

G. P. BUTTSOV.

BOAT.

APPLICATION FILED MAY 20, 1912.

Patented May 13, 1913.

3 SHEETS-SHEET 1.

1,061,355.

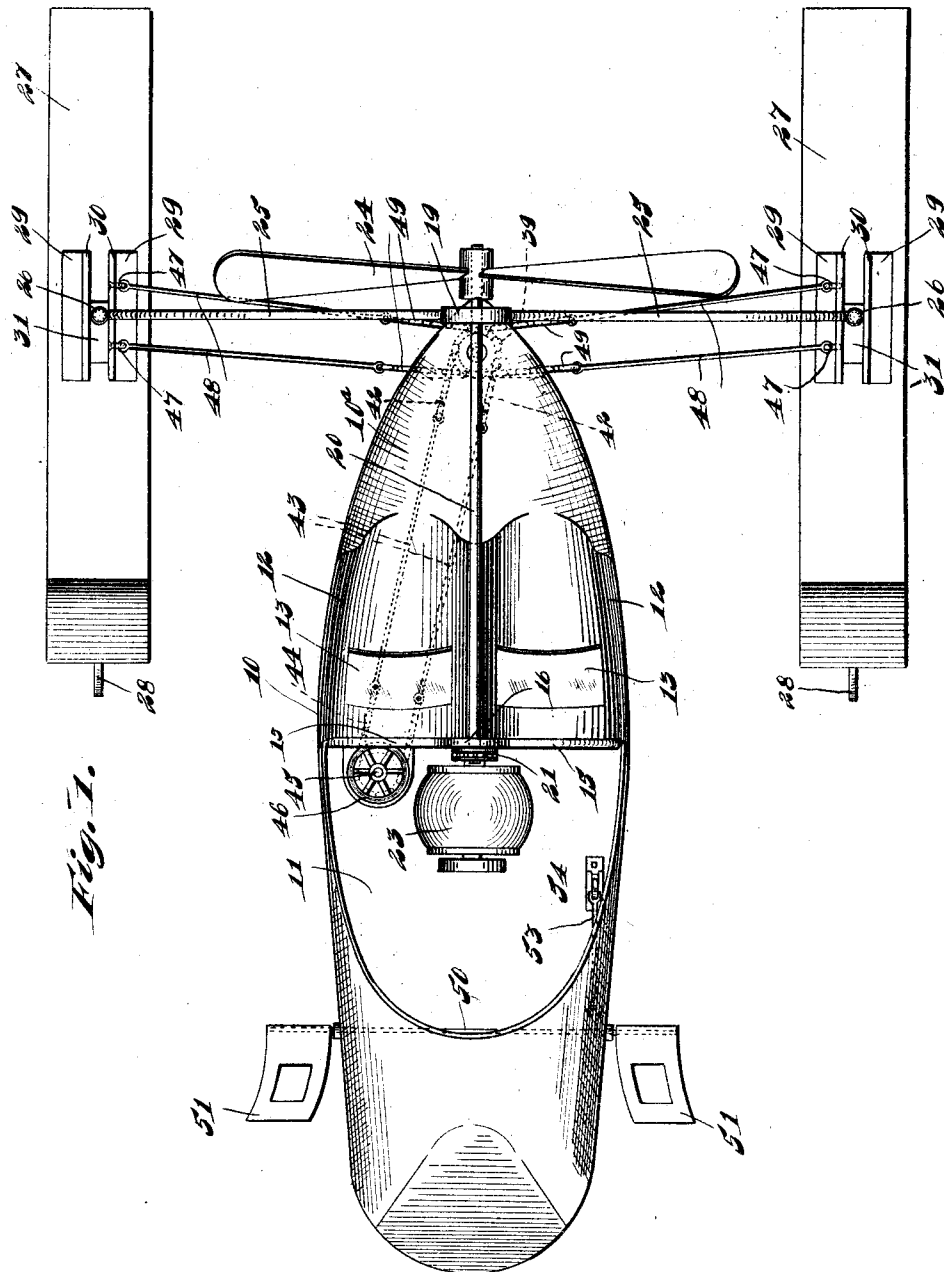


Fig. 1.

Witnesses:

C. E. Wessels

B. F. Richards

Inventor:

George P. Butts, Jr.,
By Joshua R. H. H. H.
his Attorney.

