May 5, 1953 W. W. SINGLETON 2,637,567

DETACHABLE WHEEL UNIT FOR TRANSPORTING BOATS

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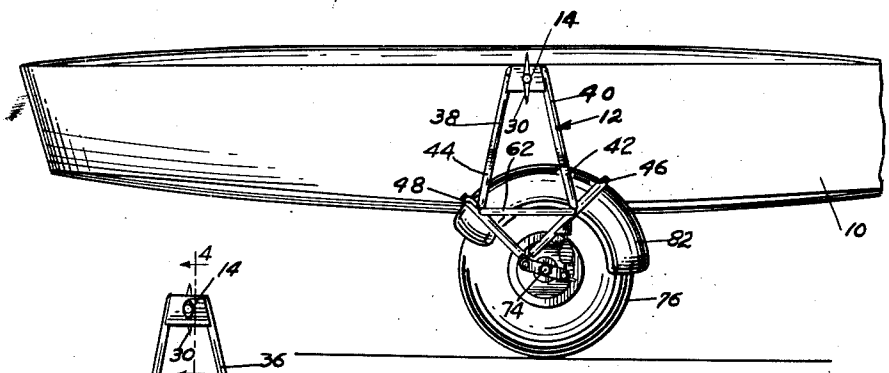


FIG. 1

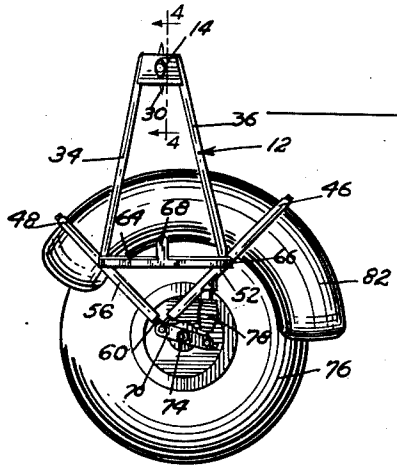


FIG. 2

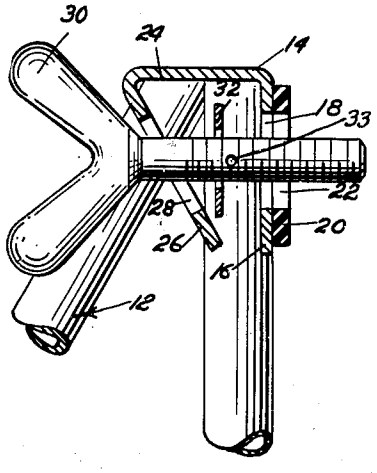


FIG. 4

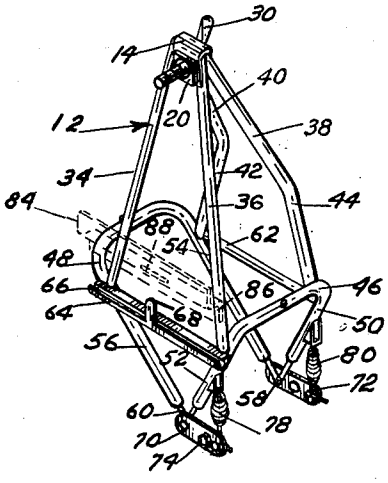


FIG. 3

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DETACHABLE WHEEL UNIT FOR TRANSPORTING BOATS

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5 Claims. (Cl. 280—47.32)

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This invention relates to trailer gear and more particularly to gear for marine craft when transported as a trailer of a motor vehicle.

Various types of gear for conveying marine craft from floating positions on water to remote positions on land and vice versa have been devised. The majority of such gear has not proved satisfactory due principally to inadequate means for support of the craft on the gear.

The incident invention comprehends gear of extreme simplicity which may be easily and quickly attached to or removed from marine craft.

Another object of the invention is to provide a gear for marine craft having but few component parts which may be produced at low cost and assembled with a minimum expenditure of effort.

Another object of the invention is to provide a gear for marine craft comprising individual corresponding units adapted to be attached to the sides of marine craft so that the craft may be easily beached and/or conveyed to a remote land position.

Other objects and advantages of the invention will appear from the following description when taken in connection with the drawings forming a part of this specification and in which:

Fig. 1 is a side elevation of the marine craft illustrating one of the units as installed;

Fig. 2 is an enlarged view in side elevation of one unit.

Fig. 3 is a perspective view taken from the back of one of the units with the fender removed,

Fig. 4 is a fragmentary sectional view taken substantially on line 4—4, Fig. 2.

Referring to the drawing for more specific details of the invention, 10 represents a boat supported on a gear indicated generally at 12. As shown, the gear includes a frame consisting of a head 14 having a flat bearing surface 16 slotted as at 18, and secured to the bearing surface 16 is a cushion 20 of rubber or other suitable material such as felt, having a slot 22 registering with the slot 18. The head has a portion 24 normal to the bearing surface 16 and a dependent yieldable shield 26 having a slot 28 registering with the slot 18 in the bearing surface 16 and the slot 22 in the cushion 20, and a thumb screw 30 extended through the slots 18, 22 and 28 has thereon a washer 32 between the back of the bearing surface and the shield 26 and a pin 33 extended diametrally through the screw, serving to inhibit displacement of the thumb screw.

Corresponding rods or tubular members 34 and

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36 and secured to the head 14 on the back of the bearing surface 16 in butting relation to the portion 24, and diverge downwardly from the head. Similarly corresponding rods or tubular members 38 and 40 secured to the head 14 in butting relation to the portion 24 of the head and overlaying the members 34 and 36 diverge outwardly and downwardly and are deformed to provide portions 42 and 44 parallel to the members 34 and 36.

