PATENT SPECIFICATION 1,099,400

DRAWINGS ATTACHED.

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COMPLETE SPECIFICATION.

Improvements in or relating to Racket Frames.

We, THE CARLTON TYRE SAVING COMPANY LIMITED, of Shire Hill, Saffron Walden, Essex, a British Company, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and byt he following statement:—

This invention relates to racket frames, and is especially, although not exclusively, applicable to racket frames for badminton rackets.

In the game of badminton a racket is required which is extremely light in weight, and difficulties have been experienced in making a frame for the strings of the racket which is light in weight and yet sufficiently strong. If the racket frame is made very thin, the tension of the strings may cause the frame to twist, and hence frequently the weight of the frame of a badminton racket is greater than would be desirable.

According to the invention there is provided a racket frame which comprises an elongated member of titanium shaped to form a frame for the strings of a racket.

Preferably said racket frame is made from a strip of titanium, formed into a loop to form said frame, and having a cross section which is substantially less in the plane of the loop than in the direction perpendicular to said plane. By way of example said cross section may, in one embodiment, be rectangular. Alternatively the cross section of the titanium strip may be such that said cross section is wider at its ends than at its centre in a direction perpendicular to the plane of said loop. For example said titanium strip may be bone-shaped in section or of H-section.

If desired one or both ends of the titanium strip may be extended to form the shaft of the racket.

In order that the invention may be clearly understood and readily carried into effect it will now be more fully described with reference to the accompanying drawings, in which:—

Figure 1 is a plan view of a racket having a frame in accordance with one embodiment of the invention,

Figure 2 is a side elevation of said racket,

Figure 3 is a section, on an enlarged scale, through the racket frame on the line A—A of Figure 1, and

Figures 4 and 5 show alternative sectional shapes of the racket frame, on the same enlarged scale.

The invention will be described with reference to the drawings as applied to the frame of a badminton racket, although it may be applied to other types of rackets.

The badminton racket shown in Figures 1 and 2 has a frame 1 for the strings (not shown) of the racket which is formed from an elongated member in the form of a strip of titanium. The titanium strip has a rectangular cross section as shown in Figure 3 and is bent substantially into a loop as shown in Figure 1 to form the racket frame. The titanium strip also comprises extension portions 2 and 3 which are continuations of the respective ends of the loop and are arranged to form the shaft of the racket. A small strip 4 of titanium is welded across said ends of the loop to complete the racket frame, and the racket frame 1 is apertured (not shown) for the application of strings. A handle 5 which may for example be of plastic or wood is applied to the ends of the extension portions 2 and 3 remote from the racket frame 1. By way of

example the cross sectional dimensions of the titanium strip may be approximately 0.05 inch to 0.07 inch by 0.5 inch, the smaller dimension being in the plane of the loop as indicated in the drawings.

In an alternative embodiment the looped titanium strip may be extended at only one end to form a shaft for the racket, the other end of the loop being secured, as by welding, to the extended end, or alternatively a separate shaft may be employed for the racket secured at its end to both ends of a titanium strip formed into a loop to constitute the racket frame.

Moreover the titanium strip may have cross section which is other than rectangular. For example the cross section of the titanium strip may be wider at its ends than at its centre in a direction perpendicular to the plane of the loop. One such embodiment is shown in Figure 4 in which the cross section of the titanium strip 1^1 is of bone-shape, and another such embodiment is shown in Figure 5 in which said titanium strip 1^2 is of H-section.

WHAT WE CLAIM IS:—

1. A racket frame which comprises an elongated member of titanium shaped to form a frame for the strings of a racket.

2. A racket frame as claimed in Claim 1 in which said elongated member is formed into a loop to form said frame and the cross section of said elongated member is substantially less in the plane of the loop than in direction perpendicular to said plane.

3. A racket frame as claimed in Claim 2 in which the cross section of said elongated member is rectangular.

4. A racket frame as claimed in Claim 2 in which the cross section of said elongated member is wider at its ends than at its centre in a direction perpendicular to the plane of said loop.

5. A racket frame as claimed in Claim 4 in which said cross section is bone-shaped.

6. A racket frame as claimed in Claim 4 in which said elongated member is of H-section.

7. A racket frame substantially as described with reference to Figures 1, 2 and 3 or modified as described with reference to Figure 4 or 5 of the accompanying drawings.

8. A racket comprising a frame for the strings of the racket as claimed in any preceding claim.

9. A racket as claimed in Claim 8 in which one or both ends of the elongated member is or are extended to form the shaft of the racket.

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1099400 COMPLETE SPECIFICATION
1 SHEET This drawing is a reproduction of the Original on a reduced scale

Fig.1.

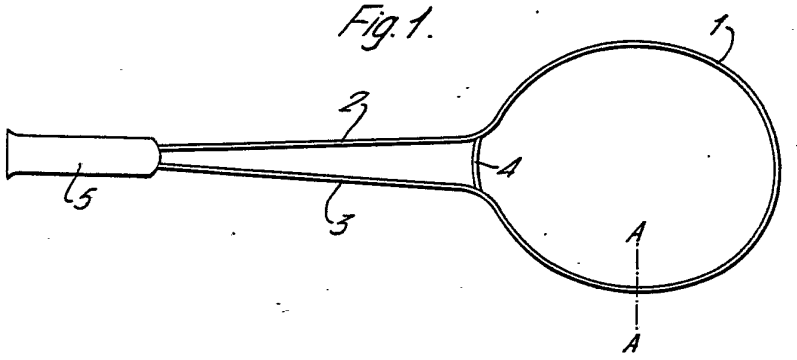

Fig.2.

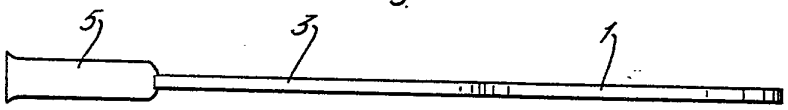

Fig.3.

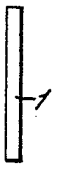

Fig.4.

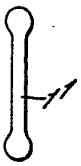

Fig.5.