(No Model.)

D. BAINBRIDGE.

HULL OF VESSELS.

No. 272,621. Patented Feb. 20, 1883.

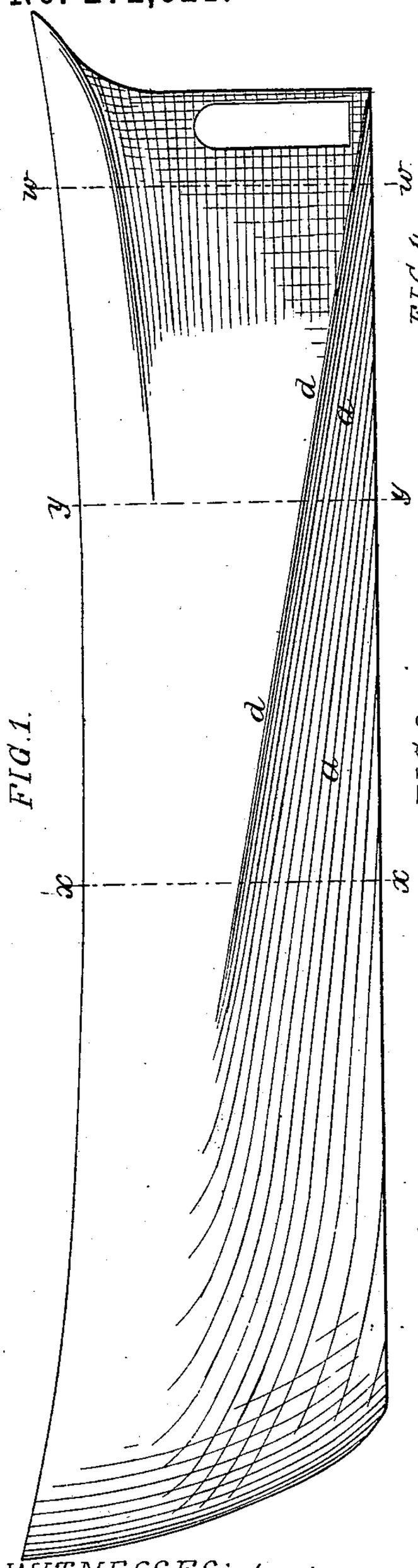

FIG. 1.

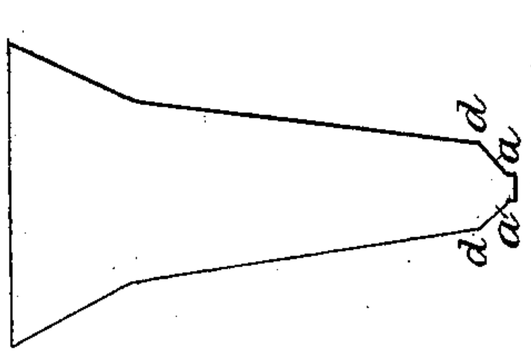

FIG. 4.

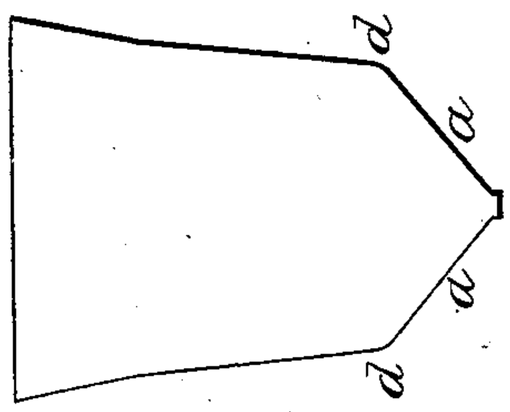

FIG. 3.

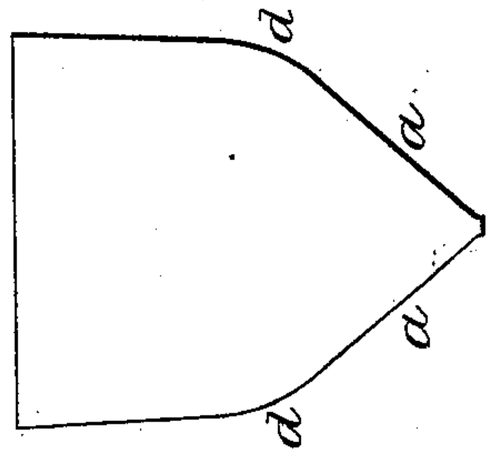

FIG. 2.

