May 5, 1953 F. A. OLIVER 2,637,050

DETACHABLE WHEEL MOUNTING FOR BOATS

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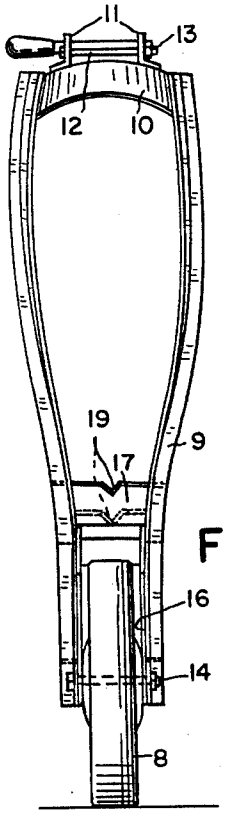


FIG.2.

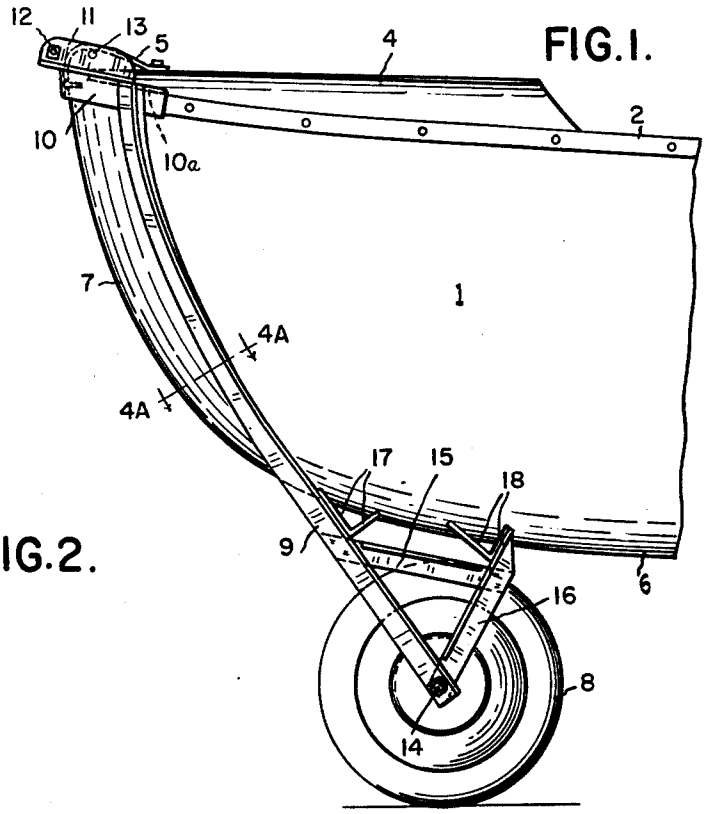


FIG.1.

FIG.3.

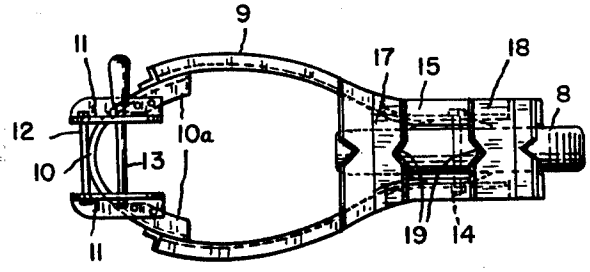


FIG.4.

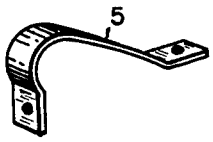




FIG.4A.

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FIG.6.

