

Aug. 26, 1952

J. H. PEARCE

2,608,171

CORRUGATED, AIR DISTRIBUTING UNDERBODY FOR WATER-BORNE VESSELS

Filed March 14, 1949

4 Sheets-Sheet 1

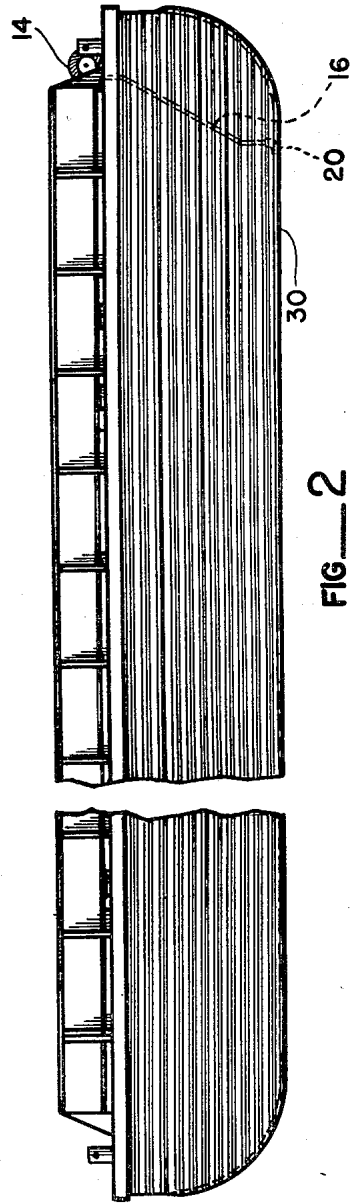
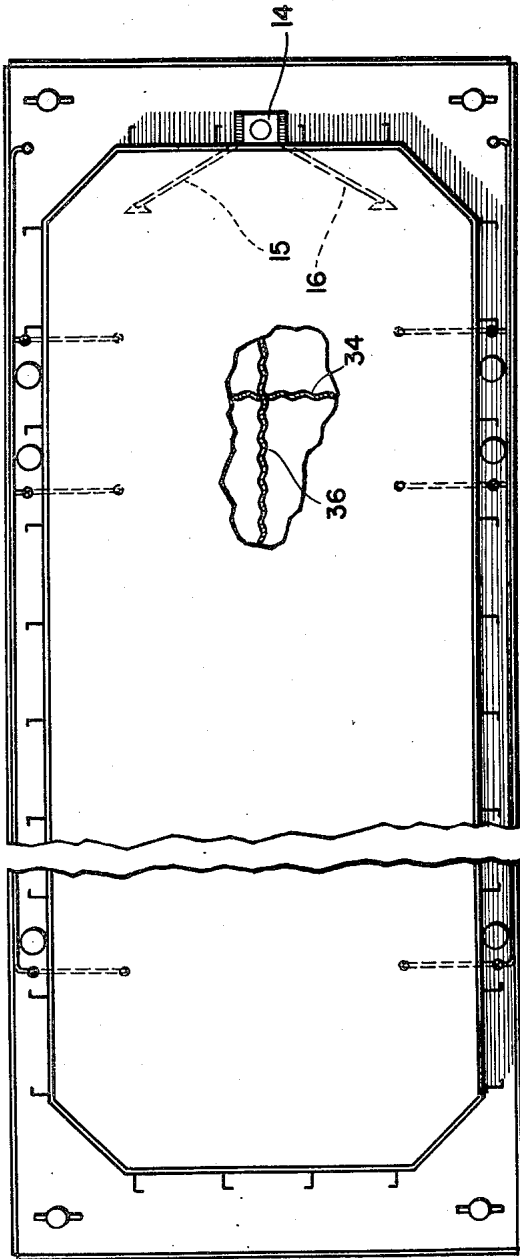


