March 18, 1930. H. W. NORTON 1,750,644

HANDLE FOR TENNIS RACKETS AND THE LIKE

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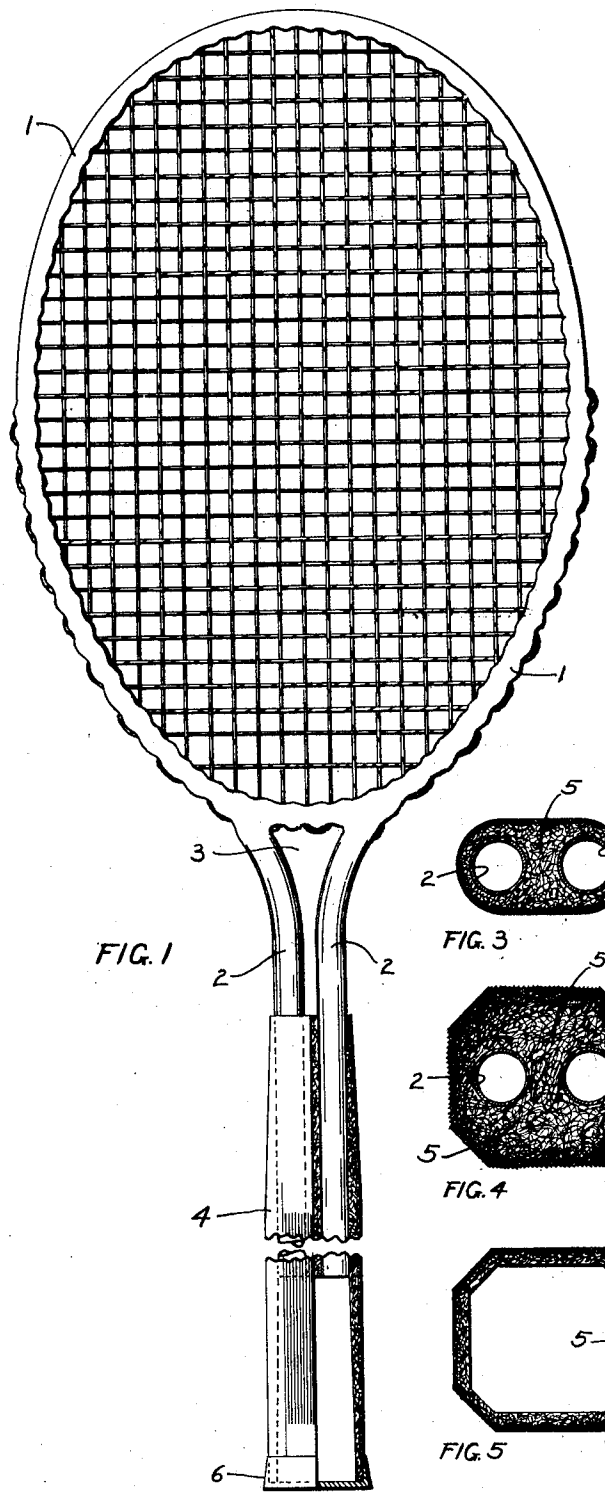