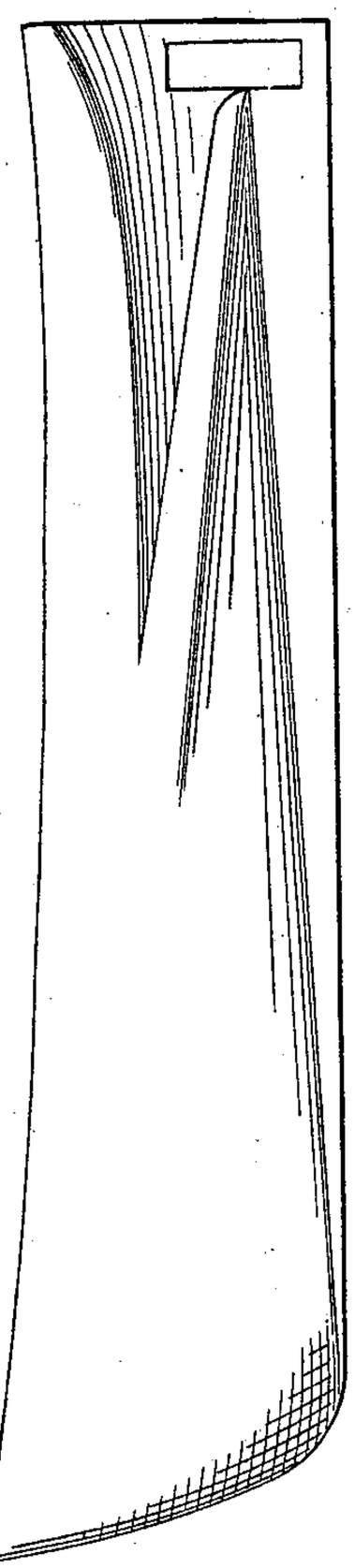

FIG. 5.

WITNESSES:
David Williams
James F. Johns

INVENTOR:
David Bainbridge
by his Attys
Howson and Sons

UNITED STATES PATENT OFFICE.

DAVID BAINBRIDGE, OF PHILADELPHIA, PENNSYLVANIA.

HULL OF VESSELS.

SPECIFICATION forming part of Letters Patent No. 272,621, dated February 20, 1883.

Application filed November 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, DAVID BAINBRIDGE, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented an Improvement in the Construction of Vessels, of which the following is a specification.

The object of my invention is to so construct the hull of a vessel that as it is driven through the water there will be a tendency to lift the vessel bodily, and thus cause less displacement of water than when the hull is constructed as usual.

In the accompanying drawings, Figure 1 is a side view of a vessel constructed in accordance with my invention; Fig. 2, a diagram showing the transverse shape of the hull at the line *x x*, Fig. 3, a similar diagram taken at the line *y y;* Fig. 4, a diagram taken at the line *w w;* and Fig. 5 a side view of a modified form of the improved vessel.

An ordinary vessel, when driven at high speed through the water, has a tendency to settle at the stern as the bow is lifted by the action of the water upon the wedge-shaped forward end of the hull. I propose to impart a lift to the entire hull from stem to stern, and thus decrease the displacement of water and permit a higher rate of speed with the same power than is attained with vessels as now constructed. This object I attain by forming on each side of the hull an inclined plane, *a*, extending to the stern from the point of greatest width at or near amidships, and from about the water-line to the keel, as shown in Fig. 1. The preferable plan of forming this inclined plane is that shown in Figs. 1 to 4, on reference to which it will be observed that the hull flares abruptly on each side from the keel to the line *d*, where it joins the vertical or nearly vertical sides of the hull, these vertical portions increasing in depth toward the stern, so as to impart the proper angle to the inclined planes *a*.

As the vessel thus constructed is driven through the water the inclined planes *a a*, owing to the resistance offered by the water, have a tendency to lift the hull bodily upward, thereby decreasing the extent of submerged hull and lessening the displacement of water, so that the vessel can with the same power be driven at a higher speed than a vessel constructed as usual.

The inclined planes may be made in the form of an inclined rib on each side of the hull, as shown in Fig. 5; but the plan shown in Figs. 1 to 4 is preferred.

I claim as my invention—

The within-described vessel, each side of the hull of which is constructed, as described, so as to present an inclined plane, *a*, extending rearward or downward from amidships or the point of greatest width of the hull, whereby said plane is caused to exert a lifting influence as the vessel is driven forward, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID BAINBRIDGE.

Witnesses:
HARRY DRURY,
HARRY SMITH.