

Dec. 14, 1943.

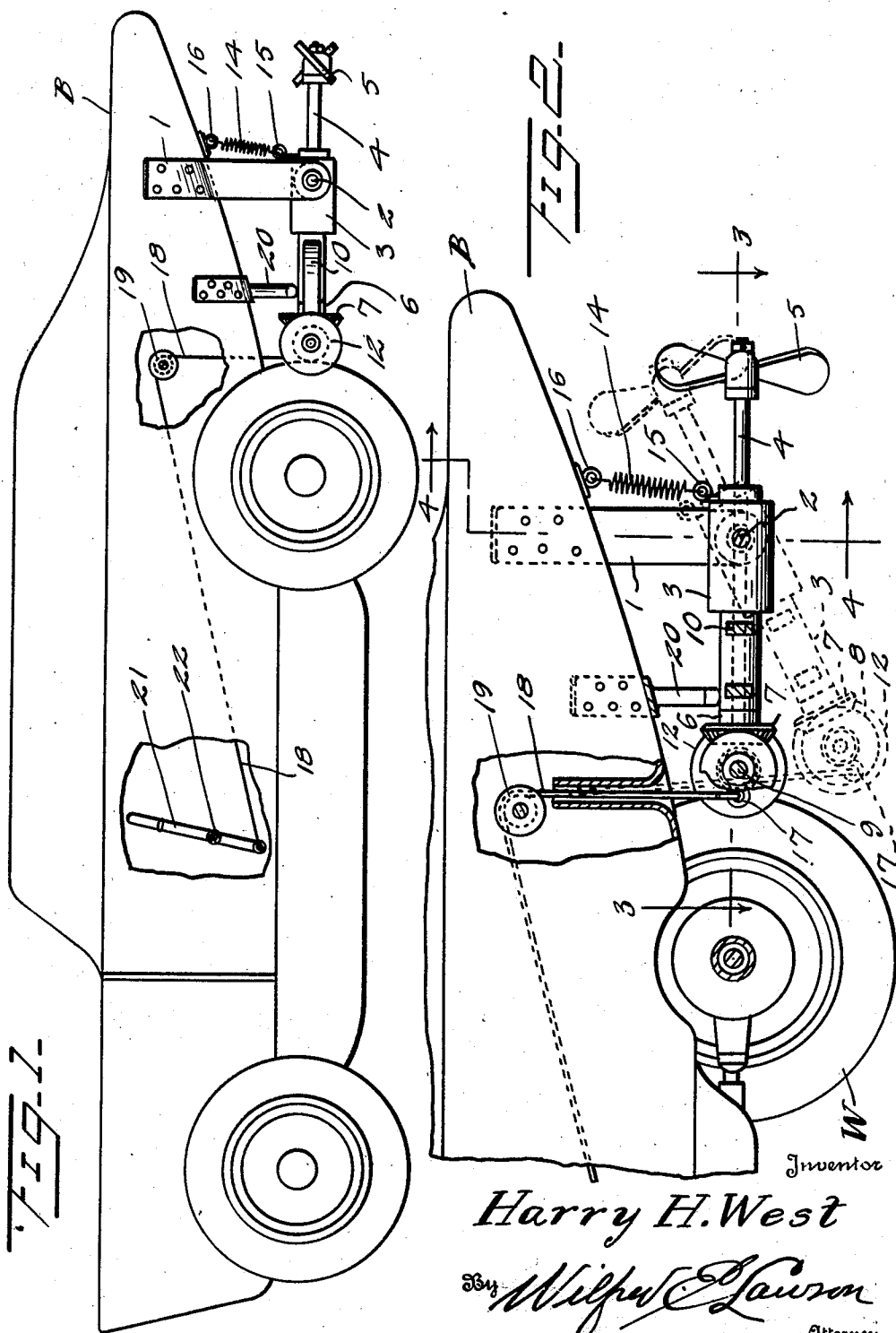
H. H. WEST

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MARINE PROPULSION ATTACHMENT

