June 16, 1925. 1,541,828

W. A. LARNED

TENNIS RACKET AND THE LIKE

Filed Jan. 30, 1922

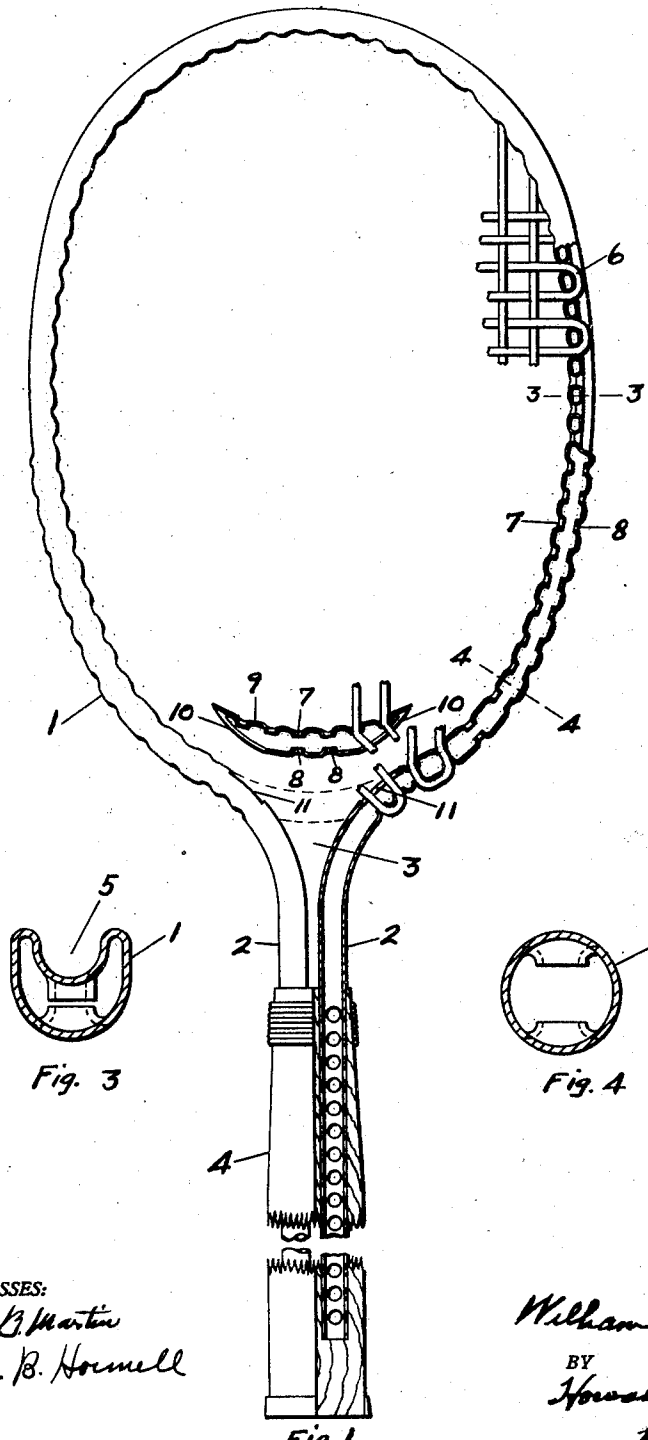

Fig. 1

Fig. 3

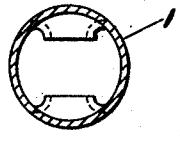

Fig. 4

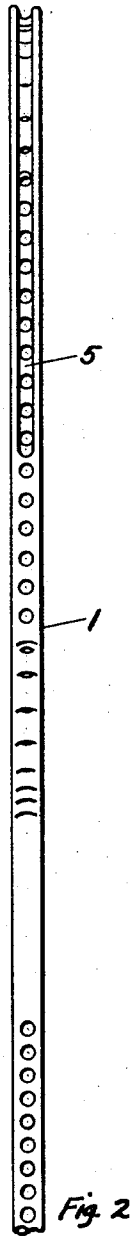

Fig. 2

WITNESSES:

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Patented June 16, 1925. 1,541,828

UNITED STATES PATENT OFFICE.

WILLIAM A. LARNED, OF SUMMIT, NEW JERSEY, ASSIGNOR TO THE DAYTON STEEL RACQUET COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO.

TENNIS RACKET AND THE LIKE.

Application filed January 30, 1922. Serial No. 532,754.

To all whom it may concern:

Be it known that I, WILLIAM A. LARNED, a citizen of the United States, residing at Summit, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Tennis Rackets and the like, of which the following is a specification.

