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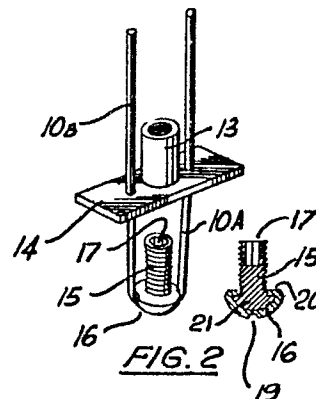
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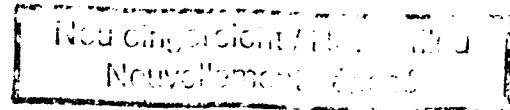
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54 **A tensioning device for a strung racquet.**

57 The present invention relates to a tensioning device for a strung racquet (4) provided with a head (8) having a plurality of string holes (9) through which one or more strings (10) are threaded and drawn tight, said tensioning device comprising a threaded socket (13,13A) for fixing within or on said racquet head (8) between two of said string holes (9), a bolt (15) threadably engageable with said socket (13,13A), a tool engaging formation on said bolt (15) for effecting advancement along said socket (13,13A) and a cap (16) freely rotatable upon the other end of said bolt (15) for engagement with a string (10) extending between said two string holes (9) so that with said advancement of the bolt (15) an increase in string tension is effected.





A Tensioning Device for a Strung Racquet

This invention relates to strung racquets such as those used for playing tennis, squash racquets, racket ball and badminton, and more particularly it relates to a device for selective tensioning of the strings of those racquets and racquets fitted with such a device.

The tension of the strings of a racquet is of importance to a skilled player of the games of tennis, squash, etc and frequently involves a matter of personal choice. In a new racquet, or in the re-stringing of an old racquet, therefore, degrees of tension are normally specified by the player and must be complied with in production, as once strung it is difficult and/or inconvenient to re-adjust the tension. Furthermore, it is common for the tension to change during use of the racquet thus entailing similar difficulty and/or inconvenience.

It is an object of the invention to provide a tensioning device for the strings of a racquet which may be incorporated on the racquet frame for selective operation. It is a further object of the invention to provide a strung racquet fitted with such a device.

According to the invention there is provided a tensioning device for a racquet provided with a head having a plurality of string holes through which one or more strings are threaded and drawn tight, said tensioning device comprising a threaded socket for

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fixing within or on said racquet head between two
of said string holes, a bolt threadedably engagable
with said socket, a tool-engaging formation on said
bolt for effecting

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advancement along said socket, and a cap freely rotatable upon the other end of said bolt for engagement with a string extending between said two string holes so that with said advancement of the bolt an increase in tension of said string is effected.

For preference, the threaded socket is mounted with a base adapted to abut the outer periphery of the head, to said base being provided with apertures to respectively coincide with said two string holes which facilitate the string of the racquet being passed through the apertures and across the base.

In a preferred embodiment the base is elongate to extend along a portion of the periphery of the racquet head and mounts a plurality of said threaded sockets for location between other string holes, each socket having said apertures adjacent thereto.

A preferred embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

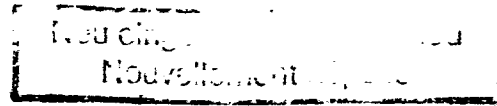
Figure 1 depicts a strung racquet incorporating one embodiment of a tensioning device of this invention;

Figure 2 is an exploded perspective view of the device forming part of Figure 1; and

Figure 3 is a perspective view similar to Figure 2 of a further embodiment of the device.

The string tensioning device of the invention is intended for tension adjustment by the application of additional strain upon a single pair of strings. However,

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the device may be provided in a form (as shown in Figure 3) wherein a plurality of devices are provided upon a common frame.

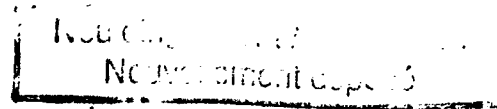
Fig. 1 depicts a strung racquet 4 having a handle 5 connected through a shaft 6 and a yoke 7 to a head 8. The head 8 has string holes 9 arranged around its periphery through which a gut, or other, string 10 or strings is threaded and drawn tight to a predetermined tension.

