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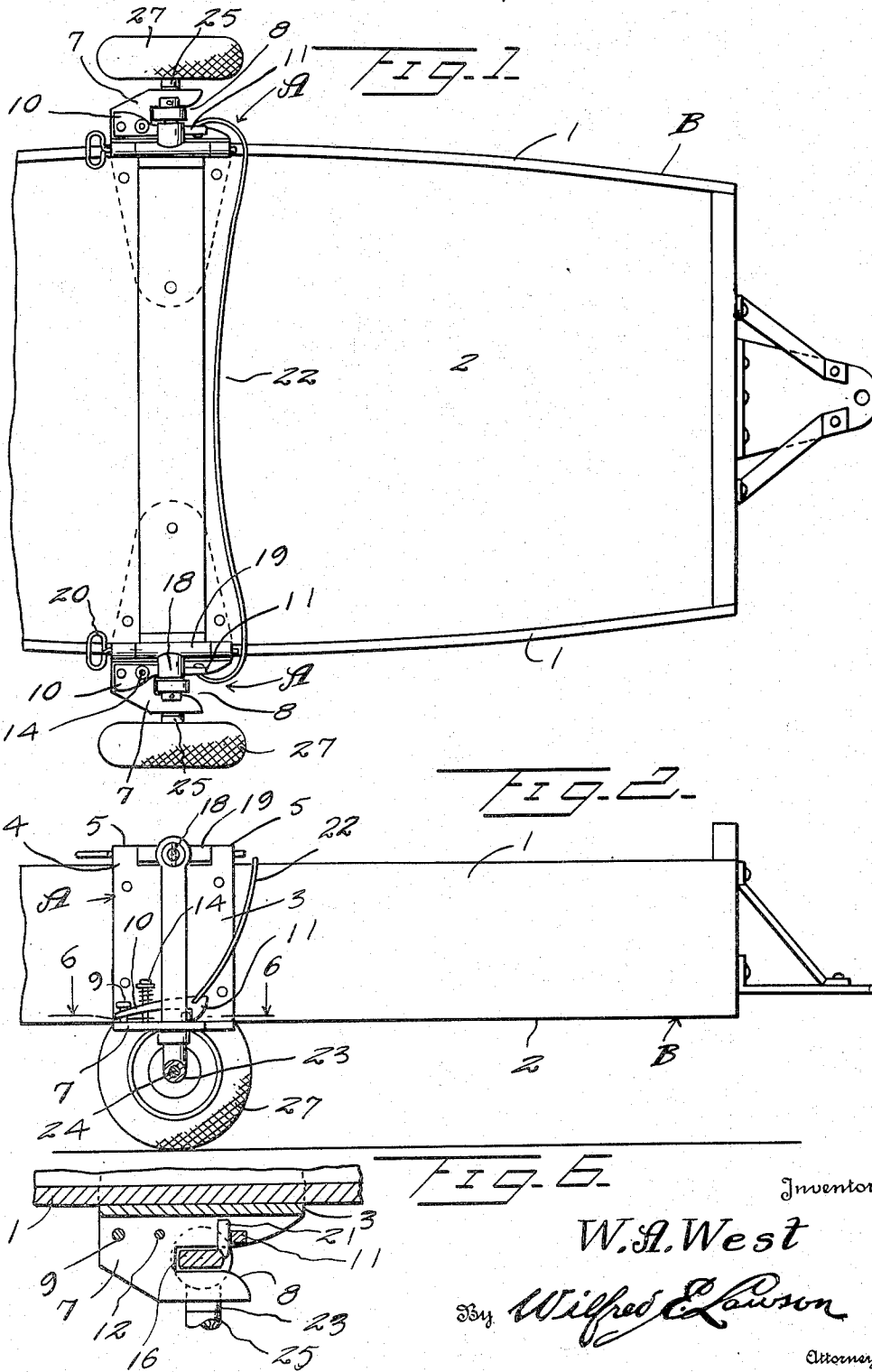
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2,421,671

