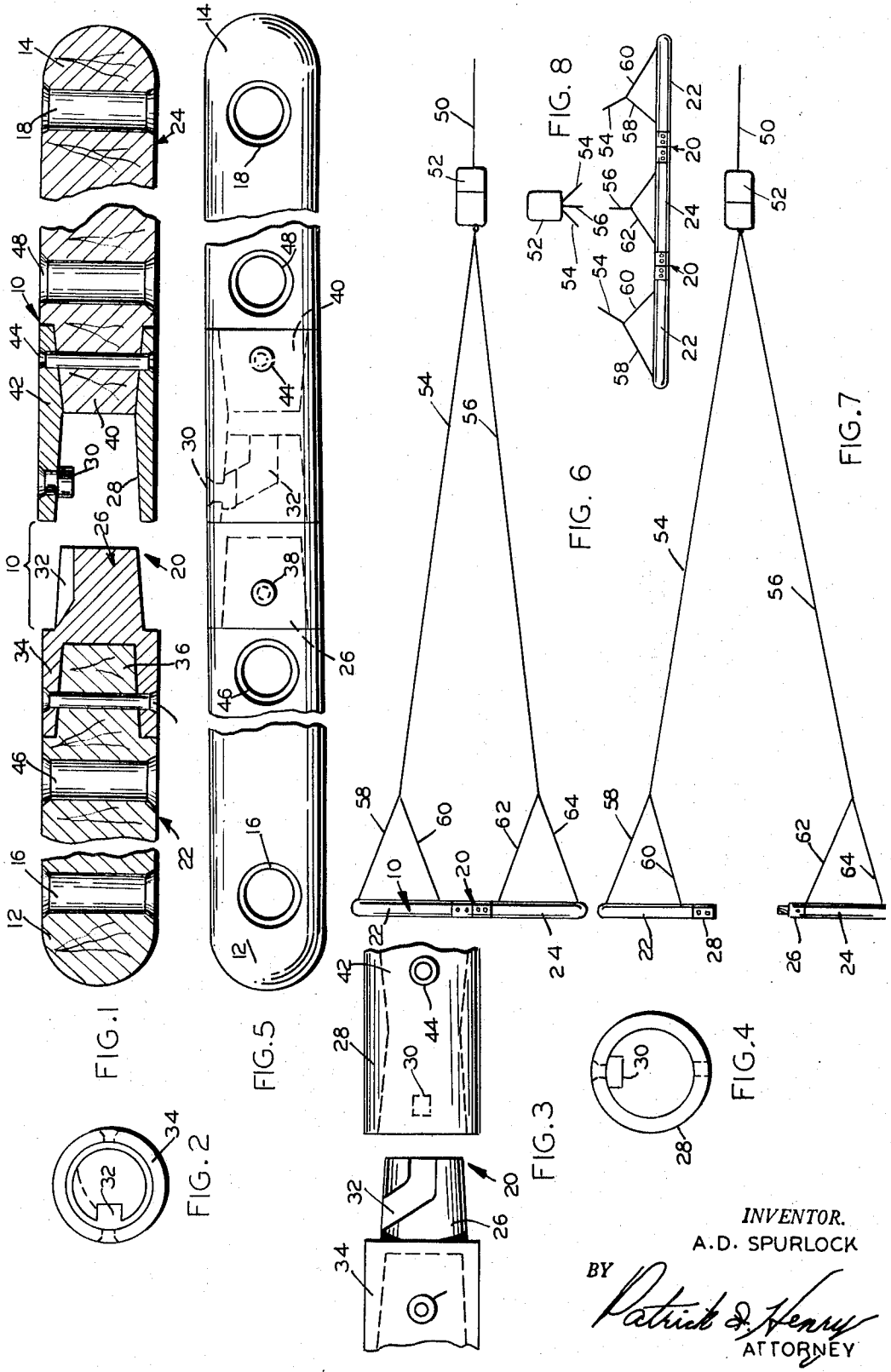
Feb. 21, 1967 A. D. SPURLOCK 3,304,904

MULTIPLE WATER SKI HANDLE

Filed June 24, 1959



INVENTOR.
A.D. SPURLOCK

BY Patrick D. Henry
ATTORNEY

United States Patent Office 3,304,904 Patented Feb. 21, 1967

3,304,904

MULTIPLE WATER SKI HANDLE

A. D. Spurlock, Dawson, Ga. 31742

Filed June 24, 1959, Ser. No. 822,650
19 Claims. (Cl. 115—6.1)

This invention relates to a multiple water ski handle and especially to a water ski handle of the sort which may be connected with a water skiing tow rope and which is readily separable from a single two-handed handle into two or more other handles each of which has its own individual tow rope line or bridle portion.

