R. S. BLAIR.

SUSPENSION FOR TENNIS NETS.

APPLICATION FILED FEB. 23, 1916. RENEWED MAR. 29, 1919.

1,322,754. Patented Nov. 25, 1919.

FIG. 1

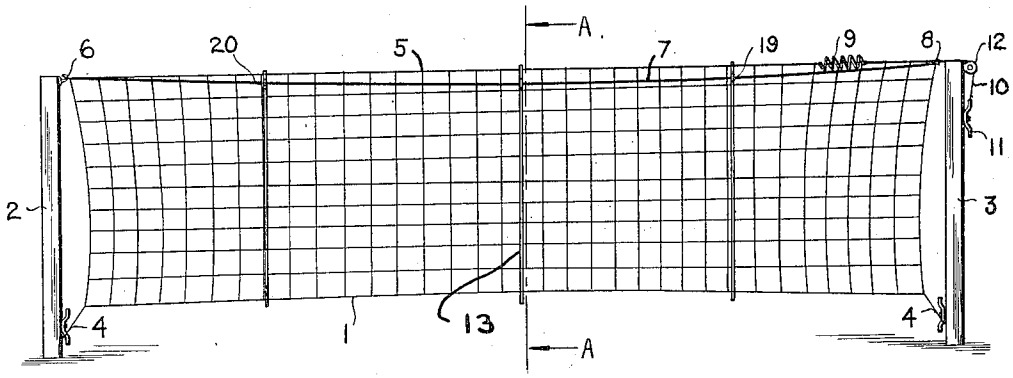


FIG. 2

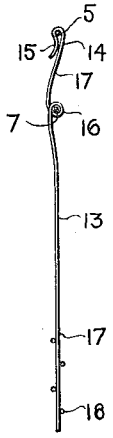
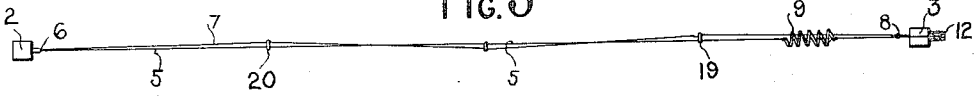


FIG. 3



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SUSPENSION FOR TENNIS-NETS.

1,322,754. Specification of Letters Patent. **Patented Nov. 25, 1919.**

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To all whom it may concern:

Be it known that I, ROBERT S. BLAIR, a citizen of the United States, and resident of South Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Suspensions for Tennis-Nets, of which the following is a specification.

This invention relates to means for suspending tennis nets and the like. One of the objects thereof is to provide means of the above type of simple and practical construction and efficient action. Another object is to provide convenient and inexpensive means for stretching a flexible member in a substantially straight form. Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction and action, the combinations of elements and arrangement of parts, which will be exemplified in the matter hereinafter described, and the scope of the application of which will be indicated in the claims.

In the accompanying drawing in which is shown one of various possible embodiments of this invention—

Figure 1 is a side elevation.

Fig. 2 is a sectional view taken substantially on the line A—A of Fig. 1.

Fig. 3 is a plan of the parts shown in Fig. 1.

Similar reference characters refer to similar parts throughout the several views of the drawing.

Referring now in detail to Fig. 1, there is shown a tennis net 1 supported by the end supports or posts 2 and 3. The lower corners of the net are stretched in position and connected to the posts by the lines 4 and along the upper edge is the usual top line or strip of canvas 5. This may be secured at the point 6 to the post 2 at one end, and at the opposite end is joined to a line 7 as at 8.

It may here be noted that the term "line" is used in a broad sense to denote any flexible or semi-flexible member adapted to stand a tensile stress.

Interposed in the line 5 there is preferably connected a spiral spring 9 in such manner that as the former is stretched the pull will be transmitted through the spring.

The line 7 is connected either to the post 2 or to the line 5 at 6 and beyond the point 8 is extended as at 10 over the post 3 and secured to a suitable cleat 11. The post 3 may be provided if desired with a pulley 12 at its upper end, over which the line portion 10 passes as the net is stretched.

