Nov. 5, 1946. L. W. DAVIS 2,410,570

BOAT TRAILER ATTACHMENT

Filed Feb. 7, 1945 2 Sheets-Sheet 1

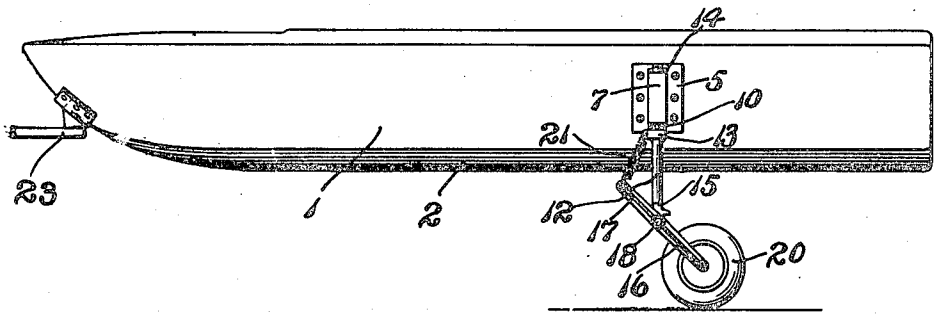


Fig. 1.

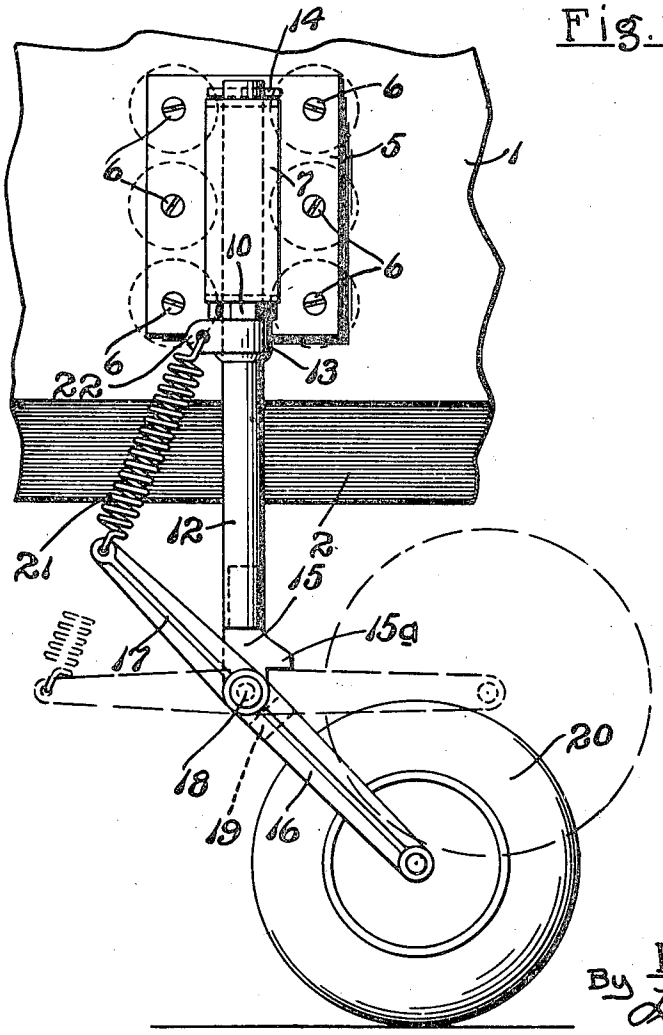


Fig. 2.

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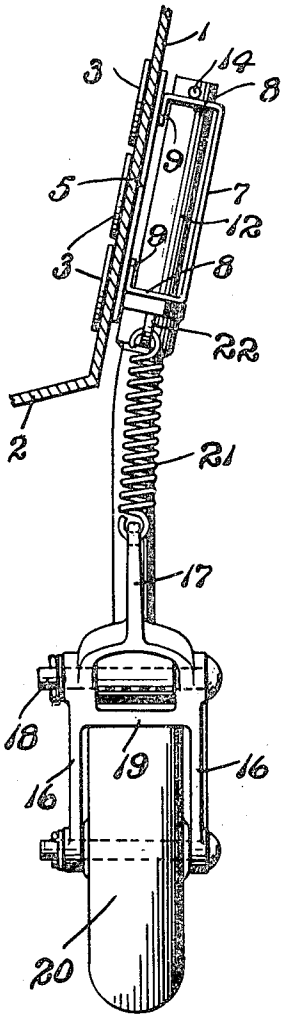


Fig. 3.

