May 22, 1934. T. CHLEBOWSKI 1,959,523

BOAT FOR ICE, SNOW, AND WATER TRAVEL

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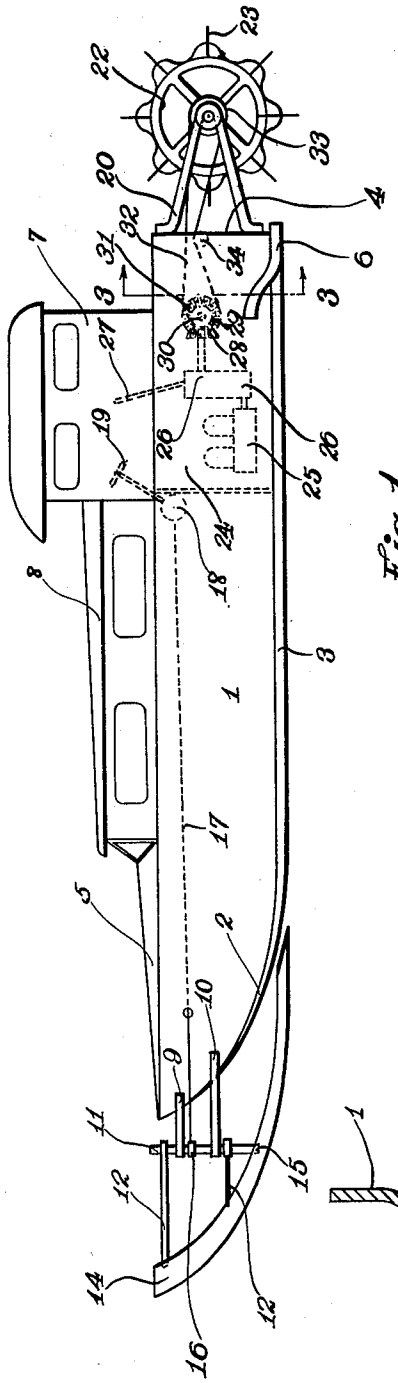

Fig. 1.

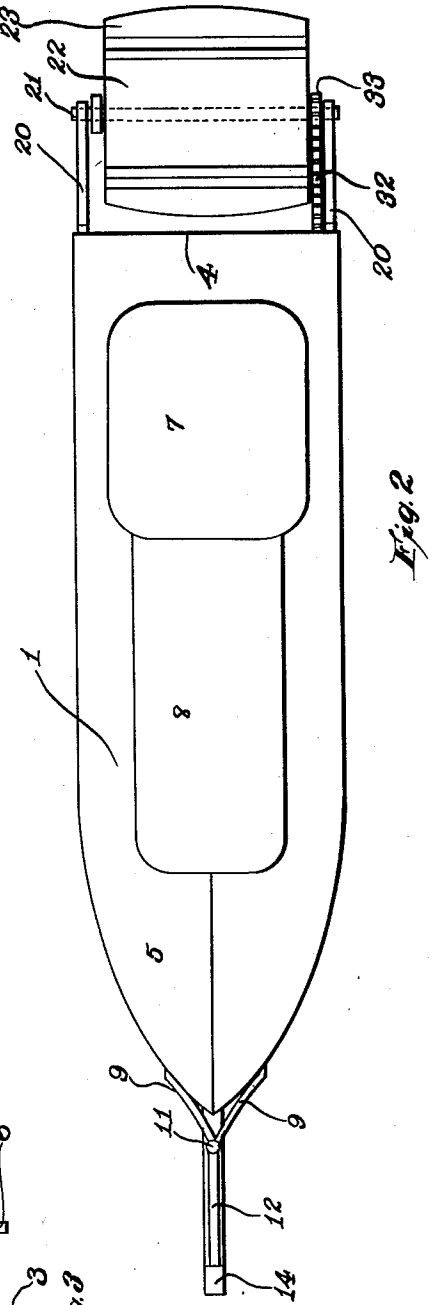

Fig. 2

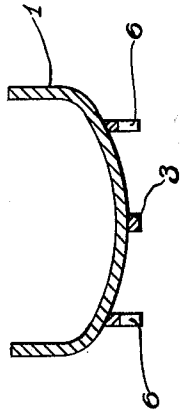

Fig. 3

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BOAT FOR ICE, SNOW, AND WATER TRAVEL

Teofil Chlebowski, Brooklyn, N. Y.

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1 Claim. (Cl. 114—43)

This invention relates to boats and is particularly directed to a boat having a hull, so constructed as to enable it to traverse snow, ice or water with ease and stability and provided with a self contained source of power and propelling means adapted to propel the boat over and in any of these media.

An important feature of the present invention resides in the employment of a bow rudder projecting forwardly of the stem of the hull and so constituted as to function as a rudder when the boat is partially submerged in water, and to function as a directional skid when the boat is traveling on snow or ice.

A further important feature of the invention resides in a peculiarly formed propelling wheel, so constituted as to operate with efficiency on ice, snow or water in order to propel the boat and this propelling wheel is driven from an engine within the hull in a novel and efficient manner.

The primary object of the invention is to provide in a unitary structure a vehicle adapted for use in countries or lands where there is considerable snow and ice with occasional water and to utilize this craft as a mode of travel over these media.

Features of the invention, other than those adverted to, will be apparent from the hereinafter detailed description and claim, when read in conjunction with the accompanying drawing.