FIG. 1

FIG. 3

FIG. 4

FIG. 5

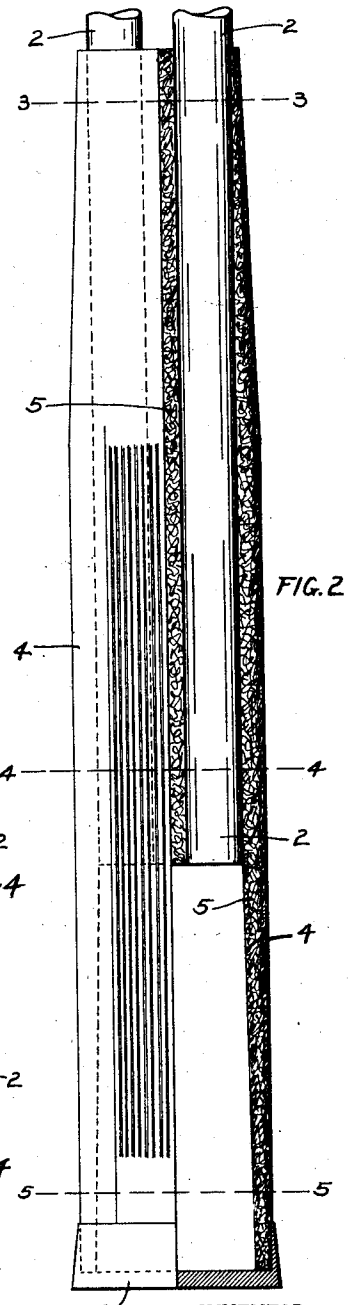


FIG. 2

INVENTOR,
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UNITED STATES PATENT OFFICE

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HANDLE FOR TENNIS RACKETS AND THE LIKE

Application filed November 20, 1922. Serial No. 602,056.

This invention relates to handles for tennis rackets and the like, and has for its principal object the provision of a handle constructed of hard rubber or a material of like properties for metal tennis racket frames.

A wood handle will frequently split or break off of a metal tennis racket frame. This is due in part to the fact that there is no glue or other adhesive that will bind wood very firmly to metal.

It is therefore the principal object of my invention to provide for a metal tennis racket frame, a handle of hard rubber or a similar material which may be firmly molded to the legs of the frame by the application of heat and pressure in a suitable die. Such a handle will more nearly approach the uniformity of a one-piece structure when united to the metal frame than will a handle constructed of wood, and will exhibit a greater bending and torsional strength than the latter.

One convenient form of embodiment of my invention is illustrated in the accompanying drawings, of which Figure 1 is a side elevational view of a tennis racket, showing my hard rubber handle, partly in section, applied to the legs of the steel frame. Figure 2 is an enlarged side elevational view of said handle, with one half in section, showing how it has been molded to the legs of a steel frame. Figure 3 is a cross sectional view taken through the upper part of the handle on the line 3—3 of Figure 2. Figure 4 is a cross sectional view taken through the middle part on the same on the line 4—4 of Figure 2. And Figure 5 is a cross sectional view taken through the lower part of the handle on the line 5—5 of Figure 2.

Throughout the specification and drawings, similar reference characters denote corresponding parts.

In the accompanying drawings, Figure 1 shows a racket having a tubular frame 1 of high-carbon, heat-treated steel or other metallic material. This tubular frame 1 terminates in two legs 2, 2 which, after curving inwardly at the throat 3, project away from it in straight parallel lines.

I have provided for the steel frame 1 a strong, light and attractive handle 4 to take the place of a wood handle, which, for the reasons hereinbefore given, has not been entirely satisfactory. My handle 4 comprises a shell constructed of a hard rubber compound, or of a material having like properties.

Preferably extending from the top or inner end of the shell to its middle portion, is a porous interior part 5 to receive the lower ends of the legs 2, 2 of the frame. This porous interior part of the shell not only lightens the handle, but will tenaciously adhere to the legs of the frame when it is molded on them by the application of heat and pressure in a suitable die.

When my handle has been molded to the frame, it will not split or break off of the latter, but will cling so firmly to the legs of the frame that it will bend with them should they be bent. It will also exhibit great tensile and torsional strength to resist being pulled or twisted from the legs of the frame.

The exterior portion of my handle may be easily and firmly gripped, while its interior porous portion lightens it and provides that clinging and yielding property which not only firmly holds it to the legs of the frame, but enables it to bend or stretch with them.

The outer end of the handle below its porous interior portion 5 is hollow to lighten its weight, and is preferably closed by a hard rubber cap 6 which is vulcanized or otherwise suitably secured to it. (See Figures 1 and 2.)

Having described my invention, I claim:

1. The combination with a tennis racket frame, of a hard rubber handle having a porous interior molded to the legs thereof.

2. The combination with a metal tennis racket frame, of a hard rubber handle having a porous interior part molded to the legs of said frame.

3. The combination with a metal tennis racket frame, of a handle comprising a hard rubber shell having a porous interior extending partly through it from its top end to tightly receive the legs of the frame.

In witness whereof I have hereunto set my hand this 17th day of November, 1922.

HAROLD W. NORTON.