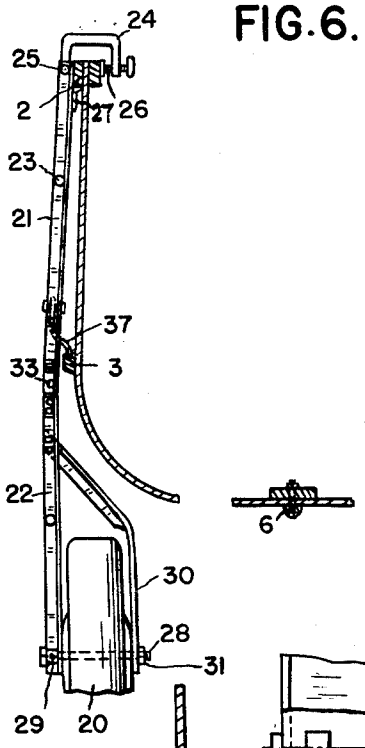
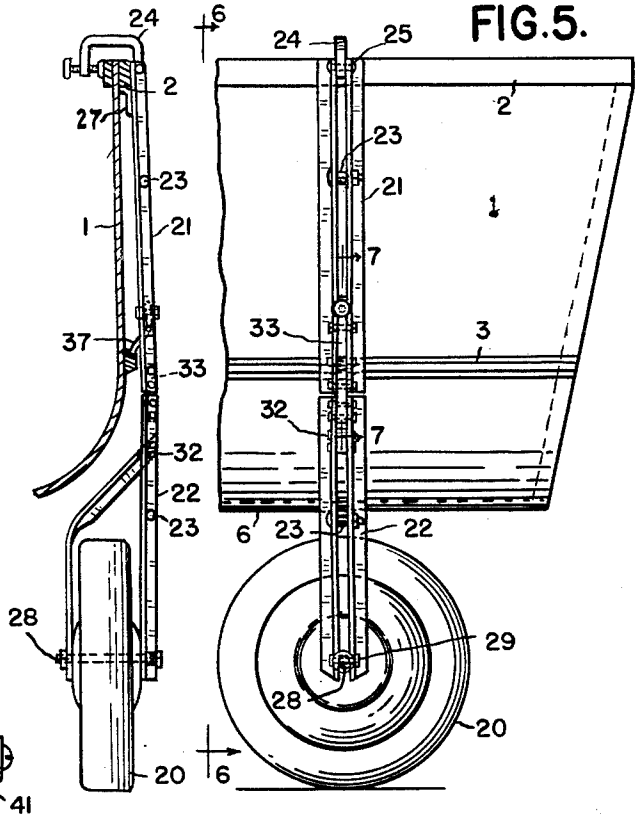


FIG.5.



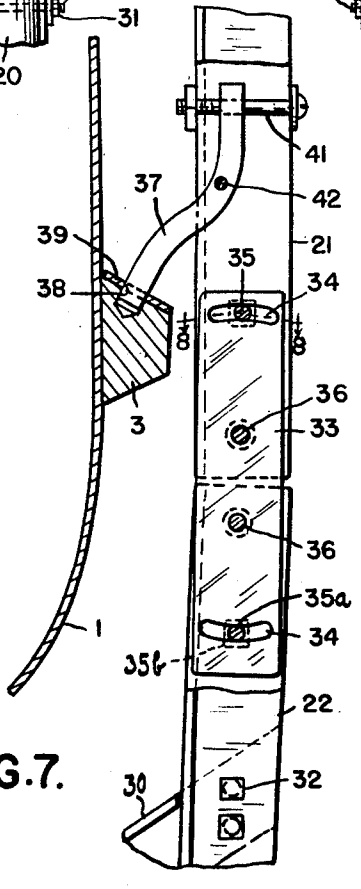


FIG.7.

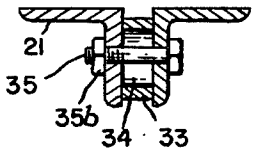


FIG.8.

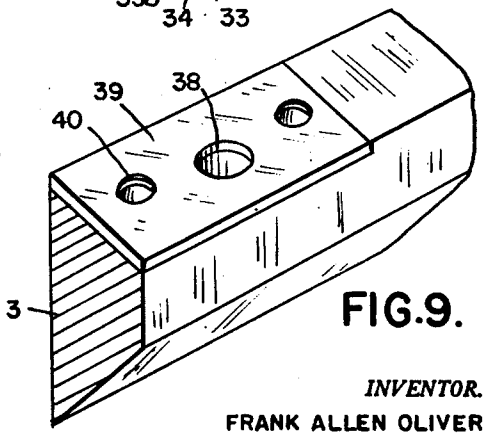


FIG.9.

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DETACHABLE WHEEL MOUNTING FOR BOATS

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3 Claims. (Cl. 9—1)

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This invention relates to detachable wheel mountings for boats and particularly for the launching and beaching of fairly small boats.

Objects of the invention are to provide simple and compact wheel mountings, easily attachable to and detachable from a boat, particularly while the same is afloat; to support a boat on such mountings by means of its gunnel rails; to adapt the gunnel and spray rails in conjunction to operatively retain such mountings in place; and to adapt such mountings to be adjusted to variouss hull contours of boats.

These and various other objects are attained by the construction hereinafter described and illustrated in the accompanying drawings, wherein:

Fig. 1 is a side elevational view of the bow portion of a boat, showing installation of a mounting for a wheel underlying the keel of such portion.