The accompanying drawing illustrates one practical embodiment of the invention, but the construction therein shown is to be understood as illustrative, only, and not as defining the limits of the invention.

Figure 1 is a side elevation of a craft embodying the present invention.

Figure 2 is a plan view thereof.

Figure 3 is a cross sectional view of the hull taken on the line 3—3 of Figure 1.

Referring to the drawing, 1 indicates the hull of the craft, said hull being of substantially boat shape. The forward portion of the hull is of the yacht or dory type, having a curved stem 2 extending down into a substantially straight keel 3 which extends aft to the transom 4. This keel is preferably a metal keel arranged centrally of the hull and the metal keel is carried upwardly over the stem 2 for at least a portion of the distance in the direction of the deck 5.

Positioned near the stern of the hull are a pair of runners 6 which are spaced laterally from the keel and serve to hold the hull on an even keel when the craft is resting on a flat surface such as the surface of ice. The hull is provided with a suitable pilot house 7 and may have an appropriate cabin 8. For the purpose of illustration, I have shown a canvas covered cabin with celluloid windows, although the cabin and pilot house may be of any suitable construction.

The bow of the boat is provided with projecting brackets or outriggers 9 and 10 supporting a rudder post 11 for rotation on a vertical axis and this rudder post carries rigid brackets 12 which are also rigid with the rudder post and with a rudder or skid 14. This skid thus projects forwardly of the bow and is adapted to extend from substantially deck height downwardly to the keel 3 and it is shaped on an even sweep so that when in normal position, it will form substantially a continuation of the keel. The rudder post is provided with laterally extending brackets 16 to which are fixed rudder lines 17 extending aft to a steering drum 18 adapted to be operated by a hand wheel 19 in the pilot house.

Mounted on the exterior of the transom are a pair of brackets 20 supporting a transverse shaft 21 on which is mounted a propelling wheel 22. This propelling wheel is of rigid construction and is provided at spaced apart intervals about its periphery with transversely extending fins which may be metal tipped, but preferably are of metal. These fins are designated 23 and eight of them are shown although any number of fins may be employed.

They preferably have curved edges as shown in Fig. 2, adapting them to readily grip snow or ice and at the same time to properly cooperate with water when the wheel is rotated to propel the boat. The wheel is preferably set at a height, so that the fins will project slightly below the keel thereby adapting them to grip ice, snow or water. If desired, the wheel 22 may be made vertically adjustable in any suitable manner, but for the purpose of illustration, I have shown the same mounted on the rigid brackets 20.

Immediately below the pilot house is an engine room or compartment 24 in which is installed an engine 25 preferably of the internal combustion type. The drive between the engine and the wheel 22 may be a direct drive and the connections may be of any appropriate character. For the purpose of illustration, however, I have shown the engine 25 as connected to a transmission 26 controlled by a lever 27 extending into the pilot house. This transmission is in turn connected to a bevel gear 28 meshing with a bevel gear 29 on a transverse shaft 30 and on this shaft 30 is

fixed a sprocket wheel 31. A sprocket chain 32 passes about the sprocket 31 and about a sprocket 33 fixed on the shaft 21 of the wheel 22 and one or more directional rollers 34 may be utilized to direct the sprocket chain through an opening in the transom above the water line of the keel.

When the craft is partially submerged in water, it is adapted to be propelled by the wheel 22 which functions similar to a paddle wheel in this connection. The steering of the craft in water is accomplished by the bow rudder 14. When traveling upon snow, the metal fins 23 dig into the snow and serve to propel the craft which rides upon the center metal runner and is precluded from lateral tilting by the skids 6. The boat is steered on snow by the bow rudder 14 and particularly the lower portion thereof which rides through the snow after the manner of a skid and imparts direction to the craft in accordance with the angular position of the rudder.

When traveling upon ice, the metal fins 23 dig into and grip the ice and thus propel the craft, while the latter rides upon the keel 3 and is kept from lateral tilting by the skids 6. At least the lower portion of the rudder may be shod with metal having a fairly thin edge exposed to the ice, so as to dig into the ice at least to a degree sufficiently to impart direction to the craft.

The craft of this invention may be made in various sizes depending upon the particular use to which it is to be put and the cabin accommodations may be appropriate in this connection.

With the craft of this invention, it is possible to travel across frozen surfaces with pure ice or with a snow covering and the boat may be launched or removed from the water from such a frozen surface under its own power.

The foregoing detailed description sets forth the invention in its preferred practical form, but the invention is to be understood as fully commensurate with the appended claim.

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

In a structure of the character described, a water buoyant hull provided with a substantially straight axial keel adapted to serve as a central runner on ice or snow, a rudder forwardly of the bow of the hull and pivoted thereto, said rudder comprising a skid extending downwardly below the normal water line of the hull and rearwardly to and into substantially horizontal alinement with the keel and shaped at its after end to closely conform to the shape of the adjacent portion of the keel to form a substantially continuous forward extension of the keel and the lower edges of the keel and rudder forming a substantially unbroken line when the hull is proceeding rectilinearly in water or on snow or ice, relatively short runners spaced at either side of the keel near the stern to maintain the hull on an even keel when resting on snow or ice, and a propelling wheel at the stern of the hull provided with extending blades operable upon water, snow or ice to propel the hull.

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