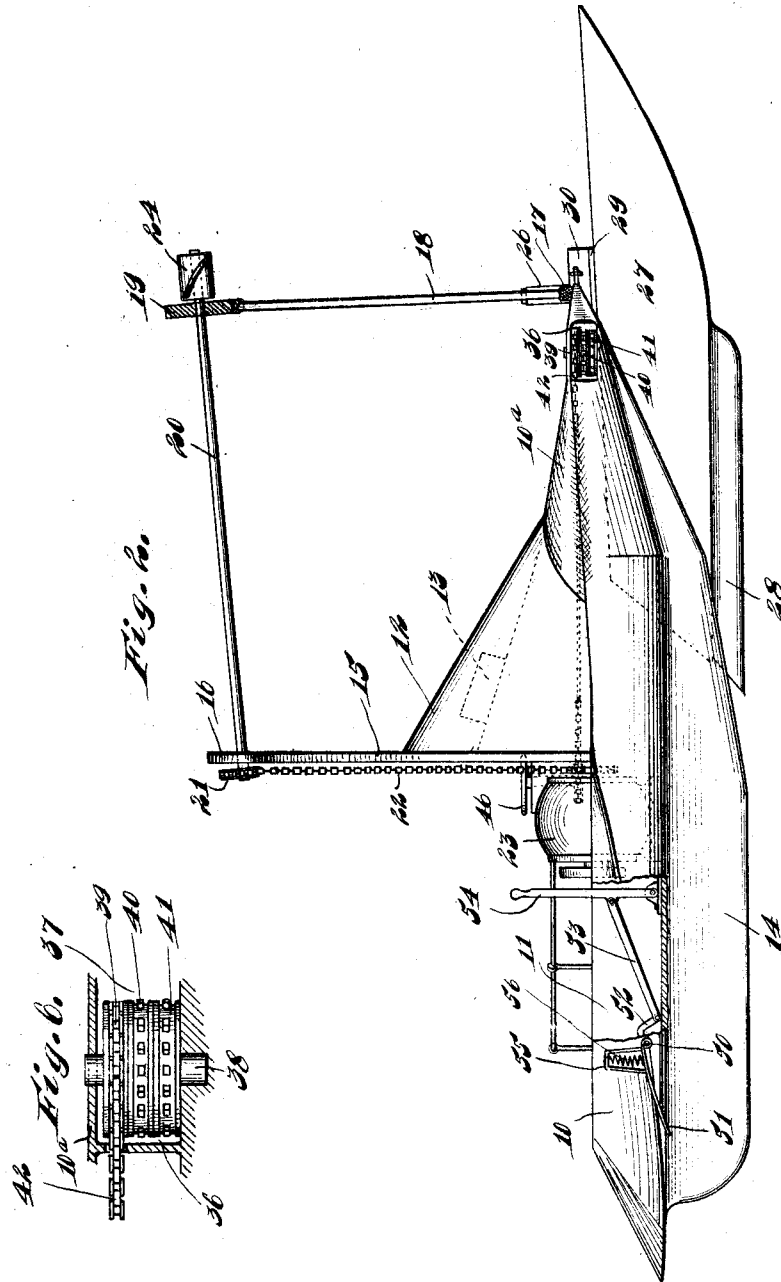
G. P. BUTTSOV.
BOAT.

APPLICATION FILED MAY 20, 1912.

Patented May 13, 1913.

3 SHEETS—SHEET 2.

1,061,355.



Witnesses:

C. E. Vessels.

B. H. Richards

Inventor:

George P. Buttsov,

By Joshua H. Torrey

his Attorney.

G. P. BUTTSOV.

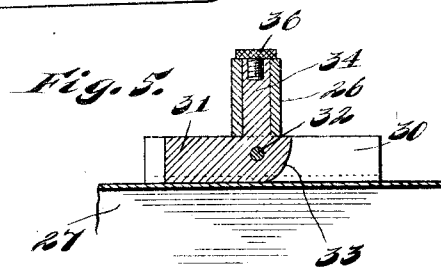
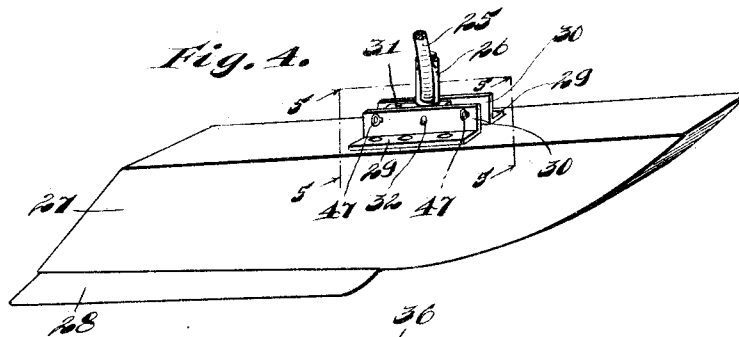
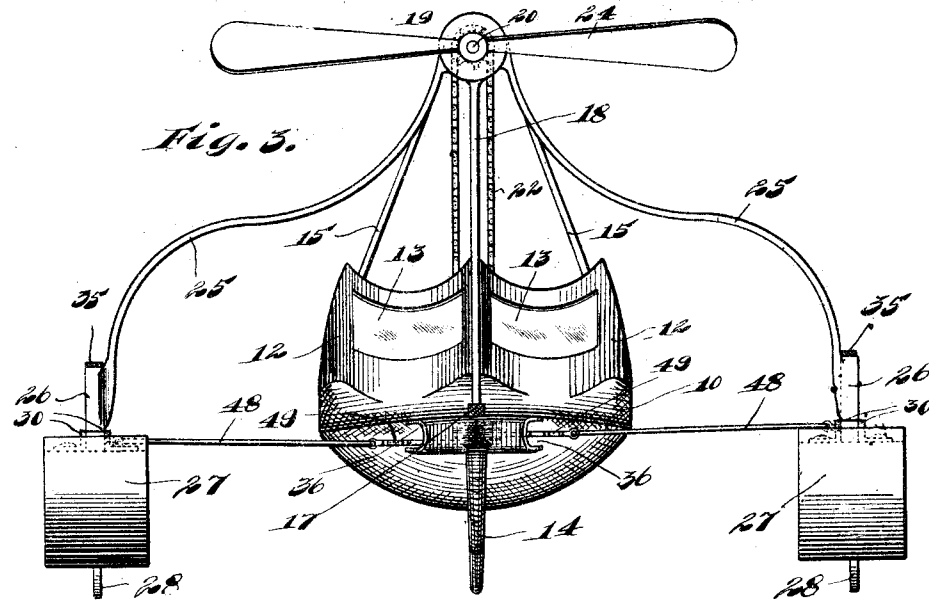
BOAT.