Filed Aug. 3, 1943

2 Sheets-Sheet 1



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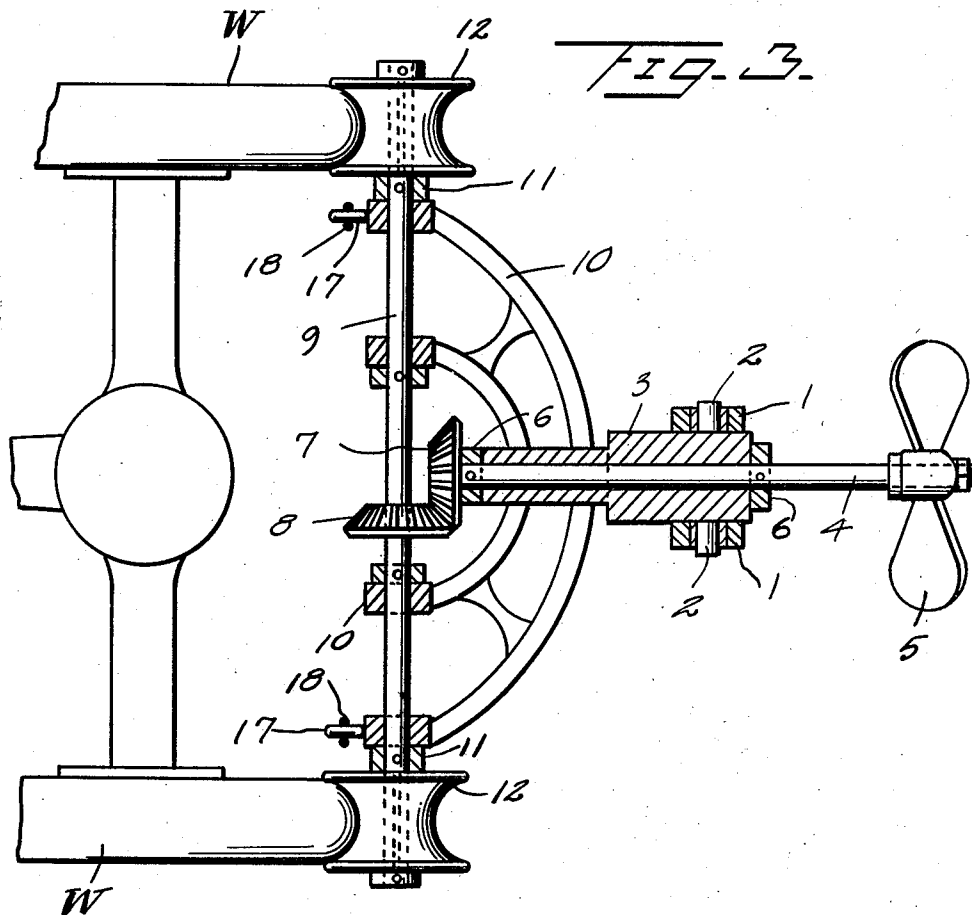
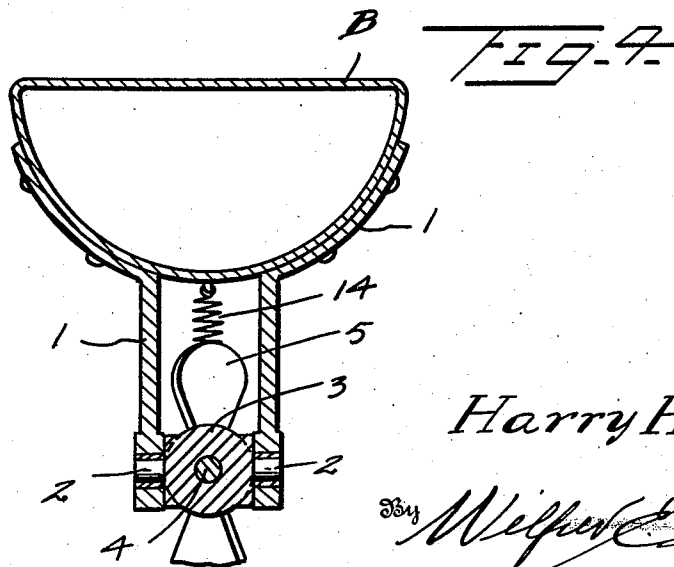
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2,336,906

MARINE PROPULSION ATTACHMENT

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Application August 3, 1943, Serial No. 497,208

5 Claims. (Cl. 115—1)

This invention relates to a marine propulsion attachment, and it is primarily an object of the invention to provide an attachment of this kind that can be readily positioned upon a land vehicle in a manner to enable such land vehicle to readily travel on the water.

