Aug. 28, 1951 H. J. GAGNON 2,566,023

SECTIONAL OAR

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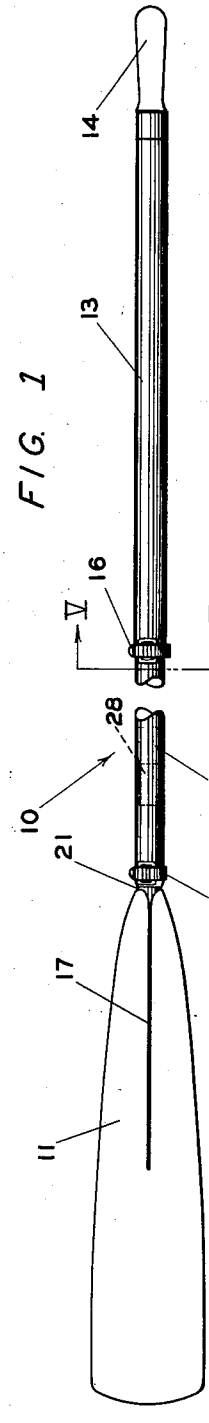


FIG. 1

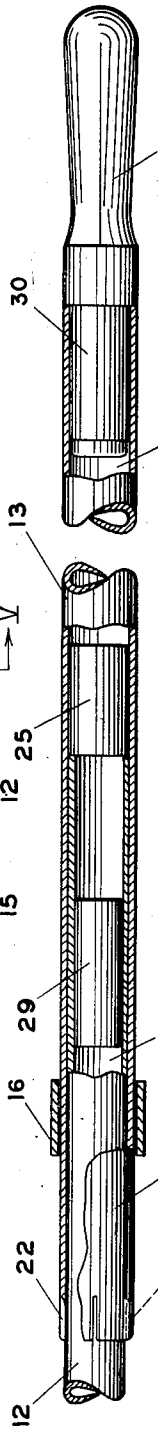


FIG. 2

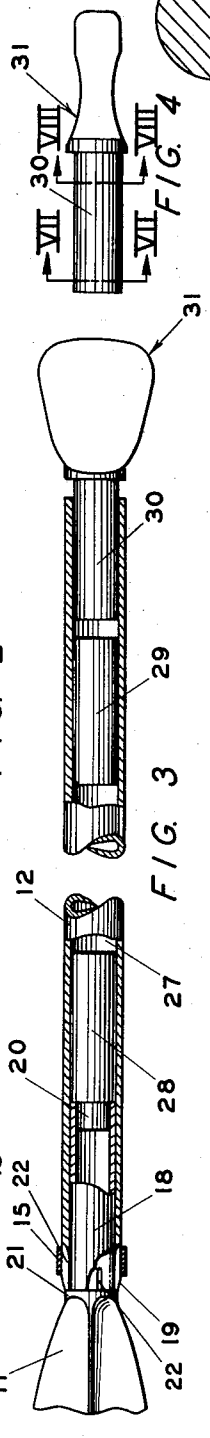


FIG. 3

FIG. 4

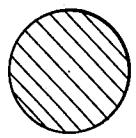


FIG. 6

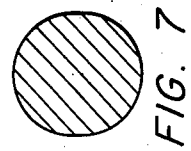


FIG. 7

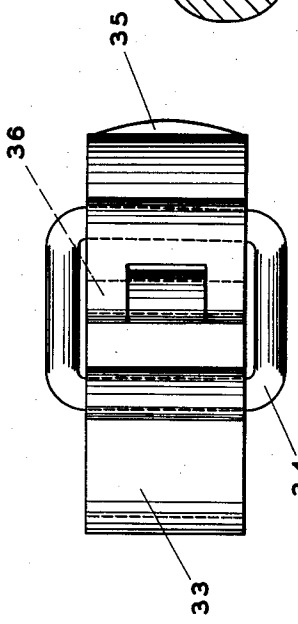


FIG. 6

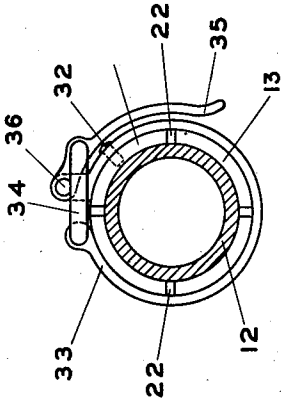


FIG. 5

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SECTIONAL OAR

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5 Claims. (Cl. 9—24)

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This invention relates to an oar and more specifically to an improved type thereof which is light in weight, adjustable in length and collapsable in structure.

