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2,231,869

BUOYANT CORDAGE

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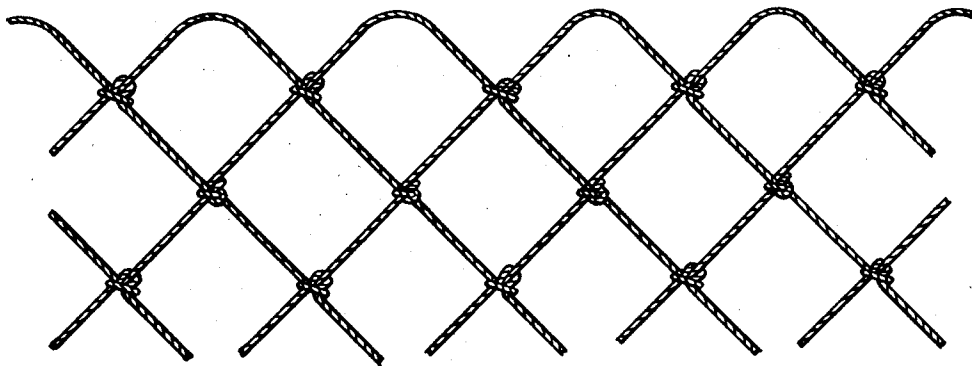


Fig. 1

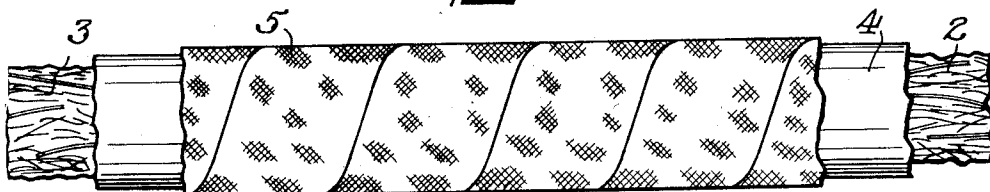


Fig. 2

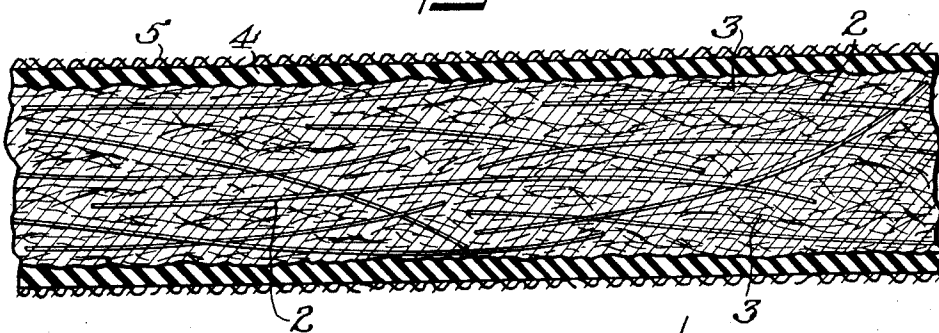


Fig. 3

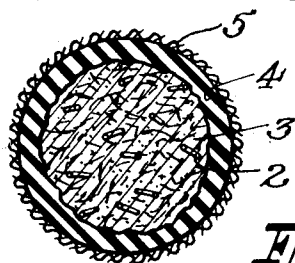


Fig. 4

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BUOYANT CORDAGE

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2 Claims. (Cl. 57-149)

My present invention relates to the art of net weaving and rope making and more particularly to buoyant cordage.

In fishing, and for use around waterways, it is desirable to have fishing nets which are buoyant, and ropes which are buoyant. In the past buoyancy has been given to nets, trawls, or the like, by placing at intervals along their upper margins, spaced floats made of cork, wood, hollow metal, or hollow glass, with the opposite sides of the nets being weighted so that the nets stand in an upright position in the water, a position necessary for successful fishing with the nets. The cost, however, of floats of the usual type has always been a great burden on the fishing industry and it has been particularly noticeable in recent years due to the ever increasing shortage of suitable cork to make the large fishing floats. There are other objections to floats for providing buoyancy to nets in that it is difficult to pull a net over the side of the boat when large floats are employed, and as a result numerous devices are employed so that rollers can be swung over the side of the boat to assist in drawing in the nets. Another disadvantage of the floats is that in stacking the nets aboard the boat the floats take up an unusually large amount of the space available, making it difficult to pile up the long nets required in certain types of fishing.

