

(No Model.)

2 Sheets—Sheet 1.

W. W. KEYS.
METAL BOAT.

No. 433,085.

Patented July 29, 1890.

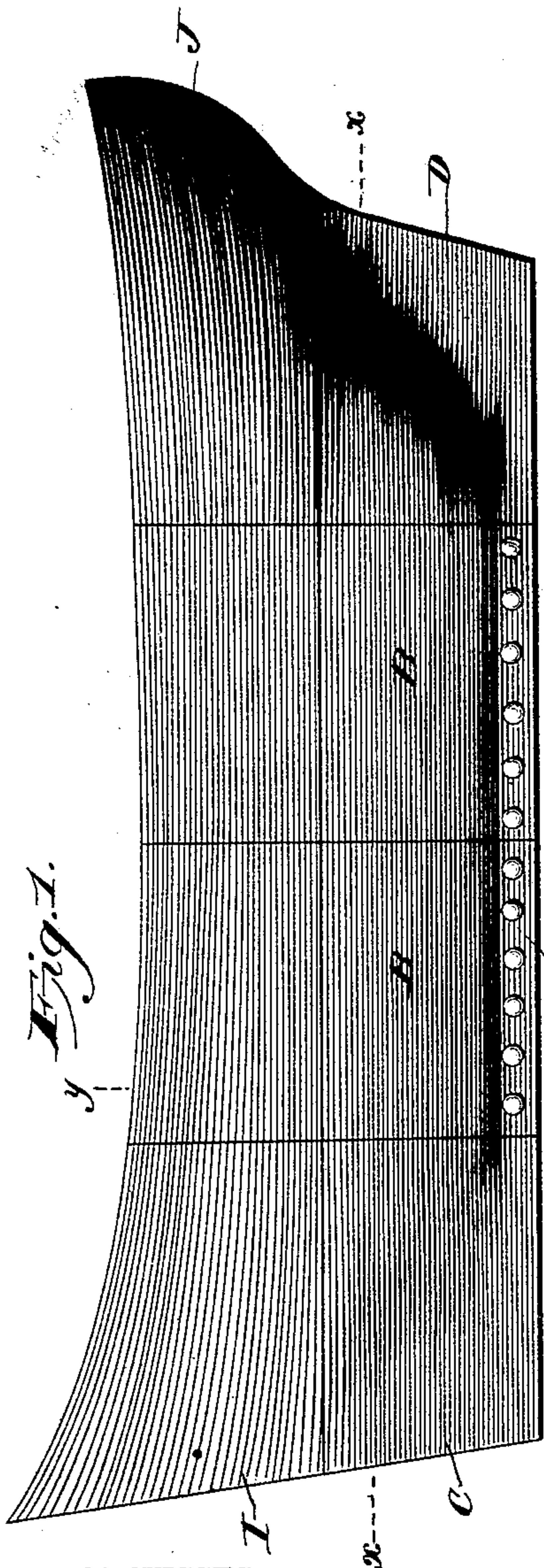


Fig. 1.

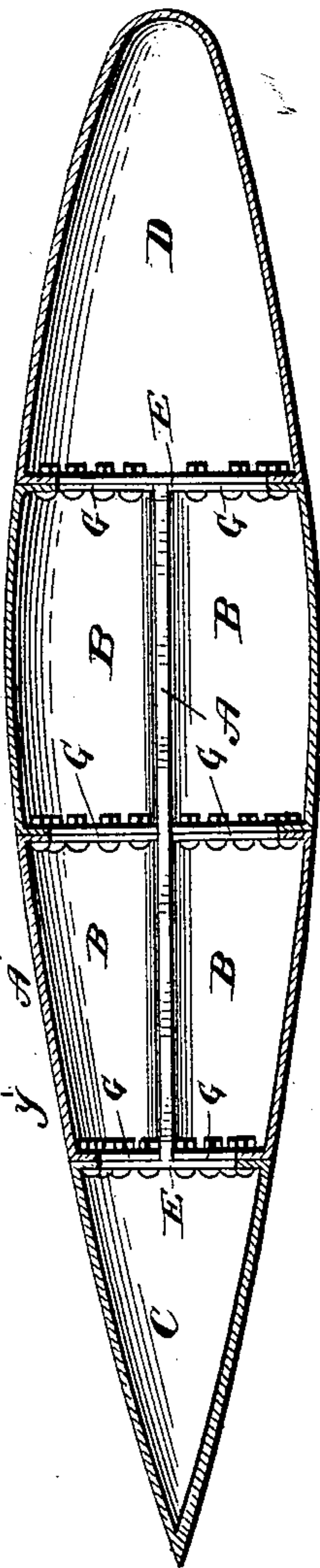


Fig. 2.