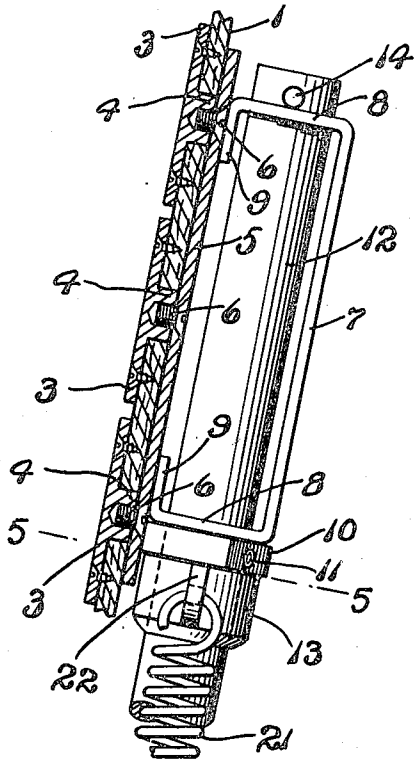


Fig. 4.

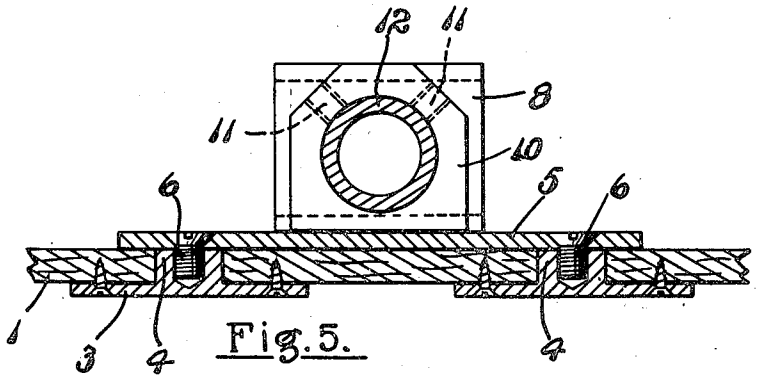


Fig. 5.

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UNITED STATES PATENT OFFICE

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BOAT TRAILER ATTACHMENT

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Application February 7, 1945, Serial No. 576,666

4 Claims. (Cl. 9—1)

1

This invention relates to a novel attachment which may be applied to the sides of a boat which may thereupon be converted into a trailer, making transportation of the boat to the place where it is to be used very simple and easy, and of course a boat when thus converted into a trailer may be used also for normal trailer purposes.

It is an object and purpose of the present invention to provide such attachment, one of which may be secured at each side of and extend below the boat, each having a wheel to roll upon the ground, each of said wheels being supplied with a spring to cushion shock as the converted boat trailer is moved over the road. A further object of the invention is to provide such attachments and connect them detachably one to each side of the boat, so that they may be very quickly and easily removed when the boat is to serve its normal functions. Other objects and purposes including novel means for effectively building and constructing the attachment will be understood and will appear from the following description taken in connection with the accompanying drawings, in which

Fig. 1 is a side elevation of a boat having the trailer attachment of my invention applied thereto.

Fig. 2 is an enlarged elevation of said trailer attachment and a portion of the side of a boat to which it is attached.

Fig. 3 is a fragmentary transverse section through a side of the boat, the trailer attachment being shown in front elevation.

Fig. 4 is a fragmentary vertical section through a side of the boat, showing the construction of the attachment and where and how it is secured, and

Fig. 5 is a substantially horizontal section on the plane of line 5—5 of Fig. 4 looking in an upward direction.

Like reference characters refer to like parts in the different figures of the drawings.

The boat may be of any conventional structure having generally vertical sides 1, usually somewhat inclined outwardly and with a bottom 2. It is to the sides 1 of the boat that the attachments of my invention are to be detachably secured. Each side of the boat at the proper place in the length thereof is provided with suitable members 3 preferably of a disk form located at the inner side of said boat side and each having a central boss 4 extending therethrough, the boss being interiorly bored and threaded. Over a plurality of rows of such bosses, an outside plate 5 may be detachably secured by means of

2

screws 6 passing through the plate and threading into said bosses 4 as best shown in Fig. 4. It is of course evident that the plate 5 and anything connected therewith may be quickly and easily attached in place or removed whenever desired.

At the outer side of the plate 5 a suitable supporting bracket is secured, made from a length of flat bar material, with an outer generally vertical section 7, upper and lower sections 8 turned again at right angles toward each other and lying against and secured to the plate 5 by welding or other suitable permanent connection. The bar 7 lies substantially parallel to the plate 5 and in the upper and lower sections 8 circular openings are made for the passage of a post of wheel carrying member of the attachment.

In the assembly of the parts, against the under side of the lower section 8 a block 10 is located of the shape best shown in Fig. 5, which has an edge lying against the plate 5 whereby said block is held against turning movement. The block is provided with two angularly disposed set screws 11 which reach to a centrally disposed circular opening so as to engage against the upper end portion of a tubular post 12 which passes upwardly through the openings in said block 10 and in said upper and lower sections 8 of the previously described bracket. A collar 13 on the post comes against the underside of block 10. The upper end of the post has openings for the passage of a retaining pin 14. When thus assembled the set screws 11 are tightened snugly against the post 12 whereby the post is held against any turning movement about its longitudinal axis.

