

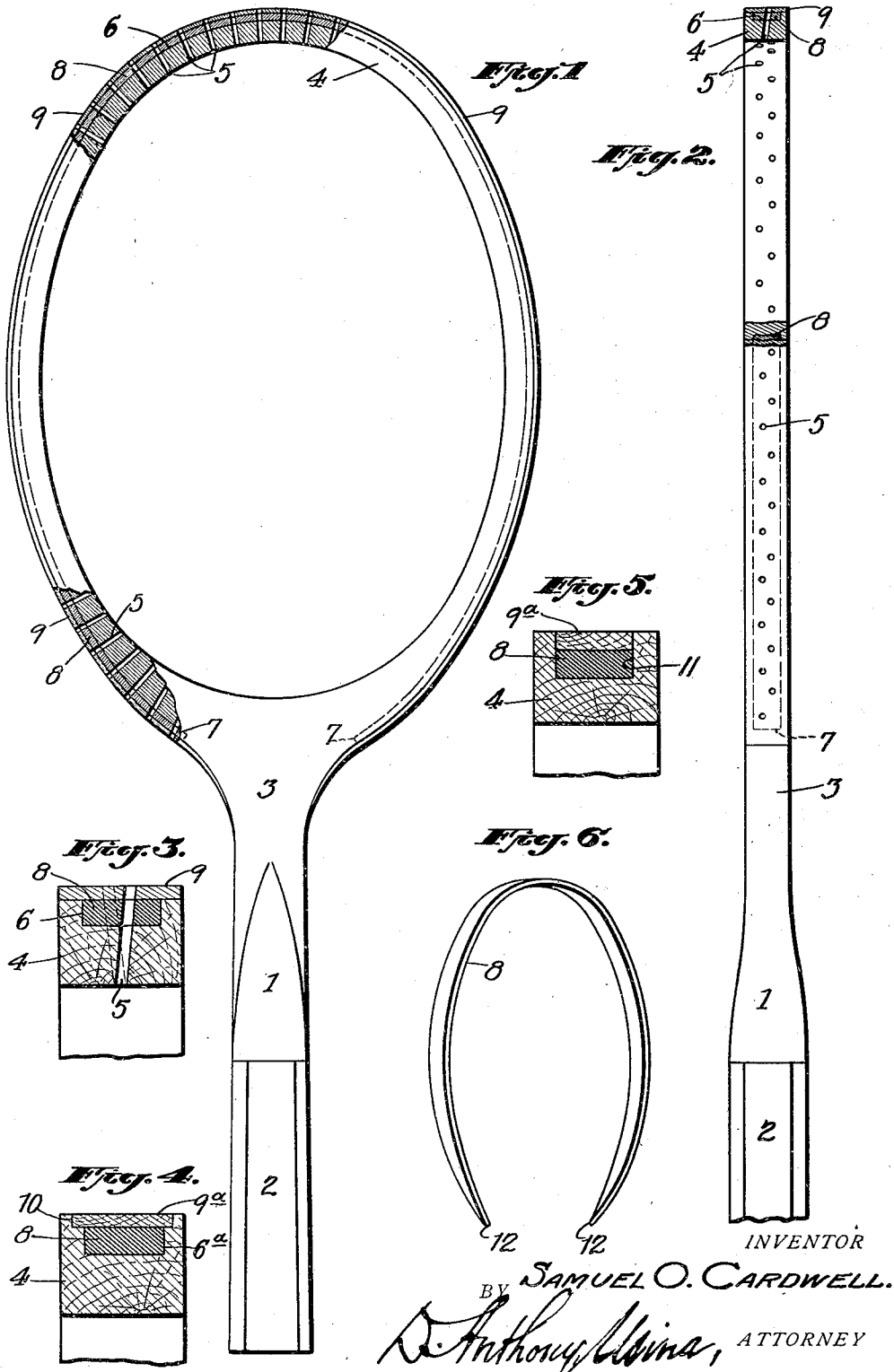
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TENNIS RACKET AND THE LIKE

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INVENTOR

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TENNIS RACKET AND THE LIKE.

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This invention has for its object to provide means for strengthening wooden and like articles; more particularly tennis rackets, cricket bats, golf clubs and the like. The article is provided with a groove in which is inserted a strengthening rib, strip or the like of metal which, though light in weight, has correspondingly increased strength; conveniently such, for instance, as is known under the trade name duralumin. This is an alloy consisting mainly of aluminum but having much greater tensile strength.