WITNESSES:

Jno. S. Finch
E. S. Sumner

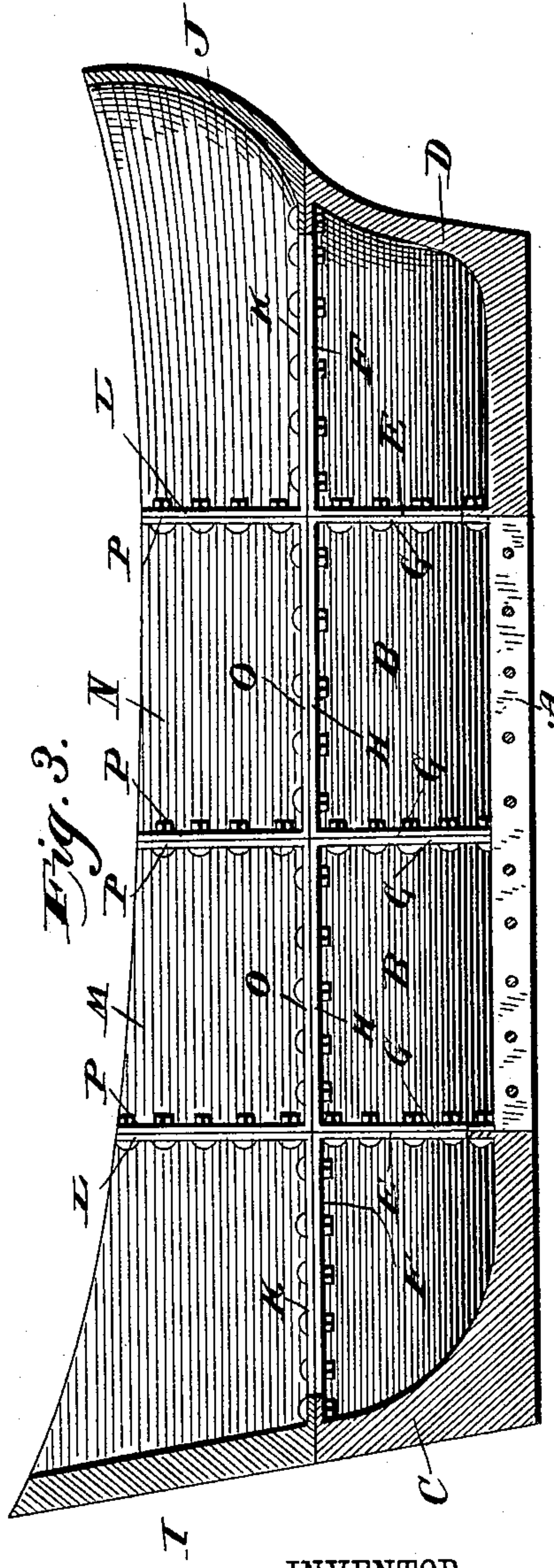


Fig. 3.

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BY *J. W. Smith.*

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Fig. 4.

