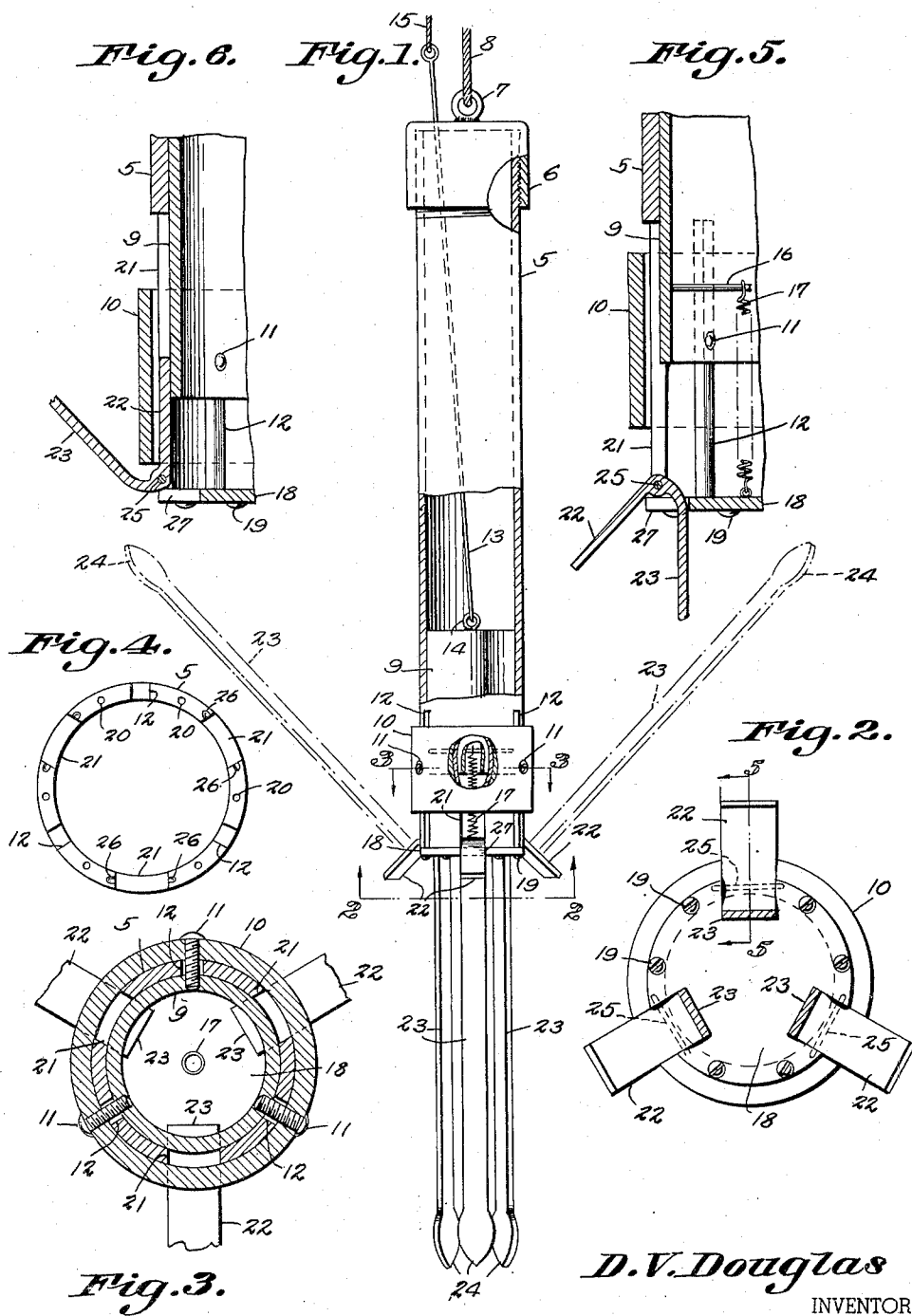


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D. V. DOUGLAS  
COLLAPSIBLE ANCHOR

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## UNITED STATES PATENT OFFICE

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## COLLAPSIBLE ANCHOR

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1 Claim. (Cl. 114—208)

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This invention relates to a collapsible anchor particularly adapted for use with small boats, but capable of use with larger boats when made in appropriate sizes and weights.

The average small boat fisherman depends upon a heavy weight of steel, a concrete block, or other makeshift means to anchor his boat. When the makeshift anchor is pulled up, it generally brings mud, water, weeds, or other trash into the boat.

An important object of the present invention, accordingly, is to provide a collapsible anchor which, after discharging its function and when it is to be pulled into the boat, can be collapsed by remote control means disposed within the boat, in a manner to cause it to release its hold upon the bottom, and to shed all weeds and similar objects.

Another important object is to provide an anchor of the type stated which will be of simple construction, durable, and easy to use.

Stated briefly, the invention comprises an anchor including a tubular body, radially swingable prongs mounted at the lower end of the body, outer and inner sleeves mounted for sliding movement upon the body and adapted when in one position to lock the prongs in extended position for regular use as an anchor, and remote control means attached to the sleeves for moving them to another position for releasing the prongs, said prongs when released being adapted to swing to another position in which they release their hold upon the bottom and shed any objects with which they might be engaged.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings

Fig. 1 is a view of the anchor partly in side elevation and partly in longitudinal section, the prongs being shown in full lines in released or folded position, and in dotted lines in set position.