The principal object of my invention is to provide a tennis racket having a tubular metal frame to the throat portion of which a new and useful bridge-piece is adapted to be welded. This bridge-piece will thoroughly re-inforce the frame and receive the stringing in such a manner that the latter will not be scraped or cut by passing through numerous holes. Instead, the stringing will pass from the inside to the outside holes in the welded pieces, through registering slots whose edges the strings need not touch to be worn down by them.

In the accompanying drawings, Figure 1 is a plan view, partly in section, of the tubular metal frame and bridge-piece of my improved tennis racket. Figure 2 is a side elevational view of the same. Figure 3 is a cross sectional view taken on the line 3—3 of Figure 1 to show the grooved outer periphery of the tubular frame. And Figure 4 is a cross sectional view taken on the line 4—4 of Figure 1 to show the inwardly beveled string receiving holes in the tubular frame.

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

In the accompanying drawings illustrating my improvements, the numeral 1 designates a tubular tennis racket frame constructed of carbon, heat-treated steel or other metallic material and bent into the shape shown in Figure 1. This tubular frame 1 terminates in two ends 2, 2 which, after curving inwardly at the throat 3, project in straight lines into a wooden handle 4. Those parts of the ends of the tubular frame that project into the handle 4 are apertured to lighten them, as shown in Figures 1 and 2.

Suitably formed in the outer periphery of that part of the head of the tubular frame 1 which is likely to touch the ground when a ball is hit on the latter, is a groove 5 to receive the bends of a stringing 6 for the purpose of preventing it from being scraped or cut through contact with the ground. The stringing 6 is strung through holes 7 that are bored and depressed from the inside of the frame so as to bevel inwardly, and holes 8 that are bored and depressed from the outside of the frame so as to bevel inwardly. The stringing is thus received in such a manner as to prevent the formation in it of sharp bends that would cause it to wear and break. (See Figures 1, 3 and 4.) Furthermore, by forming the holes 7 and 8 so as to bevel inwardly, there is presented to the stringing a cross sectional part of the frame which is adapted to be easily compressed by that portion of the stringing which encircles it, to impart a certain resiliency to that stringing when it receives the impact of the ball, in addition to the resiliency imparted to it by the yielding property of the oval head of the frame as a whole.

Referring to Figure 1, the numeral 9 designates a crescent shaped, hollow, bridge-piece which is preferably constructed of the same metallic material as the tubular frame proper. This bridge-piece also contains the inwardly-beveled, string-receiving holes 7 in its concave portion. In its convex portion it has two central inwardly-beveled string-receiving holes 8, 8 between two elongated slots 10, 10 formed near the ends of said portion of the bridge-piece. (See Figure 1.)

The bridge-piece 9 is adapted to be welded to the downwardly curved parts of the tubular frame 1, at points where the slots 10, 10 will register with, or come over, similar slots 11, 11 formed in that frame. (See dotted lines in Figure 1.) It is thus necessary to pass the stringing through but two inwardly beveled holes in the welded portions, to wit, the holes 7 in the concave part of the bridge-piece and the holes 8 in the outer periphery of the tubular frame, said stringing passing from one hole to the other through the registering slots 10 and 11 without touching the metal forming their edges. The stringing is thus saved from injury that might be done to it by passing through four inwardly beveled holes instead of two. It is thus seen that my improved bridge-piece when welded to the tubular frame, not only reinforces the latter, but protects the stringing which is connected to that frame through the bridge-piece.

Having described my invention, I claim:

1. A tennis racket comprising a tubular metal frame, a tubular metal bridge-piece

connected to said frame at its throat portion, and a stringing for said frame, said tubular bridge-piece and tubular frame containing large registering holes in their meeting walls to permit the passage of the stringing therethrough without injury to the same.

2. A tennis racket comprising a tubular metal frame, and a crescent-shaped tubular metal bridge-piece adapted to be welded to said frame, said bridge-piece containing inwardly beveled string receiving holes in its outer concave portion, and inwardly-beveled holes at the center, and elongated slots at the side, of its inner convex portion.

3. A tennis racket comprising a tubular metal frame, a stringing for said frame, and a tubular metal bridge-piece adapted to be welded to said frame, said bridge-piece and tubular frame containing elongated registering slots in their inner walls to permit the passage of the stringing therethrough without frictional contact with the same.

In testimony whereof I have hereunto set my hand this 26 day of January, 1922.

WILLIAM A. LARNED.

Witness:
HOWARD S. SMITH.