Intermediate the ends of the net as at the center portion there is provided a holding member 13, which may be formed of heavy spring steel wire. This member, as best shown in Fig. 2 of the drawing, is provided with a loop 14 at its upper end, which snaps over the upper line 5, and comprises a depending portion 15, which tends to hold flat the cloth if this upper line takes the form of a fabric binding at the upper edge of the net. From the loop 14 the wire passes downwardly to form an eye 16, through which the line 7 is loosely passed. The connecting portion 17 of the wire is preferably so shaped as to bring this wire almost under the line 5. From the eye 16 the wire passes downwardly as at 17, and is woven through the net strands 18 at the lower edge of the net. As this wire member is substantially rigid it tends to maintain an upright position when in use.

There are preferably provided additional upright members 19 and 20, which are substantially identical with the member 13, except that their portions 17 are shorter, thus spacing the lines 5 and 7 to a less degree at such points.

Although three of these devices are here shown it is to be understood that any desired number may be employed, excellent results being obtained from using two only, both alike, and each spaced one-third of the length of the net from its ends.

Although the several eyes 16 may be positioned substantially under the line 5, the slight extent to which they are offset from the vertical plane should be alternately on opposite sides, as indicated in exaggerated form in Fig. 3 of the drawings.

In the use of this apparatus the line 7 may be given a slightly greater length between the points 6 and 8 than the line 5 comprehended between those points with the spring 9, if it be used, unstretched. The lines 5 and 7 being preferably permanently connected together at the points 6 and 8, with the several supporting devices in position, the net is secured as usual at the point 6 and by the ties 4. The line portion 10 is then stretched over the pulley 12 and secured at the cleat 11. The pull, which need not be

extreme, quickly draws the line 7 to the position indicated in Fig. 1 of the drawing, and this raises up the line portion 5 with the upper edge of the net at the several supporting devices and so relieves the latter of the effect of weight, that it is readily stretched into a substantially straight line. The line 5 may, if desired, be so proportioned that when it is stretched straight, as shown in the drawings, the spring 9 will be slightly expanded, thus insuring a proper tautness in this line.

There is no real probability of the line 5 extending above the horizontal with the parts properly proportioned, even with great pull upon the line 10, for although the tension in the line 5 aids in raising it to the horizontal this same tension opposes any raising above the horizontal.

The supports are held upright without engagement with the ground by the long leverage of their lower arms, and do not extend to any appreciable extent above the upper edge of the net.

A slight increase in stability is gained by slightly staggering the eyes of the supports, as indicated in Fig. 3, but this is not essential.

It will thus be seen that there is provided simple and cheap apparatus in which the objects of this invention are achieved, and that by this means a tennis net or the like may be effectively held in a substantially horizontal line without great effort or strain upon the parts.

As various changes might be made in the above construction, and as the invention might be embodied in various forms of apparatus, it is intended that all matter herein described or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

Having described my invention, I claim—

1. In a device of the class described, in combination, means adapted to engage the upper edge portion of a net and extend below said edge and a transverse supporting member connected with said first means below said edge portion to support the same.

2. In a device of the class described, in combination, means adapted to engage the upper edge portion of a net and extend below said edge, a transverse supporting member connected with said first means below said edge portion to support the same, and means extending below said point of connection and tending to maintain said first means in a predetermined position.

3. A supporting line spaced from the upper edge of a net at an intermediate portion thereof, substantially rigid means extending from said spaced portion upwardly and adapted to support the upper edge of the net, and means mounting said line to permit it to be tautened.

4. In a device of the class described, in combination, a supporting line spaced from the upper edge of the net at an intermediate portion thereof, and substantially rigid means extending from said spaced portion upwardly and adapted to support the upper edge of the net and downwardly to tend to hold itself in an upright plane.

5. A supporting device comprising a portion adapted to be secured to the upper edge of the net, a lower portion adapted to receive a supporting line, and a lower portion adapted to make engagement with the lower portion of the net.

6. A supporting device for tennis nets and the like comprising a portion adapted to be removably secured to the upper edge of the net, a lower portion adapted to make a detachable engagement with the lower portion of the net, and an intermediate eye or loop for a supporting line, said eye being positioned nearer the first portion than the second portion of said device.

7. In a device of the class described, in combination, a supporting line spaced from the upper edge of the net at an intermediate portion thereof, and a substantially rigid device connected with said spaced portion of said supporting line and extending upwardly to engage and support the upper edge of the net, and downwardly into interlocking relation with the lower portion of the net.

