Nov. 30, 1965 A. W. LICHTI 3,220,026

HULL PROTECTOR FOR SMALL CRAFT

Filed April 22, 1964

FIG. 1

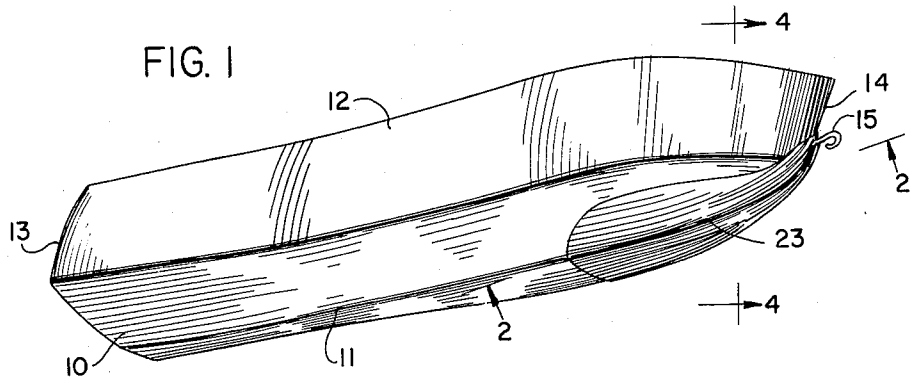


FIG. 2

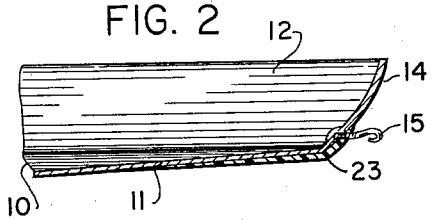


FIG. 3

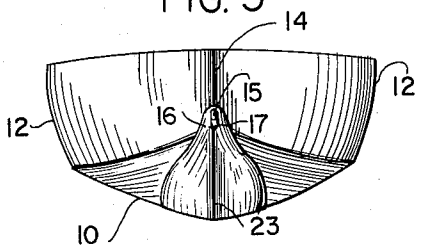


FIG. 4

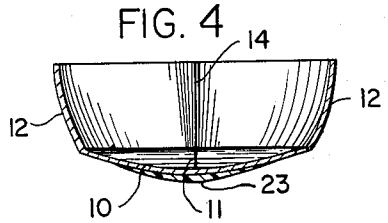


FIG. 5

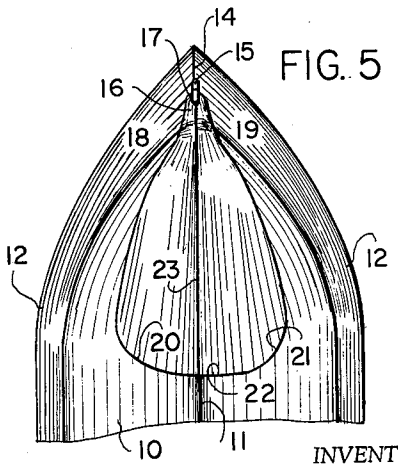
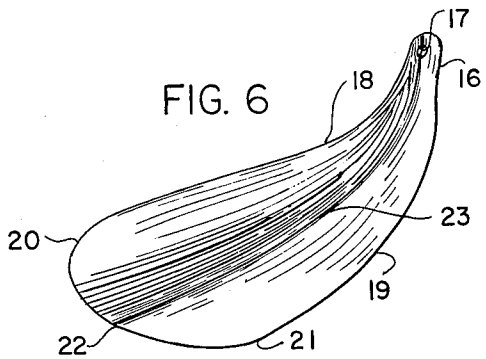


FIG. 6



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HULL PROTECTOR FOR SMALL CRAFT

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4 Claims. (Cl. 9—1)

This invention relates to the protection of the exposed surfaces of objects of various kinds from wear occasioned by contact with other objects, including the earth, and which devices shield or guard portions of such objects from injury due to impact with such objects.

The invention relates particularly to protectors for the bottom of the bow of the hull of a boat or small craft and the device is of a construction to fit and be affixed over the portion of the hull to be protected in a manner to accomplish the purpose desired without interfering with the operation of the boat and particularly without offering resistance to its movement in the water.

Various types of small boats have been produced and utilized for various purposes, the life of which has been dependent to a degree upon the durability of the hull and keel at the bow of the boat, and which constantly are in contact with the earth in launching as well as in landing or beaching of the craft and at other times during the use of the boat or on the loading of the same onto a common carrier, the bow and consequently the entire craft being short lived and therefore of limited life due to such rough usage.

It is an object of the invention to provide a simple inexpensive readily applicable protector of a flexible and resilient sheet, a pad of a general shape and character to be readily applied to form a protector for the mainly contacted portion of the hull of small craft in a manner to afford essential and desired protection and when so applied will add little resistance and will not interfere with the operation of the boat.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawing in which:

FIG. 1 is a bottom perspective illustrating the use of the invention;

FIG. 2, a section on the line 2—2 of FIG. 1;

FIG. 3, a front elevation;

FIG. 4, a section on the line 4—4 of FIG. 1;

FIG. 5, a bottom plan view illustrating the application of the invention to the bow of the boat; and

FIG. 6, a perspective viewed from above.