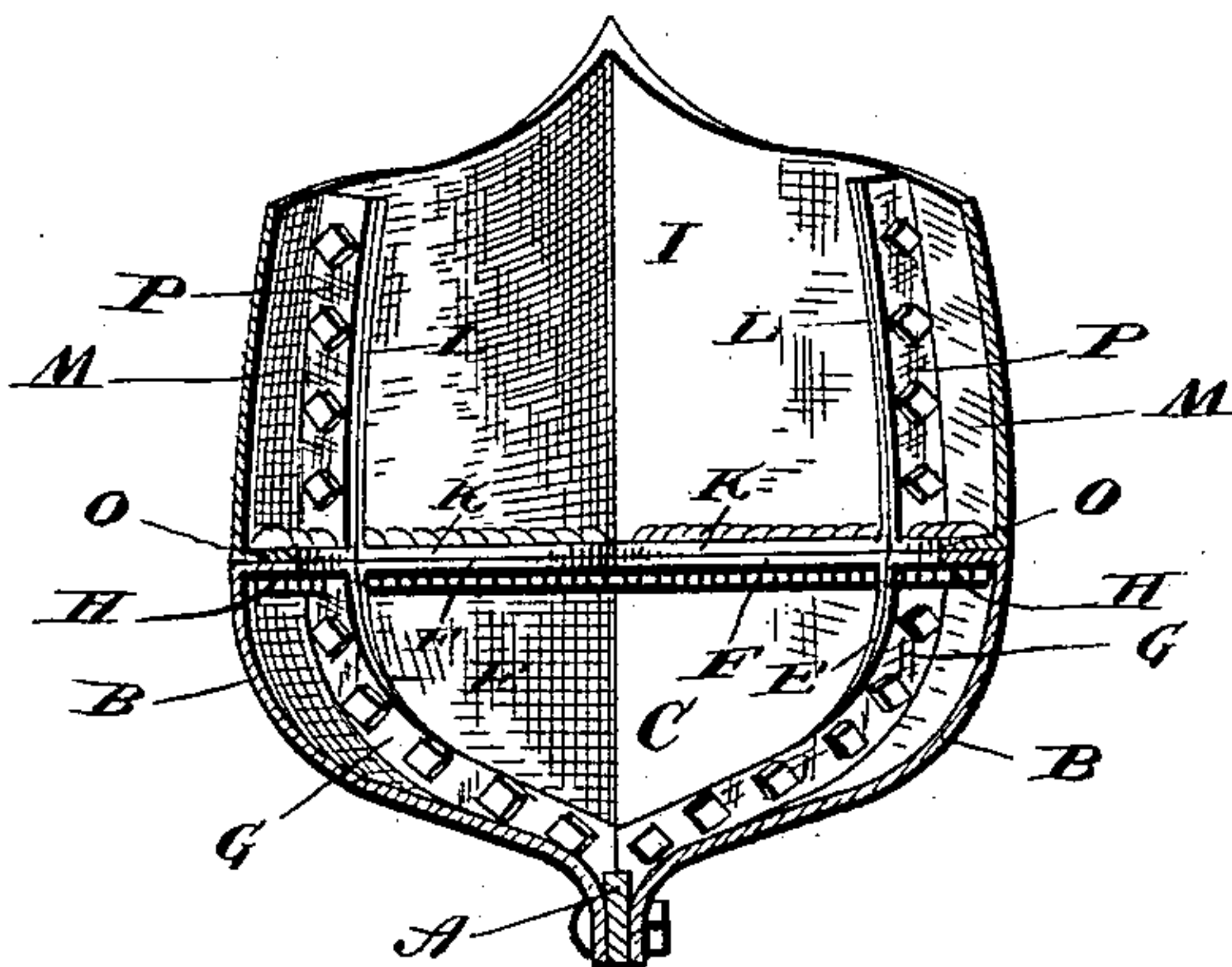
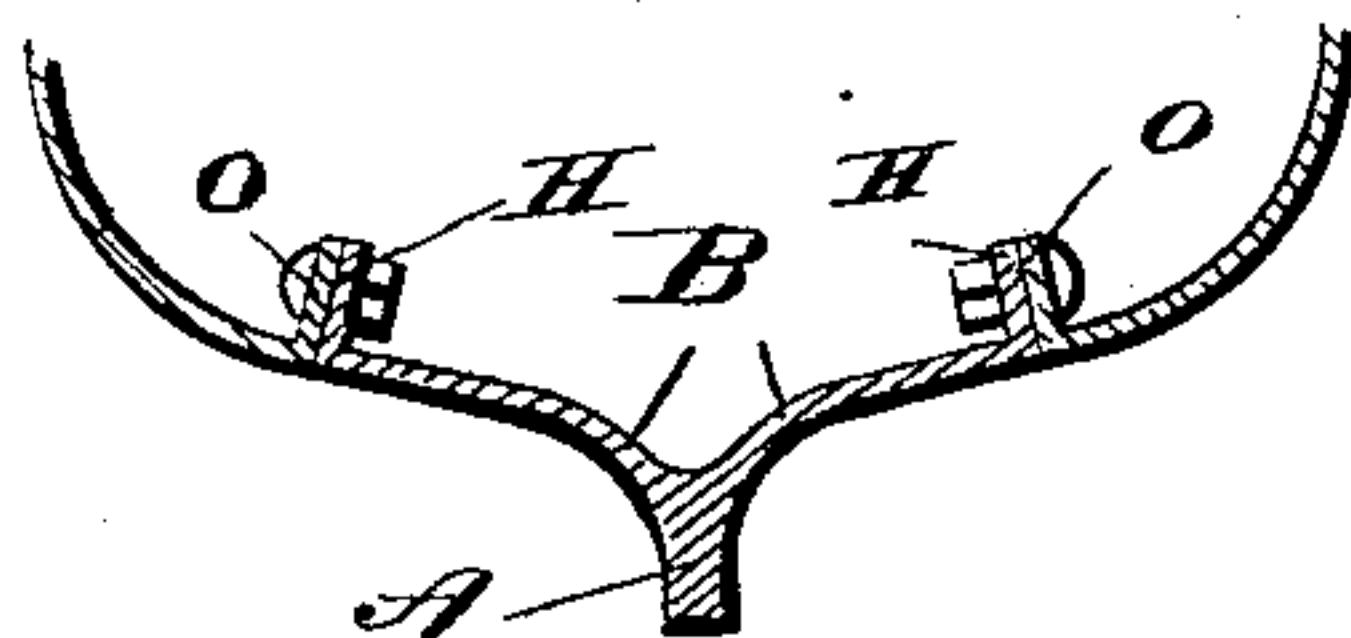


