(No Model.)

G. E. SHEPARD.

TENNIS NET.

No. 394,138. Patented Dec. 4, 1888.

Fig. 1.

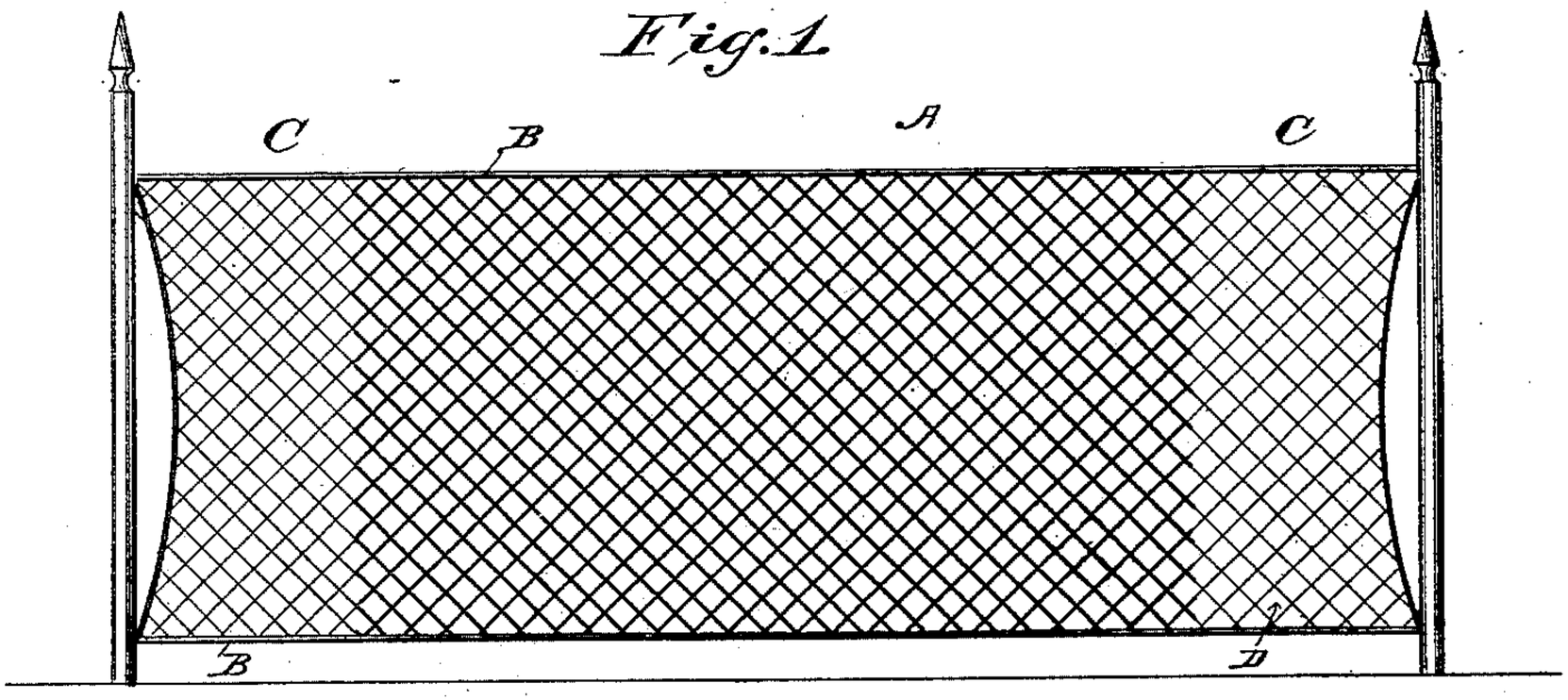


Fig. 2.

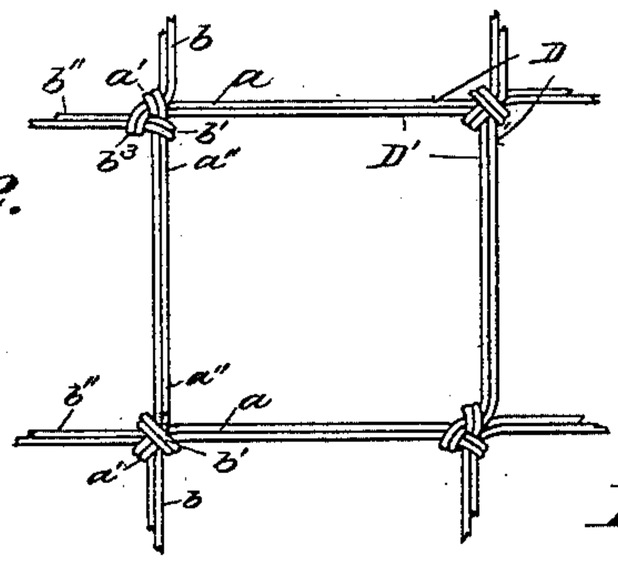


Fig. 3.

