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A.D. 1877, 31st JANUARY. N° 418.

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**Reducing the Friction of Vessels on Water.**

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LETTERS PATENT to John Isaac Thornycroft, of the Firm of John I. Thornycroft and Co., Steam Yacht and Launch Builders, of Church Wharf, Chiswick, in the County of Middlesex, for the Invention of "AN IMPROVED METHOD OF REDUCING THE FRICTION OF VESSELS WHEN TRAVELLING ON THE WATER."

Sealed the 17th July 1877, and dated the 31st January 1877.

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PROVISIONAL SPECIFICATION left by the said John Isaac Thornycroft at the Office of the Commissioners of Patents on the 31st January 1877.

JOHN ISAAC THORNYCROFT, of the Firm of John I. Thornycroft and Co., Steam Yacht and Launch Builders, of Church Wharf, Chiswick, in the County of Middlesex. "AN IMPROVED METHOD OF REDUCING THE FRICTION OF VESSELS WHEN TRAVELLING ON THE WATER."

According to my Invention in order to reduce the friction of a vessel when travelling on the water I interpose a layer or body of air between the bottom of the vessel and the surface of the water, which air I confine within a cavity of the bottom of the vessel so that the air shall be carried along with the vessel over the surface of the water, the air being in direct contact with the exterior of the bottom of the vessel and with the surface of the water below it. To this end the bottom of the vessel is formed with an external cavity into which air is forced so as to displace water from the cavity, and the air is maintained at such pressure as to keep the cavity filled, or nearly so, with air, such air as may escape being replaced.

In some cases more than one cavity supplied with air as described may be employed.

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SPECIFICATION in pursuance of the conditions of the Letters Patent filed by the said John Isaac Thornycroft in the Great Seal Patent Office on the 31st July 1877.

JOHN ISAAC THORNYCROFT, of the Firm of John I. Thornycroft and Co., Steam Yacht and Launch Builders, of Church Wharf, Chiswick, in the County of Middlesex.

[Price 6d.]