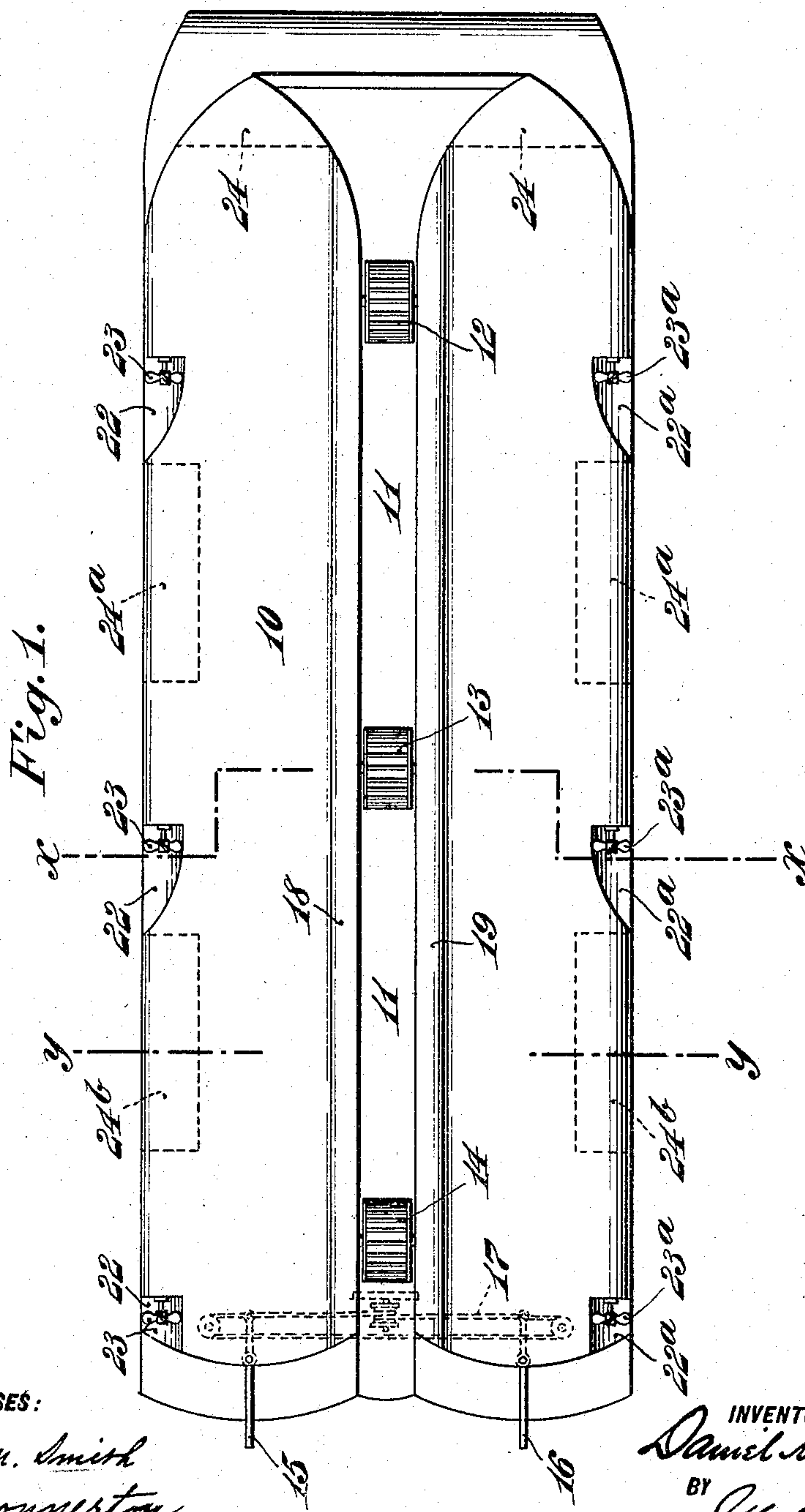


D. M. PFAUTZ.
TWIN STEAMSHIP OR VESSEL.
APPLICATION FILED SEPT. 18, 1908.

931,016.