APPLICATION FILED MAY 20, 1912.

Patented May 13, 1913.

3 SHEETS-SHEET 3.

1,061,355.



Witnesses:

C. E. Wessels.

B. J. Richards

Inventor:

George P. Buttsor,
By *Joshua H. Lott*
his Attorney.

UNITED STATES PATENT OFFICE.

GEORGE P. BUTTSOV, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-THIRD TO CHARLES MATSEN AND ONE-THIRD TO HERMAN P. ERB, OF CHICAGO, ILLINOIS.

BOAT.

1,661,355.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed May 20, 1912. Serial No. 698,549.

To all whom it may concern:

Be it known that I, GEORGE P. BUTTSOV, a citizen of the United States, and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Boats, of which the following is a specification.

This invention relates to boats, and particularly to that type of boats wherein the propulsion constitutes air pressure.

It is the object of the present invention to create a motor-boat somewhat after the type of a hydroplane, wherein the major portion of the existing pressure exerted against the passage of the boat through the water will be eliminated, not only by the construction of the hull of the boat, but also by the pressure of the water against the propeller and the rudder.

With the above and other objects in view, this invention consists in the construction, combination and arrangement of parts, all as hereinafter more fully described, claimed, and illustrated in the accompanying drawings, wherein:—

Figure 1 is a top plan view of a boat constructed in accordance with the present invention, Fig. 2 is a side elevation thereof, parts being broken away for the purposes of illustration, Fig. 3 is an elevation looking at the bow of the boat, Fig. 4 is a perspective view of one of the pontoons, Fig. 5 is a vertical section taken along the plane indicated by lines 5—5—5—5 of Fig. 4, Fig. 6 is a vertical section illustrating the cooperation and arrangement of the steering mechanism.

Reference being had more particularly to the drawings, 10 indicates the hull of a boat of the type commonly known as a shallow hull boat, which is adapted to have little displacement in the water, said hull being constructed of metal with compressed air compartments or tanks placed therein at suitable localities. The hull 10 is provided with a cockpit 11 adjacent to the stern which is partially covered by the lenticular wind shield 12, said wind shield being provided with suitable windows or ports 13. The hull 10 is also provided with the keel 14 which tapers from the stern to the bow thereof, said keel serving to balance the boat, but at the same time furnishing little or no resistance to the water.

Secured to the boat upon each side of the

wind shield 12 is a standard or support 15, said supports converging to a bearing 16 and constituting a support for said bearing. The bow 10^a has a pedestal 17 mounted thereon from which extends an upright 18, said upright carrying a bearing 19 at its upper terminal. A slightly inclined propelling shaft 20 is mounted in the bearings 16 and 19 and has a sprocket wheel 21 mounted upon the rear terminal thereof, over which operates the driving chain 22, said chain being connected with the motor 23 located in the cockpit 11. The forward terminal of the shaft 20 has a propeller 24 mounted thereon, which operates against the air to drive the boat.

A lenticular brace or support 25 is mounted upon each side of the bearing 19 and constitute braces for said bearing and also supports and retaining elements for the guide pontoons which will hereinafter be more fully described. Each lenticular brace or support 25 is provided with a vertical sleeve 26 at the lower terminal thereof, said sleeve being formed integrally with respect to said braces 25.