WHEEL ATTACHMENT FOR BOATS

Filed Oct. 25, 1944

2 Sheets-Sheet 1



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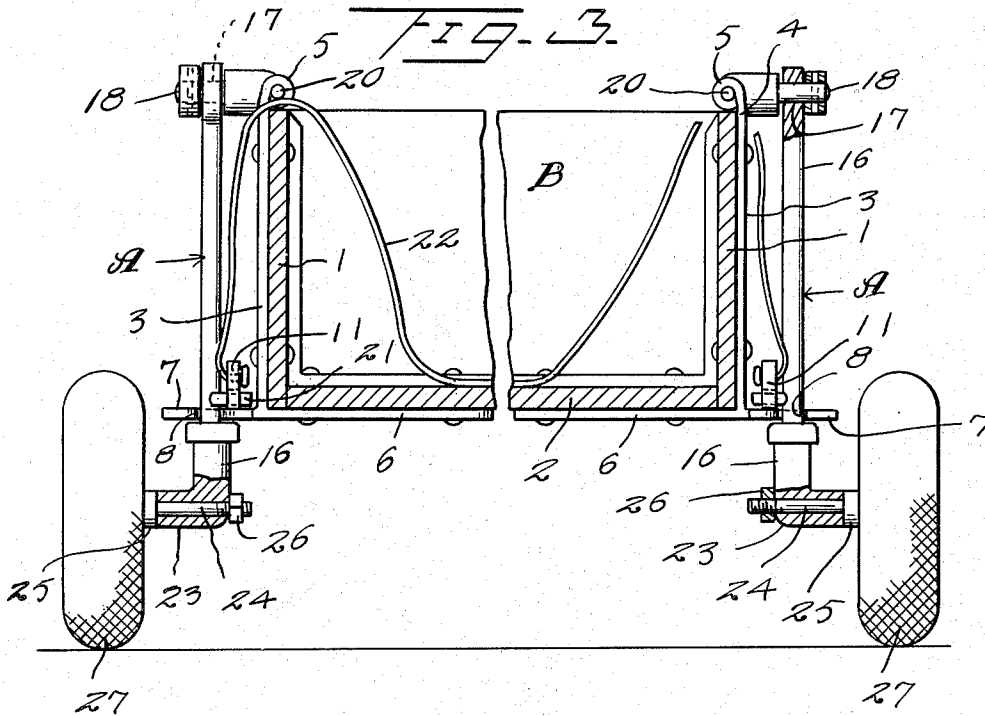
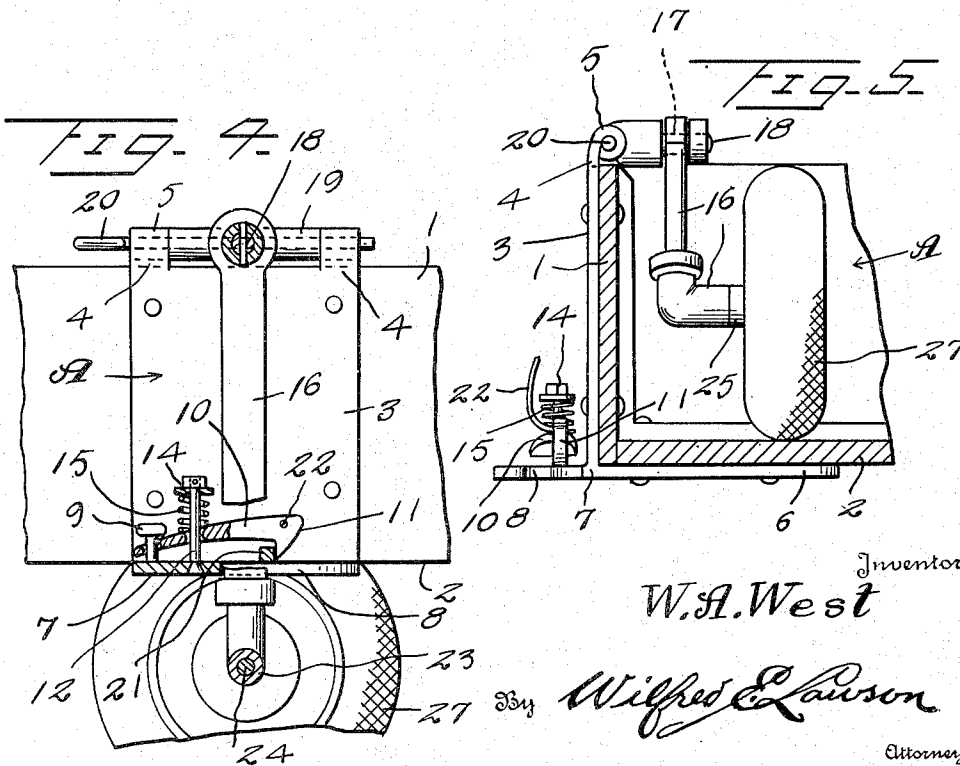
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2 Sheets-Sheet 2



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WHEEL ATTACHMENT FOR BOATS

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5 Claims. (Cl. 9—1)

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This invention relates to a carriage or wheel attachment for boats and it is an object of the invention to provide an attachment of this kind whereby a boat may be readily transported upon the land without requiring the boat to be loaded upon a trailer or other carrier.