Patented Aug. 10, 1909.
3 SHEETS—SHEET 1.



WITNESSES:

Thomas M. Smith
G. M. Leannerton

INVENTOR

Daniel M. Pfautz

BY

Walter Douglas

ATTORNEY.

D. M. PFAUTZ.
TWIN STEAMSHIP OR VESSEL.
APPLICATION FILED SEPT. 18, 1908.

931,016.

Patented Aug. 10, 1909.

3 SHEETS—SHEET 2.

Fig. 2.

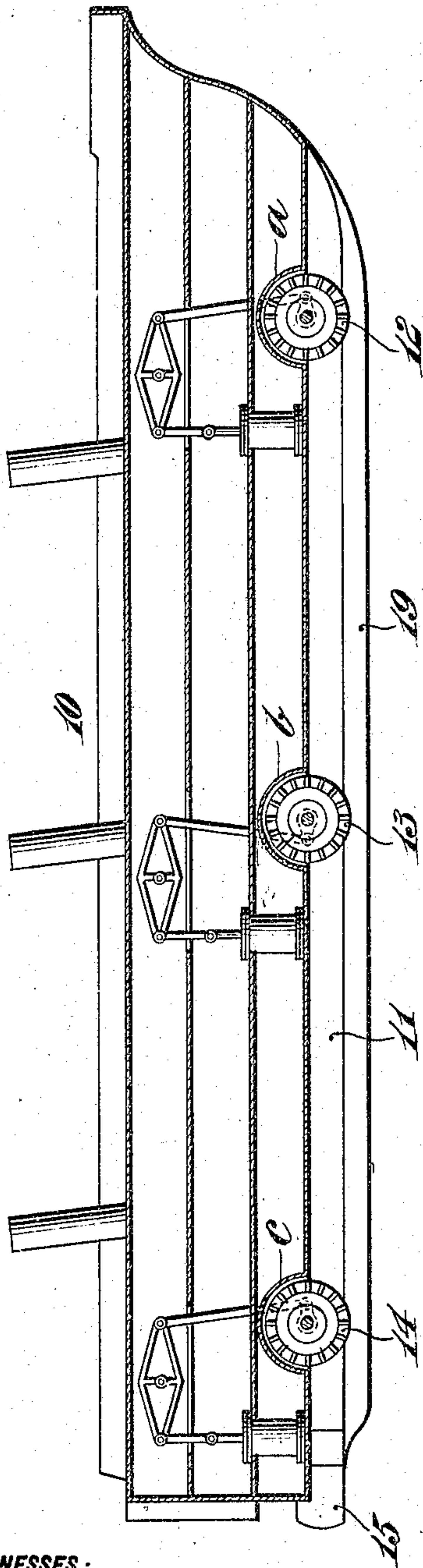
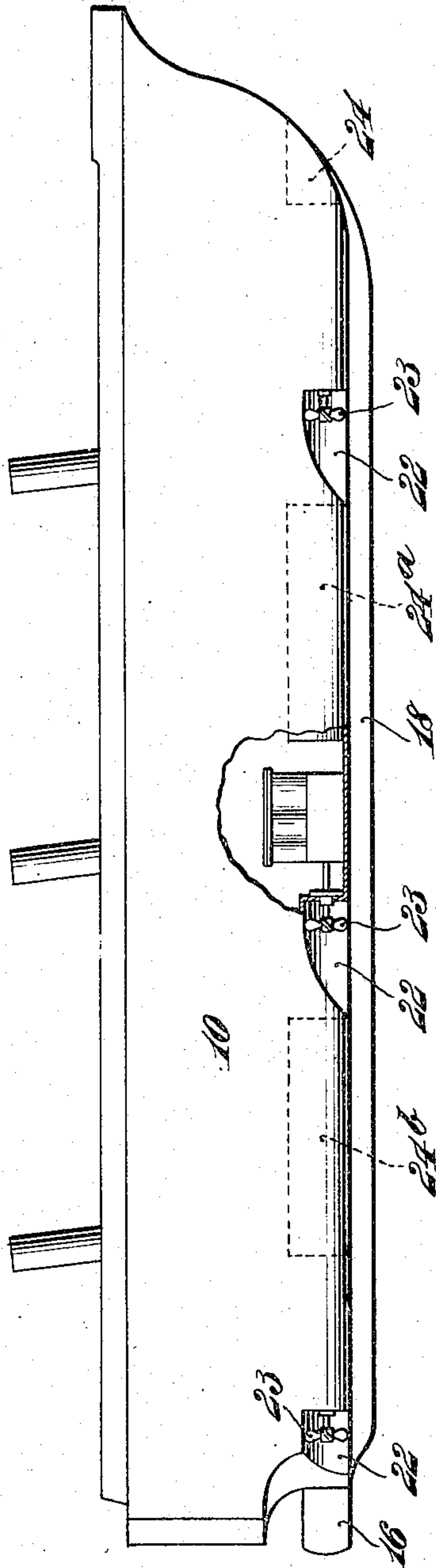


