United States Patent

Davis et al.

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[54] REINFORCING FACING FOR A STRUNG RACKET

[72] Inventors: Tyler B. Davis, Pawtucket, R.I.; Bancroft Racket Company

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[51] Int. Cl. A63b 49/14

[58] Field of Search ..... 273/73 R, 73 O, 73 F, 73 K, 273/DIG. 7; 124/23; 161/89, 93, 196, DIG. 4

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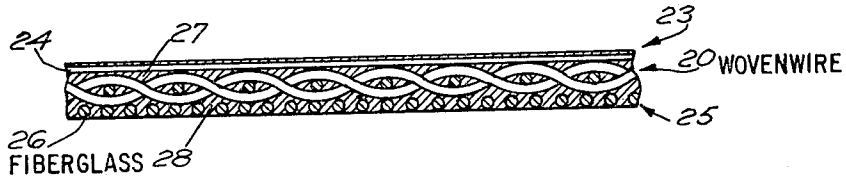
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[57] ABSTRACT

A strung wooden racket having reinforcement on a portion thereof in a plane parallel to the plane of the strings. The reinforcement comprises a mesh of metal including high portions and fiberglass reinforced resin covering opposite sides of the metal mesh. The coverings are of two thicknesses: an outer thicker covering providing a smooth surface and a thinner inner surface which allows the high portions of the metal mesh to show through and impart a rough surface. This rough surface aids the attachment to the wood racket.