It is also an object of the invention to provide an attachment for mounting upon a land vehicle for coaction with the drive wheels of such vehicle to enable the vehicle to readily travel on the water, thus converting the land vehicle into an amphibian type of vehicle.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved marine propulsion attachment whereby certain important advantages are attained, as will be hereinafter more fully set forth.

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 view in side elevation with portions broken away illustrating an attachment constructed in accordance with an embodiment of my invention in applied position;

Figure 2 is an enlarged fragmentary view partly in section and partly in elevation of the rear end of the structure illustrated in Figure 1, a second position of certain of the parts being indicated by broken lines;

Figure 3 is a sectional view taken substantially on the line 3—3 of Figure 2, looking in the direction of the arrow; and

Figure 4 is a sectional view taken substantially on the line 4—4 of Figure 2.

As disclosed in the accompanying drawings, B denotes the body portion of a motor driven land vehicle and W denotes the rear driving wheels which are driven in a well known manner from the motor of the vehicle. These several features in their detail form no particular part of the present invention and may be as preferred.

Secured to the body B at a desired point rearwardly of the wheels W, or more particularly the axes thereof, are the depending bracket plates 1 possessing requisite strength and rigidity. The lower extremities of these bracket plates 1 provide mountings for the outwardly disposed and aligned trunnions 2 carried by the rear portion of an elongated and relatively heavy bearing sleeve 3, whereby said sleeve is mounted in a manner to allow the same to have up and down swinging movement.

Snugly disposed through the sleeve 3 but free for rotation is a propeller shaft 4 of desired length and which has effectively mounted upon its rear extremity a propeller 5. This shaft 4 extends beyond opposite ends of the sleeve 3, and fixed to the shaft 4 for contact with the opposite ends of the sleeve 3 are the thrust collars 6, whereby the shaft 4 is maintained against endwise movement through the sleeve 3.

The forward end portion of the shaft 4 and in advance of the sleeve 3 has fixed thereto for rotation therewith a bevel gear 7 meshing with the bevel gear 8. This gear 8 is mounted upon a shaft 9 for rotation therewith and which shaft is in perpendicular relation to the shaft 4.

The shaft 9 is freely disposed through the outer end portion of the arcuate bearing arms 10 carried by the forward portion of the sleeve 3 and disposed laterally therefrom in opposite directions. The shaft 9 has fixed thereto for coaction with the adjacent portions of the arms 10 the thrust collars 11 to hold the applied shaft 9 against endwise movement.

Fixed to the end portions of the shaft 9 for rotation therewith are the grooved wheels or pulleys 12, so positioned that upon upward swinging movement of the sleeve 3, said wheels or pulleys 12 will be brought into contact with the treads of the wheels W, whereby said wheels W provide driving means for the shaft 9.

The shaft 9 is normally maintained in a lowered position with the wheels or pulleys 12 free of the wheels W through the medium of a retractile coiled spring 14, one end of which is anchored, as at 15, to the upper rear end portion of the sleeve 3 while the opposite end portion of the spring is anchored, as at 16, from below to the adjacent portion of the body B.

The outer ends of the outermost arms 10 are provided with the forwardly directed eye members 17 to which are suitably secured the extremities of the flexible members or cables 18 each of which extends over a suitably positioned guide pulley 19 carried by the body B to a point within ready access to an occupant of the body B, so that when desired the sleeve 3 may be rocked in a direction to bring the wheels or pulleys 12 into proper engagement with the wheels W when it is desired to effect operation of the propeller 5 to enable the vehicle to travel on water.