Another object of the invention is to provide an attachment for boats wherein the boat can be converted into a land craft without requiring the use of tools and whereby such conversion can be effected within a minimum of labor.

Furthermore it is an object of the invention to provide an attachment of this kind including a ground engaging element together with means whereby such element may be effectively held in travel position or readily moved into a position within the boat or, when desired, entirely separated from the boat.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved carriage or wheel attachment for boats whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a fragmentary view in top plan of a boat having applied thereto attachments embodying the invention, the boat being diagrammatically illustrated;

Figure 2 is a view in side elevation of the assembly in Figure 1;

Figure 3 is a transverse sectional view taken through Figure 1 in advance of the attachments;

Figure 4 is a fragmentary view partly in side elevation and partly in section illustrating details of an attachment;

Figure 5 is a fragmentary view partly in section and partly in elevation showing an attachment adjusted to position a wheel within the boat; and

Figure 6 is a fragmentary sectional view taken substantially on the line 6—6 of Figure 2.

As illustrated in the accompanying drawings, B denotes a conventional type of boat including the side walls 1 and the bottom 2. The boat as herein described is of the flat bottom type although the invention is not to be limited for use in connection with any particular type of boat.

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With each side wall of the boat at substantially the longitudinal center thereof is adapted to be employed an attachment A embodying the invention. This attachment as illustrated in the accompanying drawings comprises two major elements one of which is adapted to be secured to a side wall of the boat and the other carrying a ground engaging member and having swivel connection with the first element.

The element for mounting on the side wall of the boat comprises a plate 3 of required dimensions and which is relatively wide and of a length to extend from substantially the bottom of the wall 1 to the top thereof. This plate 3 at its top or upper end is provided with the upstanding and relatively short arms 4 provided at their free extremities with the bearing sleeves 5. These sleeves 5 are above the gunwale of the boat with the bores thereof in alignment.

The lower end of each plate 3 is joined to a relatively long plate 6 adjacent to but inwardly of an end thereof, which underlies the bottom 2 of the boat and is secured thereto. The lower end of the plate 3 is also provided with an outwardly directed flange 7 which is provided in one edge portion with the open slot 8.

The opposite edge of the flange 7 remote from the outer or open end of the slot 8, has secured thereto, by a securing element 9, an end of a lock lever 10, said securing element 9 allowing the lock lever 10 to have free swinging movement toward or from the flange 7. The outer or free extremity of the lever 10 is provided with a depending hook bill 11 for a purpose to be hereinafter more particularly referred to.

Freely disposed through an intermediate portion of the lever 11 is an upstanding shank 12 carried by the flange 7 and this shank 12 above the lever 10 is provided with an enlargement or head 14. Interposed between this enlargement or head 14 and the lever 10 is an expansible member 15 herein disclosed as comprising a coil spring surrounding the shank 12. This member or spring 15 serves to constantly urge the lever 10 toward the flange 7 to maintain the holding lug 11 in contact with the flange 7 inwardly of the slot 8 at a point adjacent to the entrance or open end of the slot.

The second element of the attachment comprises a relatively long arm 16 provided at one end portion with an opening 17 through which freely passes a short pivot member 18 extending outwardly at right angles from the central portion of a sleeve 19. This sleeve 19 is of a length to substantially snugly fit between the bearing

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sleeves 5 of the plate 3 and a removable pin 20 is insertable through the bearing sleeves 5 and the sleeve 19. This mounting of the sleeve 19 permits the ready swinging of the member 18 inwardly of the boat B to bring the arm 16 within the boat when desired. It is also believed to be obvious that by means of the removable pin 20 the arm 16 can be easily and quickly engaged with or removed from the plate 3 as may be desired.

The arm 16 is freely supported by the member 18 for swinging movement in a direction lengthwise of the sleeve 19 and the arm 16 is of a length to extend below the flange 7 when said arm is at the limit of its downward movement as determined by contact of said arm with the inner end of the slot 8 into which it readily enters as the arm 16 swings downwardly. The arm 16 in its lower portion is provided with an inwardly directed part of spur 21 which, as the lower portion of the arm 16 enters the slot 8, passes under the hook bill 11 of the lever 10. When the arm 16 reaches substantially the limit of its movement inwardly of the slot 8, the spur 21 will pass inwardly past the bill 11 whereupon the expandible member or spring 15 will return the holding bill 11 into contact with the flange 7 and thus assure the arm 16 being effectively held or locked in its lowered position. When it is desired to release the arm 16, the lever 10 is manually raised and to facilitate this manual operation a flexible member 22 is connected to the outer or free end portion of the lever 10 and of a length to extend within the boat so as to be readily grasped by an occupant of the boat. It is not desired, however, to limit the invention to any particular means for raising the lever 10 or moving the same into released position.