Fig. 2 is an enlarged section on line 2—2 of Fig. 1.

Fig. 3 is an enlarged section on line 3—3 of Fig. 1.

Fig. 4 is a bottom plan view of the anchor body.

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Fig. 5 is an enlarged section on line 5—5 of Fig. 2.

Fig. 6 is also an enlarged section on line 5—5 of Fig. 2, the anchor prong being shown in set position.

Referring to the drawings in detail, I provide a tubular body 5 of suitable length and threaded at its upper end to receive the flanged cap 6 having rigidly secured thereto the eye 7 to which is connected one end of the anchor cable 8 whereby the anchor is raised or lowered.

Mounted for sliding movement inside the tubular body 5, adjacent the lower end of said body, is the inner sleeve 9, and mounted for sliding movement along the outside of the body 5, also adjacent the lower end thereof, is the outer sleeve 10, said sleeves being rigidly connected by screws 11 (Fig. 3) which extend through elongated longitudinal slots 12 formed in the body for the purpose of permitting the desired sliding movement of the connected inner and outer sleeves. Upward sliding movement of the sleeves is limited by the inner ends of the slots 12, and sliding movement in the opposite direction is limited by a lower cap provided on the body, and to be described hereinafter.

A remote control means for elevating the connected inner and outer sleeves within the body is provided, and to this end, an elongated rod 13 is extended into the body 5 and is connected at one end to ring 14 rigidly secured to the upper end of the inner sleeve 9, the other end of the rod 13 projecting through the cap 6 which would be formed with a suitable opening for this purpose, and being connected to an operating cable 15 which would extend into the boat, not shown.

By means of the remote control means 13, 15, it is seen that the inner and outer sleeves, which comprise a prong lock in a manner to be described, can be elevated to prong-unlocking position from their lower or prong-locking position. Normally, however, the sleeves are retained in their lower position by means of a spring, and to this end, a cross pin 16 is extended diametrically of the inner sleeve 9, spring 17 being connected at one end to the cross pin and at the other end to the lower cap 18 secured to the bottom of the tubular body 5 by means of screws 19 threaded into openings 20 formed in said lower end of the body (see Fig. 4).

Formed in the lower end of the body 5 and alternating with the slots 12 are the longitudinal prong slots 21 of a width suitable to receive the angular ends 22 of the radially swinging anchor prongs 23 having at their free ends the pointed

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portions 24. The prongs are pivoted in the slots by pivot pins 25 extended transversely of the respective prong slots 21, at the lower ends, the ends of the pivot pins 25 being received in pin-receiving recesses 26 formed in the body 5 at opposite sides of the respective slots 21, as clearly seen from Fig. 4. The pins are retained in position by means of the cap 18.

Thus, the anchor prongs 23 are pivoted in the lower end of the body 5 for radial swinging movement, the prongs being swingable to extreme positions shown in dotted lines and full lines, respectively, in Fig. 1. In the dotted line positions of the anchor prongs 23, said prongs are set for regular use and are adapted to grip rocks, bury themselves in the bottom, and otherwise hold the boat against movement. In the full line positions, the prongs are in their folded position, in which position they release any engaged object and permit the anchor to be drawn upwardly by means of the anchor cable 8.

For the purpose of permitting swinging of the anchor prongs 23 to their respective positions, the bottom cap 13 is formed with marginally spaced clearance indentations 27.

The operation of the device will be readily understood, and it is not thought necessary to dwell at length upon said operation. However, it may be noted that in normal use, the anchor prongs would be set in their dotted line positions illustrated in Fig. 1 prior to throwing out of the anchor. The prongs are set simply by raising them to said dotted line positions while holding the connected inner and outer sleeves 9, 10, in their elevated positions. Then, with the prongs being held in said dotted line positions, the sleeves 9, 10 are released whereupon the spring 17 pulls them to their lower or prong-locking position, so that the prongs are locked in the position illustrated in Fig. 6. The anchor is not thrown out, and is used in the regular way, gripping the bottom for the purpose of preventing movement of the boat.

When the user is ready to up anchor, he simply pulls upon the operation cable 15, and by this

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remote control means elevates the sleeves 9, 10. While the sleeves are elevated, a tug is given upon the anchor cable 8 and it will be seen that since the anchor prongs are no longer locked, they will immediately swing to their full line positions illustrated in Fig. 1, these being the folded positions of the prongs in which positions they are longitudinally aligned with the body 5. Thus, the prongs release anything engaged thereby, and the anchor is pulled upwardly with complete ease and facility, the anchor prongs shedding any weeds or other trash.

What is claimed is:

An anchor including an elongated tubular body, said body having a plurality of longitudinal slots formed therein, anchor prongs pivotally mounted in the slots, said prongs including angular inner ends receivable in the slots the prongs being extended outwardly in an operative position when said angular ends are received in the slots, inner and outer rigidly connected locking sleeves slidably mounted upon the body for movement over the slots to hold the angular ends therein, spring means secured to the body and sleeves and normally holding the sleeves in slot covering position, and an operating cable connected to said sleeves for elevating the sleeves against the action of the springs to clear the slots and release the anchor prongs for swinging to collapsed position.

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