FIG. 2

JOHN H. PEARCE
Inventor

L. Ish & Tuck

FIG. 1

88

Aug. 26, 1952

J. H. PEARCE

2,608,171

CORRUGATED, AIR DISTRIBUTING UNDERBODY FOR WATER-BORNE VESSELS

Filed March 14, 1949

4 Sheets-Sheet 2

FIG. 3

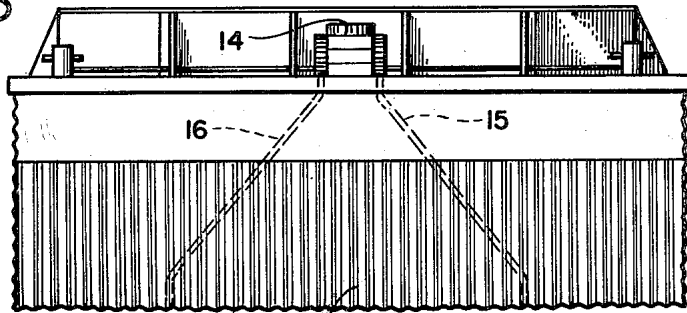


FIG. 4

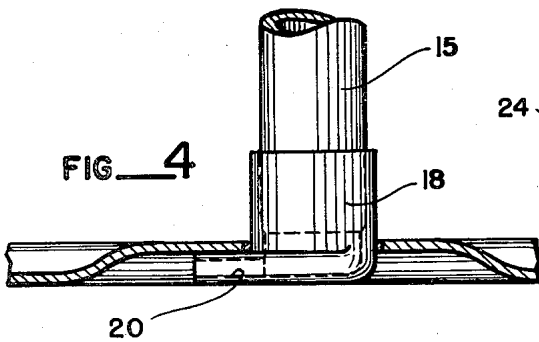
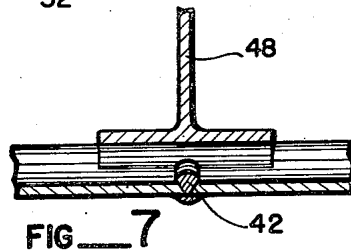
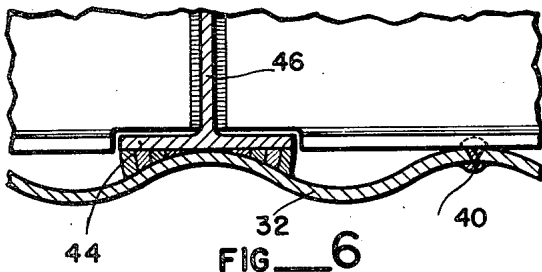
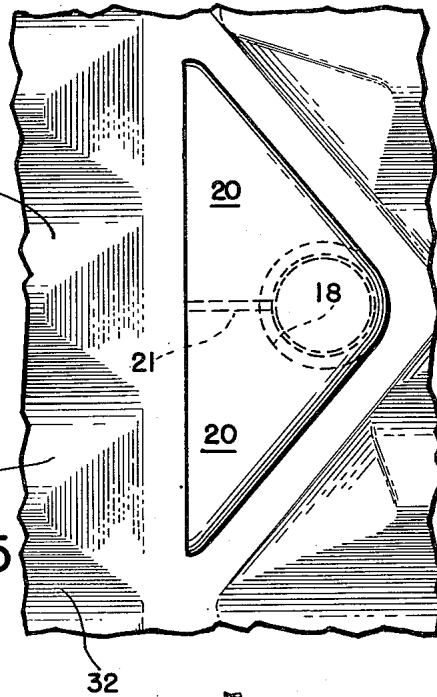


