Nov. 17, 1931. F. J. RASH 1,832,241

WATER VEHICLE

Filed Aug. 4, 1930 2 Sheets-Sheet 1

Fig. 1.

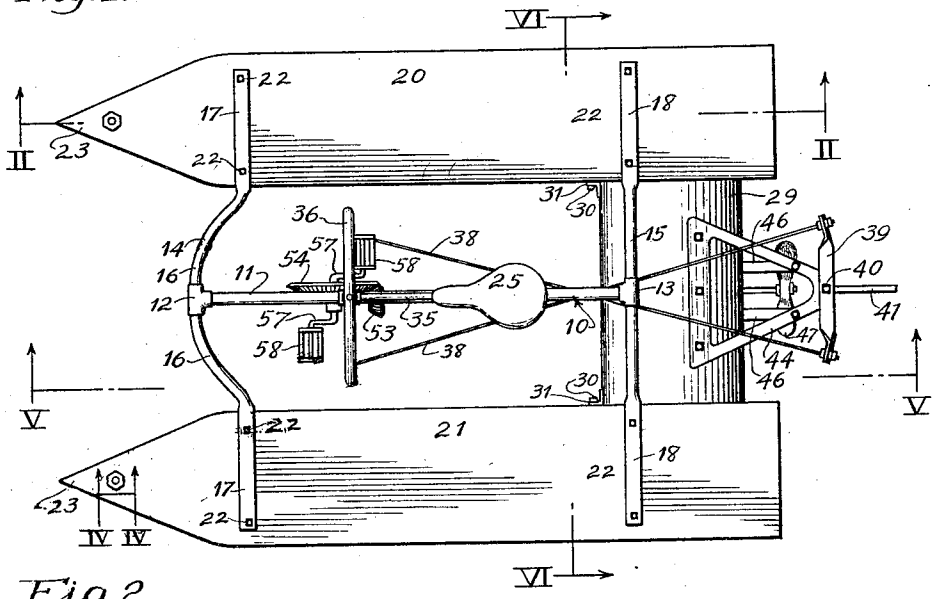


Fig. 2.

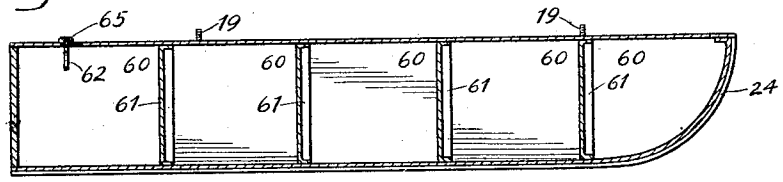


Fig. 3.

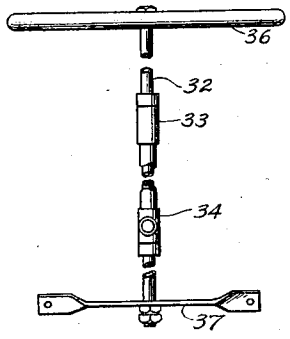
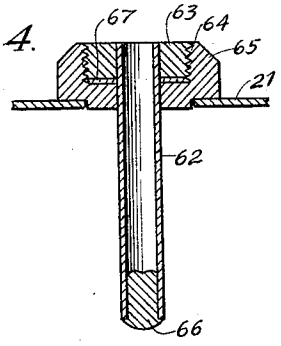


Fig. 4.



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Fig. 5.

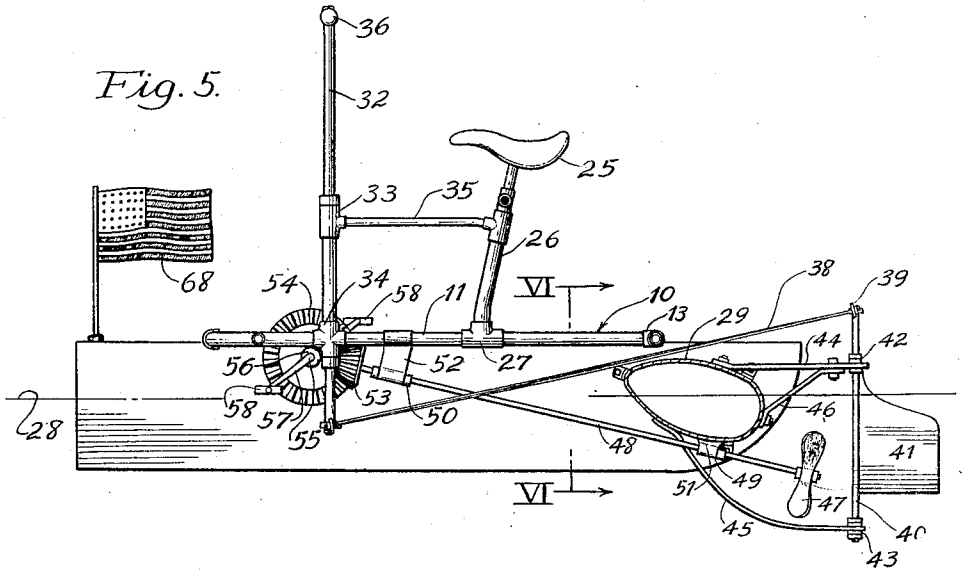
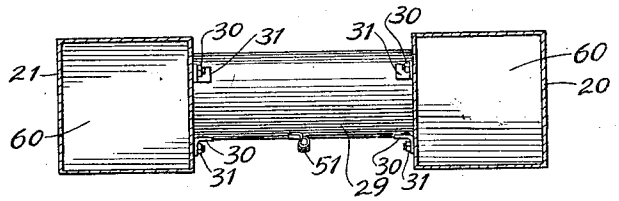


Fig. 6.