Fig. 2 is a front view of said wheel and mounting, omitting the boat.

Fig. 3 is a top plan view of the wheel and mounting.

Fig. 4 is a perspective detail of the bow handle of the boat.

Fig. 4A is a sectional detail on the line 4A—4A of Fig. 1.

Fig. 5 is a side elevational view of the stern portion of said boat, showing installation thereon of a rear wheel mounting.

Fig. 6 is a cross sectional view, taken on the line 6—6 of Fig. 5, and showing both rear wheel mountings.

Fig. 7 is a fragmentary vertical section taken on the line 7—7 of Fig. 5 and showing various details of the rear wheel mounting.

Fig. 8 is a cross sectional view of the rear wheel mounting, taken on the line 8—8 of Fig. 7.

Fig. 9 is a fragmentary perspective view showing a socketed plate secured to the spray rail of the boat.

In these views, the reference character 1 designates the hull of a boat of a type commonly driven by an outboard motor (not shown). Said hull has gunnel rails 2, spray rails 3, a forward deck 4, a bow handle 5, a keel 6, and a stem 7, such features being all common and well known.

Reference is first made to Figs. 1–4, showing a wheel 8 and a mounting suited to dispose and retain such wheel beneath the forward portion of the keel. Such mounting comprises a pair of elongated rigidly spaced angle bars 9, adapted to straddle the prow of the hull and to extend downwardly and rearwardly from the forward

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deck, with their upper portions in substantial parallelism with the corresponding portion of the stem 7. A yoke 10, rigidly interconnecting the upper ends of the bars 9, projects forwardly from such bars, conforming to and engaging the prow portions of the gunnel rails, such yoke having opposed flanges 10a projecting toward each other and seating on the deck 4. A pair of short angle bars 11 seat upon and are secured to the yoke, being spaced to engage at opposite sides of the handle 5 and rigidly interconnected by at least one bolt 12. Said handle is bridged sufficiently above the deck 4 to allow a latch pin 13 to pass freely under the handle, when inserted in sockets oppositely formed in the bars 11. The upper portions of the bars 9 bulge slightly apart, as best appears in Fig. 2, to amply clear the hull, and are twisted in a manner to maintain their inner flanges in substantial parallelism with the hull sides, despite varying curvature of the latter. The wheel 8 is journaled between the lower ends of the bars 9 on a bolt 14 mounted jointly in such ends, rotating in the vertical plane determined by the keel. Below the hull and at opposite sides of the wheel, the bars 9 rigidly carry similar rearwardly projecting truss elements, each comprising an upper bar 15 and a lower bar 16, rigidly interconnected, the lower ends of the bars 16 being anchored by the bolt 14. To seat the hull and space it above the wheel, an angle bar 17 spans the bars 9 just above the bars 15, and another angle bar 18 spans the upper ends of the bars 16. Both flanges of each bar 17 and 18 have central V-shaped notches 19 to retain the keel 6.

In applying the described mounting to a hull, it is necessary merely to lower the mounting in its straddling relation to the prow, until the yoke 10 is properly seated on the deck. Such seating will assure proper engagement of the bars 17 and 18 with the keel, as the wheel is thrust rearwardly to its position shown in Fig. 1. The pin 13 is then inserted in the bars 11 to extend through the handle 5. A reversal of these few steps serves to remove the mounting. With the pin 13 in place, the mounting is substantially held in its illustrated position of use. The bars 17 and 18, or either of them, prevent rearward swinging of the mounting beyond said position, and the portions 10a of the yoke prevent forward swinging. Forward swinging will further be resisted by any surface on which the wheel travels, as the boat is launched or beached.

Referring now to the subject matter of Figs. 5 to 9, a pair of rear wheels 20 are adapted to be

installed, for launching and beaching purposes, at opposite sides of the hull. These wheels have duplicate independent mountings, each comprising a pair of spaced upper angle bars **21** in end-to-end relation with a pair of spaced lower angle bars **22**, each pair of bars employing a suitable number of spacer bolts **23**. In applying these rear mountings, they are positioned to extend downwardly from the gunnel rail, at opposite sides of the stern portion of the hull. The upper ends of the paired bars **21** pivotally carry a C clamp **24**, suited to straddle the gunnel rail, one leg of such clamp being inserted between the bars **21** to engage a pivot pin **25**, and the other leg being tapped to receive a clamping screw **26**, adapted to apply pressure to the inner face of said rail. Further mounted (preferably rigidly) on the upper ends of the bars **21**, is an angle bar seat **27** for the gunnel rail. Each wheel **20** is journaled on an axle **28** inwardly extending from the lower ends of the corresponding bars **22**, and secured in any suitable manner between such bars, as by a bolt **29**. The inner end of each axle **28** is mounted in the lower end of a hanger **30**, being retained by a nut **31**. Above the wheel **20**, the hanger converges toward the bars **22**, in extending upwardly, being terminally inserted between the bars **22** and bolted to the latter, as indicated at **32**.

