W. FEROLD.

BOAT STERN FOR DETACHABLE MOTORS.

APPLICATION FILED NOV. 23, 1921.

1,409,937.

Patented Mar. 21, 1922.

2 SHEETS—SHEET 1.

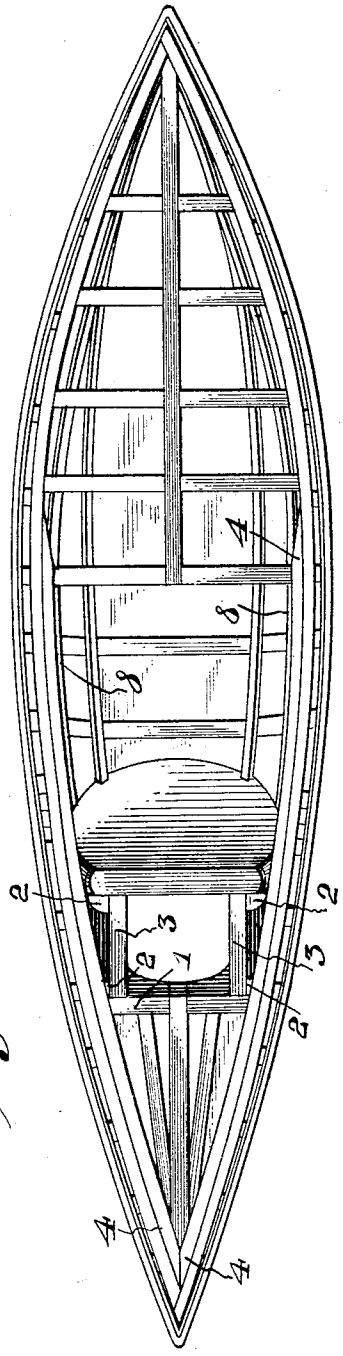


Fig. 1.

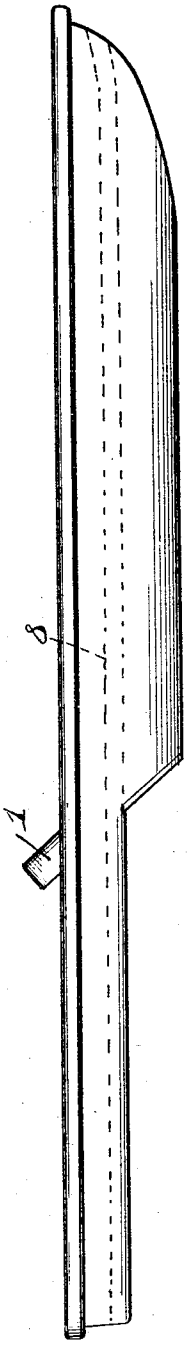


Fig. 2.

Inventor:
William Ferold,

W. FEROLD.

BOAT STERN FOR DETACHABLE MOTORS.

APPLICATION FILED NOV. 23, 1921.

1,409,937. Patented Mar. 21, 1922.

2 SHEETS—SHEET 2.

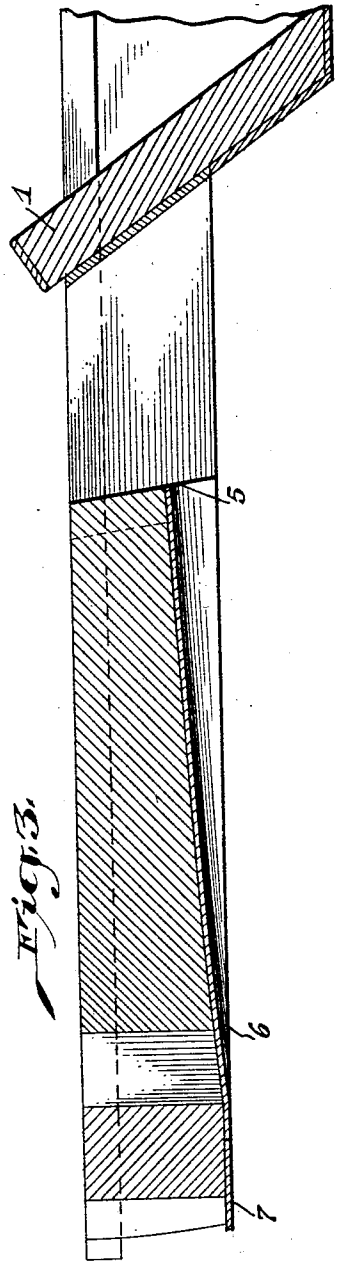


Fig. 3.