Fig. 3.



WITNESSES:

Thomas M. Smith
G. M. Connerston

INVENTOR

Daniel M. Pfautz

BY

J. Walter Douglas

ATTORNEY.

931,016.

3 SHEETS—SHEET 3.

Fig. 4.

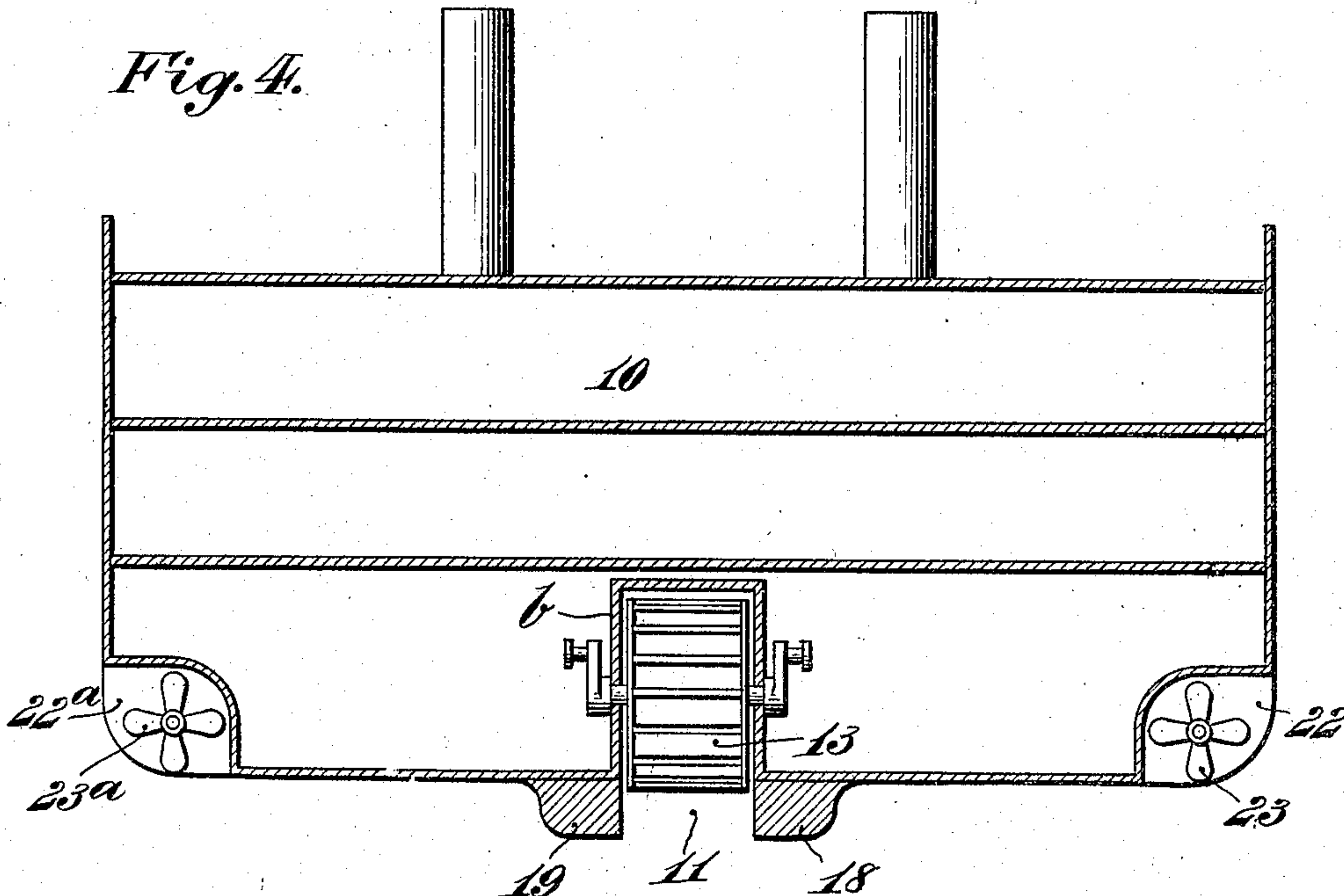
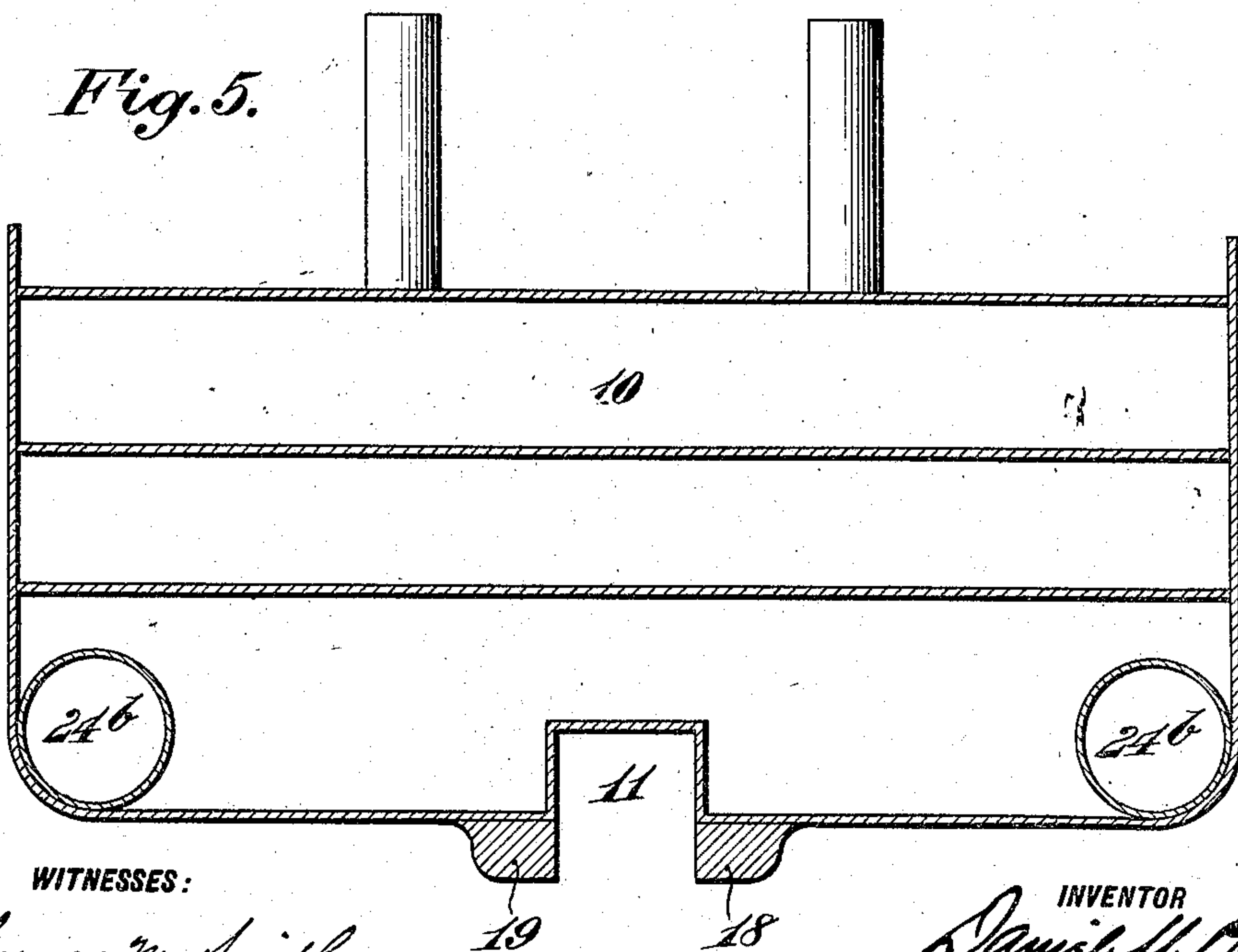