It is therefore the purpose of my present invention to provide a means for weaving a net that will itself be buoyant; either the entire net might be made buoyant or only the upper portion of the net be so constructed.

Figure 1 is a partial view of a net of the type employed in my invention.

Figure 2 is a partial sectional view showing the inner core of kapok, the intermediate layer of rubber, and the outer wrapper of paper.

Figure 3 is a longitudinal section view of the cordage.

Figure 4 is a transverse sectional view of the cordage.

I accomplish this general purpose and overcome the various objections to the present equipment as enumerated by weaving my net of either wholly or in part from buoyant fibres. These may be used by themselves or may be mixed with cotton, linen, or other suitable fibres of greater length to give increased strength. There are numerous buoyant fibres that meet these requirements, chief among these are kapok, *Bombax ceiba*, *Ochroma lagopus*, and *Chorisia insignis*.

While various fibres enumerated are suitable in various varying degrees to my purposes I have

found kapok to be, as far as at present known, the most desirable. These fibres are formed as single cells of ligno-cellulose that are impermeable to water thus giving great buoyancy and ability to float as much as fifty-five times its own weight. The kapok fibre is short, varying usually from six-tenths of an inch to one and one-half inches in length; it is normally a very fine fibre varying from .0004" to .0016" in diameter and has a smooth, slippery surface with an absence of axial twist as seen in cotton and normally presents certain difficulties in spinning. It has been found, however, that its surface can be so treated that carding and spinning can be accomplished in specially adapted machines and when so made the spun cords can be worked into rope and nets suitable for the various types of fishing. In some instances, however, it has been found that the full buoyancy available, if the net were entirely made of kapok, is not necessary and it is under such conditions that longer fibre materials that readily lend themselves to spinning may be employed. Chief among these fibres, is cotton, or linen which may be used with the kapok in varying quantities so as to give increased strength and still give the buoyancy required.

For use where it is found desirable to employ chemical preservatives to protect nets from decay and the inroads of various micro organisms in fish inhabited waters it is found that these preservatives usually will tend to bind the very fine kapok fibres more closely to each other or to the cotton or linen if they are combined with these other fibres.

Other means for making kapok readily adaptable for my purpose consists of either enclosing the kapok in a protective and binding cover or using kapok as a buoyant filler for material which can, in turn, be used in the making of cordage.

Under the heading of enclosing the kapok, experiment with the fibre have shown it practical to employ, for instance, a braided or twisted covering such as is employed as a covering for wires used for conducting electricity. Similarly a protective and binding covering, of rubber either in its vulcanized form or in the raw form as latex, can be employed to form a usable cord which may be employed in various forms of cordage. In some instances suitable paper not shown or cellulose wrapping of a spiral character may be used.

The second means consists of using the buoyant kapok fibres as a filler in paper, pulp, or in cellulose compounds which later can be suitably

formed into threads or cords wherein the tensile strength is largely supplied by the added materials and the flotation is supplied by the tiny hollow tubes of the kapok fibre. It will be apparent, it is believed, that such cordage can be used either to give flotation to the cordage itself or it may be used as in fish nets for instance to give flotation to other net elements which are suspended therefrom. For certain uses a thin covering of cellulose may be employed to enclose and give tensile strength to a thread roving or yarn made of kapok.

It is believed it will be apparent that in the event the net was to be made wholly or in part of kapok so that it would be sufficiently buoyant to support itself in water, that it would overcome many of the present disadvantages of the float laden upper line. It would be possible for a given skiff to carry an increased amount of netting and the storing and handling the same would be accomplished with much greater ease.

The foregoing description and the accompanying drawing is believed to clearly disclose a preferred embodiment of my invention but it will be understood that this disclosure is merely illustrative and that such changes in the invention may be made as are fairly within the scope and spirit of the following claims:

I claim:

1. A buoyant cord comprising strands of buoyant kapok fibers, reinforcing strands of linen fibers, and a water-proof jacket of binding material.

2. The method of making buoyant cordage, which consists in fashioning a cord from short buoyant fibrous strands, together with substantially longer reinforcing strands of less buoyant material, binding the strands with a buoyant binder, and forming a jacket for the cord.

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