FIG. 5



JOHN H. PEARCE
Inventor

33
Smith & Tuck
Attorneys

Aug. 26, 1952

J. H. PEARCE

2,608,171

CORRUGATED, AIR DISTRIBUTING UNDERBODY FOR WATER-BORNE VESSELS

Filed March 14, 1949

4 Sheets-Sheet 3

FIG. 8

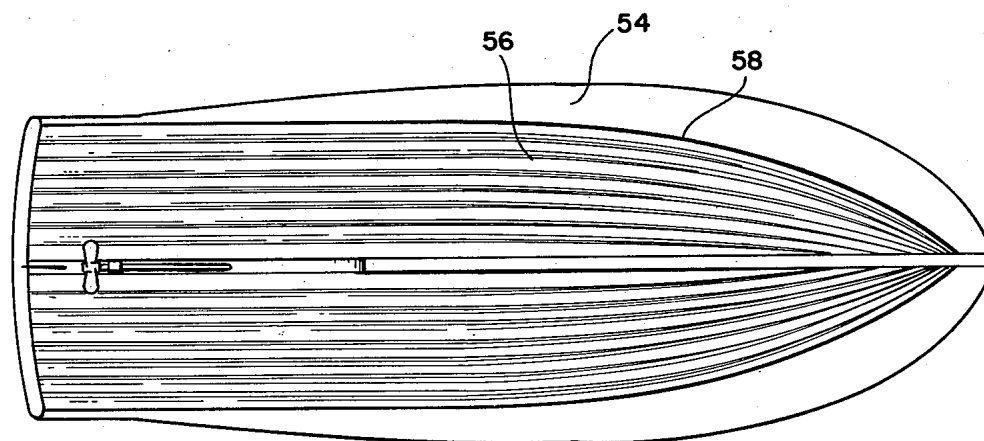
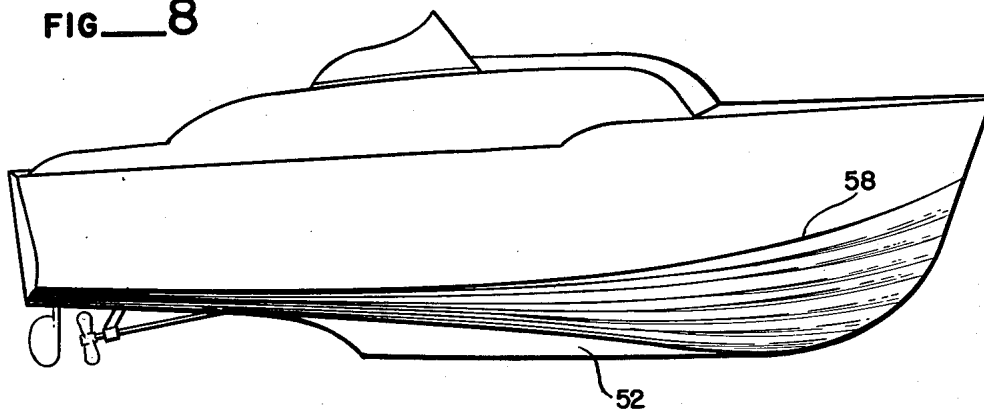
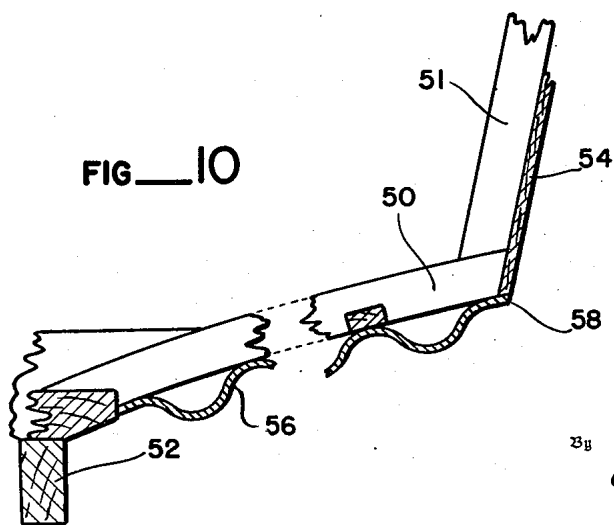


