July 7, 1931. J. LASKA 1,813,540

WEED CUTTER

Filed June 20, 1930

Fig. 1.

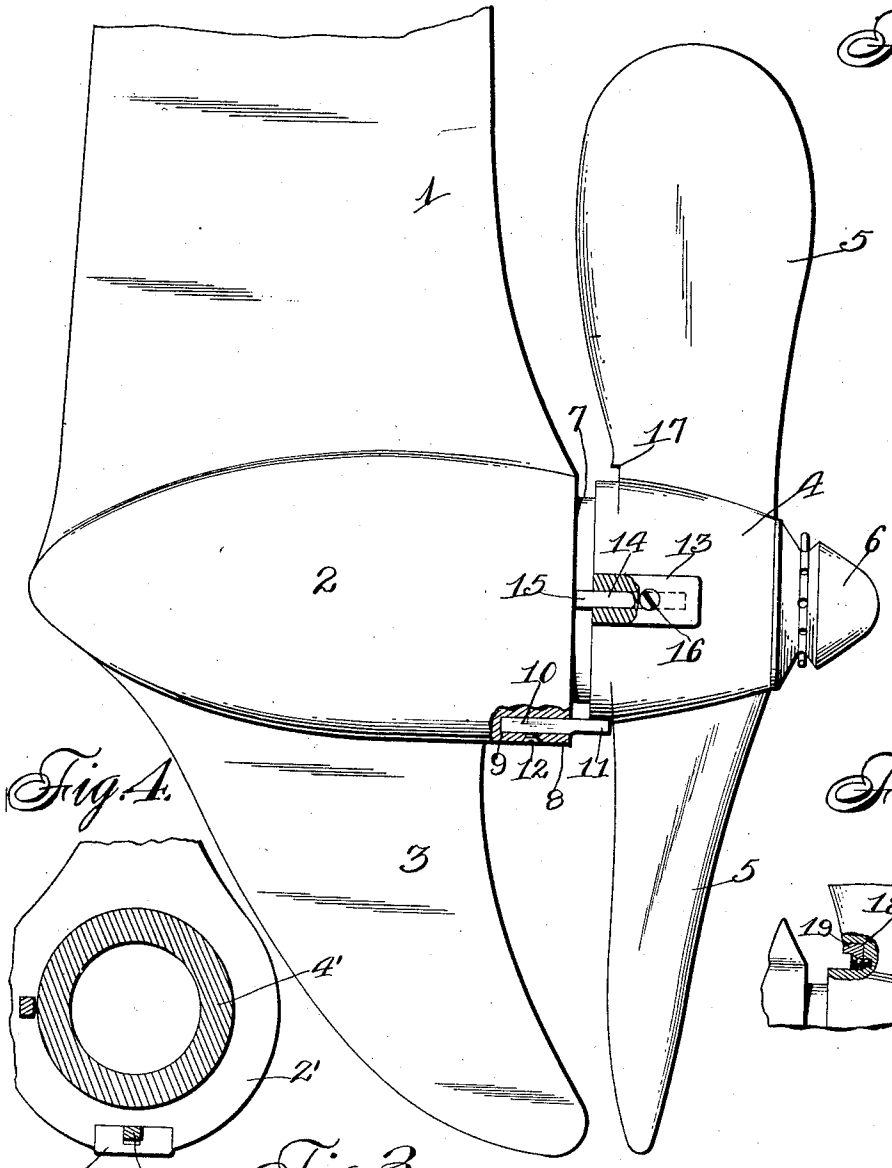


Fig. 4.

Fig. 2.

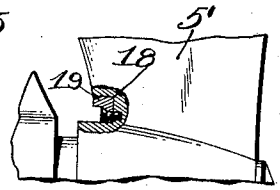
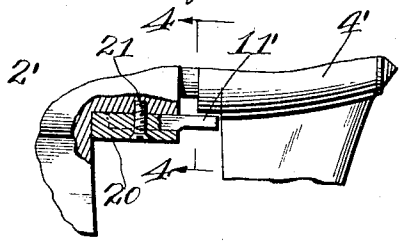


Fig. 3.



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UNITED STATES PATENT OFFICE

JACOB LASKA, OF MILWAUKEE, WISCONSIN

WEED CUTTER

Application filed June 20, 1930. Serial No. 462,664.

This invention relates to weed cutters, and more particularly to a weed cutter especially adapted for use on boat propellers.

It is a well known fact that where a boat is used in shallow water, especially on small lakes, and the like, the propeller has a tendency to pick up weeds, and the weeds become entangled around the propeller and are forced into the small space between the propeller hub and the shaft housing of the propeller, thus acting against the movement of the propeller and exerting considerable pulling power on the motor, and it is, therefore, necessary in a great many cases to stop the boat and remove the weeds and accumulation from around the propeller.

It is one of the objects of this invention to provide a cutting device for severing weeds, and the like, as they come in contact with the propeller, so as to prevent them from accumulating around the propeller and between the propeller and the propeller shaft housing, so as to reduce to a minimum the accumulation of weeds, and the like, between the propeller and the propeller shaft housing, thus increasing the efficiency of boat motors when passing through weed beds and the like in small lakes and streams.

Another object of the invention is the provision of a weed cutter which comprises a stationary cutting blade carried by the propeller shaft housing and adapted to cooperate with one or more cutting points on the movable propeller, whereby weeds and other articles becoming entangled with the propeller will be severed so as not to accumulate around the hub of the propeller and the cutting members can be removably applied or permanently affixed thereto.