Fitted between the pairs of bars **21** and **22** at their adjoined ends is a link bar **33**, affording a slight selective angularity between the upper and lower bars to suit the mounting to different hull contours. Thus the end portions of the link bar have transversely elongated slots **34** through which upper and lower clamping bolts **35** and **35***a* extend respectively into the upper bars **21** and lower bars **22** and carry clamping nuts **35***b*. The adjoined ends of the upper and lower bars are pivotally attached to the mid portion of the link bar, as by rivets **36**. By virtue of this two-part construction of each rear mounting, the nuts **35***b* may be loosened, in initially adapting the mountings to a certain hull, allowing said bolts to be shifted in the slots **34** to best conform the mountings angularly to such hull, the nuts then being tightened to firmly maintain the selected angularity of the mountings.

Above the link bar **33**, each pair of bars **21** rigidly carries a pin **37** having an upper end portion inserted between said bars, and having a lower portion projecting inwardly and downwardly from said bars for insertion in a socket **38** of a plate **39** fastened by screws **40** against the top face of the spray rail. Through the upper end of the pin **37** is extended a bolt **41** disposed between the bars **21** and clamped thereto by a head on one end of said bolt and a nut on its other end. The mid portion of the pin **37** is mounted on a bolt **42** disposed transversely to the bolt **41** and allowing the pin a slight pivotal adjustment, when the bolt **41** has been loosened, such adjustment serving to best adapt said pin for insertion in the socket **38**, on initial adjustment of the described mountings to a certain hull. It is preferred to form the three described mountings of a light metal such as aluminum.

Primary advantages of the described mountings are their simple construction, compact nature, ready adaptation to different hull sizes and shapes, and the rapidity and facility with which they may be applied to or removed from a boat. Also highly desirable is the fact that these mountings require for their installation only two quite small and inconspicuous fittings (the plates **39**), as permanent attachments to the boat. The three mountings are removed as soon as the boat is afloat, and are again applied upon approaching a beach on which the boat is to be wheeled from the water. During intervals between boat trips, the mountings will ordinarily remain attached to the boat. For boats of lighter sizes, the two rear mountings usually suffice, the bow being manually carried. The described attachments are to be distinguished from wheel mountings adapting a boat for trailer travel behind a car, such mountings being necessarily quite heavy and requiring very secure retention to the boat.

What I claim is:

1. In combination with a boat having gunnel rails and spray rails downwardly spaced from the gunnel rails and having sockets substantially opposed transversely of the boat, of a pair of elongated mountings exteriorly adjoining opposite sides of the boat and each having an upper and a lower end, a pair of wheels journaled on said lower ends, a pair of clamps pivoted on said upper ends for gripping the gunnel rails, seats on said upper ends for underlying the gunnel rails, and elements carried by the mountings between their ends engageable in said sockets to hold the mountings in proximity to the spray rails.

2. In combination, a boat having a gunnel rail and a spray rail downwardly spaced from the gunnel rail, a member secured to the spray rail and formed with a socket, an elongated mounting having an upper and a lower end, a wheel journaled on said lower end, a clamp pivoted on said upper end for gripping the gunnel rail, a seat on said upper end for underlying the gunnel rail, and a pin carried by the mounting between its ends and downwardly projecting to engage in the socket.

3. In combination, a boat having a gunnel rail and a spray rail downwardly spaced from the gunnel rail, an elongated mounting having an upper and a lower end, a wheel, means journaling the wheel on said lower end, a clamp pivoted on said upper end for gripping the gunnel rail, a seat on said upper end for underlying the gunnel rail, and a pair of interengageable elements respectively carried by the spray rail and said mounting, for holding the mounting in proximity to the spray rail.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,109,520	Flower	Sept. 1, 1914
1,376,496	Woodruff	May 3, 1921
2,042,598	Harvey	June 2, 1936
2,339,782	Johnson	Jan. 25, 1944
2,361,951	Livermon	Nov. 7, 1944
2,424,641	Swanson	July 29, 1947
2,500,602	Christensen	Mar. 19, 1950
2,509,974	Jacobs	May 30, 1950
2,533,895	Raveau	Dec. 12, 1950