1 Claims, 7 Drawing Figures



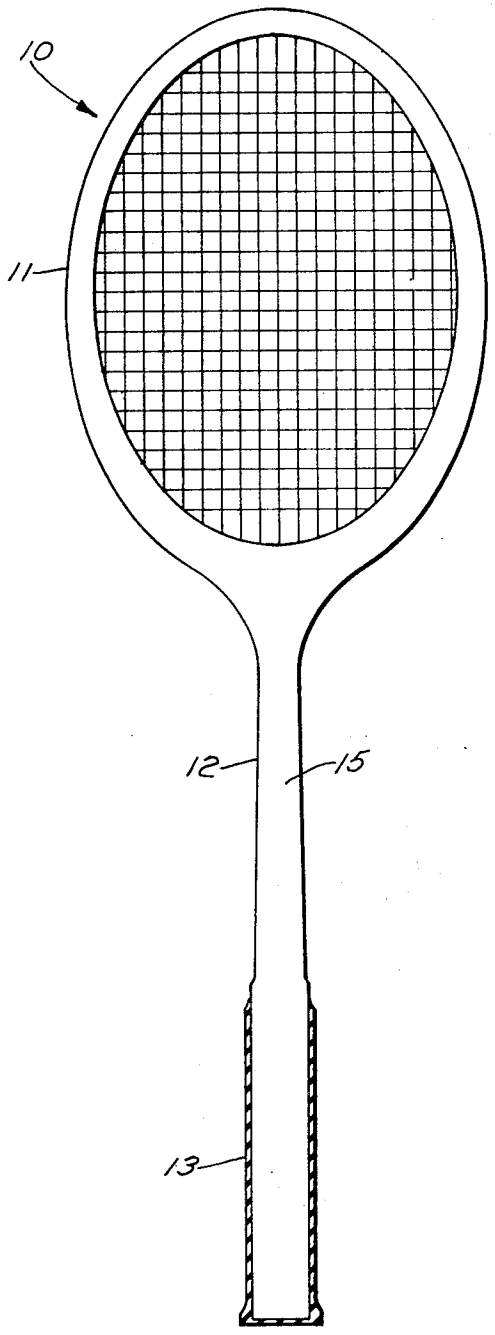


FIG. 1

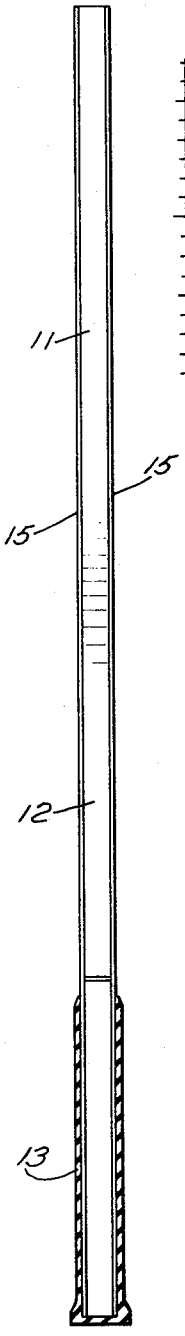


FIG. 2

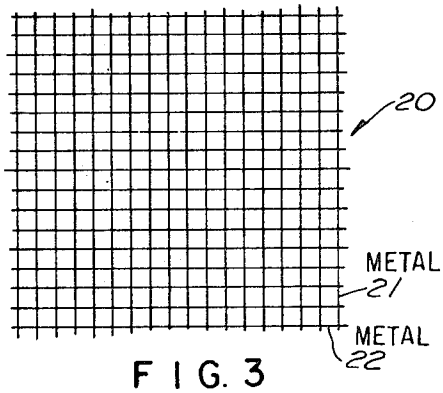


FIG. 3

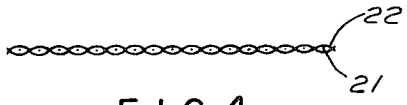


FIG. 4

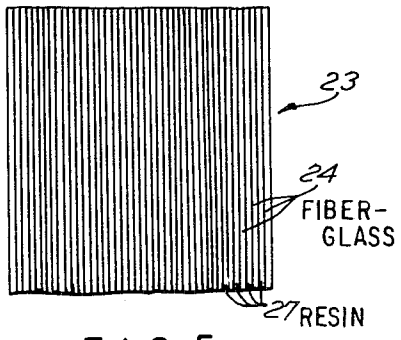


FIG. 5

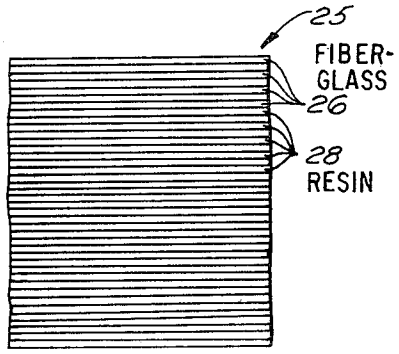


FIG. 6

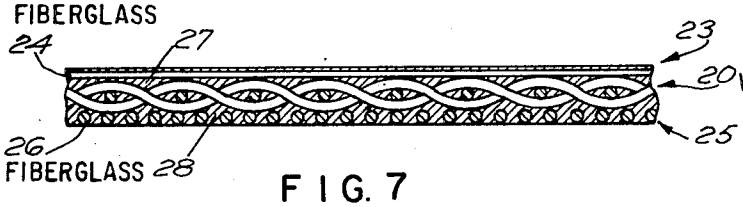


FIG. 7

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REINFORCING FACING FOR A STRUNG RACKET

BACKGROUND OF THE INVENTION

Attempts have been made to reinforce wooden rackets by using various facing materials along the face and the frame and handle of the racket. Such materials are often plastics.

SUMMARY OF THE INVENTION

The facing material of this invention comprises a combination of metal and plastic, the metal being in the form of a screen or mesh chosen from the metal which will have the desired strength. Plastic material which is reinforced with fiberglass is pressed into the metal mesh from opposite sides thereof and has the characteristics of being hard and forming a composite strengthened sheet to be applied to the face of the frame and handle of a racket, the frame of which carries strings. The fiberglass is in the form of strands or mat extending generally in one direction in one sheet while the fibers are so oriented as to extend in a generally right angular or perpendicular direction is a sheet on the other side of the metal mesh.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view of a strung racket;

FIG. 2 is a side elevation thereof;

FIG. 3 is a plan view of metal mesh in the form of a screen;

FIG. 4 is an edge view thereof;

FIG. 5 is a plan view of a sheet of resin reinforced with fiberglass, the strands of which extend in one direction.

FIG. 6 is a view similar to FIG. 5 but showing the strands extending in a right angular direction; and

FIG. 7 is a greatly enlarged section showing the composite metal mesh and sheet resin reinforced with fiberglass applied to opposite sides thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

A strung racket, such as a tennis racket, is designated generally **10** and comprises a frame portion **11** and handle portion **12** with a grip **13** at the end of the handle remote from the frame. Upon opposite sides of the racket and extending either completely over the opposite faces of the frame and handle or portions thereof there is a sheet **15** of reinforcing material, shown in FIG. **2** as existing on both sides of the face of the frame and handle, covering the same throughout as will be described now.

The mid ply or core of this sheet material is formed of woven wire **20** having strands **21** extending in one direction

and strands **22** extending in a a right angular direction which may be steel of the desired hardness or any metal material in mesh form. A sheet **23** of a plastic reinforced with fiberglass strands **24** in mat or strand form and extending in generally one direction with resin **27** between and around the strands is provided while a second sheet **25** having strands which may be in mat or strand form as at **26** extend in a right angular direction with resin **28** between and around the strands. These sheets of plastic material of any resin form which may be used advantageously in a tennis racket are then applied to the opposite sides of the screen **20**, one sheet such as **25** being thicker than the other sheet such as **23** and then under heat and pressure the resin materials of the two sheets are pressed toward each other into the wire mesh so as to substantially unite the opposite sheets through the interstices of the metal mesh forming a composite sheet of material reinforced not only with the steel of the metal mesh but also with the fiberglass of the opposite layers which lie close to and against the metal mesh.

By reason of one of these layers such as **25** being thicker than the other layer, a different surface characteristic may be provided on the opposite faces such as very smooth shiny surface on one side, whereas the other side which is thinner may have the high portions of the mesh close to and show through the surface. The rougher surface of this composite material such as shown in FIG. **7** may then be attached by cement, or natural adhesives in some cases where the resin has adherence to the face of a racket to provide the opposite facing such as shown in FIG. **2** extending throughout the face of the frame and also the face of the handle. The handle may then be provided with a grip portion such as **13** to complete the racket.

I claim:

1. A racket having a frame with strings therein and a handle extending from said frame, both frame and handle comprising a wood material, said wood material being reinforced in at least a portion thereof with a sheet of material extending in a plane parallel to the plane of the strings and comprising a mesh of metal including high portions, a fiberglass reinforced resin covering the opposite surfaces of the mesh, said coverings of fiberglass reinforced with resin being of different thicknesses with one covering being of a thickness to provide a smooth resin surface and the other covering being thinner with the high portions of the metal mesh being close to and showing through the thinner surface covering thus imparting a rougher surface, said rougher surface is attached to the wood material for the racket frame.

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