A further object of the invention is the provision of a weed cutter which includes in its construction a removable cutting blade adapted to be applied to the propeller shaft housing and adapted to cooperate with a removable blade carried by the propeller hub as well as cutting points carried by the propellers so as to increase the efficiency of the cutting during the rotation of the propeller.

With the above and other objects in view, the invention consists in the novel features of construction, the combination and arrangement of parts hereinafter more fully set forth, pointed out in the claims and shown in the accompanying drawings wherein:

Figure 1 is a side elevation of a propeller and its mounting illustrating the application of the cutting members with parts thereof broken away and illustrated in cross section;

Figure 2 is a detailed side elevation illustrating a slightly modified form of the invention with parts thereof broken away and shown in cross section;

Figure 3 is a detailed side elevation illustrating another form of the invention with parts broken away and shown in cross section; and,

Figure 4 is a transverse sectional view of on the line 4—4 of Figure 3.

Referring more particularly to the drawings, 1 indicates a supporting bracket for the propeller shaft housing 2, having depending from the lower side thereof a curved protecting fin 3. In mounting the propeller hub 4 upon the shaft, it will be noted that the inner edge of the hub is spaced from the end of the housing 2, so as to provide a proper amount of space between the propellers 5 and the bracket 1 and fin 3. The hub 4 is retained in position upon the usual shaft by means of the cap member 6.

The above construction is the usual well known construction for boat motors, particularly the outboard type, and it is a well known fact that where these motors are used in shallow lakes, streams, and the like, the weeds prevalent in the waters in reach of the propeller, will have a tendency to become entangled with the propeller and become clogged in the space indicated at 7, which is located between the propeller hub and the shaft housing 2, and due to this clogging of the blades in this space, the efficiency of the propeller is reduced to a considerable extent.

It is, therefore, one of the principal objects of this invention to provide means for reducing to a minimum the accumulation of weeds and the like in this space. Therefore, I propose to have the housing 2 formed with a slightly enlarged portion 8 which will be

provided with a socket or receiving bore 9 for receiving the shank 10 of a cutting blade 11. The shank of the cutting blade will be re'ained within the socket 9 by means of a set-screw 12 so that the cutting blade can be removed or replaced within a very short space of time.

The hub 4 of the propeller is also provided with an enlarged portion 13 having a longitudinal socket or bore in which is fitted the shank 14 of a cutting member 15, said cutting member being retained in position within the enlarged part 13 by means of the set screw 16.

It will be noted that in placing the cutting members 11 and 15, the cutting member 11 is disposed outwardly of the cutting member 15 so that during the rotation of the propeller hub 4, the cutting member 15 will pass beneath the cutting member 11 with the edges of both cutting elements cooperating to sever weeds, or the like, which may become entangled around the propeller.

It will also be noted that the cutting element 11 is somewhat longer than the cutting element 15, and this necessitates providing the propeller blades at their inner ends with suitable notches 17 through which the outer end of the cutting member 11 passes, and as it passes through these notches, it will serve to provide additional cutting points in connection with the cutting element 15 so as to increase the efficiency of the cutting of any weeds becoming entangled with the propeller. Attention is also directed to the fact that while only one stationary cutting element is provided and only one movable element, it will be apparent that any number of cutting elements may be used in accordance with the requirements.

In Figure 2, I have illustrated means for providing a cutting element in the propeller blades themselves, and to this end, the propeller blade 5' is provided with a transverse recess 18 in which is arranged a cutting block 19.

This cutting block 19 is preferably of tool steel or the like to provide for wearing qualities and this cutting element 19 may be used in place of cutting element 15 or in conjunction therewith and is adapted to cooperate with one or more stationary cutting elements carried by the housing 2.

In Figures 3 and 4, I have illustrated another form of the invention wherein a removable plate 20 is attached to the propeller housing 2' by means of screws or other similar fasteners, as shown at 21. The plate 20 is provided with a recess for receiving the shank of the cutting element 11' and this form of the invention can be applied to boat motors on the market at the present time as the cutting elements carried by the propeller hub 4' can also be removably secured to the outer surface of the hub to cooperate with the cutting element 11'. In fact there are a great many ways in which these cutting elements can be applied to the housing and the hub of the propeller, but it is preferred to have the cutting elements removably attached so they can be easily replaced when desired and in applying the cutting elements, the cutting element carried by the housing 2 can be arranged inside or outside of the radial path of the cutting element carried by the propeller hub.

It will be apparent from the foregoing that the main object of the invention is to provide stationary cutting elements carried by the propeller shaft housing and movable cutting elements carried by the hub of the propeller or the blade and adapted to cooperate for severing weeds and the like which would ordinarily become entangled with the propeller and forced in the space between the propeller hub and the shaft housing.

It will also be apparent that the device can be applied to boat motors already on the market or can be incorporated in the make-up of such motors at a very low cost, and the efficiency of the motor and the propeller will be greatly increased.

While I have shown and described the preferred embodiment of my invention, it will be apparent that slight changes may be made in the construction when putting the invention into practice without departing from the spirit of the same or the scope of the appended claims.

I claim:

1. In a device of the character described, a housing having a bore extending inwardly from one end thereof, a cutting blade having a shank removably secured within the bore, a rotatable propeller hub adjacent the housings, a removably secured cutting blade carried by the propeller head and adapted to cooperate with the cutting blade on the housing.

2. In a device of the character described, a housing, a shaft carried thereby, a propeller or hub mounted on the shaft adjacent the housing, said hub and housing having inwardly extending bores, cutting blades having shanks removably positioned within said bores and said cutting blades being relatively positioned for overlapping cooperation with one another for severing weeds engaging between the housing and the propeller hub.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

JACOB LASKA.