It has long been recognized by persons acquainted with row boats of the usual type found on inland lakes, that there is a real need for a light, sturdy, waterproof and inexpensive oar which can be collapsed or assembled quickly and easily. The conventional one piece oar, commonly in use, is cumbersome to transport primarily because of its length and/or weight.

Recent increases in the production, and improvements in the quality of the light weight metals and plastics have made them available and desirable for use in manufacturing where suitable.

Consequently, an improved oar, which is light in weight, sturdy, collapsable, waterproof, adjustable, inexpensive and can be fabricated from the relatively inexpensive, light weight metals or plastics, appears to be desirable.

Accordingly, it becomes a primary object of this invention to provide an improved oar which is light in weight, sturdy in structure, waterproof, adjustable, which may be collapsed or assembled easily and quickly, and which is especially suited to use with the conventional type inland lake row boat.

A further object of this invention is to provide an improved oar as aforesaid which can be fabricated quickly and economically, preferably from the light weight metals or from plastics.

A further object of this invention is to provide an improved oar as aforesaid which is comprised of a non-buoyant material but which is so constructed as to be buoyant in its entirety as well as in its parts.

Other objects and purposes will become apparent to those familiar with this art upon referring to the accompanying drawings and upon reading the following specification.

In meeting the objects and purposes heretofore mentioned as well as others incidental thereto and associated therewith, I have provided a collapsable oar, whose blade is cast from any light weight metal, such as aluminum or magnesium, and whose loom is fabricated from two lengths of similarly light weight material. When assembled, one tube telescopes the other so that the overlapped portion occurs where the loom is engaged by any conventional, appropriate row lock, thereby providing a desirable additional strength at the point of maximum strain and flexion. One end of both said tubes is adapted to reception of a handle. The other ends are

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both slotted and equipped with compressive gripping means so that the inner tube can be clamped to the blade and so that the outer tube can be clamped to the inner tube.

For illustrations of the said improved oar to which this invention relates, attention is directed to the drawings, in which:

Figure 1 is a broken plan view of the assembled oar to which this invention relates.

Figure 2 is a fragmentary side elevation view, partially in central cross-section, of that portion of the said assembled oar which includes the handle.

Figure 3 is a fragmentary side elevation view, partially in central cross-section, of that portion of said assembled oar which includes the blade.

Figure 4 is a side elevation view of the alternate, canoe paddle handle.

Figure 5 is a cross-sectional view of Figure 1 taken along the line V—V thereof, showing an end view of an outside compressive device.

Figure 6 is an enlarged top plan view of the said outside compressive device.

Figure 7 is a section taken on the line VII—VII of Figure 4.

Figure 8 is a figure taken on the line VIII—VIII of Figure 4.

The improved collapsible oar 10, a preferred, assembled embodiment of which is illustrated in Figure 1, is essentially comprised of a blade member 11, a lower tubular member 12, an upper tubular member 13, an oar handle 14 and two outside compressive gripping devices 15 and 16. The said blade member 11 may be of any conventional design and/or shape but is preferably cast or otherwise formed from a suitable light weight material such as aluminum, magnesium, or plastics. The said blade may be advantageously provided with a pair of centrally located, longitudinally disposed blade ribs 17, one on each face of the said blade, as shown in Figure 1. Such ribs will brace the blade against excessive or harmful flexions in a direction perpendicular to the plane of the blade.

As illustrated in Figure 3, the said blade 11 has an integral, tubular blade stem 18 which is slidably receivable within the slotted extremity 19 of the lower tubular member 12. Said blade stem 18 is provided with a stem plug 20 which either may be some conventionally buoyant material such as cork, or may be in the form of an air tight metal cap, whereby in either case the blade will be prevented from completely submerging in the event it is accidentally dropped into the water while disengaged from the oar loom.

An integral ring flange 21 between the blade 11 and the blade stem 18 provides a seat against which the slotted extremity 19 of the lower tubular member 12 will bear when the said blade stem 18 is inserted within the hollow opening of the tubular slotted extremity 19.

The lower tubular member 12 and the upper tubular member 13 may be of any convenient length and strength whereby the one will overlap the other to provide a loom at least equivalent in length and strength to the loom of a standard oar and with the overlapping providing for adjustability within the limits of such overlapping.

The diameters and wall thicknesses of the tubing from which the said lower tubular member and said upper tubular member are fabricated are limited only by the strength they must possess to withstand the loads to which the oar may be exposed. It will be understood of course that the individual diameters of the two said tubular members with respect to each other will preferably, but not necessarily, be such that the lower tubular member may be slidably received within that extremity of the upper tubular member having the slots 22.