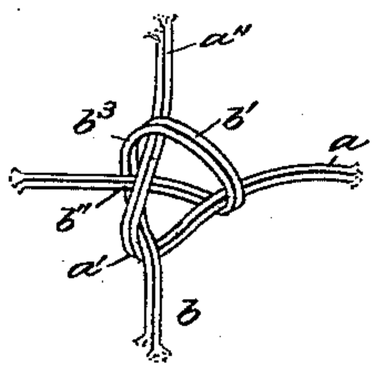
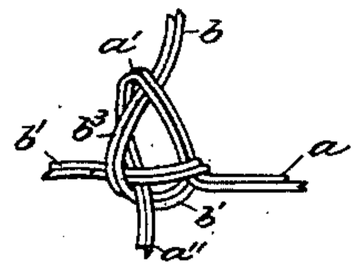


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE E. SHEPARD, OF JERSEY CITY, NEW JERSEY.

TENNIS-NET.

SPECIFICATION forming part of Letters Patent No. 394,138, dated December 4, 1888.

Application filed July 19, 1888. Serial No. 280,390. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. SHEPARD, a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Tennis-Nets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

The object of this invention is to provide a net that shall be stronger, more durable, and more attractive in appearance than the ordinary tennis-net. These objects are attained without thickening the fabric in any part by forming the middle portion of the net with double the usual amount of cord arranged to give double the usual number of meshes, each of approximately the usual size.

In the drawings, Figure 1 shows the complete net in position for service. Fig. 2 is an enlarged view of one of the meshes of the middle portion. Figs. 3, 4 show opposite sides of one of the flat knots at the mesh-angles loosened, so that the entire course of each cord may be apparent.

The net A, as a whole, is supported in the usual way by cords B, secured in any convenient manner to the upper and lower edges of the net. The end portions, C, of the net consist of single cords knotted to form polygonal meshes D; but at a suitable distance from each end a second set of meshes, D′, are introduced just within and in the plane of the meshes D. Each opening in the middle section of the net is thus bounded on each side by two parallel contiguous cords, of which all are in the same plane and alike exposed to the action of the ball. Now, however the ball may strike, all those portions of the cords lying within an area nearly equal to a great circle of the ball come in contact with the ball's surface. Necessarily, the shock of impact being distributed so perfectly, both the wear and the strain at any given point are slight, and the net is correspondingly durable. In fact, thus doubling the amount of cord in the middle causes much more than twofold serviceability. The manner of forming this portion of the net to secure permanency in the relative position of the outer and inner meshes, together with a perfect distribution of strain, is shown in Figs. 3, 4. The double cord *a* is folded upon itself without twisting and carried away in the direction of *a″*; the double cord *b* is passed through the loop *a′* thus formed, deflected and carried around both branches of said loop at *b′*, and thence between said loop and the part b^3 of its own body, all without any twisting whatever of either double cord. If, now, the knot be drawn close, its two sides appear as shown in the similarly-lettered parts of Fig. 2.

Using the two parallel cords as a flat band gives the middle of the net the appearance at a little distance of being made of narrow tapes, and secures flat knots much neater in appearance than even the same knot formed of two intertwisted cords. This arrangement secures much greater durability than is found when the two cords are twisted together, for the reason that the wear is distributed over every part of each cord, and while the tensile strength of each pair of cords is somewhat less than when twisted it is thought that the greater elasticity causes a distribution of the ball's force among a greater number of cords, and that, therefore, for the particular strain to which the net is subjected by the ball this form is stronger than any other.

What I claim is—

A tennis-net having its end portions composed of single cords interlocked to form meshes, each bounded by a single cord, and its middle portion composed of cords interlocked to form meshes, each bounded on all sides by two cords forming an outer mesh and a smaller mesh just within and in the plane of the first, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE E. SHEPARD.

Witnesses:

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ISAAC B. POTTER.