This invention is particularly applicable to tennis and like racket frames and in such articles a groove or grooves is/are provided around the outer periphery of the main frame of the blade, in which is arranged a rib or strip of metal such as that known under the trade name duralumin.

If desired, the strengthening rib or strip may be hidden by providing around the outer periphery of the frame a covering or concealing ply of wood which may be stuck to the main frame, thereby imparting the appearance of an ordinary one-piece racket.

In order that the invention may be clearly understood reference should be made to the accompanying drawings wherein:

Fig. 1 is an elevation of the frame of a tennis or other racket shown partly in section;

Fig. 2 is an edge view of the same, also partly in section;

Fig. 3 is an enlarged view in cross section of the frame of the racket shown in Fig. 1;

Fig. 4 is a similar view in cross section of a modified construction;

Fig. 5 is an enlarged view in cross section of a further modification;

Fig. 6 is a perspective view of a manner of forming the stiffening or reinforcing strip.

Referring to Figs. 1 to 3 of the drawings, the racket shown therein and which may be constructed in any convenient manner consists of a stem 1, the lower part 2, of which forms the handle while its upper end 3 constitutes what is generally known as the neck. Merging into or extending from the neck 3 is the hoop frame 4 in which holes 5 are provided for receiving therethrough strings (not shown) with which the racket is strung.

Provided in the outer peripheral surface of the frame 4 is a groove 6 extending around the greater part of the perimeter of the frame, the groove as shown in Fig. 1 terminating at

points 7 at each side of and at equal distances from the neck 3 of the racket.

Embedded within the groove 6 is a strip or rib 8 of metal of the kind described, the strip or rib being snugly fitted and retained therein, the dimension of the groove being such as to tightly embrace the strip. Further, if desired, the strip or rib may be stuck and/or otherwise secured within the groove. In order that the racket may present the appearance of an ordinary one-piece racket a covering or concealing ply 9 of any suitable material may be provided upon and secured to the outer peripheral surface of the frame, the covering or concealing ply being finished or shaped in any convenient manner to allow its easy application to the frame, the construction shown in Fig. 1 being tapered in thickness at its ends in order to readily permit its application to the frame.

It is not to be construed that the constructional details are limited to any of the precise constructions hereinbefore described; I may modify them without departing from the scope of the invention. For instance, as in Fig. 4, the strengthening rib 8 and the concealing ply 9^a of the frame 4 may both be embedded and retained within grooves, the groove 10 for receiving the concealing ply 9^a being of greater width than the groove 6^a in which the strengthening strip or rib 8 is embedded.

In Fig. 5, wherein a further modification is shown; the strengthening rib 8 and the concealing ply 9^a may be identical in width, the groove 11 being of sufficient depth to receive them.

In constructing the strengthening strip or rib 8 I may form it with its width and thickness constant throughout its length, or alternatively, it may be varied in any manner desirable; as, for instance, as shown in Fig. 6, where the ends 12 taper in both width and thickness; any arrangement, however, may be adopted, it being appreciated that the groove is of corresponding depth and shape.

The strengthening strip preferably does not extend entirely around the blade, but only extends to within say 1½ inches from the wedge which is located in the neck 3.

As shown, the holes 5 for receiving the strings extend through the frame, the reinforcing or strengthening rib or strip and the concealing ply as a whole; and with rackets strengthened according to this invention, the

holes may be arranged at substantially less inclination to the plane of the frame than heretofore, thereby lengthening the life of the gut as the tendency to fray at the inner edge of the frame is materially lessened.

The covering ply as described above and when composed of wood may be arranged with its grain running the length of the frame or be arranged with its grain obliquely with respect to the frame. In the first case the holes to receive the strings would be staggered with respect to one another as is usual, as shown in Fig. 2, while in the second case they would be arranged in line with one another around the blade of the racket. A convenient angle for the grain of the covering ply is 20 degrees to the plane of the frame.

Although this invention has been more particularly described with reference to tennis and like rackets, it will be appreciated that it is also applicable in whole or in part to cricket bats, golf clubs and any other wood

or like articles or structures requiring increased strength. It is particularly valuable in connection with wood articles which like the frame of a tennis racket are long and narrow and are curved in their length.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:

A tennis racket having a main frame of a single piece of comparatively thick wood around the outer periphery of which is a groove, a reinforcing strip of greater tensile strength tightly embraced within said groove and lying therein below the outer face of the frame and a concealing ply of comparatively thin wood overlying and entirely concealing said reinforcing strip and lying also within a groove in the main frame.

In witness whereof, I have hereunto signed my name.

SAMUEL OSWALD CARDWELL.