Briefly stated the invention is a sheet or pad of flexible resilient material generally pear-shaped or of the general shape and character of the under side of the bow portion of the hull portion of a boat and subjected to the most wear. It is adapted to underlie the heel and to be cemented or otherwise attached to the forward underside of a boat and of a plastic material sufficiently tough to provide the desired protection, being composed of a sheet or pad tapering in every direction in thickness from a central area to a thin feathered edge in order that it will offer little resistance to and not interfere with the operation of the boat.

With continued reference to the drawing, a boat or small craft with which the present invention is concerned includes a bottom **10**, a keel **11**, sides **12**, a stern **13**, and a bow **14** constituting the hull of the craft. A hook **15** is located in the lower portion of the bow by which the craft may be pulled, towed, or secured to suitable moorings.

Small boats of this type scrape the earth or ground when launched and when landed or beached. Additionally they engage various objects in the water and these scrapings or contact with objects produce wear, particularly to the hull, especially to the forward portion thereof including the keel, and the present invention has been

created to serve as a protector for such portions subjected to undue wear.

The protector of the present invention may be a shield forming pad generally pear-shaped or triangular with a pointed forward end, diverging sides, and a blunt rear end, and may be composed of a sufficiently tough plastic, transparent or opaque, clear or colored, or of similar substance to provide protection against impact and abrasion of the forward bottom portion of the boat, and may be readily attached by a suitable adhesive to provide an inconspicuous shield allowing for inspection or observation of the surface over which it is applied. Its length is approximately one-third of the hull to which it is to be applied. The invention consists of a flexible resilient sheet or pad having a relatively narrow forward portion **16** with an opening **17** through which the hook **15** of the boat is adapted to be received when the protector is applied.

The edges **18**, **19**, **20**, **21**, and **22** of the device are relatively thin and divergingly uniformly taper from a thicker central rib or keel covering line **23** of maximum thickness adjacent the forward end thereof. The device is wide enough to cover the desired area and due to its being feathered to a thin edge, it will not provide any appreciable drag on the craft at any time but will serve as a protection during launching and beaching, as well as when loading the craft on a common carrier.

It will be apparent from the foregoing that the present invention is a readily applied inexpensive attachment and not only will provide protection for the forward under surface of the hull without otherwise interfering with the ease of movement of the boat in the water, but will serve as a cushion for shock and add a slight amount of weight needed in the bow of the boat.

It will be obvious to one skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is illustrated in the drawing and described in the specification, but only as indicated in the accompanying claims.

What is claimed is:

1. A protector for application to the exterior forward bottom of the bow portion of the hull of a small water craft including a keel and having forwardly and inwardly curved sides forming a bow portion, said protector comprising

a flexible resilient transparent generally pear-shaped sheet of plastic having a central longitudinal thickened portion adapted to underlie a portion of the forward end of the keel and tapering to a feathered edge,

adhesive means for intimately securing said protector flat against the under side of the forward bottom portion of the hull,

said pear-shaped sheet of plastic being adapted to extend rearwardly from the boat bow a distance equal to at least the length of the bow portion in a manner to provide an inconspicuous shield for the portion of the boat that it covers and which provides for the visual inspection of the surface of the boat to which it is applied.

2. A protector for mounting on the exterior forward undersurface of the bow portion of a small water craft, including a keel and having forwardly and inwardly curved sides forming a bow portion, said protector comprising

a generally pear-shaped sheet of plastic-like material adapted to extend rearwardly from the boat bow approximately one-third the length of the boat,

said material having a central longitudinal thickened portion adapted to underlie a portion of the keel with the material extending therefrom in every direction of a reduced graduated thickness terminating in a feathered edge,

and means adapted for securing said protector in intimate contact with the under surface of the forward bow portion of the craft in a manner to form a shield between the forward undersurface of the craft and an object coming into contact therewith.

3. A sheet-like protector adapted for fixedly mounting in contact with the forward undersurface of the hull of a small watercraft having forwardly and inwardly curved side walls forming a bow portion terminating in an upwardly extending bow edge and a keel on said undersurface,

said protector comprising a sheet of flexible resilient material of a shape corresponding generally to the hull forward end undersurface,

said sheet being adapted to extend rearwardly from the upwardly extending bow edge of the craft a distance equal to at least the length of the bow portion formed by the forwardly and inwardly curved side walls,

said sheet having a central longitudinal thickened portion adapted to underlie a portion of the keel of the craft,

said longitudinal thickened portion being of uniform graduated thickness with the maximum thickness thereof adapted to underlie the forward bow edge of the craft and extend upwardly along at least a portion thereof,

said protector material extending from said central longitudinal thickened portion being uniformly reduced in thickness and terminating in a feathered edge at its periphery.

4. The combination of a relatively small boat having a hull including a keel and inwardly curved boat sides at its forward end terminating in a bow edge thereby defining a forward bow portion of appreciable length,

a generally triangular sheet of plastic material intimately and symmetrically secured to the undersurface of said bow portion so as to extend with increasing width from said bow edge rearwardly a distance equal to at least the length of said hull forward bow portion for protection against impact and abrasion,

said plastic material having a central longitudinal thickened portion underlying the keel,

said protector plastic material being uniformly reduced in thickness outwardly therefrom and terminating in a feathered edge at its periphery.

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