

April 6, 1926.

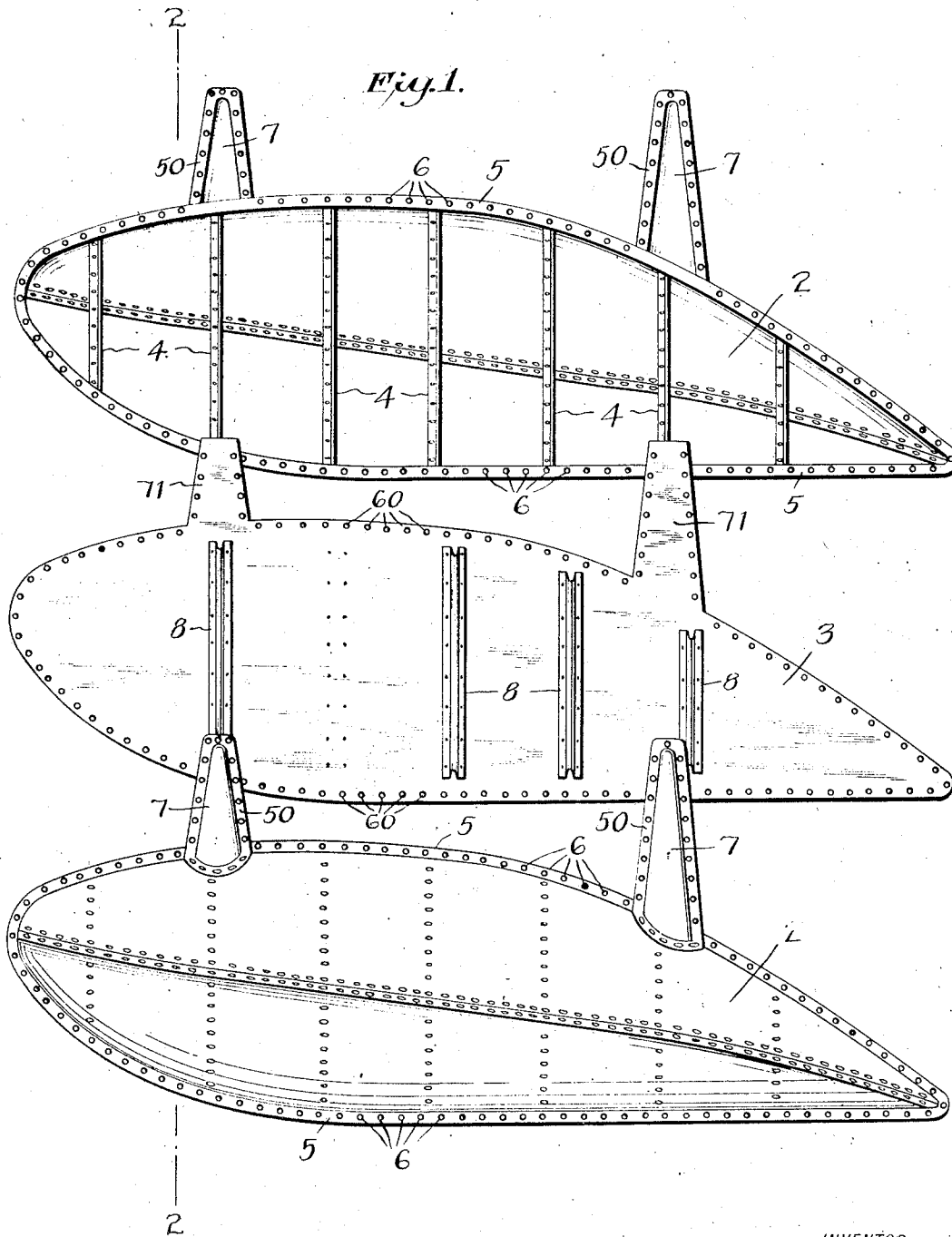
1,579,906

P. G. ZIMMERMANN ET AL

PONTOON

Filed July 11, 1923

2 Sheets-Sheet 1



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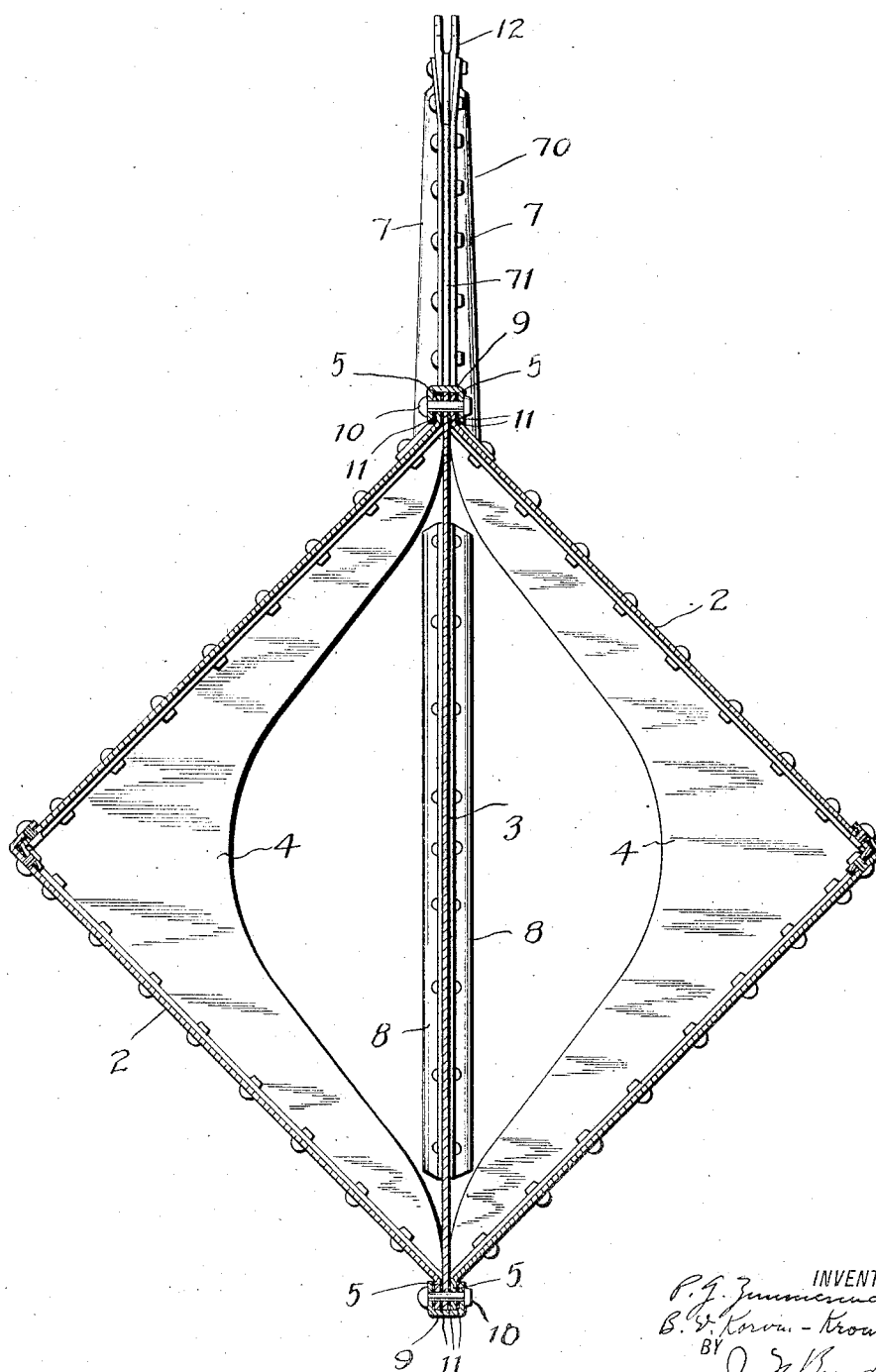
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2 Sheets, Sheet 2

Fig. 2.



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Patented Apr. 6, 1926.

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UNITED STATES PATENT OFFICE.

PAUL G. ZIMMERMANN AND BORIS V. KORVIN-KROUKOVSKY, OF KEYPORT, NEW JERSEY, ASSIGNORS TO AEROMARINE PLANE & MOTOR COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

PONTOON.

Application filed July 11, 1923. Serial No. 650,771.

To all whom it may concern:

Be it known that we, PAUL G. ZIMMERMANN and BORIS V. KORVIN-KROUKOVSKY, citizens, respectively, of the United States of America and of Russia, and both residents of Keyport, in the county of Monmouth and State of New Jersey, have invented certain new and useful Improvements in Pontoons, of which the following is a specification.

The invention relates to the construction of metal pontoons or floats, such as, specifically, the wing-tip pontoons of flying-boats, and the object is greatly to simplify and reduce the labor and cost of manufacture over prior constructions, in which it has been necessary to operate on the inside through a small opening. Our construction is a sectional one, riveted wholly on the outside in such manner as to form an effective tight joint.

In the accompanying drawings forming part hereof:

Fig. 1 is a separated side view of the parts in readiness for assembling; and

Fig. 2 is a cross-section on the line 2—2 of Fig. 1.

As seen in Fig. 1, the pontoon comprises two longitudinal sheet-metal half sections 2, and a central vertical diaphragm 3.

Each of the sections 2 is made in an appropriate manner of a suitable number of pieces, braced internally by ribs 4, and extending around the full circuit of the edge is an external flange 5, lying adjacent the central vertical plane. These flanges are perforated at short intervals by rivet-holes 6 arranged in a line extending continuously all the way around the margin of the section.