Fig. 5.



WITNESSES:

Thomas M. Smith.
G. M. Leannerton

INVENTOR

INVENTOR
Samuel M. Paulz
 BY
J. Walter Dingle
 ATTORNEY.

UNITED STATES PATENT OFFICE.

DANIEL M. PFAUTZ, OF GERMANTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-THIRD TO WILLIAM H. TIGERMAN, OF PHILADELPHIA, PENNSYLVANIA.

TWIN STEAMSHIP OR VESSEL.

No. 931,016.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed September 18, 1908. Serial No. 453,668.

To all whom it may concern:

Be it known that I, DANIEL M. PFAUTZ, a citizen of the United States, residing at Germantown, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Twin Steamships or Vessels, of which the following is a specification.

My invention has relation to a combined twin steamship or vessel, constituting in such type of ship or vessel, a flat bottom divided by a deep and wide medial longitudinal channel extending from prow to stern and with depending projections, and in which channel are arranged a series of paddle-wheels, with respective water tight caps thereover, the said wheels arranged so as to revolve at different speeds with respect to each other and with buoyant devices, such as, compressed air chambers, in front and on the sides of the ship or vessel, for lessening friction of the body of water in the flotation thereof; screw-propellers on the sides, in pockets, at suitable distances apart and open to the outside and to the bottom of the ship or vessel and connected steering rudders in the stern, arranged to act in unison, and to rotate in the same direction.

The nature, characteristic features and scope of my said invention, as above defined, will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, in which—

Figure 1, is a top or plan view of a combined twin steamship or vessel embodying essentially, as shown, all the characteristic main features of my present invention. Fig. 2, is a longitudinal central sectional view through the combined twin steamship or vessel. Fig. 3, is a side elevational view of the steamship or vessel, partly broken away, to show one set of side screw-propellers with partially, actuating means therefor; and Figs. 4 and 5, are respectively, transverse sectional views through the steamship or vessel on respectively the lines x, x , and y, y , of Fig. 1, to show the compressed air compartments side-screw-propellers, one of the paddle wheels mounted in the wide and deep channel and the depending projections on both sides of the said longitudinal channel of the combined twin ship or vessel.

Referring to the drawings 10, is the combined twin steamship or vessel having a wide and deep medial longitudinal channel 11, extending from prow to stern of the combined structure. At suitable distances apart in the channel 11, are arranged a series of paddle-wheels 12, 13 and 14, as shown with water tight caps a, b and c , extending thereover, as clearly shown in Fig. 2. Each of the paddle-wheels are arranged so as to be revolved at different speeds, by separate engines in the hold of the ship or vessel. In the stern are arranged two steering rudders 15 and 16, connected with each other by a belt or chain 17, and acting in unison, and operating in the same direction, by suitable steering means, controlled from the ship's pilot house, not shown. Projecting downwardly from the walls of the channel 11, are projections or blades 18 and 19, extending below the respective paddle-wheels, so that in case of grounding of the ship or vessel by reversal of the ship's course, the same may, when the tide permits be readily floated off of its grounding, without affecting the paddle-wheels, as they are fully protected by the said projections or wings 18 and 19, as clearly and fully shown in Figs. 4 and 5.

