This invention relates to single bladed paddles for boats, canoes and the like and is one of the class of inventions disclosed in my applications Serial No. 605,601, filed Nov. 12, 1957, now Patent No. 2,913,727 and application Serial No. 843,260, filed Sept. 29, 1959. More particularly, this invention relates to high speed single bladed boat paddles. It is the primary object of this invention to provide a variety of paddles so appointed and so constructed that the operator thereof can paddle on each side of the boat, in turn, without removing his hands from the paddle in order to re-position them. By using my invention the operator will have at all times, each hand properly placed, thereby eliminating all the lost motion heretofore experienced and thereby attain maximum efficiency.

The most outstanding advantage of the invention will become apparent from the following description in which:

FIGURE 1 discloses the conventional single bladed paddle having a blade and stem with my device attached to the stem.

FIGURE 2 discloses a top view of the combination in FIGURE 1.

FIGURE 3 discloses a second modification showing a new type high speed paddle incorporating the teaching of FIGURE 1 showing the position of the grips which facilitates a right hand paddling stroke.

FIGURE 4 is a top view of the paddle of FIGURE 3.

FIGURE 5 discloses a third modification of the device disclosed in FIGURE 1.

FIGURE 6 discloses an enlarged and expanded sectional view of the stem and slidable grips disclosed in FIGURE 5.

FIGURE 7 discloses a fourth modification of the high speed plunging means.

FIGURE 8 discloses alternative mounting structure.

FIGURE 9 discloses structure for the stop or positioning means for the hand grip with respect to the stem.

A more appreciable understanding of my invention will emanate herefrom provided the following necessary procedure is understood with respect to paddles as they are now known. When operating a paddle, each hand must be removed from the paddle, turned over, and then placed in the position previously occupied by the other hand in order to complete the stroke. For illustration, when the paddling stroke has been made on the right side of the boat and the operator desires to stroke on the left side, his left hand must be (1) removed from the upper end of the paddle, (2) turned over, and (3) placed in a position on the lower end of the paddle. At about this same interval and before completing the left-side stroke, the right hand must be (1) removed from the lower end of the paddle, (2) turned over, and (3) placed in a position at the upper end of the paddle previously occupied by the left hand. This awkward gymnastic procedure must be followed at each and every stroke when paddling a boat or canoe.

With my invention, an operator can grip the paddle at the beginning of the stroke and paddle continuously without ever removing his hands from the paddle, or without altering his grip and thereby always have his hands properly placed. This will readily be seen, will provide for faster stroking, more regularly timed stroking, and the elimination of the lost motion prevalent in all other single bladed paddles.

Referring to the drawings, wherein like reference numbers refer to like and corresponding parts throughout the several views, the overall illustrative embodiment of the invention shown in FIGURE 1 comprises a well known type of wood or metal single bladed boat paddle 1 having blade 2 and the usual connecting stem 3 with my invention indicated generally at 4 attached thereto. The embodiment of my invention shown in FIGURE 1 comprises a pair of suitable bar 5 extending generally, but not necessarily, along the longitudinal axis of stem 3 which bars 5 are preferably of square or rectangular cross-section. Holes 6 are provided for receiving a screw or bolt 8 for attaching my invention 4 to the stem 3 through connection 5A (see FIGURE 2). Contained on each of the bars 5 is a hand grip means 7 which is slideable along the longitudinal axis of bar 5. When operating a paddle with my device attached, the position of hand grip means 7 as shown in FIGURE 1 will facilitate paddling on the right hand side of the boat.

When it is next desired to paddle on the left hand side of the boat, it is not necessary to remove the hands from the paddle as is required by present day paddles as all that is necessary with my invention is to slide the grips, with sort of a scissors motion, to the position indicated by the dotted grips at 7A whereupon the left hand side paddling stroke can be made. In order to insure that the hands and arms grip the paddle at the proper angle, bars 5 are permanently twisted in such a way as to cause the grips in right hand side stroking position 7 to be rotated by the respective upward and downward motion, to the position shown by the arrows at grip position 7, and when the grips are slid to the position shown at 7A for left hand side paddling they will follow the permanent torsional trace of bars 5 as shown by the arrows on grips 7A. Thus, the torsion effect places the paddle blade at the proper angle in the water with respect to the boat.