Each section has also, at the top, projecting halves 7 of two hollow struts spaced fore and aft of the pontoon. The completed strut seen in Fig. 2 is marked 70. These strut halves are likewise formed with out-turned meeting flanges 50.

The diaphragm is made larger than the interior of the pontoon and its marginal portion lies between the flanges 5 and is perforated with a similar line of rivet holes 60. It is likewise formed with vertical ex-

tensions 71 corresponding to the positions of the strut halves 7, to form central webs in the struts. Ribs 8 are united in vertical position to the opposite faces of the diaphragm.

The half sections and the diaphragm are put together, and the edges are enclosed by a metal U-strip or clamp 9, also perforated for rivets. The parts are then united to form a closed water-tight float by rivets 10 passed through the composite external fin, the construction being such that a tight joint is obtained by a single line of rivets, owing to the circuitous path between the faces that water would have to follow to gain entrance to the interior. Impregnated textile strips 11 may be laid between the flanges and the U-piece 9.

Socket pieces 12 inserted into the upper ends of the struts serve for fastening to fittings on the under side of the wing.

This completes a description of the preferred construction, which, it will be understood, may be modified in detail.

What we claim as new is:

1. A pontoon constructed of sheet-metal half sections with external flanges extending the full circuit of their edges, and a central diaphragm held at its margin between said flanges, the flanges and marginal portion of the diaphragm being incorporated into a tight riveted joint, substantially as described.

2. A wing-tip pontoon constructed of sheet-metal half sections with external flanges and halves of upwardly projecting hollow struts, and an externally riveted tight joint including the flanges.

3. A wing-tip pontoon comprising sheet-metal half sections with external flanges and halves of upwardly projecting hollow struts, a central diaphragm held at its margin between said flanges and having extensions lying between the halves of the struts, and an externally riveted tight joint including the flanges and the margin of the diaphragm.

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