The conventional water ski handle is usually a round elongated member of wood or the like normally fashioned in one rigid piece to which the ends of a tow rope may be fastened. This handle is of sufficient length to accommodate two hands spread apart and since different skiers with different size hands do not hold their hands the same space apart on the handle, it is necessary that the handle be long enough to accommodate both short and long spaces between the hands. Since the handle is rigid, this means that for one-handed skiing, or for skiing with the hands close together, it is necessary that the skier contend with a long unwieldy handle and the undesirable effect that is caused by having the two tow rope lines far apart on the ends of a long handle rather than having them closer together on the ends of a shorter handle. In other words a skier skiing with one hand or with two hands close together can manipulate a short handle with the two tow rope lines closer together than he can a long unwieldy handle with the two tow rope lines further apart. However, a permanent short handle has its disadvantages in that it permits no shifting of the hands to obtain different positions and it requires the arms to be held more in a converging position in front of the body which is a vary tiresome position if the skier cannot move his hands apart to relieve it. In so-called slalom (or one-ski skiing) skiing the skier would prefer to have two one-handed handles or at least to have two shorter lengths of handle than he has been using with two ski skiing because he wants more arm freedom for balance and because his legs are now confined to one ski rather than the latitude of sidewise movement with two skis. Therefore there is a definite demand for a water ski handle which will operate as a rigid two-handed handle but which can be readily separated into additional shorter handles. This invention provides such a device.

For purpose of simplest description, the disclosure herein is directed primarily to converting a rigid one-handle ski handle into two individual ski handles. However, it will become apparent that the same arrangement which provides division into two handles can be extended to provide three or more handles, simply by multiplying the necessary connecting elements shown. Generally described, without restriction on the scope of my invention, as defined in the appended claims, and without significant use of complex language, the present embodiment of the invention when assembled resembles externally the conventional elongated tubular ski handle made from wood and the like and adjacent each of the terminal end portions there is provided a through opening into which one of each of the two ski rope connection lines will fit to be secured in place. Located substantially in the central portion of the ski handle is a novel connection which permits the single unitary two-handed handle to be readily separated into two individual smaller handles. Each of the smaller handles is provided with an additional opening or bore therein spaced from the other bore adjacent the terminal end whereby the ski rope line may be attached to each of the two independent handles.

A preferred center connection portion comprises a tapered male fitting on one end of one of the individual handle members attached to its inner end by means of a tubular sleeve portion fitting over and around a reduced cylindrical end portion of the center of the main handle and riveted in place by means of a rivet passing both through the tubular sleeve and through the cylindrical portion. Integrally formed with the sleeve and extending outwardly therefrom is a tapered male plug member having a cam groove formed on the periphery thereof which leads from the outward terminal end thereof inwardly and upwardly across the surface of the male plug. This male end connection portion may be constructed by forming aluminum into the desired shape and form. The other side of the central connection portion comprises a tapered female socket, which may be manufactured by forming aluminum material, complementary to the male plug and with an end sleeve portion attachable to a reduced cylindrical portion of the other handle and with an open, tapered socket portion positioned for attachment on the male plug member. Fastened inside the female socket portion at the upper top periphery thereof, preferably by riveting thereon, is a cam lug member which is complementary to and normally fits in the groove or channel formed on the periphery of the male plug member. With this arrangement there is provided a cam lug locking member between the male and female portions whereby a substantially rigid elongated single two-handed handle member is assembled by fitting the lug into the groove and rotating the lug handle portion relative to the other handle portion to slide the lug upwardly in the groove and to bring the male and female portions tightly locked together. According to this arrangement there is provided a unitary elongated ski handle which may readily be separated into two independent elongated ski handles by the skier himself simply by manipulating the main handle at the center thereof to separate same into two independent handles. Any other workable coupling or connection may be substituted.

