May 31, 1960 R. G. PUCKETT 2,938,220

WATER SKI ATTACHMENT

Filed Feb. 17, 1958 2 Sheets-Sheet 1

Fig. 1

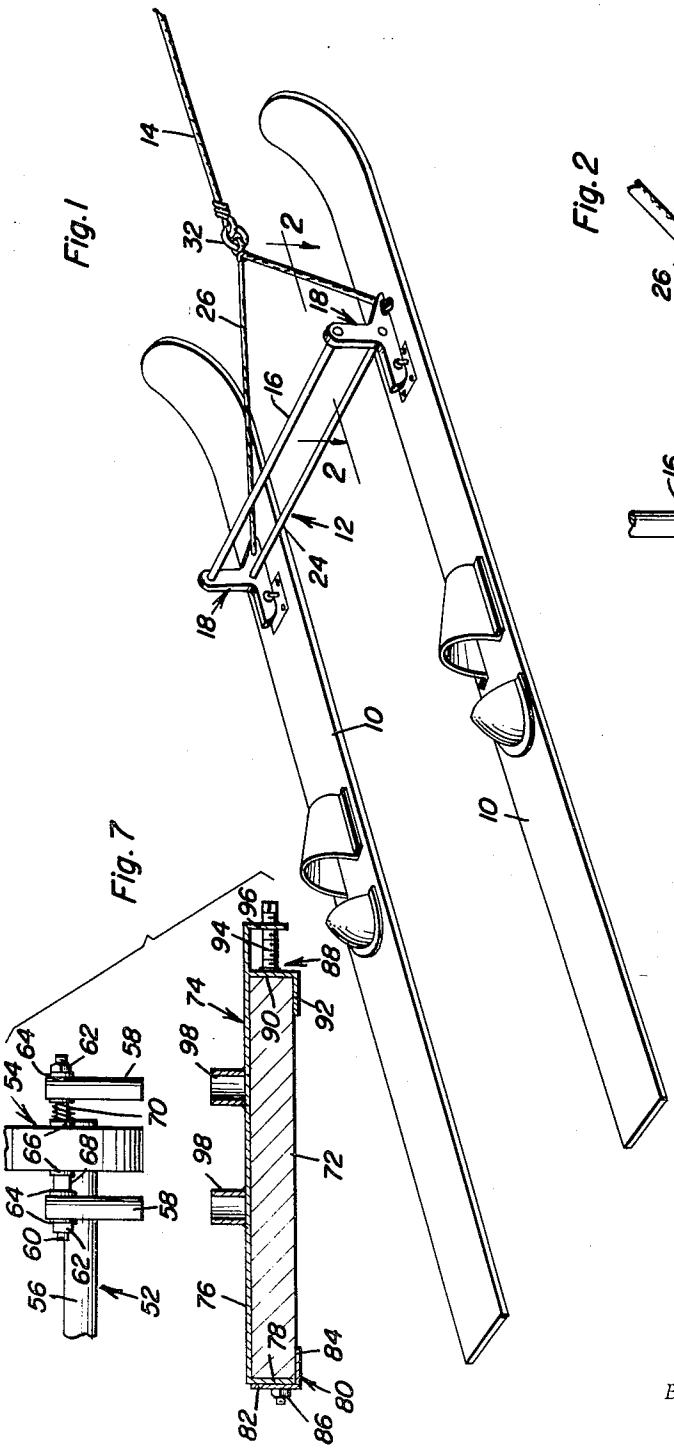


Fig. 2

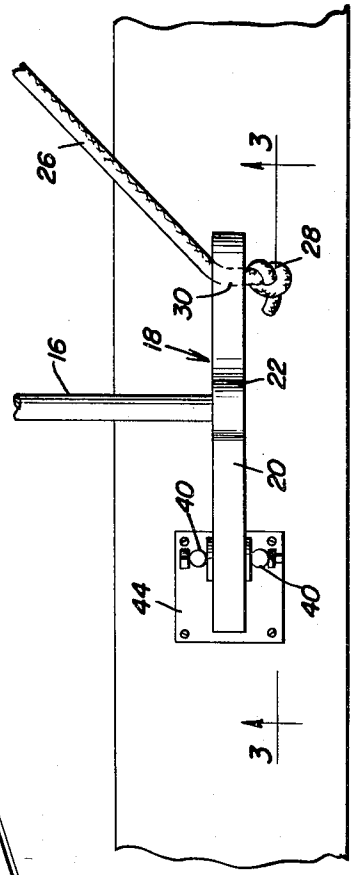


Fig. 7

Ronald G. Puckett
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

May 31, 1960 R. G. PUCKETT 2,938,220

WATER SKI ATTACHMENT