Fig. 5.



WITNESSES:

Geo. S. Finch
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F. W. Smith.

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM W. KEYS, OF BRIDGEPORT, CONNECTICUT.

METAL BOAT.

SPECIFICATION forming part of Letters Patent No. 433,085, dated July 29, 1890.

Application filed September 6, 1889. Serial No. 323,205. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. KEYS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Metal Boats; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to boat-building, but has especial reference to the construction of metal boats, the end aimed at being a strong and simply-constructed boat which shall be perfectly water-tight and which shall present a smooth exterior, unbroken by rivets or bolts.

With these ends in view my invention consists in the details of construction and combination of elements, such as will be herein-after fully described, and then specifically designated by the claims.

In the accompanying drawings, Figure 1 is a side elevation of a boat constructed in accordance with my improvement; Fig. 2, a horizontal sectional view at the line $x x$ of Fig. 1; Fig. 3, a longitudinal vertical sectional view; Fig. 4, a cross-section at the line $y y$ of Fig. 1; and Fig. 5, a cross-section showing the keel and bottom section cast integral.

Similar letters denote like parts in the several figures.

A is the keel, to which the bottom sections B are bolted on both sides. The bottom sections C D at the bow and stern are cast each in a single piece, with flanges E F on their inner and upper edges, which extend inwardly, and the intermediate sections B have flanges G H extending inwardly from their lateral and upper edges, the outer lateral flanges G being bolted to the inner flanges E, while the inner flanges G are bolted to each other.

A second or upper tier of sections is secured to the sections B C D, as follows: The upper bow and stern sections I J are cast each in a single piece, with flanges K L extending inwardly from the bottom and inner edges, respectively. These flanges K are bolted to the flanges F of the lower bow and stern sections, and the upper intermediate sections M N have inwardly-extending flanges

O P along their lower and lateral edges, the flanges O being bolted to the upper flanges H of the lower intermediate sections B, while the outer flanges P are bolted to the inner flanges L of the upper bow and stern sections, and the inner flanges P are bolted to each other. The bolting of the flanges forms a water-tight joint, while the flanges themselves constitute strengthening-ribs capable of resisting an enormous strain or shock. If desired, the keel may be cast integral with the intermediate bottom sections, as shown at Fig. 5.

I prefer to use cast deoxidized bronze in the construction of the various sections, since such metal has no effect on the magnetic needle of the compass, is not corrosive, does not require painting, will repel barnacles, is stronger and tougher than steel, and in the end, as scrap, has the market value of copper. I have shown only two intermediate sections and only two tiers of sections; but it is obvious that this invention is not limited in these respects, since the gist of said invention resides in the broad idea of a cast-metal boat made in sections bolted together on the inside, so as to leave an unbroken and smooth exterior.

I claim—

1. A boat made from cast metal in sections, each section having inwardly-extending flanges on all its edges which are abutted against adjacent sections, the contiguous flanges of adjacent sections being bolted together, substantially as set forth.

2. A boat made from cast-metal sections fitted together by longitudinal and upright joints, the edges of said sections at each of the said longitudinal and upright joints being provided with inwardly-extending flanges bolted together, substantially as set forth.

3. In a boat made from cast-metal sections, as described, the upper and lower bow and stern sections, cast each in a single piece and provided with inwardly-extending edge flanges which are bolted together, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM W. KEYS.

Witnesses:

F. W. SMITH, Jr.,
JNO. S. FINCH.