No. 823,028. PATENTED JUNE 12, 1906.

H. BROWN.

TENNIS RACKET.

APPLICATION FILED DEC. 26, 1905.

Fig. 1.

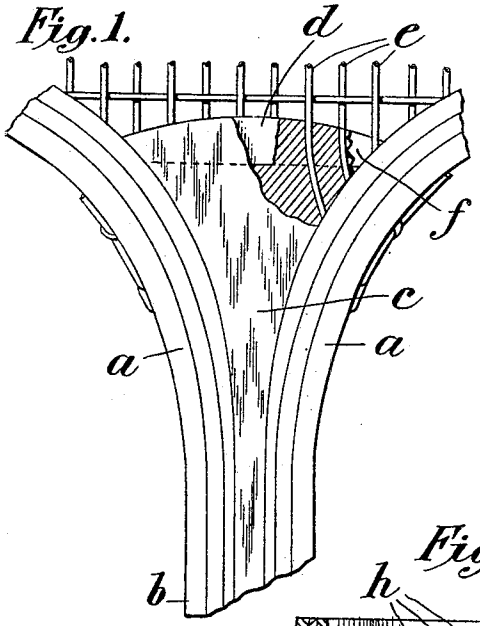


Fig. 2.

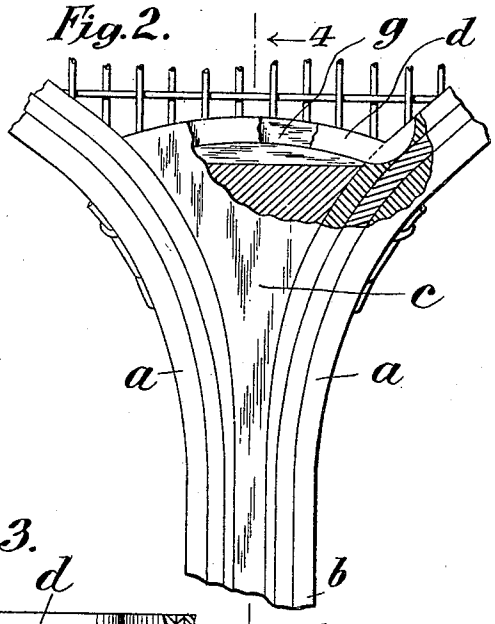


Fig. 3.

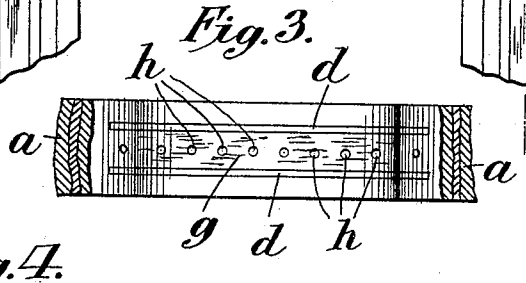


Fig. 4.

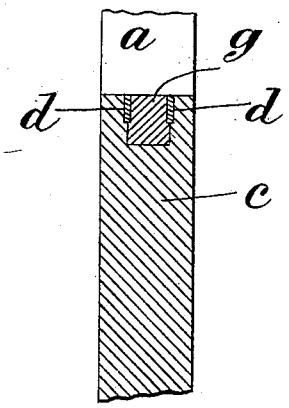
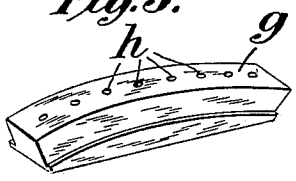


Fig. 5.



Attest:

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HORACE BROWN, OF SPRINGFIELD, MASSACHUSETTS.

TENNIS-RACKET.

No. 823,028. Specification of Letters Patent. Patented June 12, 1906.

Application filed December 26, 1905. Serial No. 293,226.

To all whom it may concern:

Be it known that I, HORACE BROWN, a citizen of the United States, and a resident of Springfield, in the State of Massachusetts, have invented certain new and useful Improvements in Tennis-Rackets, of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