Corresponding U-shaped tubular members 46 and 48 have their arms 50, 52, 54 and 56 fixedly secured respectively to the tubular members 34, 36, 38 and 40. The arms of the members 46 and 48 are inclined downwardly and the adjacent arms are secured together as by brackets 58 and 60. A cross member or tie rod 62 connects the arms 50 and 54 at the junctures of the arms with the members 38 and 40, and correspondingly a tie rod or angle iron 64 connects the arms 52 and 56 at the junctures of the arms 34 and 36, and the tie rod or angle iron 64 has an upwardly extended flange 66 provided with a centrally disposed tongue 68, the purpose of which will hereinafter appear.

The cross members 62 and 64 serve as tie rods or trusses for the members 34, 36, 38 and 40 and also for the arms of the U-shaped members 46 and 48. The members and the arms constitute in effect a frame characterized in that it is substantially a parallelogram in general contour, adapted to take compression loads and the cross member tie rods receive tension when load is imposed on the frame.

Links 70 and 72 pivoted to the brackets 58 and 60, suport an axle 74 having mounted thereon a wheel 76, and compression springs 78 and 80 are fastened between the links 70 and 72 and the frame, and secured to the U-shaped members 46 and 48 above the wheel is a fender 82.

In practice, a member 84 secured to the boat, preferably on the chine, has a downwardly extended flange 86 and a centrally disposed slot 88. The gear is lowered to engage the tongue 68 on the flange 66 of the cross member 64 with the flange 86 and when so engaged, the gear is moved horizontally until the tongue 68 is received by the slot 88. This serves to center the gear and to guide the flange 66 of the gear into engagement with the flange 86. The gear is then slightly elevated so as to interlock the flanges 66 and 86. The thumb screw 30 is then manipulated so as to engage a threaded aperture in the side rail of the boat, and when the thumb screw is firmly set to secure the gear to the boat, the shield 28 serves to retain the thumb screw against displacement.

While this invention has been described in connection with certain specific embodiments, the principle involved is susceptible of numerous other applications that will readily occur to persons skilled in the art. The invention is, therefore, to be limited only as indicated by the scope of the appended claims.

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

1. A trailer gear comprising corresponding frame structures each including a head, means for securing the head to a side of the trailer, arms diverging downwardly from the head, corresponding U-shaped members arranged in oppositely disposed relation each having inclined parallel arms, each of said last named arms secured to a corresponding one of the diverging arms, brackets connecting the adjacent arms of the U-shaped members, tie rods connecting corresponding arms of said re-shaped members for trussing the frame, a fastening member on one of the tie rods for cooperation with a fastening member on the side of the trailer, a wheel mounted for rotation on the brackets, and a fender supported on the U-shaped members above the wheel.

2. A trailer gear comprising matched frame structures, each including a head, means for attaching the head to a side of the trailer, members diverging downwardly from the head, corresponding members arranged in oppositely disposed relation to one another each having parallel arms with each arm secured to one of the diverging members, brackets connecting the adjacent arms of the corresponding members, transverse tie rods each connecting two of the diverging members to two of the arms, a fastening member on one of the tie rods for cooperation with a fastening member on the side of the trailer, a wheel supported on the brackets, and a fender supported on the corresponding members above the wheel.

3. A trailer gear comprising matched structures each including a head, means for attaching the head to the side of the trailer, members secured to and diverging downwardly from the head, corresponding U-shaped members each having parallel arms inclined downwardly, brackets connecting the adjacent arms of the corresponding members, each arm of the corresponding members connected to one of the downwardly diverging members, tie rods connecting two of the diverging members and two of the arms of the corresponding members, a fastening member on one of the tie rods for cooperation with a fastening member on the side of the trailer, a wheel supported on the brackets, and a fender supported on the U-shaped members above the wheel.

4. A trailer gear for a boat comprising matched structures, each including a head, means for attaching the head to a side of the boat, a pair of arms depended and diverging from the head, a second pair of arms depended and diverging from the head at an angle to the first pair of arms and bent downwardly parallel to the first pair of arms, a pair of U-shaped members having corresponding inclined arms, the arms of the U-shaped members being connected to the depended arms, transverse tie rods connecting the corresponding depended arms and the corresponding arms of the U-shaped members, a fastening member on one of the tie rods for cooperation with a fastening member on the side of the boat, brackets connecting the adjacent arms of the U-shaped members, a wheel supported on the brackets, and a fender supported on the U-shaped members above the wheel.

5. A trailer gear for a boat comprising matched units each including a head adapted to be secured to a side of the boat, a pair of arms secured to the head and diverging downwardly therefrom, a second pair of arms secured to the head and diverging therefrom at an angle with relation to the first pair of arms and bent to provide end portions parallel to the first pair of arms, a pair of corresponding U-shaped members having their bights in spaced relation, with the parallel arms of each U-shaped member extended downwardly and inwardly toward the corresponding parallel arm of the other U-shaped member and with each arm of the U-shaped member connected to a corresponding arm of the first and second pair of arms, tie rods connecting the corresponding dependent arms and the corresponding arms of the U-shaped members, brackets connected to the ends of respective arms of the U-shaped members, a fastening member on one of the tie rods for cooperation with a fastening member on the side of the boat, a wheel supported on the brackets and a fender supported on the bights of the U-shaped members above the wheel.

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