It is a primary object of this invention to provide a ski handle which may readily be separated into two or more ski handles by the skier himself through the manipulation of the handle.

Another object of this invention resides in the simple connection which is provided to assemble two or more independent handles into one conventional type two-handed ski handle and vice versa.

A further object of this invention resides in the particular construction of a handle connection portion employing male and female connection portions which may be rigidly joined through a simple hand manipulation.

An additional object of this invention is found in the particular method of assembly and disassembly of the handle whereby a skier may maintain his grip on the handle portion at all times when effectuating a change from a unitary handle to two or more handles or when changing back from two or more handles to one single, unitary handle.

Another object of the present invention is found in the arrangement of a tow or bridle rope arrangement for multi-handle use.

Other and further objects and advantages of my invention will become apparent upon reading the following specification, taken in conjunction with the accompanying drawing, in which:

FIG. 1 is a central longitudinal vertical sectional view taken through a ski handle constructed in accordance with my invention.

FIG. 2 is a right end elevation view looking into the male socket end of the left hand, smaller handle member of the device shown in FIG. 1.

FIG. 3 is a top plan view of the device shown in FIG. 1 with portions thereof broken away.

FIG. 4 is a left end elevation view of the left end of the right side handle member in FIG. 1.

FIG. 5 is a top plan view of the device shown in FIG. 1 in assembled position forming a single substantially rigid handle.

FIG. 6 is a diagrammatic view of the present ski handle attached to a ski tow rope or line for use either as a single or independent dual handles.

FIG. 7 is a similar diagrammatic view but with the single handle member separated into two independent, slalom handles or for use as two independent handles.

FIG. 8 is a diagrammatic view of a modified form of the invention.

As stated heretofore, the present invention, for purposes of simplicity, is illustrated and described as a single ski handle member which converts to a double ski handle member and vice versa. It is emphasized that while a single to double arrangement is described herein, this is not the only way that the handle can be used as it is a simple matter to multiply the number of smaller handles so that it is possible to convert from a single long handle into any number of smaller independent handles such as three, four, or more simply by providing more connections of the sort described herein. Referring initially to FIG. 1, the composite or overall ski handle itself is designated generally by reference numeral **10**. It is preferably constructed mainly from elongated hardwood or the like of a generally cylindrical shape polished on its outer surface to provide a smooth splinter-free gripping surface about which the hands may grip. Adjacent each of the terminal ends **12** and **14** of this composite handle member is a pair of respective through openings or bores **16, 18** each adapted to receive a respective ski rope connecting line which may be inserted therethrough and then knotted to prevent detachment thereof. Formed substantially at the center portion of the handle member **10** is a central connecting coupling, joint or portion **20** comprising the detachable joint or coupling by means of which the elongated unitary handle may be separated into two individual independent handle members **22, 24**.

The connecting and coupling portion **20** comprises a tapered male connecting member **26** which is insertable in and attachable into a tapered, complementary female connection portion **28** through the cam locking action between a lug member **30** mounted on the female member **28**, fitting into a cam channel, groove or slot member **32** formed on the periphery of the male member **26**.

The male member **26** comprises a tapered, tubular sleeve portion **34** providing a socket into which is fitted a reduced tapered end portion **36** of the wooden material of the smaller handle member **22**. This male portion may be formed in a manufacturing operation from aluminum material and the socket portion **34** is rigidly attached in place on the portion **36** by means of a long rivet **38**.

In similar fashion, there is attached on the end **40** of the other smaller handle **24** the female member **28** which has a tapered socket portion **42** on one end thereof into which is tightly fitted the tapered cylindrical portion **40** and which is rigidly attached in place by means of a long rivet **44**. The open end of the female socket member **28** provides an open tapered socket complementary with and into which is fitted the matching tapered male plug portion of the male member **26**. The cam locking member **30** is attached inside the open socket portion of female member **28** by means of a riveted head portion which is provided as an integral part of the lug cam member **30** when it is assembled in a hole in the female portion **28**.