8. In a device of the class described, in combination, a pair of end supports, means mounting a net on said end supports, and comprising a line spaced from the upper edge of the net at an intermediate portion thereof and supporting means interposed between said line at said spaced portion and said upper edge, and means tending to maintain said supporting means in an upright position.

9. In a device of the class described, in combination, a pair of end supports, means mounting a net on said end supports and comprising a line spaced from the upper edge of the net at an intermediate portion thereof and supporting means interposed between said line at said spaced portion and said upper edge, means tending to maintain said supporting means in an upright position, and a spring interposed in the upper edge portion of the net.

10. In a device of the class described, in combination, a pair of end supports, means mounting a net on said end supports comprising a line spaced from the upper edge of the net at an intermediate portion thereof and a plurality of supporting means interposed between said line at said spaced portion and the upper edge of the net, one of said supporting means being more remote from said end support than the other and of greater effective length and means

adapted to maintain said supporting means in an upright position.

11. In a device of the class described, in combination, a pair of end supports means mounting a net on said end supports comprising a line spaced from the upper edge of the net at an intermediate portion thereof and a plurality of supporting means interposed between said line at said spaced portion and the upper edge of the net, and means adapted to maintain said supporting means in an upright position.

12. A supporting device for tennis nets and the like formed of a unitary substantially integral member having at its upper end a resilient portion adapted to snap over and grip the upper edge of the net, and extending downwardly in substantially rigid form, first into an eye and then into a portion adapted to interlock with the lower portion of the net.

13. A supporting device for tennis nets and the like of substantially rigid form and having its upper end bent on itself to form a resilient loop, the lower portions of said loop being closer one to another than the upper portions, whereby said device is adapted to grip and hold upwardly the upper edge portion of the net without projecting materially above the same.

14. In combination a pair of end supports, means mounting a tennis net on said end supports and a plurality of devices engaging the upper edge of said net between said end supports, and extending from said upper edge downwardly upon alternately opposite sides of the net.

15. In a device of the class described, in combination, a line stretched along the net and connected therewith at a plurality of points downwardly spaced from its upper edge and at an intermediate point downwardly spaced to a greater extent from its upper edge.

16. A flexible member horizontally disposed, a line extending substantially lengthwise of said member and substantially beneath the same, a spacing device between said line and said member at an intermediate portion of the latter and means adapted to hold said spacing device in a substantially upright position.

17. Supporting means for a tennis net comprising a pair of end supports, an upper edge line stretched between said supports, a second line, means securing said second line to the net at a point intermediate of the net and downwardly spaced from its upper edge, and means securing said second line adjacent said end supports at points higher than said point of adjustment to said net.

18. Supporting means for a tennis net comprising a pair of end supports, an upper edge line stretched between said supports, a second line, a detachable device secured to said net at an intermediate point spaced from its upper edge and providing an eye through which said second line passes, and means securing the ends of said second line in position at points higher than said eye.

19. Supporting means for a tennis net comprising a pair of end supports, an upper edge line stretched between said supports, means secured to said net at an intermediate point and providing an eye downwardly spaced from its upper edge, and a second line secured at one end to a point higher than said eye, thence passing through said eye, and thence extending upwardly and secured to said first line.

20. In a device of the class described, in combination, a tennis net, means adapted to support the upper edge of said net, means intermediate the ends of said net and spaced from its upper edge adapted to make connection with a line, and a line passing through said last means and extending in each direction to a point of support at a higher level.

21. In a device of the class described, in combination, a tennis net, and a device secured to said net having a part adapted to make connection with a line spaced from the upper edge of said net and a part engaging said net beneath said point of connection.

22. In a device of the class described, in combination, a tennis net and a plurality of devices secured to said net intermediate its ends, each provided with a part for making connection with a line, each of said parts being spaced from the upper edge of the net, and the parts toward the ends of the net being so spaced to a lesser degree than intermediate parts.

23. In a device of the class described, in combination, a tennis net, a line stretched along the upper edge of said net, and a line secured to said net at a point intermediate its ends and spaced from the upper edge and extending upwardly toward each end, one of said lines having a spring interposed therein.

Signed at South Orange, in the county of Essex and State of New Jersey, this 12th day of February, A. D. 1916.

ROBERT S. BLAIR.