

(No Model.)

J. LONG.

CONSTRUCTION OF VESSELS.

No. 250,373.

Patented Dec. 6, 1881.

Fig. 1.

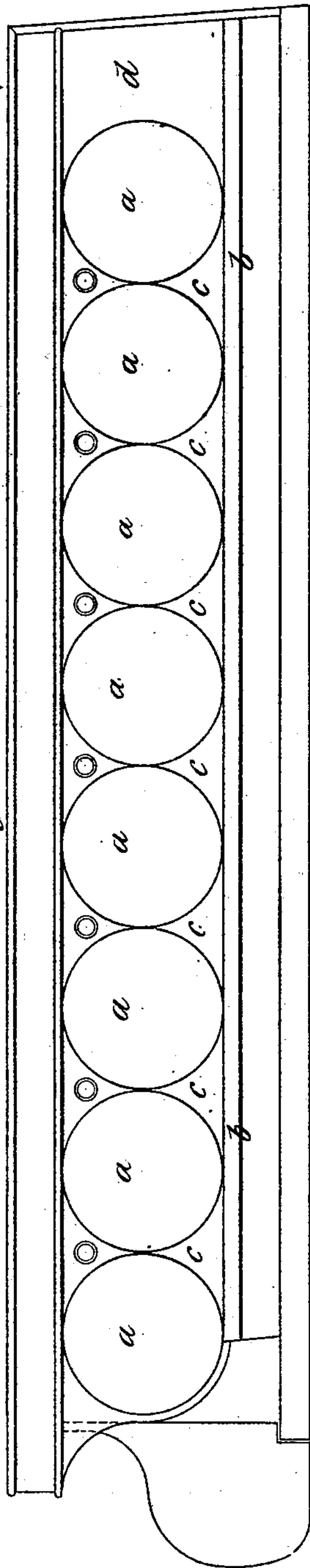


Fig. 2.

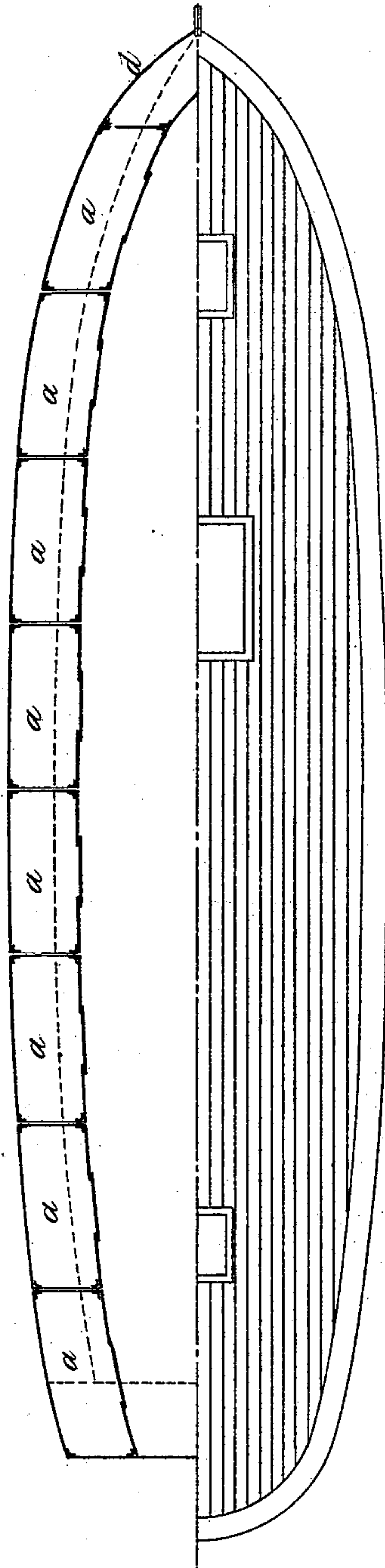
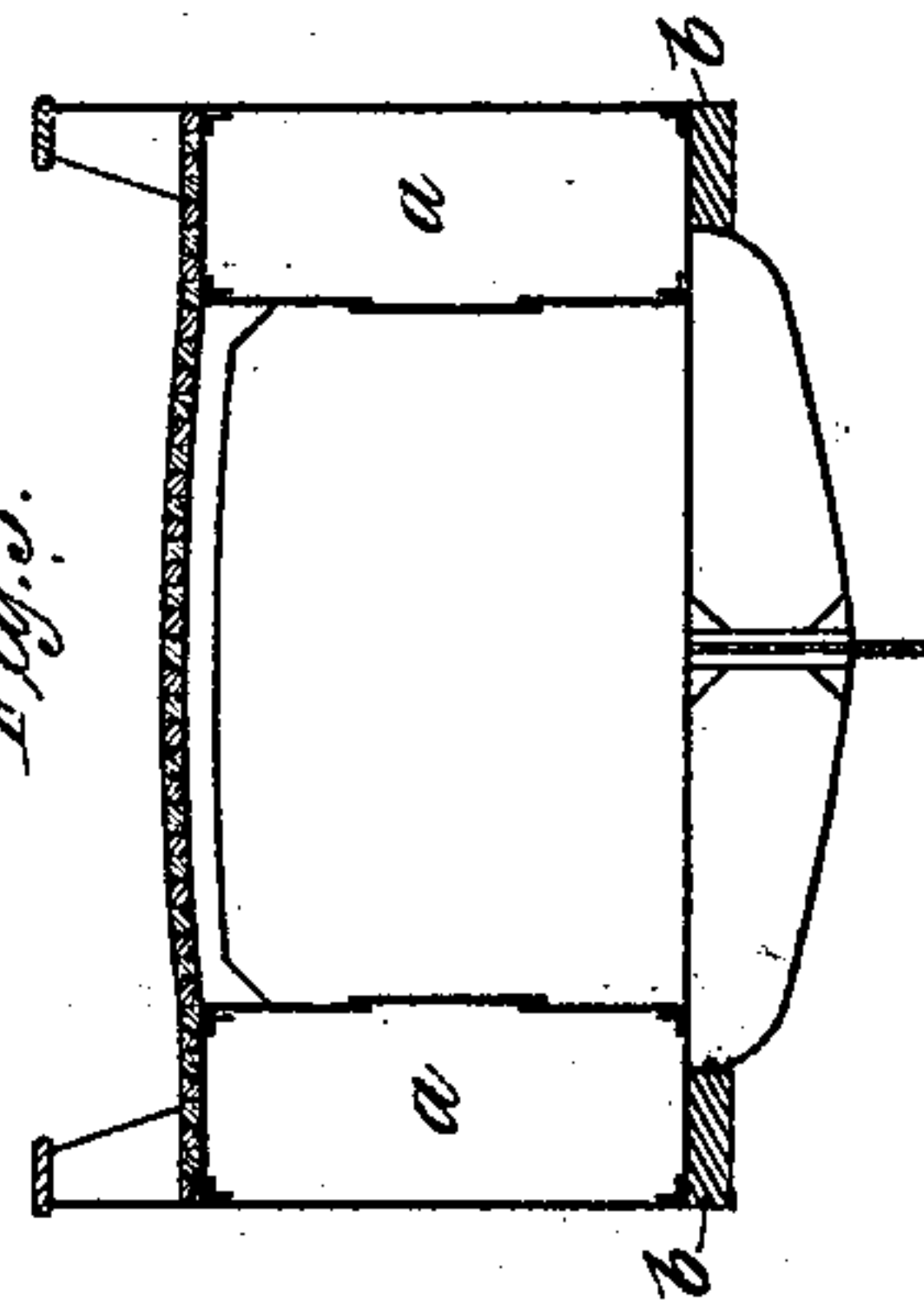