This is further illustrated in FIGURE 2 which is a downward view from the top of the paddle in FIGURE 1. It can clearly be seen how the hands should, and will, be positioned for the respective side stroking. In FIGURE 2, when paddling on the right side the hands will take the position designated by the "R" arrows so that the left hand will grip at left "R" and the right hand will grip the right hand "R". The left hand "R" grip will be at the top of bar 5 and the right hand "R" will be at the bottom of bar 5. Conversely, when paddling on the left hand side of the boat the hands will be traversed by the scissors and torsional motion to take the position of the "L" arrows but the left hand "L" will then be at the bottom of bar 5 and the right hand "L" will be at the top of its corresponding bar 5.

It will be noted that the force of the paddling stroke will be facilitated by the grips at the bottom end of the bar 5 bearing against cross member 5A when a particular hand is in that bottom position. However, on every stroke, one of the hands is always at the top position of bar 5 and in order to understand the means for holding the grip at the top of bar 5 reference is now made to FIGURE 9. At the top of bar 5 I provide a recess 9 which will receive a plunger 10 which plunger is mounted on a leaf spring 11 which spring normally holds plunger 10 out of contact with recess 9. Spring 11 is form fitting and is a part of the grip 7. It can be seen then, that when paddling, the operator places the particular hand that is at the top of the bar 5 and forces the plunger 10 into the respective recess 9 thereby causing grip 7 to remain at the top of bar 5 as the downward force is applied to grip 7 to make the stroke. Sequentially, all that is necessary for moving the grip 7 into position at the lower end of bar 5 (for paddling on the opposite side of the boat) is for the operator to slightly relax his firm grip but retaining a lighter grasp of grip 7 and thereupon
sliding the grip into the proper lower position and at the same time sliding the former lower grip to the top of its corresponding bar 5, squeezing the grip 7 and forcing plunger 10 into its proper recess 9 so as to retain it when upon the stroke can be made. For comfort to the operator all of this structure may be covered with live rubber.

A number of stop means are practicable and it is believed that each is the full mechanical equivalent of the other insofar as this invention is concerned. The spring member 11 is shown to be form-fitting with respect to the hand grip 7. Further the spring 11 is shown to be bowed with respect to the longitudinal axis of the said hand grip 7 so as to provide the effect necessary whereby the plunger 10 in its at rest position does not protrude into the longitudinal bore of grip 7. It can be seen that when spring 11 is placed in engagement with grip 7 that this is a fact. Further it can be understood from the foregoing and from the nature of the grip-spring-plunger system that the firm grasp of one’s hand will cause the plunger 10 to engage recess 9 in bar 5. It is apparent, irrelevant and a matter of choice as to whether or not spring 11 is mounted externally or internally of grip 7 or whether spring 11 is mounted completely within the longitudinal opening in grip 7 and retained by grip 7. In any modification it is further necessary that the grip 7 or at least the part between the paddler’s hand and spring should be made of resilient or elastic material.

FIGURE 3, a second species, discloses a unitary paddle which is entirely new. The paddle is fabricated with the teaching of the device in FIGURE 1 incorporated, thereby eliminating the stem 3. It can be seen that the broad idea of FIGURE 1 is attached directly to the blade 2 and is contemplated that element 5A is detachable to facilitate replacing worn hand grips 7. The bars 5 are bowed outward to more readily conform to the natural arc motion of the hands and arms but they can be reversed and be bowed inwardly if it is desired.

FIGURE 4 is a top view of the paddle of FIGURE 3. FIGURE 5, a third embodiment of the invention discloses a single longitudinally extending bar 12 instead of the two bars 5 disclosed in FIGURES 1-4. The cross section of bar 12 differs from bars 5 and an enlargement thereof is shown in FIGURE 6. It can be seen in FIGURE 6 that grips 13 are sidable on bar 12 by virtue of mating parts 14 and 15, parts 13 being contained by slider 16. The operation is the same as in the case of FIGURES 1-4 with the exception that the retaining plunger is a part of handle 13 and the plunger engages recess 17 on part 14. It is to be understood that bar 12 can be prefabricated to blade 2 so as to produce a unitary paddle in the case of FIGURE 3. Due to the inherent nature of the members 14 and 15 with respect to their cross section slot and T type reciprocation there is less tendency for the hand grip 13 and thereby element 15 to be forced downward along stem 12 when that particular grip is at the uppermost position with respect to said stem 12 and under force by the paddling stroke.