Filed Feb. 17, 1958 2 Sheets-Sheet 2

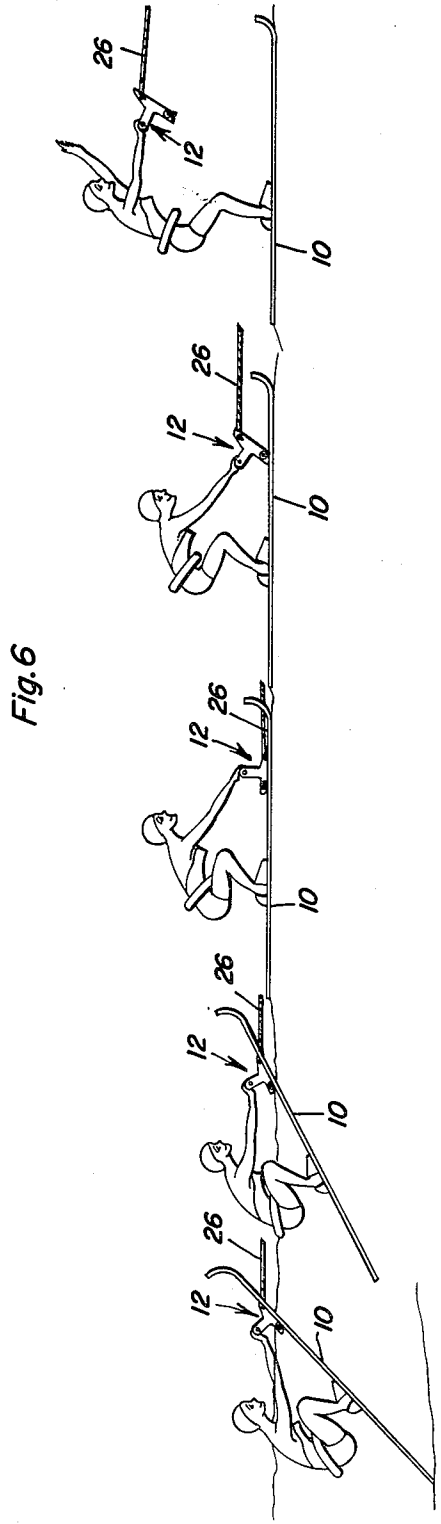


Fig. 6

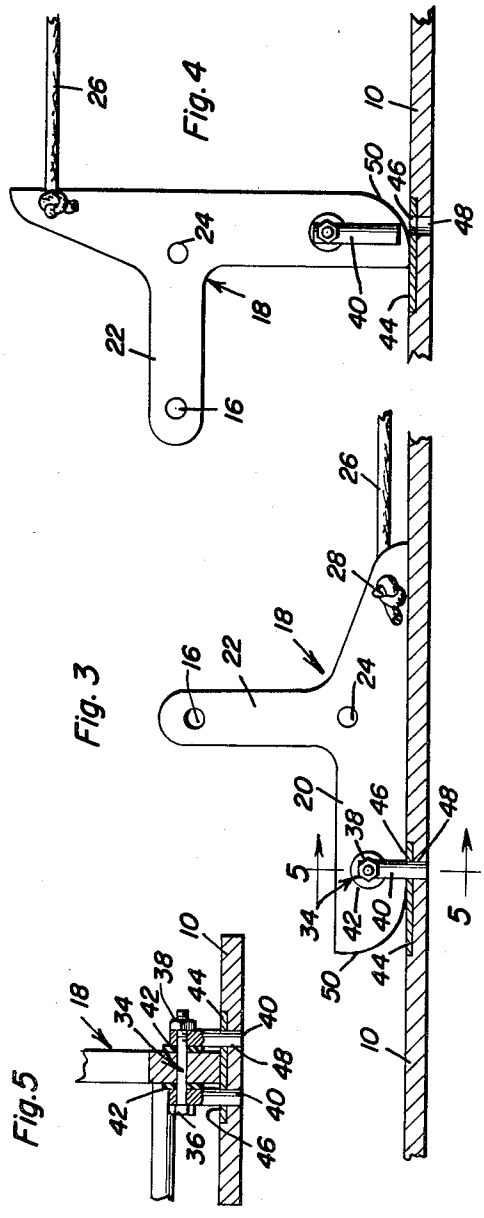


Fig. 4

Fig. 3

Fig. 5

Ronald G. Puckett

INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

United States Patent Office 2,938,220
Patented May 31, 1960

2,938,220

WATER SKI ATTACHMENT

Ronald G. Puckett, 208 S. Troost, Olathe, Kans.