It has been found advantageous, as illustrated in Figure 2, to select the individual lengths of the said tubular members so that the average zone of overlapping between the upper tubular member and the lower tubular member is approximately 12 inches long and is located at or near to that point in said loom where it is engaged by a row lock, not shown.

The upper and lower tubular members may be made from any suitable type of tubular material such as magnesium, aluminum or plastics.

A handle 14 of any appropriate material, such as wood, aluminum or plastics and of a type such as appears in Figure 2, is inserted into the hollow end of the upper tubular member 13, remote from that extremity slidably engaged by the lower tubular member, and secured therein by any convenient means such as cementing, riveting or pressing.

Said upper tubular member 13 contains an upper tubular partitioning member 25 which is appropriately positioned there within so as to provide a maximum air chamber 26 between the handle 14 and the said partition 25 without interfering with that end of said lower body member which is slidably received within the upper body member. The said partition 25 may be made of a buoyant material such as cork or of a solid material, such as a light metal and may be fixed within said upper tubular member in any convenient manner such as by cementing or pressing. Said partition 25 may also be used as a stop for the inserted end of the said lower tubular member.

The said lower tubular member 12, as shown in Figure 3 is also provided with an air tight chamber 27 between the lower partitioning member 28 and the upper partitioning member 29, which partitioning members may be made of cork, aluminum, wood or other suitable material, and may be secured within said lower tubular member by any suitable means such as cementing, brazing or pressing. The said lower partitioning member 28 is preferably, but not necessarily, spaced only such distance from the slotted extremity of the lower tubular member to allow for the insertion of the blade stem 18. The upper partition 29 is preferably, but not necessarily, spaced only such distance from that end

of the lower tubular member, remote from the slotted extremity 19, that the shank 30 of the canoe paddle handle 31 may be inserted within the hollow end thereof.

Said canoe paddle handle 31, as illustrated both in Figure 3 and in Figure 4, may be made of any suitable material, but, in as much as it is detachable and should therefore be buoyant, it is preferably made of a buoyant material such as wood.

In order that the said canoe paddle handle 31 may be held securely within the round opening at that end of said lower tubular member 12 remote from the slotted end thereof a portion of the stem 30 of said canoe handle may be out of round, such as elliptical (Figure 8). Such elliptical portion will advantageously be spaced from the free end of said stem 30 so that said free end of said stem 30 may be round (Figure 7) for easy engagement of the aforesaid round opening in said lower tubular member.

An outside compressive device 15 of any conventional, convenient type is provided about the lower body member 12 adjacent to the end thereof which engages the blade 11 for the purpose of securing the blade stem 18 within the slotted extremity 19 of said lower tubular member 12. Another outside compressive device 16 also of any conventional, convenient type is provided about the upper body member 13 adjacent to the end thereof containing the slots 22 for the purpose of securing said lower tubular member 12 within said upper tubular member 13. A side view of one preferred type of compressive device is illustrated in Figures 5 and 6. In Figure 5, the compressive device 16 is shown compressing the upper tubular member 13, to which it is secured by means of the pin 32, against the lower tubular member 12. The said preferred type of compressive device, of which 15 and 16 are two examples, is comprised of a compression ring 33, a compression link 34 and a compression lever 35, which is pivoted upon the compression ring 33 by means of the dovetail hinge 36.

The said compressive devices 15 and 16 are identical in every respect other than the diameter of the ring 33 which is varied in order to fit snugly around the two different diameters of the upper and lower tubular members.

Although the above mentioned drawings and description apply to one particular, preferred embodiment of the invention it is not my intention, implied or otherwise, to eliminate other variations or modifications which do not depart from the scope of the invention unless specifically stated to the contrary in the hereinafter appended claims.

I claim:

1. An adjustable, collapsible, lightweight oar comprising in combination: a lower metallic tubular member having substantially longitudinally aligned slots in one end thereof, a pair of liquid tight partitions within said tubular member each near to, respectively, but spaced from, each of the two ends thereof, and quickly releasable, first outside compressive means affixed to and circumscribing the slotted end thereof; an upper metallic tubular member having substantially longitudinally aligned slots in one end thereof which end, and the portion of said upper tubular member adjacent thereto, slidably and removably telescopes with a similar portion of that end of said lower tubular member remote from said slotted end thereof, whereby the point

on said oar, normally engaged by a rowlock, will be located within the zone of telescoping between said upper and lower tubular members, a liquid tight partition within said upper tubular member but spaced from said slotted end of said upper tubular member and adjacent the last-named end of said lower tubular member and quickly releasable second outside compressive means affixed to and circumscribing the slotted end of said upper tubular member for positively and releasably securing said upper and lower tubular members together; a non-metallic handle having one portion adapted for manual engagement and another portion tightly insertable within and secured to that end of said upper tubular member remote from its slotted end; a metallic blade member having a blade stem extending therefrom which stem is snugly but removably insertable within the said slotted end of said lower tubular member and seperably securable thereto by said first compressive means, said blade stem having a liquid tight hollow chamber within itself; whereby said blade, said lower tubular member, the partitions associated therewith, and said upper tubular member and the partition and handle associated therewith, each comprise units which may be quickly assembled and disassembled and each unit is individually buoyant.

