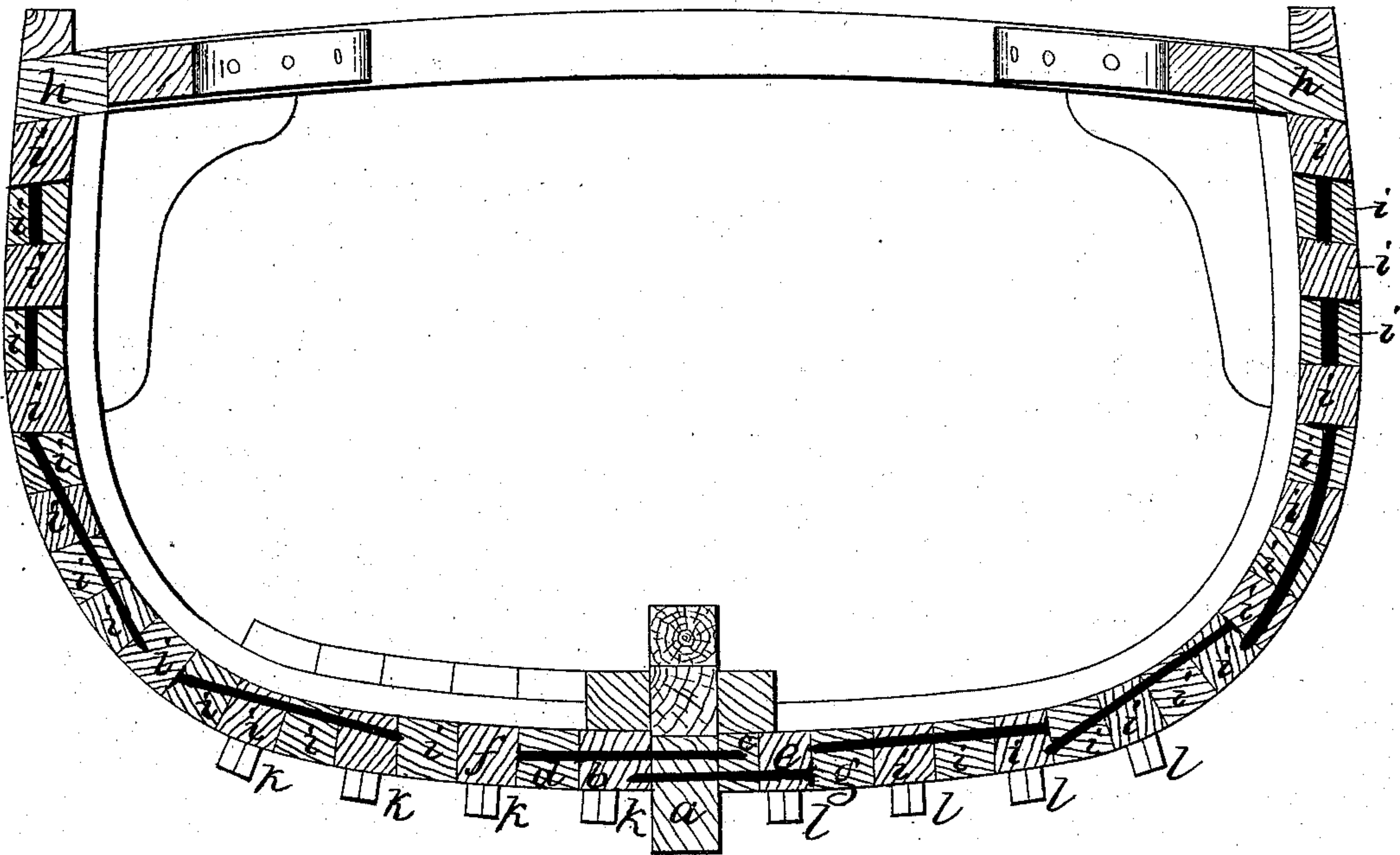


N. GIBSON.  
Construction of Vessels.

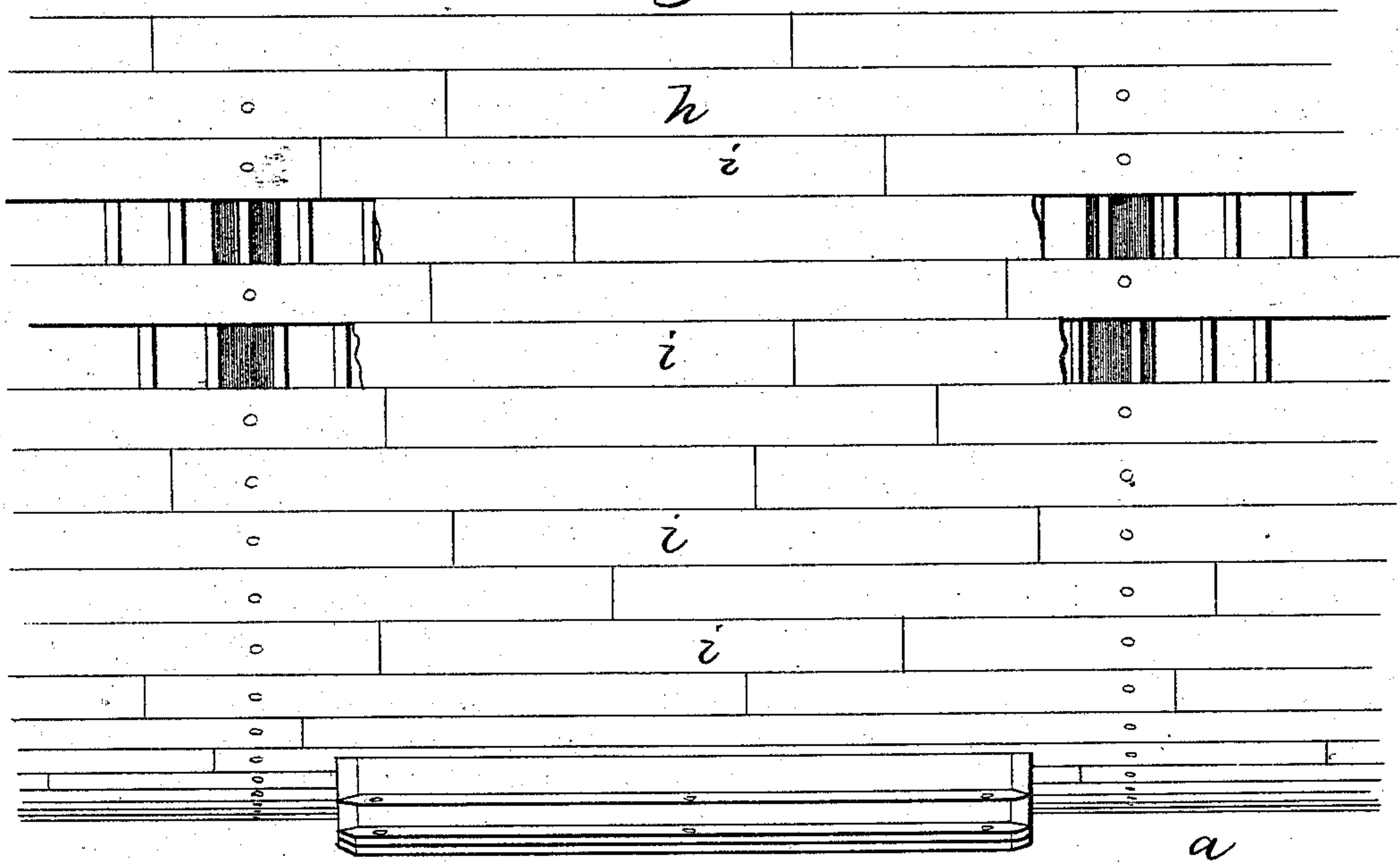
No. 154,663.

Patented Sept. 1, 1874.

*Fig: 1*



*Fig: 2*



Witnesses.  
M. W. Frothingham.  
L. H. Oatner,

Inventor.  
Nehemiah Gibson.  
per Crosby & Gould  
Attys.



# UNITED STATES PATENT OFFICE.

NEHEMIAH GIBSON, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN THE CONSTRUCTION OF VESSELS.