Filed Feb. 17, 1958, Ser. No. 715,823

11 Claims. (Cl. 9—310)

This invention relates in general to new and useful improvements in water sport equipment, and more specifically to an improved attachment for water skis.

In the learning of the sport of water skiing, the most difficult maneuver is that of the water skiing start. Unless the skier is started from a platform, it is necessary for the skier to crouch in the water with the skis pointing upwardly and forwardly and with the skier holding onto the handle of the tow rope. The towing boat is then suddenly accelerated so that when the tow rope is tensioned, a relatively great force is placed upon the arms of the skier. This force must be transmitted through the skier's body to the skier's legs and finally to the water skis. At the same time, the skier must remain balanced on the water skis. This, of course, is difficult for the novice, particularly non-swimmers and children.

It is therefore the primary object of this invention to provide a water ski attachment which is so constructed whereby at the water skiing start the towing force is applied directly to the skis in lieu of being applied to the skis through the skier's body so that it is merely necessary for the skier to maintain his or her balance on the skis thus greatly facilitating the water skiing start.

Another object of this invention is to provide an improved attachment for water skis to facilitate in the water skiing start, the attachment being in the form of a handle which has attached at opposite ends thereof end members which are releasably connected to the skis whereby at the water skiing start the towing force is applied directly to the skis and once the skier has reached a position on top of the water, the handle may be detached from the skis and the skier towed in the normal skiing position.

Still another object of this invention is to provide a towing attachment for water skis to facilitate the water skiing start, the towing attachment including a handle having secured to opposite ends thereof end members, the end members having connected thereto a bridle which is in turn connected to the tow rope, there being a releasable connection between the end members and the water skis whereby at the water skiing start the force is applied directly to the skis and at the same time once the skis are in the desired skiing position, the skier may stand upright and while maintaining his or her hold on the handle, the handle may be disconnected from the skis.

A further object of this invention is to provide a water ski attachment to facilitate a water skiing start, the attachment being in the form of a handle having secured to opposite ends thereof end members which have secured to the forward parts thereof a bridle, the rear parts of the end members carrying pins which are fitted in sockets carried by the skis whereby the handle may be releasably connected to the skis, the skis being provided with removable sockets whereby conventional skis may be readily converted to utilize the water ski attachment.

These together with other objects and advantages which will become subsequently apparent reside in the details

of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a conventional pair of skis having mounted thereon the water ski attachment which is the subject of this invention;

Figure 2 is an enlarged fragmentary sectional view taken substantially upon the plane indicated by the section line 2—2 of Figure 1 and shows the specific connection between the water ski attachment and one of the skis;

Figure 3 is an enlarged fragmentary sectional view taken substantially upon the plane indicated by the section line 3—3 of Figure 2 and shows the outline of one of the end members of the water ski attachment and the relationship thereof with respect to one of the skis;

Figure 4 is an enlarged fragmentary sectional view similar to Figure 3 and shows the end member pivoted to a position whereby it is released from the skis;

Figure 5 is an enlarged fragmentary sectional view taken substantially upon the plane indicated by the section line 5—5 of Figure 3 and shows the specific mounting of pins carried by the end member, which pins are received in sockets in the ski to releasably attach the end member to the ski;

Figure 6 is a pictorial series of views on a small scale showing the various positions of the water ski attachment and a skier during a water skiing start; and

Figure 7 is an enlarged fragmentary sectional view taken through a modified form of attachment.

Referring now to the drawings in detail, it will be seen that there is illustrated a pair of water skis 10 to which there is attached the water ski attachment which is the subject of this invention, the water ski attachment being referred to in general by the reference numeral 12. Also connected to the water ski attachment 12 is a conventional tow rope 14.

The water ski attachment 12 includes a transverse hande 16 which extends between the skis 10 and which has secured to opposite ends thereof inverted T-shaped end members 18. As is best shown in Figure 3, each of the end members 18 includes an elongated base 20 which has extending upwardly from a central part thereof a stem 22. The handle 16 extends between upper parts of the stems 22. The side members 18 are further connected together by a transverse connector 24 which is identical with the handle 16 and which is disposed in parallel relation to the handle 16. The connector 24 engages the end members 18 at the intersection of their stems 22 and bases 20.

In order that the tow rope 14 may be attached to the water ski attachment 12, there is provided a bridle 26. The bridle 26 has end portions thereof passing through transverse bores 30 in the forward parts of the end members 18. The bridle 26 terminates in knotted ends 28. A suitable fitting 32 connects the bridle 26 to the tow rope 14.