Therefore a plunger means as above defined with respect to FIGURE 9 is not necessary. I find it operational to have a ball and socket system whereby a ball is in element 15 and the socket or recess 17 is in the stem 12. It is apparent that when the grip 13 is at the uppermost position with respect to the stem 12 that the recess will accept, as it were, a plunger or ball and thereby momentarily lock the grip in that position. Then, when a change in position is sought, added pressure against the grip 13 will force the plunger out of recess 17.

FIGURE 7 discloses a fourth embodiment of my invention which consists of two identical simplified individual parts which together go to make up the equivalent structure of FIGURES 1-4. Each part is attached to the paddle stem 3 by bolts 18, but otherwise the operation and construction is similar to that disclosed and described in the species of FIGURES 1-4.

FIGURE 8 discloses a refinement for all of the previously disclosed species and consists of the same structure heretofore described except that attaching spacers 19 are provided as to cause the bars 5 (or 12) to be spaced further from stem 3 at the bottom than at the top, or vice versa, if desired. It is to be understood that the device disclosed herein may be attached to both wood and metal paddles and the paddle of FIGURE 3 may also be made entirely of metal.

Having disclosed and described my invention, I claim:

1. A boat paddle comprising a single blade and a connecting stem, the improvement comprising a pair of hand grip support means mounted on said stem, an operationally positionable hand-grip mounted for longitudinal reciprocation thereon against the axis of said stem and each of said support means, said pair of hand-grips and said stem operationally eliminating the need for removal of either hand during continuous paddling.

2. A boat paddle comprising a single blade and a connecting stem, the improvement comprising a pair of permanently twisted longitudinally extending traversing bars, each bar having a hand-grip mounted for torsional reciprocation thereon, and means providing positioning of said grip with respect to said bar, said device operationally eliminating the need for removal of either hand during continuous paddling.

3. A hand grip device for mounting on the stem of a boat paddle, said device comprising a pair of permanently twisted longitudinally extending traversing bars, each bar having a hand-grip mounted for torsional reciprocation thereon, and means providing positioning of said grip with respect to said bar, said device operationally eliminating the need for removal of either hand during continuous paddling.

4. In combination, a hand-grip device with a boat paddle having a blade and a connecting stem, said device mounted on said stem and comprising a pair of permanently twisted longitudinally extending traversing bars, each bar having a hand-grip mounted for torsional reciprocation thereon, and means providing positioning of said grip with respect to said bar, said device operationally eliminating the need for removal of either hand during continuous paddling.

5. A boat paddle having a blade and connecting stem means, said stem means comprising a pair of permanently twisted longitudinally extending bars, each of said bars having a hand-grip mounted for torsional reciprocation thereon, and means providing positioning of said grip with respect to each of said bars, said stem means and said hand-grips operationally eliminating the need for removal of either hand during continuous paddling.

6. A paddling device for mounting on the stem of a boat paddle, said device comprising a single longitudinally extending stem attachable traversing bar, said bar having a pair of hand-grips mounted for reciprocation thereon, and means providing positioning of said grips with respect to said bar, said device, when mounted, operationally eliminating the need for removal of either hand during continuous paddling.

7. A boat paddle mounting device and a boat paddle having a blade and a connecting stem, said device mounted on said stem and comprising a single traversing bar, a pair of hand-grips mounted for reciprocation on said bar and means providing positioning of said grips and with respect to said bar, said device operationally eliminating the need for removal of either hand during continuous paddling.

8. A boat paddle having a blade and a connecting stem, said stem being a single longitudinally extending traversing bar, said bar having a pair of hand-grips mounted for reciprocation thereon, and means providing positioning of said grips with respect to said bar, said hand-grips and said bar operationally eliminating the need for removal of either hand during continuous paddling.

9. A device for mounting on a boat paddle having a single blade and a connecting stem, said device com-
prising a longitudinally extending permanently twisted traversing bar, one hand-grip mounted for torsional reciprocity on said bar, means providing positioning of said grip with respect to said bar, stem mounting means on said bar, two of said devices being required for proper paddling and each being separately mountable, said pair of devices being mountable so as to operationally eliminate the need for removal of either hand during continuous paddling.

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