FIG. 9

FIG. 10



JOHN H. PEARCE
Inventor

Smith & Tuck

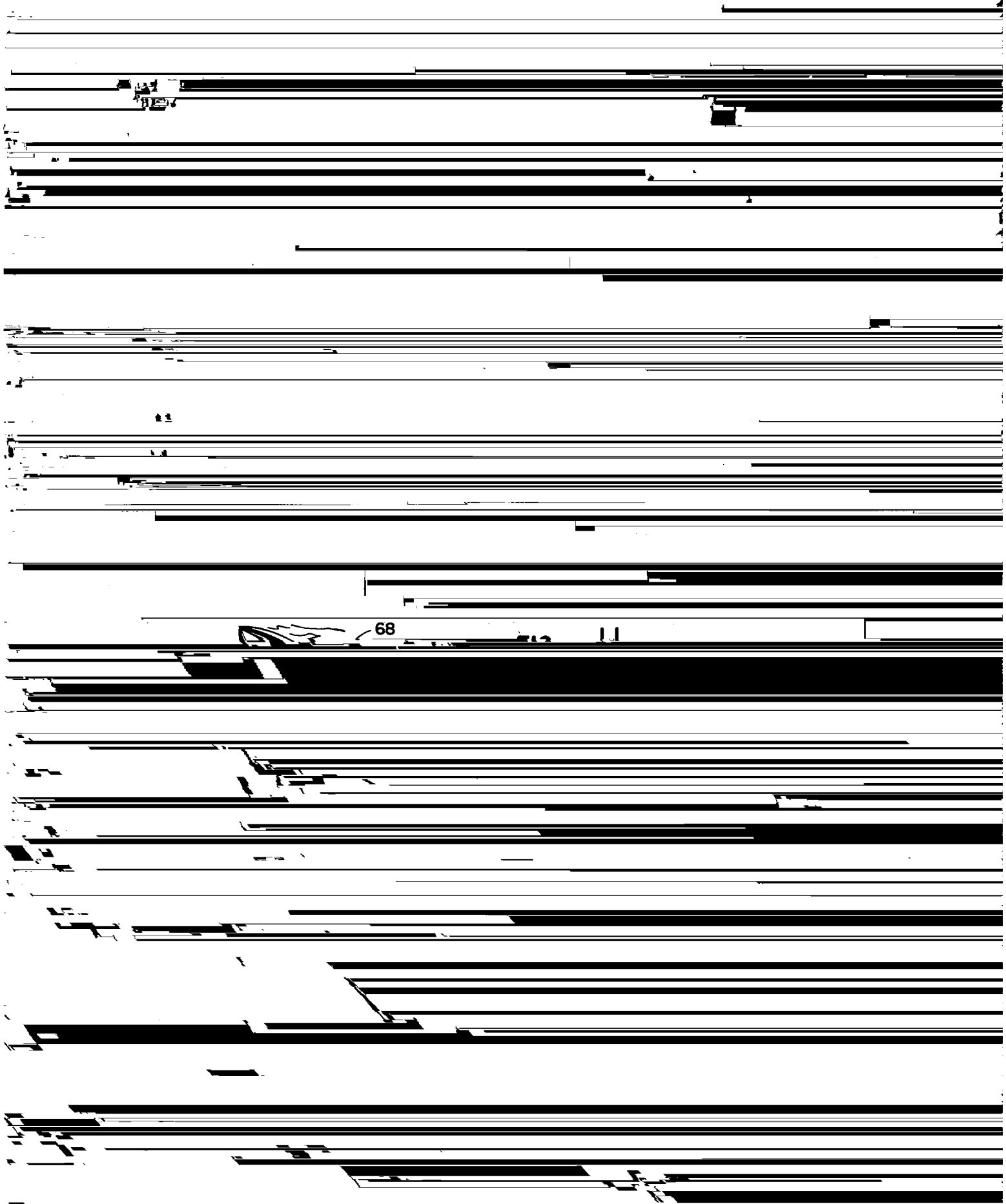
Attorneys

Aug. 26, 1952

J. H. PEARCE

2,608,171

CORRUGATED AIR DISTRIBUTING UNDERBODY FOR WATER-BORNE VESSELS



Patented Aug. 26, 1952

2,608,171

UNITED STATES PATENT OFFICE

2,608,171

**CORRUGATED, AIR DISTRIBUTING UNDER-
BODY FOR WATER-BORNE VESSELS**

John H. Pearce, Seattle, Wash.

Application March 14, 1949, Serial No. 81,264

2 Claims. (Cl. 114-67)

1

My invention relates to the construction of hulls for water borne vessels, in which the surface below the water line is plated with longitudinally corrugated shell plating which permits

2

hedron form of hull. Very worthwhile savings can be made by employing the principles in the design of submarine torpedoes and an especially advantageous application is in the plating of

3

will be apparent from the description and the disclosure in the drawings, or may be comprehended or are inherent in the device.

In the drawings:

Figure 1 is a top plan view of a freight-handling barge made after the teachings of this present invention. The view is broken at one point so that the essential features may be shown on an enlarged scale.

Figure 2 is a side elevation of the barge of Figure 1.

Figure 3 is a front end elevation of the barge of Figure 1.

Figure 4 is a fragmentary view, shown partly in vertical section, to illustrate one manner of introducing air into the bottom area of a barge

4

throughout the length of the ship by the movement of the ship through the water. In slow moving vessels, especially freight carrying vessels, the speed is not normally sufficient to produce a suction under the hull and this requires that air under low pressure must be forced down at the bow and possibly at other points throughout the length of the ship, thus giving the required lubrication.

Referring to Figures 1, 2 and 3 it will be noted that I have provided an air pump, or more properly, blower, at 14, and air under the pressure created by the blower is forced downwardly as through pipes 15 and 16. Pipes 15 and 16 terminate in the fittings shown in Figures 4 and 5, wherein pipe 15 engages a fan shaped fitting

5

6

tudinal structural member 46. In Figure 7, attachment is made to the transverse frame 48.

In Figures 8 and 9 I have illustrated corrugated metal plating for the bottom of a pleasure boat. There are many work and utility boats, however, that also may be plated in the same manner. To be successfully applied, the plating should be used in the V bottom form generally referred to as a monohedron type or a surface ~~formed by the development of a plurality of~~

having a flat bottom, consisting of: a hull frame forming said flat bottom having its main stress members disposed longitudinally thereof; curvedly corrugated plating for said hull having each corrugation running from end to end thereof, fixedly secured to said stress members, disposed with the corrugations substantially parallel to the longitudinal axis of said hull, there being a load distributing pad between each stress member and said plating, the lower face of each pad being