Extending through the rear part of each of the end members 18 is a transverse pivot member 34. The pivot member 34 is in the form of a bolt 36 which has removably secured on one end thereon a nut 38. Pivotally carried by outer parts of the pivot member 34 are depending pins 40. The pins 40 are disposed on opposite sides of the respective end member 18 and engage friction type washers 42 abutting the opposite surfaces of the end member 18. The friction washers 42 restrain pivotal movement of the pin 40, but still permit relative pivoting between the pins 40 and the end members 18.

Each of the skis 10 is provided with a countersunk reinforcing plate 44. The reinforcing plate 44 is provided with a pair of transversely spaced bores 46 which are

aligned with similar bores 48 passing through the ski 10.

The lower rear surface of the base 20 is in the form of a curved fulcrum 50 (see Figures 3 and 4). The forward part of the fulcrum 50 terminates approximately in alignment with a vertical plane passing through the pivot member 34.

As best shown in Figure 6, during the initial position of a water skiing start, the skis 10 are disposed at an angle to the surface of the water, the skis 10 extending upwardly and forwardly. At this time the bridle 26 passes between the skis 10 and the action of the bridle 26 on the water ski attachment 12 is to pull the bases 20 of the end members 18 against the skis 10. During the water skiing start, the angle between the bridle 26 and the skis 10 decreases until such time as the skis 10 are planing on the top surface of the water at which time the angle of the bridle 26 is reversed and the bridle 26 extends upwardly from the skis 10. At that time there is a tendency for the fronts of the bases 20 to lift up and for the end members 18 to rock on their fulcrums 50. As the skier straightens up on the skis 10 and pulls rearwardly on the handle of the water ski attachment 12, the end members 18 are further rocked rearwardly on their fulcrum 50 until they reach the position illustrated in Figure 4 at which time the pins 40 more completely moved out of the sockets 46 and 48. As is shown in the fifth position of the skier in Figure 6, the skier is now free to assume an upright position with the towing force being transmitted directly to the skier through the attachment 12 from the bridle 26.

From the foregoing description of the water ski attachment 12, it will be readily apparent that during the water skiing start in lieu of the towing force being directed to the skis 10 through the skier's body, the towing force is directed to the skis 10 directly from the bridle 26 by the water ski attachment 12. This requires only that the skier maintain his or her balance on the water skis 10 during the water skiing start. This, of course, makes the water skiing start much easier and thus will encourage many people to water ski who now hesitate to attempt to do so.

Referring now to Figure 7 in particular, it will be seen that there is illustrated a modified form of water ski attachment which is referred to in general by the reference numeral 52. The water ski attachment 52 is identical with the water ski attachment 12 in most respects and includes end members 54 which are identical with the end members 18. The end members 54 are connected together by a connecting member 56 which is identical with the connecting member 24 and a handle (not shown) which will be identical to handle 16.

The water ski attachment 52 differs from the water ski attachment 12 in that pins 58 thereof are shorter than the pins 40. Also, the mounting of the pins 58 is slightly different from the mounting of the pins 40.

The pins 58 are mounted on the end members 54 for pivotal movement by means of a pivot member 60 which extends transversely through the base of its respective end member 54. The outer part of the pivot member 60 has pivotally mounted thereon the pins 58. Disposed on opposite sides of the pins 58 are washers 64. Disposed on the extreme ends of the pivot members 60 and abutting against the outermost ones of the washers 64 are nuts 62. Bearing against the opposite sides of the end member 54 are additional washers 66. Disposed between adjacent ones of the washers 64 and 66 at one side of the end member 54 is a spacer 68. Disposed between other adjacent ones of the washers 64 and 66 at the opposite side of the end member 54 is a coil spring 70. The purpose of the coil spring 70 is to provide frictional engagement with the pin 60 so as to resist rotation thereof but still permit pivoting of the pins 58 on the pivot member 60.

Associated with the water ski attachment 52 is a conventional water ski 72. The water ski 72 is provided with a fitting which is referred to in general by the reference numeral 74. The fitting 74 includes a plate 76 which is provided at one end thereof with a downwardly directed flange 78. Secured to the flange 78 is an L-shaped member 80 which includes a vertical flange 82 and a horizontal flange 84. The vertical flange 82 is secured to the flange 78 in overlapping relation by suitable fasteners 86. The flange 84 underlies the plate 76 and together with the plate 76 and the flange 78 form a socket for one edge of the ski 72.

Engaged in the opposite edge of the ski 72 is an angle member 88. The angle member 88 includes a vertical flange 90 which engages the vertical edge of the ski 72 and a horizontal flange 92 which underlies the ski 72. The angle member 88 is retained in place by a plurality of adjusting screws 94 which are threadedly engaged in a depending flange 96 disposed at the edge of the plate 76 remote from the flange 78. Thus the fitting 74 is clamped in place on the ski 72 and may be readily removed therefrom when it is not desired to use the ski attachment 52.