The upward swinging movement of the shaft 9 with respect to the wheels W is positively limited by a stop member 20 depending from the body B and with which the forward end portion of the

sleeve 3 contacts as said end portion of the sleeve 3 moves or swings upwardly. This stop member 20, however, allows sufficient upward swinging movement of the shaft 9 to assure effective contact of the wheels or pulleys 12 with the treads of the wheels W but prevents said pulleys or wheels W passing up and beyond the horizontal centers of the wheels W.

The forward extremities of each of the cables 18 may be secured to the lower portion of a lever 21 at a point below the pivotal mounting 22 thereof so that the lever 21 may be employed to effect the desired raising of the shaft 9. This lever 21 is, of course, to be positioned upon the body B at a point within ready access by an occupant of the body.

From the foregoing description it is thought to be obvious that a marine propulsion attachment 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 operated.

What is claimed is:

1. A marine propulsion attachment for a motor driven land vehicle having power driven ground engaging wheels, comprising a sleeve, means for supporting said sleeve by and below the vehicle for rocking movement, a propeller shaft disposed through the sleeve, a second shaft carried by the sleeve for driving connection with the propeller shaft, means for rocking the sleeve in a direction to bring the second shaft into contact with the drive wheels of the vehicle for rotating said propeller shaft, and means for rocking the sleeve in a direction to move the second shaft away from the drive wheels of the vehicle upon release of said first rocking means.

2. A marine propulsion attachment for a motor driven land vehicle having power driven ground engaging wheels, comprising a sleeve, means for supporting said sleeve by and below the vehicle for rocking movement, a propeller shaft disposed through the sleeve, a second shaft carried by the sleeve for driving connection with the propeller shaft, means for rocking the sleeve in a direction to bring the second shaft into contact with the drive wheels of the vehicle for rotating said propeller shaft, and means for automatically rocking the sleeve in a direction to move the second shaft away from the drive wheels of the vehicle upon release of said first rocking means.

3. In combination with a land vehicle having a body and power driven ground engaging wheels,

a marine propulsion attachment comprising a sleeve, means for supporting the sleeve by and below the body for up and down swinging movement, a propeller shaft disposed through said sleeve, a second shaft carried by the sleeve and disposed substantially at right angles to the propeller shaft, a driving connection between said shafts, means for rocking the sleeve in a direction to bring the second shaft into operative contact with the drive wheels of the vehicle for rotating said second shaft and the propeller shaft, and automatic means for rocking the sleeve in the opposite direction to maintain the second shaft out of contact with said drive wheels when the first named rocking means is inoperative.

4. In combination with a land vehicle having a body and power driven ground engaging wheels, a marine propulsion attachment comprising a sleeve, means for supporting the sleeve by and below the body for up and down swinging movement, a propeller shaft disposed through said sleeve, a second shaft carried by the sleeve and disposed substantially at right angles to the propeller shaft, a driving connection between said shafts, means for rocking the sleeve in a direction to bring the second shaft into operative contact with the drive wheels of the vehicle for rotating said second shaft and the propeller shaft, automatic means for rocking the sleeve in the opposite direction to maintain the second shaft out of contact with said drive wheels when the first named rocking means is inoperative, and means for limiting the swinging movement of the sleeve when the same is rocked to bring the second shaft into contact with the drive wheels.

5. A marine propulsion attachment for a motor driven land vehicle having power driven ground engaging wheels, comprising a sleeve, means for supporting said sleeve by and below the vehicle for rocking movement, a propeller shaft disposed through the sleeve, a second shaft carried by the sleeve for driving connection with the propeller shaft, means for rocking the sleeve in a direction to bring the second shaft into contact with the drive wheels of the vehicle for rotating said propeller shaft, means for rocking the sleeve in a direction to move the second shaft away from the drive wheels of the vehicle upon release of said first rocking means, and a member depending from the body of the vehicle for coaction with the sleeve to limit the movement of the sleeve when rocked to bring the second shaft into operative contact with the drive wheels.

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