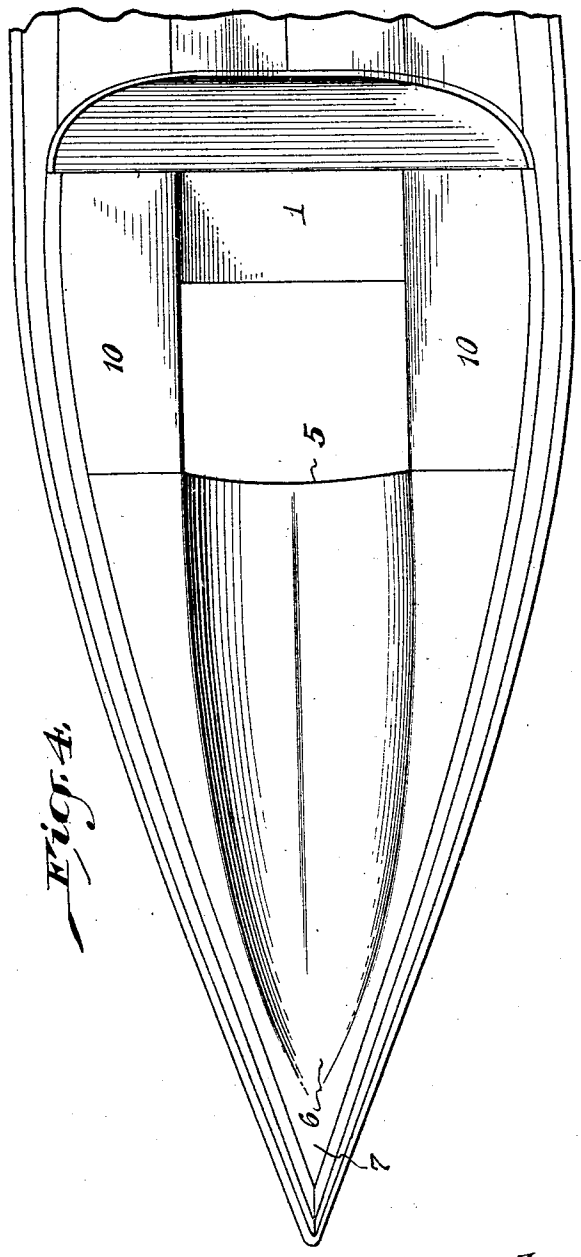


Fig. 4.

Inventor:
William Ferold.

UNITED STATES PATENT OFFICE.

WILLIAM FEROLD, OF MILLIS, MASSACHUSETTS.

BOAT STERN FOR DETACHABLE MOTORS.

1,409,937. Specification of Letters Patent. Patented Mar. 21, 1922.

Application filed November 23, 1921. Serial No. 517,389.

To all whom it may concern:

Be it known that I, WILLIAM FEROLD, a citizen of the United States, residing at Millis, in the county of Norfolk and State of Massachusetts, have invented new and useful Improvements in Boat Sterns for Detachable Motors, of which the following is a specification.

My invention relates to improvements in boat sterns, in which two inclined bulkheads or transoms of different size and different design at bottom are built into the stern end of the boat at approximately one-third the distance from extreme stern end of the boat, of the entire length of the boat, or at any point between the beam and stern end.

The bulkheads are spaced to form fore and aft walls of a bottomless motor unit receiving well. The forward transom forms the detachable motor support and the bottom of the stern is stepped upward aft of motor supporting transom, and the bottom of aft well wall and bottom of stern arched upward; the side walls of well extending down about $\frac{3}{5}$ of the depth of the fore wall or transom and the aft wall at the extreme height of the arch extending down $\frac{1}{6}$ of the depth of the fore wall, or any intermediate point between $\frac{1}{6}$ of the depth to $\frac{3}{5}$ of the depth of fore wall; in the instance of the model, it is approximately $\frac{1}{4}$ of the depth of the transom.

The gunwales are reinforced from beam to end of stern. The stern is supported by a sill that extends into the bow end of the boat. The motor unit receiving well and arched bottom are made water-tight with a covering of canvas and paint, or other suitable material. Canvas is stretched tightly over the framework of the stern deck and rendered water-proof, and a thin veneering of boards is placed over the canvas.

The canvas, water-proofing and veneering are omitted in the model.

The objects of my improvements are: first, to provide an extra rigid motor supporting transom; second, to eliminate objectionable speed retarding water drag operative in other boat wells; third, to produce a boat well that permits of the installation and successful operation of motors with tilting device.

I attain these objects by the mechanism illustrated in the accompanying drawings.

Fig. 1, is plan and Fig. 2, a side elevation of the boat.

Fig. 3, is an enlarged sectional detail view of the stern and Fig. 4, is bottom plan view of the stern.

The bulkheads 1, are reinforced with substantial blocks 2, at each well corner between the gunwales and the outside of the side well walls 3.

The gunwales are reinforced from beam to stern end by stringers, 4. The aft bulkhead 1, is given extra rigidity by light bottom planking extending from 5 to 6 on the bottom of the stern on a strong framework.

The said bottom planking is arched transversely, as indicated in Figs. 3 and 4, and is also arched fore and aft from 5 to 6. The extreme after end 7, of this planking is flat as are also the sides 10.

The aft bulkhead 1, being shorter than the forward bulkhead, the stern may be said to be stepped upwardly from the fore bottom and this stepping off upward together with the arched channel in the stern bottom makes possible the successful operation of motors with a tilting device.

The channel 5—6 is above the water-line to a point near the aft end of the channel at 6.

The upward stepping of the stern bottom and the formation in the latter of an arcuated channel are essential features in the elimination of speed-retarding water drag.

The sills 8, are underneath the gunwales and extend into the stern as indicated by broken lines in Fig. 2.

These sills support the stern as stated above.

I do not make a claim to either the inclined bulkheads, the sill, or the method employed in rendering the bottom and deck water-tight, excepting as used in connection with my invention, but

I claim:

1. The combination in a boat stern of spaced inclined bulkheads designed differently at the bottom, the aft one arched upward at bottom, the two forming fore and aft walls of a motor unit receiving well, and the fore wall or transom, the detachable motor support, the side walls extending down approximately three fifths of the depth of the fore wall or transom, the depth of the aft wall at the extreme height of the arch being a fraction of the depth of the motor-supporting transom, reinforcing blocks secured to the four corners of the well, and gunwales, reinforcements extending from the

beam to the stern end, the well, bottom and deck of the stern being made water-tight, all substantially as set forth.

2. A boat with a motor-supporting transom any fraction of the distance aft of the beam, the stern bottom being stepped upward aft of the transom.

3. A boat stern having a forward motor-receiving well formed of spaced bulkheads, the bottom of the aft bulkhead being arched upwardly and corresponding to the upward arch or concavity given the bottom of the stern aft of this bulkhead, the concavity gradually diminishing to the extreme stern end where the bottom is flat, substantially as described.

WILLIAM FEROLD.