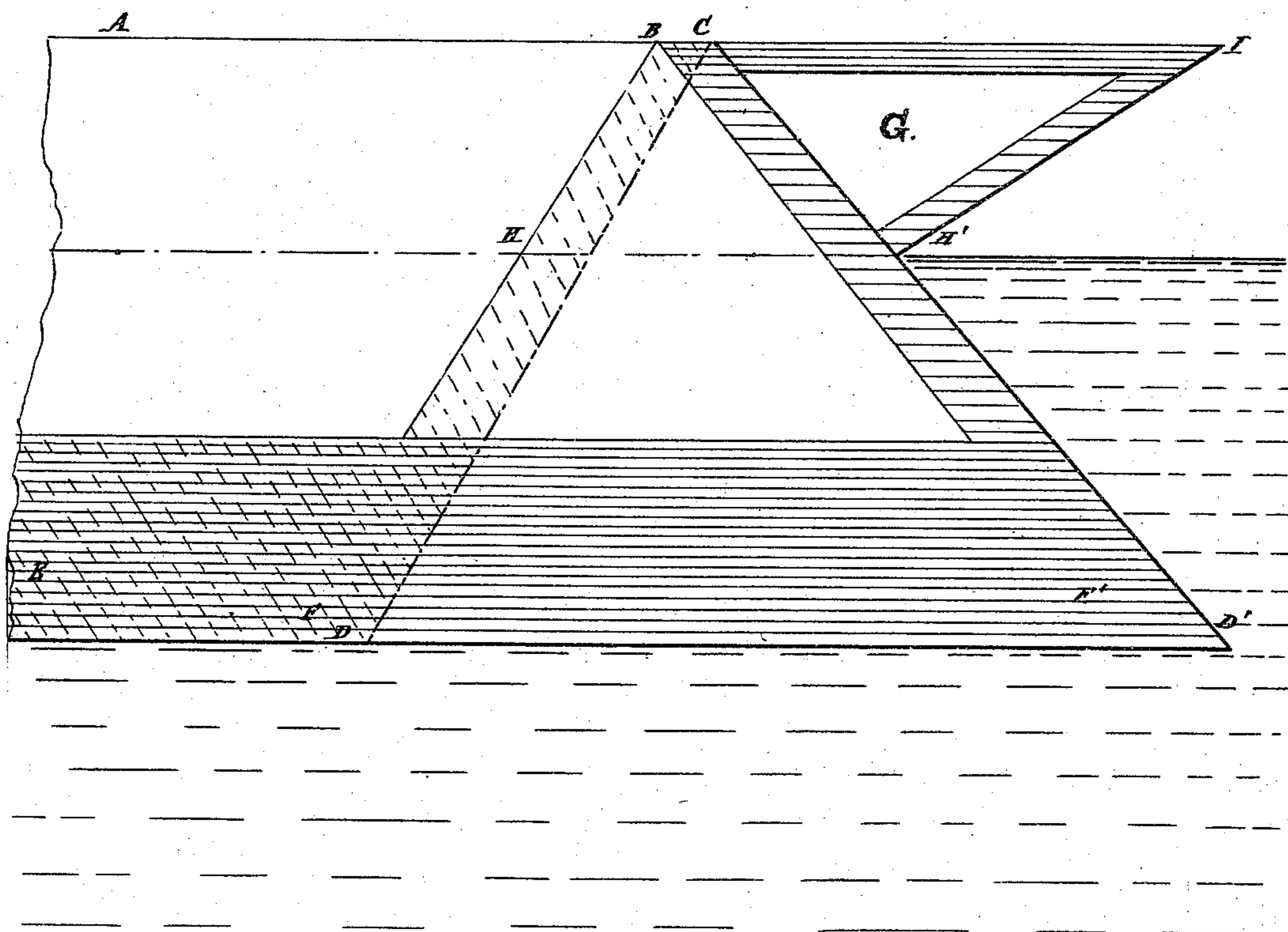


E. E. MIDDLETON.

Construction of the After-Hull of Yachts, &c.

No. 152,805.

Patented July 7, 1874.



WITNESSES:

A. W. Humphreys
Admiral

INVENTOR:

E. E. Middleton

BY

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

EMPSON E. MIDDLETON, OF SOUTHAMPTON, ENGLAND.

IMPROVEMENT IN THE CONSTRUCTION OF THE AFTER HULLS OF YACHTS, &c.

Specification forming part of Letters Patent No. **152,805**, dated July 7, 1874; application filed April 25, 1874.

To all whom it may concern:

Be it known that I, EMPSON EDWARD MIDDLETON, of Southampton, in the county of Hampshire, in England, have invented a new and useful improvement in building and altering, by lengthening by the stern, the after hull of yachts and other vessels, of which the following is a specification:

The figure is a view illustrating my improved method of building and altering the after hull of vessels.

My invention has for its object to increase the capacity of vessels for carrying cargo or ballast, to enable them to carry more canvas to improve their sailing qualities, and to make them safer in rough weather and in heavy gales of wind. The invention consists in the arrangement of the stern-post of yachts and other vessels with its lower end inclined to the rearward at an angle of forty-five (45) degrees, more or less, in connection with a corresponding rearward extension of the keel, as hereinafter fully described.

A B represent the deck-line. C D represent the ordinary position of the stern-post. E F represent the rear part of an ordinary keel.

In carrying my invention into practical effect, the lower end of the rear stern-post C D', of the necessary length, is carried to the rearward at a suitable angle, from ten (10) to forty-five (45) degrees, more or less, its upper end being placed in the same relative position as that of the old pattern stern-post, and as

shown in the figure, the stern-post having now the position C D'. The keel E F is then lengthened to the position E F' to meet the lower end of the stern-post C D'. This enables the counter G to be extended to the rearward, giving a long and extremely useful counter, as shown in the figure, the counter being made at any desired slope to the stern-post C D', at or near the water-line H H', as shown at I H' in the figure. The rudder may be quadrilateral in form, and hung with the blade at right angles to the stern-post C D', the rudder-post being parallel to the same C D'. The rudder-blade should be set rather low on the rudder-post, so that the top corner of the blade may project a little above the water-line.

The rudder is not a part of the invention.

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

The arrangement of the stern-post of yachts and other vessels with its lower end inclined to the rearward at a suitable angle, from ten (10) to forty-five degrees, more or less, in connection with a corresponding rearward extension of the keel, substantially as herein shown and described.

April 2, 1874.

EMPSON EDWARD MIDDLETON,
Member of the Royal Albert Yacht Club.

Witnesses:

CATHERINE MIDDLETON,
HARRIET SPARKES.