It is to be noted that the pins 58 terminate coplanar with the lower surface of their respective pin member 54. It is not necessary that the pins 58 project below the end member 54 as in the case of the pins 40 in that the pins 58 are received in upwardly projecting sockets 98 carried by the plate 76. The sockets 98 are spaced to receive the pins 58.

Inasmuch as the operation of the water ski attachment 52 and the fitting 74 are identical with the operation of the water ski attachment 12 and the plate 44, further description of the water ski attachment 52 is believed to be unnecessary.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to water skis whereby during a water skiing start the towing force is exerted directly on the water skis.

2. A water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to water skis whereby during a water skiing start the towing force is exerted directly on the water skis, said second means further including a connection on said rear portion engageable in sockets on said water skis and pins on said end members.

3. A water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to water skis whereby during a water skiing start the towing force is exerted directly on the water skis, said second means further including a connection on said rear portion engageable in sockets on said water skis and pins on said end members, transverse pivot members on said end members, said pins

being carried by said pivot members for pivotal movement.

4. A water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to water skis whereby during a water skiing start the towing force is exerted directly on the water skiis, said second means further including a connection on said rear portion engageable in sockets on said water skis and pins on said end members, transverse pivot members on said end members, said pins being carried by said pivot members for pivotal movement, said pins being disposed in pairs with pins of each pair of pins being disposed on opposite sides of one of said end members.

5. A water ski attachement for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to water skis whereby during a water skiing start the towing force is exerted directly on the water skis, said second means further including a connection on said rear portion engageable in sockets on said water skis and pins on said end members, said first means being on forward parts of said end members, said pins being on rear parts of said end members.

6. A water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to water skis whereby during at water skiing start the towing force is exerted directly on the water skis, said second means further including a connection on said rear portion engageable in sockets on said water skis and pins on said end members, said first means being on forward parts of said end members, said pins being on rear parts of said end members, said end members having lower rear fulcrum surfaces to facilitate upward and rearward rocking of said end members and the withdrawal of said pins from said sockets.

7. A water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to water skis whereby during a water skiing start the towing force is exerted directly on the water skis, said second means further including a connection on said rear portion engageable in sockets on said water skis and pins on said end members, said first means being on forward parts of said end members, said pins being on rear parts of said end members, said end members having lower rear fulcrum surfaces to facilitate upward and rearward rocking of said end members and the withdrawal of said pins from said sockets, transverse pivot members on said end members, said pins being carried by said pivot members for pivotal movement.

8. A water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to water skiis whereby during a water skiing start the towing force is exerted directly on the water skis, said second means further including a connection on said rear portion engageable in sockets on said water skis and pins on said end members, said first means being on forward parts of said end members, said pins being on rear parts of said end members, said end members having lower rear fulcrum surfaces to facilitate upward and rearward rocking of said end members and the withdrawal of said pins from said sockets, transverse pivot members on said end members, said pins being carried by said pivot members for pivotal movement, said pins being disposed in pairs with pins of each pair of pins being disposed on opposite sides of one of said end members.

9. In combination, a pair of water skis, a water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to said water skis whereby during a water skiing start the towing force is exerted directly on said water skis.

10. In combination, a pair of water skis, a water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to said water skis whereby during a water skiing start the towing force is exerted directly on said water skis, said second means further including a connection on said rear portion engageable in sockets on said water skis and pins on said end members, transverse pivot members on said end members, said pins being carried by said pivot members for pivotal movement, said pins being disposed in pairs with pins of each pair of pins being disposed on opposite sides of one of said end members.

11. In combination, a pair of water skis, a water ski attachment for facilitating a water skiing start, said water ski attachment comprising a transverse handle member and end members secured to opposite ends of said handle, first means including a forward portion of said end members for attaching a tow rope to said end members, and second means including a rearward portion of said end members for releasably connecting said end members to said water skis whereby during a water skiing start the towing force is exerted directly on said water skis, said second means further including a connection on said rear portion engageable in sockets on said water skis and pins on said end members, transverse pivot members on said end members, said pins being carried by said pivot members for pivotal movement, said pins being disposed in pairs with pins of each pair of pins being disposed on opposite sides of one of said end members, including a fitting removably secured to each of said water skiis, said sockets being carried by said fittings.

References Cited in the file of this patent

UNITED STATES PATENTS

1,559,390	Waller	Oct. 27, 1925
2,841,805	Roudebush	July 8, 1958