A pontoon 27 of the construction illustrated in Fig. 4, which is somewhat parallelogrammatic in form, is mounted at the lower terminal of the lenticular supports 25 through the instrumentality of the sleeves 26. These pontoons are of hollow metallic construction, being substantially air-tight and provided with the keels or vanes 28 on their under surfaces, which contact with the water to retain said pontoons in a substantially perpendicular position. A pair of angle bars 29 are secured to the decks of each pontoon 27 and have the vertical sections 30 thereof arranged in spaced parallel position. Between each pair of angle bars 29 and between the vertical sections 30 thereof, is pivoted a bar 31 through the instrumentality of the pin 32, said bar having its forward terminal curved, as at 33, to allow for the oscillation thereof about the pin 32. A vertical rod 34 is formed upon each bar 31 directly over the pivotal pin 32 and is rotatably mounted in the adjacent sleeve 26, said rod being retained in its operative position by the screw 35 which is threaded into the upper terminal of the rod 34, when the same is in its operative position, as illustrated in Fig. 5. From this construction it will readily be seen that each pontoon is

provided with a movement about a horizontal pivot which will permit the pontoons to accommodate themselves to irregularities and swells upon the surface of the water; and also said pontoons are provided with a movement about a vertical pivot which permits the pontoons to be swung for the purposes of steering the boat, the vanes or keels 28 creating the necessary guiding pressure against the water.

The bow 10^a is pierced by an opening 36 upon each side thereof, said openings being the terminals of a passage 37 extending through the bow 10^a. A vertical shaft 38 is mounted centrally in the passage 37 and has the sprocket wheels 39, 40 and 41 mounted thereon. The sprocket wheel 39 is connected by means of a chain 42 which embraces the same, and the rods 43 attached thereto, to the chain 44, which coöperates with a sprocket wheel carried by the steering shaft 45. This steering shaft is operated by a wheel 46 for the purpose of rotating the shaft 38 by means of the gear 39 and the chains 42 and 44 and the rods 43. The vertical section 30 of each inner angle bar 29 is provided with a pair of eyes 47, to which are connected the steering rods 48. These steering rods are connected to the ends of the chains 49 at their free terminals, said chains operating about the sprocket wheels 40 and 41. By this construction, it will readily be seen that, as the wheel 46 is rotated, the shaft 38 will likewise be rotated, swinging the pontoons 27 in like direction in order that the boat may be steered in either direction, dependent upon the direction in which the pontoons are swung.

In order to provide a means whereby the momentum of the boat may be impeded, a shaft 50 is arranged transversely adjacent to the stern of the boat and has an orificed blade 51 secured rigidly thereto at each terminal thereof. A bent lever 52 is secured to the shaft 50 and is connected to a link 53 which is interposed between the lever 54 and the bent lever 52. By the movement of the lever 54 in a forward direction, it will be seen that the blades 51 will be swung downwardly, creating a bearing surface for the water, which will create sufficient resistance to impede and stop the motion of the boat. In order to automatically raise the blades 51, a bracket 55 is mounted on one side of the boat adjacent to the gunwale thereof adja-

cent to the shaft 50 and has one terminal of a spring 56 secured thereto, the opposite terminal of said spring being attached to the adjacent blade 51, the tension of said coil spring 56 normally retaining the blades in an elevated or horizontal position.

Having described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. The combination with a boat; of a vertical standard carried on the prow of said boat; two diverging legs depending from the top of said vertical standard; a vertical sleeve on the lower end of each of said diverging legs; a plurality of pontoons; angle bars arranged upon the decks of said pontoons; a bar pivoted between the angle bars of each pontoon having the forward terminal thereof curved in order that the forward terminal of each pontoon may swing upwardly; and rods carried by said bars swiveled in the sleeves aforesaid.

2. The combination with a boat; of a vertical standard carried on the prow of said boat; two diverging legs depending from the top of said vertical standard; a vertical sleeve on the lower end of each of said diverging legs; a plurality of pontoons; angle bars arranged upon the decks of said pontoons; a bar pivoted between the angle bars of each pontoon having the forward terminal thereof curved in order that the forward terminal of each pontoon may swing upwardly; rods carried by said bars swiveled in the sleeves aforesaid; and guide rods connected with certain of said angle bars for steering said pontoons.

3. The combination with a boat; of a frame mounted thereon; vertical sleeves secured to said frame; a plurality of pontoons; angle bars arranged upon the decks of said pontoons; a bar pivoted between the angle bars of each pontoon having the forward terminal thereof curved in order that the forward terminal of each pontoon may swing upwardly; and rods carried by said bars swiveled in the sleeves aforesaid.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE P. BUTTSOV.

Witnesses:

JOSHUA R. H. Potts,
J. SIMONS.