*, rotated through the medium of a chain, *l*, which passes over pulleys *m* and around the driving-pulley *n*, operated by any suitable power.

The siphon-tube B may vary in altitude from the slightest curve to the arc of a circle which shall have for its perpendicular (or versed sine) the distance of about thirty feet, the height to which water rises in vacuum; and with this varying altitude the chord of this arc must vary so that the insertion of the ends of the tube in the surface of the water shall be at the angle of inclination most convenient for raising or discharging the water, and at the same time gaining a horizontal propelling power—viz., at an angle of about forty-five degrees or less.

The tube containing the propeller may have its entrance in the bow of the boat, rising upwardly in a regular curve above the water-line at an angle of or about forty-five degrees, and having its exit through the bottom of the hull at a point distant about one-half the length of the vessel; or, as in a long vessel, the regularly upwardly-curved tube rising above the water-line may have its entrance and exit at points equally distant from the bow and stern.

Having thus described the nature and operation of my invention, what I claim is—

The boat A, provided with upwardly-curved tube B, one end of said tube having its entrance through the bow, and the other its exit through the stern, the same having within the forward end of its bore the propeller-wheel *g*, operated by suitable mechanism, all constructed and arranged substantially as and for the purpose set forth.

EMILY EVANS TASSEY.

Witnesses:

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