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Patented Nov. 17, 1931 1,832,241

UNITED STATES PATENT OFFICE

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WATER VEHICLE

Application filed August 4, 1930. Serial No. 472,876.

This invention relates to amusement devices and more particularly to manually propelled water vehicles although certain features thereof may be employed with equal advantage for other purposes. It contemplates more especially the provision of improved, more effective and less intricate means for imparting movement to a vehicle responsive to the manipulation of the rider for amusement purposes.

One object of the present invention is to provide a vehicle for sustaining the rider above the surface of water and to effect the traverse thereover.

Another object is to simplify the construction and improve the operation of devices of this character.

Still another object is to provide a frame having water buoyant pontoons thereon to sustain and enable the traverse of a rider with minimum friction and resistance.

A further object is to provide simplified and more effective means for imparting linear movement to a water vehicle responsive to the manual effort of the rider.

A still further object is to provide a frame having buoyant means thereon for water traverse so that the rider may effect the propulsion and directional steering thereof.

Still a further object is to provide a water vehicle having pontoons thereon comprising independent hermetically sealed compartments to impart increased safety thereto.

Other objects and advantages will appear from the following description of an illustrative embodiment of the present invention.

In the drawings:

Figure 1 is a plan view of a device embodying features of the present invention.

Figure 2 is a sectional view taken substantially along line II—II of Figure 1.

Figure 3 is a fragmentary view in elevation of the handle and steering mechanism for the device shown in Figure 1.

Figure 4 is a sectional view of a hermetically sealed flag support designed for employment with the pontoons disclosed in Figure 1.

Figure 5 is a sectional view taken substantially along line V—V of Figure 1.

Figure 6 is a sectional view of the pontoon taken substantially along lines VI—VI of Figures 1 and 5.

The structure selected for illustration comprises a frame 10 of any suitable construction and configuration adapted to receive buoyant means thereon to sustain a rider above the surface of water in a manner to be more fully described hereinafter. As shown, the frame 10 is, in this instance, built from tubular pipe members, one pipe member 11 extending in a longitudinal direction of movement for termination in T-unions 12 and 13 which have transversely extending members 14 and 15, respectively, associated therewith in any suitable manner as commercial practice may dictate. The forward transverse member 14 has an arcuate portion 16 symmetrically disposed with reference to the longitudinal pipe member 11 for termination in transversely aligned extensions 17. The rearward transverse member 15 is similarly provided with extensions 18 in parallel spaced longitudinally aligned relation with the extension 17, these being apertured to receive threaded studs 19 therethrough so as to effect the attachment of suitable buoyant means, in this instance pontoons 20 and 21.

It is to be noted that the threaded studs 19 are anchored in any suitable manner to the pontoons 20 and 21 in correspondingly spaced relation with the apertures provided in the extensions 17 and 18 so that suitable fasteners such as nuts 22 may threadedly engage the studs 19 for detachably associating the pontoons 20 and 21 to the underside of the frame 10. The pontoons 20 and 21 are formed or otherwise shaped from sheet material to present elongated tubular members of preferably, though not essentially, rectangular cross section for termination in pointed bows 23 to minimize the frictional resistance with the water responsive to the traverse thereof. The stern or rearward extremity of the pontoons 20 and 21, is arcuately curved as at 24 for a similar purpose, these being detachably associated with the frame 10 in parallelism for longitudinal disposition in the direction of travel.

A seat member 25 is telescopically associ-

ated with a shank member 26 fixed to the longitudinal bar 11 by means of a T-union 27 to sustain a rider above the surface 28 of a body of water, the pontoons 20 and 21 being of such capacity as to impart the necessary buoyancy thereto so as to sustain the rider in the desired elevated position with respect to the water surface 28. In order to maintain the pontoons 20 and 21 together with the frame 10 substantially level with the water surface 28 with the rider sustained upon the seat member 25, an auxiliary pontoon 29 is transversely disposed between the pontoons 20 and 21 for detachable association therewith by means of stud fasteners 30 which project through flanges 31 fixed to the surface of the pontoon 29 in any suitable manner.