2. An adjustable, collapsible, lightweight oar comprising in combination: a lower tubular member having slots in one end thereof, a pair of partitions within said tubular member each respectively near to each of the two ends thereof, and first compressive means affixed to and circumscribing the slotted end thereof; an upper tubular member having slots in one end thereof which end, and the portion of said upper tubular member adjacent thereto, slidably and removably telescopes with a similar portion of that end of said lower tubular member remote from its said slotted end whereby the point on said oar normally engaged by a rowlock will be located within the zone of telescoping between said upper and lower tubular members, a partition within said upper tubular member near to said last named end of said lower tubular member, and second compressive means affixed to and circumscribing the slotted end of its said upper tubular member for rigidly and releasably securing said upper and lower tubular members together; a handle having a portion adapted for manual engagement thereof and another portion tightly insertable within, and secured to, that end of said upper tubular member remote from its slotted end; a blade member having a blade stem extending therefrom which stem is snugly but removably insertable within the said slotted end of the said lower tubular member and separately securable thereto by said first compressive means, said blade stem having a liquid tight, hollow chamber, therewithin; whereby said blade, said lower tubular member, and the partitions associated therewith, and said upper tubular member and the partition and handle associated therewith, each comprise units which may be quickly assembled and disassembled and each unit of which is individually buoyant.

3. A combined adjustable, collapsible, lightweight boat propelling device, the combination comprising: a metallic tubular member having substantially longitudinally aligned slots in one end thereof, a pair of liquid tight partitions within said tubular member each respectively near to but spaced from, each of the two ends thereof, and normally operable, outside compressive

means affixed to and circumscribing the slotted end thereof; a non-metallic, buoyant handle having a portion for manual engagement and a portion tightly but removably insertable within that end of said tubular member remote from the slotted end thereof; said last named portion being circular in cross-section at the tube-entering end thereof and non-circular in cross-section in the portion spaced from the end thereof with said circular and said non-circular portions having the same circumferential length, whereby said handle will enter easily into said tubular member but upon full insertion thereinto will distort said tubular member sufficiently to effect tight gripping thereby; a metallic blade member having a blade stem extending therefrom which stem is snugly but removably insertable within the said slotted end of said tubular member and separably securable thereto by said compressive means, said blade stem having a liquid tight, hollow chamber within, whereby said blade, said tubular member and said handle may be quickly assembled and disassembled.

4. An adjustable, collapsible, lightweight boat propelling device comprising in combination: a metallic tubular member having substantially longitudinally aligned slots in one end thereof, a water tight compartment within the tubular member, a quickly releasable, outside compressive means affixed to and circumscribing the slotted end thereof; a non-metallic, buoyant handle and means affixing said handle to that end of said tubular member remote from the slotted end thereof; a metallic blade member having a blade stem extending therefrom which stem is snugly but removably insertable within the said slotted end of said tubular member and separably securable thereto by said compressive means, said blade stem having a liquid tight hollow chamber within itself; whereby said blade, said tubular member and said handle may be quickly assembled and disassembled.

5. An adjustable, collapsible, light-weight oar comprising in combination: a lower tubular member having a pair of water-tight partitions therewithin and each being respectively near to each of the two ends of said tubular member, an upper tubular member partially telescoping said lower tubular member, a removable non-metallic handle having a portion adapted for manual engagement and another portion tightly inserted within and secured to that end of said upper tubular member which is remote from the lower tubular member and a water-tight partition in said upper tubular member positioned between said handle and said lower tubular member and spaced substantially from said handle; means holding said tubular members in a selected telescoped position; a blade member having a stem extending therefrom which stem is snugly but removably received within that end of said lower tubular member remote from the upper tubular member and means removably holding said stem securely therewithin; said blade and said upper and lower tubular members of said handle, all being so proportioned that the telescoped portions of the upper and lower tubular members occur at that position between the handle and the blade that will normally be engaged by a row-lock in normal use of said oar; whereby said oar may be assembled and disassembled quickly and its length may be readily adjusted.

HERBERT J. GAGNON.

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