The cam attaching groove or slot **32** formed in the male member **26** extends inwardly a distance and then upwardly across the periphery of the male member **26** so that it is necessary in inserting the lug member **30** therein to turn the smaller handle member **24** about 45 degrees from the position which it will ultimately occupy in fixed attachment so as to align the lug **30** in the entrance to the slot or groove **32** and then by rotating the handle member **24** substantially 45 degrees with respect to and relative to the handle member **22**, the lug member **30** is caused to ride up in the channel **32** and to seat firmly in place at the same time the handle member **24** is rigidly attached to the handle member **22** thereby reassembling the unitary elongated two-handed handle member **10**. The connection may be effected by cumulative movement, that is, handles **22, 24** may both be rotated simultaneously. The tapered parts **34, 28** provide a rigid joint.

When the skier desires to separate the combined elongated single unitary handle member **10**, as seen assembled in FIG. 5, the skier simply holds firmly with his grip around the handle portion **22** while at the same time still maintaining a firm grip on the other handle member **24** he rotates handle **24** preferably through a wrist action, to move the handle **24** substantially 45 degrees relative to the handle **22** thereby sliding the lug **30** back down in the groove **32** at which time the two hands are moved apart slightly to separate the two handle members **22, 24** into separate handles. Both handles may be moved simultaneously for cumulative movement, if desired. There is provided in each of the handle members **22, 24** a respective second open bore or hole member **46, 48** into which the second connecting ski line for that particular handle is inserted and knotted firmly in place. All ski or bridle lines may be attached by nuts and bolts, clamps, brackets or other conventional fastening devices.

In the diagram of FIG. 6 there is shown a ski line set-up wherein the main ski tow rope **50** is separated through a floating buoy member **52** into a bridle of two connecting ski lines **54, 56** each of which in turn terminates in respective shorter connecting lines **58, 60** and **62, 64** connected respectively to a respective opening **16, 46** and **18, 48** in each of the smaller handle members **22, 24**. With the ski handle **10** in the unitary, rigid coupled position shown in FIG. 6, the skier manipulates himself and the ski line in a conventional two-handed manner with his hands placed anywhere along the handle **10**. When the skier desires to separate the single handle **10** into its two component handles **22, 24**, in the manner described previously, and shown in FIG. 7, the skier simply holds the handle member **22** substantially stationary with a grip thereon in one hand while at the same time still gripping the other handle member **24** he rotates it substantially 45 degrees to displace the lug **30** in the groove **32** and thereafter moves the handles apart for independent use. For slalom skiing the skier may manipulate smaller handles **22, 24** independently of each other as he shifts to his single (or slalom) ski. Later on the handles **22, 24** may be reinserted in place again to assemble and form the unitary two-handed ski handle **10**. Once a skier becomes adept he can couple and uncouple the handle instantly with slight wrist movement. The groove or slot **32** may be of any selected length and pitch to provide more or less turning and travel between handles **22, 24** as desired. The 45 degree relationship is merely one suggested form.

In FIG. 8, one handle **80** comprises three of the smaller handles **22, 24** coupled detachably by the coupling **20** and having respective lines **58, 60** and **62, 64**. The operation is the same as between respective adjacent handle members **22, 24** in FIGS. 6 and 7.

While I have shown and described a particular embodiment of my invention, this is not to be construed as any sort of limitation on the scope thereof, since various changes, alterations, substitutions and modifications may be made in the embodiment shown and described without departing from the scope of my invention as shown in the appended claims.

I claim:

1. A hand hold device for water skiing comprising an elongated member composed of at least two separable parts, said parts being readily detachable to form sepa-

rate members, engagement means on the ends of said parts to effect joinder thereof into a unitary rigid member and separation of said parts, and at least four separate attachment means one located approximate the ends of each of said parts for attachment to four branches of a tow rope, whereby said hand hold device may be used as a unitary member and as a plurality of separate members with sufficient space between the attachment means of each part for receiving the hand of a water skier.

2. In a water skiing apparatus to be utilized with a powered water craft, a tow rope having at least two branches, each one of said two branches being attached to a separate buoyant hand hold member, each of said hand hold members having orifice means for attachment to said tow rope and having telescopic engagement means at their adjacent ends for joinder of said members into a rigid unitary whole, said hand hold parts each having a hand hold portion, each one of said branches of said rope being attached to one of said parts in a fashion to provide a balanced pull directed through substantially the center of said hand hold portion whereby said parts are free of torque forces.