The racquet 4 is fitted with a tensioning device comprising an internally threaded socket 13 mounted with a base 14 adapted to abut the outer periphery of the head 8 when socket 13 is accommodated within a hole in the head between two of string holes 9. In the arrangement shown the hole in head 8 is between yoke arms 11 and 12 but the invention is not restricted to this positioning of the tensioning device. The base 14 extends to cover the two string holes 9 adjacent the hole in head 8 and is provided with apertures which coincide with the string holes to facilitate the string being passed through the apertures and across base 14.

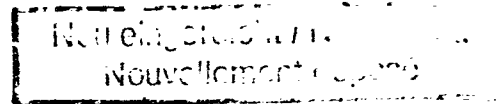
A bolt 15 is threadably engaged within the sleeve and carries a loosely fitted cap 16 which is freely rotatable with respect to the bolt 15. The cap 16 is dome shaped with an inturned peripheral edge 20 for capturing the enlarged head 21 of the bolt 15. The cap 16 is provided with a transverse slot 19 along

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which a string 10A passes before returning through
the frame head 8 to constitute a further string
10B in the racquet 4. The end 17 of the



bolt 15 may be provided with any tool-engaging formation, and preferably has an internal hexagonal recess to accept an Allen key tool.

Should tension adjustment of the strings 10 in the racquet head 8 be required an Allen key is inserted within the end 17 of the bolt 15 and by rotation for advancement along the socket 13 the cap 16 is projected from the base 14 to exert additional strain upon the strings 10A and 10B.

The embodiment illustrated in Figure 3 includes an elongated base 14A to extend along a portion of the peiphery of the racquet head and which mounts three identical threaded sockets 13A which are positioned between a respective pair of apertures 9A provided in the base 14A. With the head 8 of a racquet bored to accept the three sockets 13A, the device may be attached within the yoke 7 of the racquet 4 with adjustment provided in respect of three pairs of central strings of the racquet 4.

Whereas a preferred embodiment has been disclosed in the foregoing passages it should be understood that other forms are possible within the scope of this invention. For example, the socket 13 and base 14 may be replaced by a nut fitted into a hole in the head of the racquet.

CLAIMS:

1. A tensioning device for a strung racquet (4) provided with a head (8) having a plurality of string holes (9) through which one or more strings (10) are threaded and drawn tight, said tensioning device comprising a threaded socket (13,13A) for fixing within or on said racquet head (8) between two of said string holes (9), a bolt (15) threadably engageable with said socket (13,13A), a tool engaging formation on said bolt (15) for effecting advancement along said socket (13, 13A) and a cap (16) freely rotatable upon the other end of said bolt (15) for engagement with a string (10) extending between said two string holes (9) so that with said advancement of the bolt (15) an increase in string tension is effected.
2. A tensioning device as claimed in claim 1 wherein said threaded socket (13, 13A) is mounted with a base (14,14A) adapted to abut the outer periphery of the head, said base being provided with apertures (9A) to coincide with said two string holes (9) which facilitate the string (10) of the racquet being passed through the apertures (9A) and across the base (14,14A).
3. A tensioning device as claimed in claim 2 wherein, said base is elongate (14A) to extend along a portion of the periphery of the racquet head (8) and mounts a plurality of said threaded sockets (13A) for location between other string holes (9), each socket (13A) being positioned between said apertures (9A) thereto.
4. A tensioning device as claimed in claim 1 wherein said threaded socket comprises a nut fitted into a hole in the head (8) of the racquet (4).
5. A tensioning device as claimed in any one of claims 1 to 4 wherein said cap (16) is provided with a transverse

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slot (19) along which the string (10) passes for engagement with the cap (16).

6. A strung racquet fitted with a tensioning device as claimed in any one of claims 1 to 5.

