A. THOMSON.

Vessels Propelled by Steam.

No. 148,780. Patented March 17, 1874.

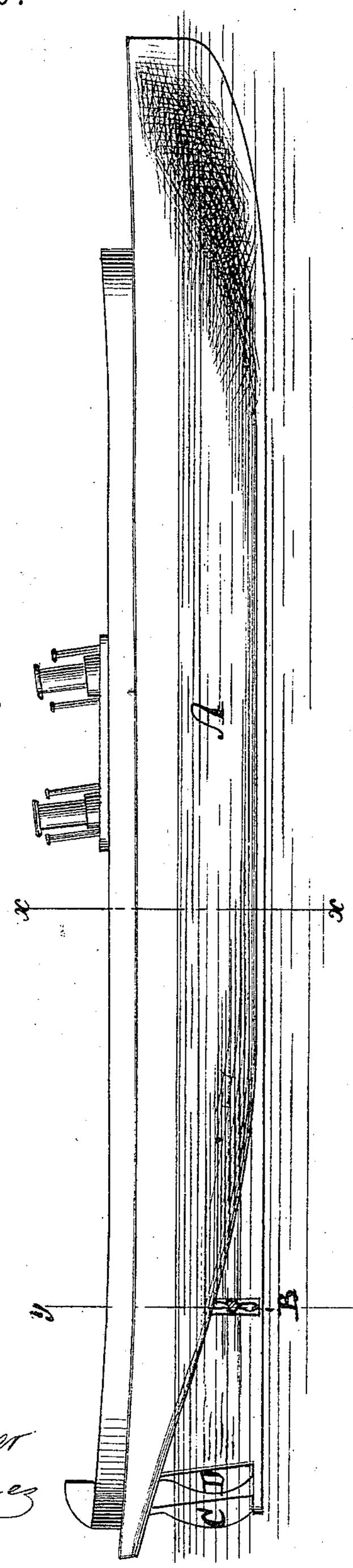

Fig. 1.

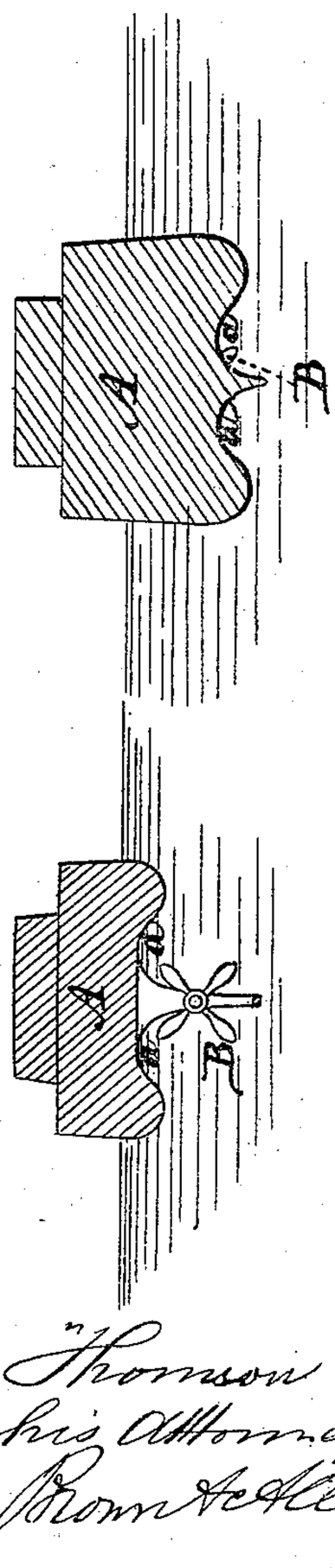

Fig. 2.

Fig. 3.

Witnesses.
John Becker
Fred. Haynes

A. Thomson
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

ARCHIBALD THOMSON, OF NEW YORK, N. Y.

IMPROVEMENT IN VESSELS PROPELLED BY STEAM.

Specification forming part of Letters Patent No. **148,780**, dated March 17, 1874; application filed January 23, 1874.

To all whom it may concern:

Be it known that I, ARCHIBALD THOMSON, of the city and county of New York, in the State of New York, have invented an Improvement in Steam-Vessels, of which the following is a specification:

My invention relates to that class of vessels known as screw-propellers; and consists in arranging the propeller and a reserved or second rudder, as hereinafter set forth.

To enable others skilled in the art to make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the accompanying drawing, Figure 1 is a side elevation of a vessel embodying my improvements. Fig. 2 is a transverse section taken in the line *x x;* and Fig. 3, a transverse section taken in the line *y y* of Fig. 1, looking toward the stern in both figures.

Similar letters of reference indicate corresponding parts.

The vessel A is preferably constructed with two longitudinal channels, *a a*, on its bottom, one on each side of the keel, and running parallel therewith. At a point between the stern-post and the midlength of the vessel, and distant from the stern-post about one-fifteenth of the length of the vessel, the propeller B is arranged, working in a well constructed in the usual manner, and extending on each side of the keel, so as to operate on the water in the channels *a a*. By this construction and arrangement of parts the propeller is well covered and protected by the vessel's hull, and racing is effectually prevented, as the propeller can never be exposed out of the water. It also requires less length of shafting, and places the propeller nearer to the engine. In this position the propeller is prevented from damaging the rudder, as is sometimes the case when the propeller is placed near the stern-post.

A propeller thus placed is less liable to be damaged in docking and undocking the vessel than would be the case if placed at the stern-post.

A second or reserved rudder, D, is arranged forward of the main rudder C, which reserved rudder is kept in condition ready for immediate use in case of damage to the main rudder.

By my method of applying the screw-propeller so far in advance of the stern-post, it becomes easy to apply the reserved rudder in advance of the main rudder without danger or inconvenience.

What I claim as my invention is—

In a steam-vessel having the propeller arranged as described, a second or reserved rudder placed forward of the main rudder, substantially as and for the purpose herein set forth.

ARCH. THOMSON.

Witnesses:

HENRY T. BROWN,

FRED. HAYNES,