The lower portion of the post 12 extends below the bottom of the boat and is disposed vertically as shown in Fig. 3, the post being bent between its ends the necessary amount, dependent upon what may be the inclination of the side 1 of the boat away from the vertical. At the lower end of the post 12 a bracket 15 is permanently secured having a boss, as indicated in dotted lines in Fig. 2, extending to the lower end of the tubular post. On the bracket 15 a lever is mounted one end of which is forked, having spaced apart arms 16 and with a single arm 17 extending oppositely. The lever is pivotally mounted to turn about a horizontal axis upon a pivot pin 18 passing through the bracket 15. A cross bar 19 extends between the two arms 16 of the fork and the bracket 15 has a stop projection 15a at its rear side so that the lever is stopped in a rotative movement in a counterclockwise direction by said bar 19 coming against the projection 15a,

as shown in the dashed lines at the lower part of Fig. 2. A wheel 20 of a conventional structure preferably provided with a pneumatic tire, is mounted upon a suitable axle extending between the outer ends of the two sides 16 of the described fork. A relatively heavy coiled tension spring 21 is connected at one end to the free end of the arm 17 and at its opposite end to an ear 22 extending laterally from the collar 13. Said spring normally tends to move the lever 16—17 in a clockwise direction about the pivot 18, the weight of the boat and its contents with two of the attachments secured to the boat, one at each side causing the springs 21 of both attachments to be stretched in accordance with the weight which is supported thereby. For connection of the front end of the boat to a motor vehicle which is to pull it over the road, the front part of the boat may be supplied with any desired or conventional type of hitch generally indicated at 23 in Fig. 1.

With this construction the boat being supplied with the inner disks 3 having outwardly extending bosses 4, a plurality of them at each side of the boat, the attachments one for each side of the boat may be connected in place by use of the screws 6; and of course may be as quickly and easily removed by withdrawing said screws. When secured in place the attachments, one at each side of the boat, support the boat in an elevated position above the ground and provide a wheel support therefor so that it may be readily pulled over the road. The springs 21 cushion any shocks occurring during such rolling movement. The stops at 15a prevent excessive elongation of the springs 21 and insure against the wheels coming against the bottom of the boat as shown in Fig. 2. The block at 10 and set screws 11 associated therewith provide a novel and ready means for the proper adjustment of the wheels with reference to each other and to the ground over which they are to be drawn.

The construction described is very practical and useful. It is readily manufactured and is particularly easy to apply or to remove. The disks 3 with the central outwardly extending bosses 4 are likewise quickly and readily applied to the sides of a boat, merely boring the necessary openings for the passage of the bosses 4, and driving the screws by means of which said disks are secured in place.

The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

I claim:

1. In a construction as described, an attachment adapted to be secured, one to each side of a boat, said attachment comprising, a base plate adapted to be detachably secured to a side of the boat, a bracket made from a length of flat metal having upper and lower spaced apart ends and an outer side connecting said ends, said ends

of the bracket being permanently secured to said base plate and said ends having alined openings therethrough, a post extending through said openings, a detachable pin passing through the upper end portion of the post above the upper end of the bracket, a block having a side bearing against the base plate located below and against the lower end of said bracket, means for securing the block to said post, said post extending downwardly, a lever pivotally mounted between its ends to turn on a horizontal axis, on said post at its lower end, said lever to one side of said pivot comprising a fork having spaced apart sides, a wheel disposed between said sides and mounted at the ends thereof to turn about a horizontal axis, and a tension spring connected at one end to the opposite end of the lever and at its other end to said post adjacent said block.

2. A construction as defined in claim 1, said post below said block having a collar thereon and an ear extending laterally from the collar to which the upper end of the spring is connected, and said post adjacent its lower end having an outwardly extending stop against which said lever engages on a predetermined pivotal turning movement thereof and stretching of the spring.

3. In a construction as described, a boat having spaced sides, a plurality of plates located at the inner side of each side of the boat, each having a central boss passing through the side of the boat, each of said bosses being interiorly bored and threaded, a plate located against the outer side of each side of the boat, screws passing through said plate into said bosses, a post connected with each plate and extending downwardly therefrom below the boat, a lever pivotally mounted between its ends at the lower end of the post to turn about a horizontal axis, a wheel mounted to turn on a horizontal axis at one end of said lever, and spring means between the opposite end of the lever and said post resisting turning movement of the lever in one direction.

4. In a construction as described, a base plate adapted to be secured in a generally vertical position against and to the side of a body, a bracket connected to and extending outwardly from said base plate having spaced apart upper and lower portions with alined openings therethrough, a post extending at its upper end portion through said openings and below the plate, a lever pivotally mounted between its ends at the lower end of the post, a wheel carried at one end of the lever to turn about a horizontal axis, spring means between the opposite ends of the lever and said post yieldingly resisting turning movement of the lever in one direction, and a block at the lower side of said bracket having a side engaging against the base plate to lock the block against turning movement, said post passing through said block, and releasable securing means mounted on said block and engaging against the post to hold it in fixed relation to the block.

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