As shown, the exterior contour of the auxiliary pontoon 29 is of generally elliptical or preferably egg-shaped cross section so as to offer minimum resistance to the water responsive to the traverse of the frame 10 therethrough. For this purpose the pontoon 29 is situated rearwardly so as to balance the load of the rider which is concentrated in the region thereof, thereby imparting increased buoyancy to the frame 10 owing to the greater water displacement capacity thereof. So that the rider may conveniently be supported on the frame 10 against accidental removal therefrom, handle means consisting, in this instance, of a vertically disposed tubular member 32 is anchored to the longitudinal bar 11 by means of vertically aligned bearings 35 and 34, the former being supported by a bar or tube 35 extending from the seat support 26 to impart increased rigidity thereto. The post 32 terminates at one extremity thereof in a transverse handle bar 36 for convenient grasp of the rider with the other extremity thereof terminating in a transverse steering bar 37 intermediate the pontoons 20 and 21.

In order to effect steering, rods 38, in this instance two, are anchored at the extremities thereof to the steering bar 37 for crossed extension to engage a rudder bar 39 fixed to the vertical rod 40 along which a rudder 41 is attached. The rod 40 is journalled in aligned bearings 42 and 43 which are sustained by bracket members 44 and 45 of any suitable configuration for attachment to the auxiliary pontoon 29 on the top and bottom surfaces, respectively, thereof. As a result, the bearings 42 and 43 are maintained in vertically aligned association to rotatably sustain the rudder 41 in position for steering guidance responsive to the handle means 32. As shown, an inclined bracket 46 extends between the pontoon 29 and bracket 44 to sustain the latter in position against movement.

In order to propel the frame 10 over any body of water and along the surface 28 thereof, a propeller 47 of standard design or any approved construction is fixed to the extremity of a rod 48 journalled in bearings 49 and 50. As shown, the bearings 49 and 50 are supported in brackets 51 and 52 secured to the underside of the pontoon 29 and longitudinal frame bar 11, respectively, for inclined rotary support with the other extremity thereof carrying a beveled pinion 53. The pinion 53 meshes with a beveled gear 54 carried by a transverse stub shaft 55 journalled in a bearing 56 integrally or otherwise associated with the bearing bracket 34 supra.

It is to be noted that the vehicle or frame 10 may be propelled in any suitable manner and, in this instance, it is preferred to provide pedal means in the form of crank arms 57 which extend from the stub shaft 55 to carry laterally extending pedals 58 of standard construction. The pedals 58 are journalled on the crank arms 57 within range of the rider sustained on the seat member 25 so as to effect the traverse of the frame 10 along the water surface 28. In consequence thereof, the rider may be conveniently and comfortably seated and simultaneously effect the traverse of the frame 10 together with the steering thereof responsive to the manipulation of the pedals 58 and handle means 38, respectively.

In order to insure increased safety, the pontoons 21 are preferably provided with a longitudinal series of independent hermetically sealed compartments 60, in this instance five, which are defined by partition members 61 disposed transversely therein for adhesive joinder to the confining walls thereof in any suitable manner. In consequence thereof, one or more of the compartments 60 may be punctured without placing the rider in jeopardy in that the pontoons 20 and 21 will still retain sufficient buoyancy to sustain the frame 10 with the rider thereon.

Flag posts 62 are formed integrally with a nut 63 exteriorly threaded as at 64 for engagement with a cap member 65 adhesively or otherwise joined to the top surface of the pontoons 20 and 21 in the region of their bows 23 for extension therein. The posts 62 are closed at the bottom thereof with any suitable means such as solder 66 and water is precluded from entering the pontoons around the flag posts 62 and through the cap 65 owing to a gasket 67 interposed therebetween. As a result, the flag posts 62 are sealed from the interior of the pontoons 20 and 21 for fixed association therewith so that flags 68 or other ornaments may be telescopically supported for display thereon.

Various changes may be made in the embodiment of the invention herein specifically described without departing from or sacrificing any of the advantages of the invention as defined in the appended claims.

I claim:

1. In a vehicle the combination with a frame, of parallel disposed pontoons associated with said frame, a pontoon disposed

transversely between said parallel pontoons for detachable association therewith, a seat member on said frame for sustaining a rider above the surface of water, pedal driving means for effecting the traverse of said frame, and handle means within grasp of the rider on said seat member.

2. In a water vehicle, the combination with a frame, of parallel elongated pontoons detachably associated with said frame to maintain a rider above the surface of water, said pontoons being pointed and elongated in the direction of travel independent hermetically sealed compartments in said pontoons, a pontoon transversely associated between said parallel pontoons, a seat member on said frame for sustaining a rider, and means for manually propelling said frame over a body of water.

3. In a water vehicle, the combination with a frame, of parallel elongated pontoons detachably associated with said frame to maintain a rider above the surface of water, said pontoons being pointed and elongated in the direction of travel, a seat member on said frame for sustaining a rider, handle means on said frame, a steering rudder responsive to said handle means, means for manually propelling said frame, and a transverse pontoon between said parallel pontoons to increase the buoyancy in a position of maximum weight concentration.

In witness whereof, I subscribe my name.

FRANK J. RASH.