3. In a water skiing apparatus to be utilized with a powered water craft, a tow rope having at least two branches, each one of said two branches being attached to a separate buoyant hand hold member, each of said hand hold members having orifice means for attachment to said tow rope and having telescopic engagement means at their adjacent ends for joinder of said members into a rigid unitary whole, said hand hold members each having a hand hold portion, each one of said branches of said rope being attached to one of said members in a fashion to provide a balanced pull directed through substantially the center of said hand hold portion whereby said members are free of torque forces.

4. In a water skiing apparatus to be utilized with a powered water craft, a tow rope having at least two branches, each one of said two branches being attached to a separate hand hold member, each of said hand hold members having means for attachment to said tow rope and having engagement means at their adjacent ends for joinder of said members into a rigid unitary whole, said hand hold members each having a hand hold portion, each one of said branches of said rope being attached to one of said hand hold members in a fashion to provide a balanced pull on each of the respective hand hold portions.

5. In a water skiing apparatus to be utilized with a powered water craft, a tow rope having at least two branches, each one of said two branches being attached to a separate hand hold member, each of said hand hold members having means for attachment to said tow rope and having engagement means at their adjacent ends for joinder of said members into a unitary whole, said hand hold members each having a hand hold portion and each one of said branches of said rope being attached to one of said hand hold members in a position to provide a balanced pull.

6. The apparatus claimed in claim 5, wherein said engagement means comprises a coupling between said separate hand hold members.

7. The apparatus claimed in claim 6, wherein said coupling comprises a detachable friction connection for retaining said assembled hand hold members in rigid association.

8. The apparatus claimed in claim 7, wherein said coupling comprises a male connecting member attached on one end of one of said hand hold members and a female socket on the other of said hand hold members.

9. The apparatus claimed in claim 8, wherein said coupling includes interlocking connection means between said male and said female connecting members.

10. The apparatus claimed in claim 8, wherein said male connecting member is tapered and reduced in cross-section along the length thereof, and said female socket is complementary thereto and reduced in cross-section accordingly.

11. The apparatus claimed in claim 9, wherein one of either said male connecting member and female socket include an elongated cam groove extending inwardly thereof and the other of said male connecting member and female socket has a cam lug thereon which is inserted into the cam groove upon assembly of said hand hold members and to travel in said groove to retain said hand hold members in engagement.

12. In a water skiing apparatus to be utilized with a powered water craft, a tow rope having at least two branches, each one of said branches being attached to a separate hand hold member, each of said hand hold members having means for attachment to said tow rope and having engagement means at their adjacent ends for joinder of said members into a unitary whole, said hand hold members each having a hand hold portion, and the respective lengths of said branches being substantially the same as measured from the tow rope to the respective hand hold member.

13. The apparatus claimed in claim 12, wherein said engagement means comprises a coupling between said separate hand hold members.

14. The apparatus claimed in claim 13, wherein said coupling comprises a detachable friction connection for retaining said assembled hand hold members in rigid association.

15. The apparatus claimed in claim 14 wherein said coupling comprises a male connecting member attached on one end of one of said hand hold members and a female socket on the other of said hand hold members.

16. The apparatus claimed in claim 15 wherein said male connecting member is tapered and reduced in cross-section along the length thereof, and said female socket is complementary thereto and reduced in cross-section accordingly.

17. The apparatus claimed in claim 15 wherein said coupling includes a locking member on one hand hold member and an opening into which said locking member fits on the other hand hold member.

18. The apparatus claimed in claim 15 wherein said coupling includes interlocking connection means between said male and said female members.

19. The apparatus claimed in claim 18 wherein one of either said male connecting member and female socket includes an elongated cam groove extending inwardly thereof and the other of said male connecting member and female socket has a cam lug thereon which is inserted into the cam groove upon assembly of said hand hold members and to travel in said groove to retain said hand hold members in engagement.

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MILTON BUCHLER, *Primary Examiner.*

JOSEPH D. SEERS, *Examiner.*

J. S. SHEAA, A. H. FARRELL, *Assistant Examiners.*