As tennis-rackets are now universally constructed there is provided between the two sides of the frame near the juncture thereof with the handle a throat-piece or wedge, which is securely glued in position. Narrow reinforcing-pieces are sometimes set into the exposed end of the wedge, entering also the frame members and preferably extended above or beyond the wedge. Such niceties of balance are now required in high-class tennis-rackets that the wedge is necessarily made of a light-weight wood, and the grain thereof necessarily runs parallel with the axis of the handle. Furthermore, the employment of light-weight wood is desirable, because it is more open-grained than heavy wood, and therefore takes glue better. The guts of the middle portion of the racket are carried through the wedge from the outer sides of the frame, and as they are carried through the wedge at a greater or less angle there is a tendency to split the wedge, especially near the sides thereof. The light-weight wood which is necessarily employed for the wedge is somewhat coarse-grained and has very little capacity to resist this tendency. The result is that the side portions of the wedge are frequently split off, reducing the efficiency of the wedge, injuring the appearance of the racket, and permitting the guts to slacken. It is the object of this invention to overcome the difficulty above described, and in accordance therewith the wedge, of mahogany or other suitable wood of light weight, is provided in its exposed edge with a string-piece of suitable material, preferably of a close-grained wood, such as holly, set into the wedge and extended from frame to frame. The string-piece is of small dimensions, and the weight of the wood employed is therefore inconsiderable and may be neglected in determining the balance of the racket. The material of which it is made resists the tendency of the string tension to split off pieces at the ends, and even if the particular piece of wood employed in any case should not be as close-grained as desirable the fact that the grain runs lengthwise of the piece itself insures against the splitting off at the ends.

The invention will be more fully explained hereinafter with reference to the accompanying drawings, in which it is illustrated, and in which—

Figure 1 is a view in elevation of a portion of a tennis-racket of ordinary construction, showing particularly the wedge and the adjacent portions of the frame and guts. Fig. 2 is a similar view of a portion of a racket which has the invention applied thereto. Fig. 3 is an edge view of the wedge, showing the adjacent portions of the frame in section. Fig. 4 is a view in section on the plane indicated by the line 4 4 of Fig. 2. Fig. 5 is a view in perspective of the string-piece.

As shown in both Figs. 1 and 2, the frame members *a a* are brought together below the bow in the handle *b*. At the point where they approach each other in the throat of the bow is secured a wedge *c*, which is glued in place. The wedge and the frame nearby are reinforced in high-class rackets by reinforcing-pieces *d*, which are set into the edge of the wedge and into the side frames, as shown most clearly in Fig. 2. The grain of the wedge *c* runs lengthwise, and, moreover, as indicated in Fig. 1, the guts *e* of the central portion of the racket pass through the wedge at a greater or less angle. The result is that the wedge is frequently split out near the frames between the reinforcing-pieces *d*, as shown at *f* in Fig. 1, whereby the frames are deprived of the full support of the wedge, the guts are slackened and permitted to draw out of line, and the appearance of the wedge is injured. Accordingly, as represented in Figs. 2, 3, 4, and 5, a string-piece *g*, of any suitable material, preferably a close-grained wood, such as holly, is set into the wedge and is extended from side to side thereof to make contact with the frames. The grain of the wood of the string-piece is preferably lengthwise of the piece, as indicated in Figs. 2 and 5, and the piece is provided with holes *h* for the passage of the guts. In the manufacture of the racket the string-piece *g* is preferably first set into the wedge, and thereafter the cuts are made for the reception of the reinforcing-pieces *d d*, such cuts being formed partly in the string-piece and partly in the wedge, as indicated in Figs. 2, 4, and 5.

It will be observed that the string-piece is comparatively small, so that its weight does not materially affect the balance of the

racket. Any suitable material which is well adapted to resist the splitting tendency of the strings can therefore be selected and can be so disposed as to the direction of its grain as to accomplish most efficiently the desired purpose.

I claim as my invention—

1. In a tennis-racket, the combination with a frame, wedge and guts, of a separate string-piece of wood with the grain running lengthwise of the piece adapted to resist the splitting tendencies of the guts and set into the edge of the wedge and provided with holes for the passage of the guts, substantially as described.

2. In a tennis-racket, the combination with a frame, a wedge having its grain parallel with the axis of the racket, and guts, of a string-piece of close-grained wood with the grain running lengthwise of the piece, set into the wedge between the frames and provided with holes for the passage of the guts, substantially as described.

3. In a tennis-racket, the combination with a frame, a wedge having its grain parallel with the axis of the racket and guts, of an independent string-piece of wood with the grain running lengthwise of the piece set into the wedge and reinforcing-pieces set into the wedge on opposite sides of the string-piece and into the frame, substantially as described.

4. In a tennis-racket, the combination with a frame, a wedge-piece having its grain parallel with the axis of the racket and guts, of a string-piece of close-grained wood set into the wedge with the grain lengthwise of the piece and provided with holes for the passage of the guts, and reinforcing-pieces set into the wedge on opposite sides of the string-piece and into the frame, substantially as described.

This specification signed and witnessed this 21st day of December, A. D. 1905.

HORACE BROWN.

In presence of—

JOHN NUTTALL,

F. C. BREAKSPEAR.