Specification forming part of Letters Patent No. **154,663**, dated September 1, 1874; application filed March 14, 1874.

*To all whom it may concern:*

Be it known that I, NEHEMIAH GIBSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Building Ships; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

In the construction of the hulls of sea-going vessels, the common and well-known custom is, to first set up a frame of ribs of timber, and then to fasten planks to these ribs upon their outer sides, and at the same time sealing the inside, the planks and ceiling being fastened to the ribs by bolts and treenails.

In my construction I use no frame or ribs to support the planking; but I take plank or timber sixteen inches or less in width and twelve inches or less in thickness, and, commencing at the keel, lay the plank one on each side of the keel, and then proceed to lay one side by side or on top of another, as hereinafter more particularly described, their abutting surfaces being made to match or approximately match, and the successive planks or courses being so placed as to break joints, the planks being progressively laid up to form the shape required for the hull. The planks thus laid are bolted or doweled together by bolts, dowels, or treenails driven through each plank as it is laid, and through one, two, or more of those precedingly laid, and these connections being driven as near together as it is practical to insert them. The keel being first laid, the first plank is fastened upon one side of it by bolts driven through the two. Then the corresponding plank is laid against and united to the other side of the keel by bolts driven through said plank and the keel and the first-laid plank. Then another plank is laid against the first, and bolts driven through it and the first, and into or through the keel, and so on, shaping each plank as may be necessary to shape the hull, and fastening each by bolts driven through it and through a greater or less number of those preceding it, until the hull is finished, the bolts being from one foot to six feet long, and

each having a head formed upon it before it is driven home.

For the keel, a timber of sufficient width to form one of the timbers of the hull and the keel is used, the first two timbers of the hull being fastened to its opposite sides, leaving the bottom part projecting beneath them, and timbers being also similarly fastened upon its top to form the keelson.

The bolts connecting the hull planks or timbers are of course so driven as not to come in contact, and these bolts constitute an iron frame concealed from exposure, and imparting enormous strength to the hull.

The timbers for the bow and stern are partially sawed to the requisite shape, and are also bent to the requisite curvature.

Beams properly roomed may be placed inside of the shell thus formed, and such beams covered with a sheathing, and hanging knees may be employed to support the deck-plank.

To the bottom of the hull so made a series of parallel ribs may be fastened for bilge-pieces to keep the vessel from rolling.

In short, the construction generally described may have various and many features more or less contingent upon the peculiar construction of the hull itself, my invention consisting primarily in a hull formed entirely of the planks or timbers joined each to its fellows by a series of bolts driven through them, as each is laid in place, each plank or timber having thus its own bolts driven home through it.

The drawing represents a sectional elevation and a side view of part of a hull built in accordance with my invention.

*a* denotes the keel-timber; *b c*, the timbers bolted to the opposite sides of said keel-timber; *d e*, the timbers bolted to *b c*; *f g*, the next timbers, and so on up to the deck-timbers *h*, with intervening timbers *i*. The timber *b* is fastened to the keel *a* by bolts passing through *b* into or through *a*, and driven at regular intervals, the heads of the bolts being embedded into the surface of the timber *b*. Next the timber *c* is fastened to the keel *a* by bolts driven through *c* into and through the keel, and into or through the first timber *b*, the bolts being of course driven so as to pass

between the first-driven bolts. Then to the timber *b* the timber *d* is similarly fastened, and so on until the hull is finished. The timbers are laid so as to break joints, as seen in Fig. 2, and the seams between adjacent timbers may be calked in the usual manner of calking vessels, and either under and outside, or both inside and outside.

The timbers may be laid up against a skeleton frame, and a water-space may be furred off inside of the hull.

*k l* denote a series of bilge-timbers, spiked to the hull near the center, parallel to the

same, said timbers tending to keep the vessel from rolling.

I do not claim a flat-bottomed boat, whatever may be its construction; but

I claim—

The described hull of a vessel, consisting entirely of timbers laid and united together at the keel, and built up from the keel to the top of the hull, as shown and described.

NEHEMIAH GIBSON.

Witnesses:

FRANCIS GOULD,

W. M. FROTHINGHAM.