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES LONG, OF BRIGHTON, COUNTY OF SUSSEX, ENGLAND.

CONSTRUCTION OF VESSELS.

SPECIFICATION forming part of Letters Patent No. 250,373, dated December 6, 1881.

Application filed November 18, 1880. (No model.) Patented in England December 9, 1878.

To all whom it may concern:

Be it known that I, JAMES LONG, a subject of the Queen of Great Britain and Ireland, residing at Brighton, in the county of Sussex, Kingdom of Great Britain and Ireland, have invented new and useful Improvements in the Construction of Ships and Vessels, (for which I have obtained a patent in Great Britain, No. 5,042, bearing date December 9, 1878,) of which the following is a specification.

According to this invention the body or hull of the ship or vessel has combined with it and is supported by pontons or air-tight metal chambers of cylindrical or other convenient shape, arranged around the body or hull outside the same or exterior to the skin-plates.

Referring to the accompanying sheet of drawings, Figure 1 is a side elevation of a vessel embodying my invention. Fig. 2 is a plan, partly in section; and Fig. 3 is a transverse section.

a a a are cylindrical chambers formed or applied round the hull of the vessel for supporting it in the water. Such cylinders are very easy of construction, and they impart great buoyancy to the ship or vessel to which they are attached or of which they form part. They support the body or hull and protect it from injury. The ship or vessel is thus rendered safe and unsinkable.

b b is a shelf beneath the cylinders *a*, supporting blocks or filling-pieces *c c* between the

lower halves of the cylinders, forming a fair surface to pass through the water. Sometimes, in place of employing the filling-pieces *c*, I so form the pontons or chambers *a* that they lie close together up to the water-line of the vessel or deck level.

d is a guard-plate in front, forming a fair surface from the cut-water to the first cylinder.

The bottom of the vessel is formed double, as shown in Fig. 3, which construction furnishes air-chambers, which extend from stem to stern without partition, except in a longitudinal line where the keel cuts it in half.

Such vessels may be provided with screw-propellers, or paddle-wheels, or sails, or other means of propulsion.

It will be evident pontons or air-tight metal chambers as above described may be applied to the hulls of existing vessels.

What I claim is—

The combination, with the hull of a ship, of pontons *a*, of cylindrical form, rigidly attached with their axes transverse to the length of the ship, and with shelf *b*, guard-plate *d*, and filling-pieces or blocks *c*, as herein set forth.

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