On the respective sides of the twin body of the vessel or ship in pockets 22 and 22^a, open to the outside and to the flat bottom, are mounted screw propellers 23 and 23^a, operated by separate engines, and preferably at greater rates of speed than the respective centrally arranged paddle wheels 12, 13 and 14, mounted in the longitudinal channel 11.

In the front and on the sides of the twin structure, near the flat bottom are arranged buoyant or compressed air chambers 24, 24^a and 24^b, for lessening friction of the body of surrounding water upon the ship or vessel, in action and hence to buoy up the same, under the dead load tending to overcome the effect of such chambers, while ploughing through the body of water.

My present invention is designed especially for deriving a high rate of speed, in navigating or propelling the ship, not through a deep body of water as they do now, but largely over a thin surface of the actual body of water in which the ship or vessel is being impelled. By reason of having great width, such a combined twin structure can roll in a rough or tempestuous

sea, without capsizing or overturning. And by arranging the series of paddle-wheels 12, 13 and 14, in the medial longitudinal channel 11, of the combined structure and so as to
 5 operate at respectively, different rates of speed as already explained, each paddle-wheel will draw water from the one in front and hence keep its action clear of the other, so as to exert respectively their full propelling powers on the ship or vessel. The
 10 arrangement on the respective sides of the combined structures, of screw-propellers, in the pockets open, as stated, to the outside and the flat bottom and operating in series
 15 on both sides, by separate engines, at high speeds in opposite directions effectually throw the water outward away from the ship or vessel and thus facilitate the travel over practically a thin surface of the body
 20 of water as well as to a considerable extent lessen friction of the actual body of water on the said series of paddle-wheels in action, for impelling the ship or vessel under the directing influence of the rubbers, working
 25 in unison, in the same direction, from the stern of the vessel or ship.

Having thus described the nature and objects of my invention, what I claim as new and desire to secure by Letters Patent is:--

30 1. A combined twin flat bottom ship or vessel having a medial longitudinal wide channel extending from prow to stern, impelling means arranged, in series, in said channel and each operating at different
 35 speeds from the other, side screw-propellers arranged in series in pockets open to the outside and flat bottom, and said propellers actuated, at different speeds with respect to those of said impelling means, substantially
 40 as and for the purposes described.

2. A combined twin flat bottom ship or vessel having a medial longitudinal wide

and deep channel extending from prow to stern, rotary impelling means, in series, arranged in said channel and each operating
 45 at different rates of speed, side screw-propellers mounted in pockets on the respective sides, said pockets open to the outside and to the flat bottom and buoyant-means in front and in the sides, near the bottom of the
 50 ship or vessel, substantially as and for the purposes described.

3. A combined twin flat bottom ship or vessel having a medial longitudinal wide and deep channel with water-tight overhead
 55 caps, impelling means, in series relation, in said channel below said caps, side screw-propellers, in series, operating at different speeds and steering means in the stern, operating in unison, in the same direction, sub-
 60 stantially as and for the purposes described.

4. A combined twin flat bottom ship or vessel having a medial longitudinal wide and deep channel with upper water tight caps and depending projections or wings,
 65 paddle impelling means mounted in said channel and each operating at different speeds with respect to each other, side screw-propellers arranged in pockets open to the outside and flat bottom, and the propellers
 70 on the respective sides operating in series at different speeds to that of said paddle impelling means, buoyant chambers in the front and sides of the twin structure and steering means in the stern acting in unison
 75 and at the same rates of speed, substantially as and for the purposes described.

In witness whereof, I have hereunto set my signature, in the presence of two subscribing witnesses.

DANIEL M. PFAUTZ.

Witnesses:

J. WALTER DOUGLAS,
 THOMAS M. SMITH.