The extreme outer end portion of the arm 16, at a desired distance outwardly with respect to the spur 21, is provided with an outwardly directed hub 23 of a length to extend beyond the outer margin of the flange 7 when the arm 16 is in its lowered position. Disposed through this hub 23 and the adjacent portion of the arm 16 is the rear end portion of the spindle 24, said spindle having a surrounding shoulder 25 for contact with the outer end of the hub 23 while the outer extremity of said rear portion of the spindle has threaded thereon a clamping nut 26 whereby the spindle 24 is rigidly coupled to the arm 16. It is to be understood, however, that other means may be employed for rigidly mounting the spindle 24 upon the arm 16.

Mounted upon the outer end portion of the spindle 24 is the ground engaging member 27 herein disclosed as a conventional type of wheel.

One end portion of the boat B carries a conventional type of hitch 28 whereby the boat when on the water may be conveniently coupled in tow or with equal facility, when on land, can be coupled to a suitable draft unit.

It is to be pointed out that with the use of the attachments, as herein embodied, no special bracing of the boat B is required as the weight is carried from the bottom of the boat.

From the foregoing description it is thought to be obvious that a land traction attachment for boats constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and used, and it will be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this

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reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

1. In combination with a side wall of a boat, a member movably mounted on said side wall for position at either side of the side wall and substantially at right angles thereto, a relatively long arm having an end pivotally joined to said member for swinging movement lengthwise of the side wall when said member is in either of its two positions with respect to the wall, a ground engaging member carried by the opposite end of the arm and extending below the boat when the arm is swung downwardly upon the outer side of the side wall, a flange carried by the boat adjacent to the bottom of the boat and extending outwardly with respect to the boat side wall, said flange having an open slot in which the arm enters when swung downwardly and means carried by the flange and operatively engaging the arm after entering the slot to hold the arm against upward swinging movement.

2. In combination with a side wall of a boat, a member movably mounted on said side wall for position at either side of the side wall and substantially at right angles thereto, a relatively long arm having an end pivotally joined to said member for swinging movement lengthwise of the side wall when said member is in either of its two positions with respect to the wall, a ground engaging member carried by the opposite end of the arm and extending below the boat when the arm is swung downwardly upon the outer sides of the side wall, a flange carried by the boat adjacent to the bottom of the boat, and extending outwardly with respect to the side wall, said flange having an open rearwardly directed slot to receive the arm as it swings downwardly, a spur carried by the arm to overlie the flange as the arm enters the slot, and a hooked holding lever carried by the plate and adapted to automatically engage said spur to hold the arm against upward swinging movement.

3. A land carriage attachment for a boat, comprising plate means designed to extend transversely of and be secured to the under side of a boat and designed to extend at remote ends beyond the outer sides of the boat side walls, a pair of vertical plates each secured to the plate inwardly of an extended end thereof and adapted to be secured to the outer side of the adjacent side wall of the boat, the said extended end portions constituting flanges, each of said flanges having a slot formed therein and opening through an edge which is directed toward one end of the boat, a member pivotally supported upon the upper end of each vertical plate and above the plane of the top edge of the adjacent side wall of the boat to swing transversely of such side wall to an inwardly or outwardly directed position, a relatively long arm pivotally attached at one end to each member to swing thereon about an axis perpendicular to the axis upon which the member swings, whereby said arm swings in a plane extending lengthwise of the boat when the member is in either of its two positions, the lower end of said arm being adapted to enter the slot of the adjacent flange when the arm is upon the outer side of the boat, a ground engaging supporting member carried by each arm at its other end, and means for establishing a locking connection be-

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tween each flange and the adjacent arm when the arm is moved into the flange slot.

4. An attachment for a boat as stated in claim 3, in which the said latching means comprises a vertically swingable hook member supported upon each flange, spring means normally urging the hook member downwardly toward the flange, and a spur carried by the adjacent arm and adapted to be forcibly introduced under the hook member when the arm moves into the flange slot.

5. An attachment for a boat as stated in claim 3, wherein each of said vertical plates is formed at its upper end to provide a pair of spaced upwardly extending hinge ears and said members each comprises a hinge sleeve adapted to position

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between the hinge ears, a pivot pin passing through the sleeve and ears, and a pivot member carried by the sleeve and extending at right angles to the sleeve and having the adjacent arm pivotally supported thereon.

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