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(54) **Portable net support assembly for racket and ball games.**

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Description

This invention relates to a portable net support assembly for racket and ball games. It has particular, but not exclusive application, to tennis nets, especially for use in playing the lawn tennis based games of Short or Compact Tennis (Trade Marks).

The posts which support tennis and like racket and ball game nets are usually permanently anchored (eg. in concrete) to oppose the bending movements applied thereto by the nets when the latter are tensioned to the required height for play. In certain installations, the posts may be releasably received in sockets but the whole support net assembly is not portable. Attempts to provide a portable racket and ball game net support assembly have not been successful to date.

US-A-3998455 discloses a free-standing portable tennis net support assembly comprising telescopically expandable stretcher means interconnecting a pair of net anchoring means. The net anchoring means are bent to provide a horizontal short arm portion, a horizontal long arm portion, a vertical portion and a vertical strut member. The stretcher means and interconnected net anchoring means are disposed in an upstanding position on a playing surface by use of footing means. Each of the footing means comprises a tubular member and an end flange portion. A "T"-shaped member allows the footing means to be slidably positioned along long arm portions between the vertical strut members. The net is tensioned by moving the upper portions of the net anchoring means towards each other with a resultant flexure of the stretcher means towards the playing surface. It is stated that the footing means act as a "quasi fulcrum so that, despite its minimal weight, the net supporting system is firmly anchored with respect to the playing surface in use".

The present invention provides a portable net support assembly for a racket and ball game, said assembly including:

a pair of self-supporting posts for standing on a playing court surface and

strut means interconnecting the posts and spaced above the supporting court surface;

characterised in that foot means depend from the strut means at the centre thereof to contact the court surface so as to provide a fulcrum to oppose bending movements applied to the posts upon tensioning a net between said posts.

The invention also provides a portable net assembly for a racket and ball game comprising a portable net support assembly of the invention and a net supported by and extending between the posts thereof.

Usually, at least one of the posts will include winding means for tensioning a net between the

posts.

Preferably, the posts have detachable feet and/or are tubular to enable them to be filled with ballast, eg. sand.

Suitably each post has a horizontal arm adjacent its lower end and is braced by an oblique member interconnecting the post upright and said arm. Usually, the horizontal arms will form part of or be connected to the strut means.

In order to facilitate storage and transport, the strut means preferably is collapsible and comprises two or more telescopically or otherwise axially connectable members, especially tubular members. In this case, the horizontal arms, if present can be integral with the terminal members of the collapsible strut means.

Preferably, net engaging means, for example hooks are provided at spaced intervals along the strut means to secure the net thereto. When the strut means is collapsible, it is especially preferred that net-engaging means are provided on each of the strut members.

The following is a description, by way of example only and with reference to the accompanying drawings, of a presently preferred embodiment of the invention. In the drawings:-

FIG. 1 shows a net support assembly, as assembled, with a net shown in dashed lines; and

FIG. 2 is an exploded view of the components of said assembly.

The assembly comprises a pair of posts 10, 11, each having a tubular upright 12, a horizontal arm 13 and an oblique brace 14 interconnecting said upright and arm.

A winding mechanism 15 (with a ratchet) is mounted on one post 10 and an anchor hook 16 is provided on the other post 11. Lower net cord hooks 17 are provided on the arms 13.

Each post has a detachable foot 18 of hollow box section closed by end caps 19 and a peg 20 received in frictional engagement in the lower ends of the post upright 12. The feet 18 may be filled with ballast, eg. sand, if so desired.

The arms 13 are joined by a strut formed of six tubular members 19-24 interconnected by suitable male/female friction couplings. As shown in FIG. 1 the tubular members are aligned with (and connected to) the arms 13 and are spaced above the court surface. A foot 25 is formed integrally with tubular section 21 and contacts the court surface.

When a net 26 is attached to the posts 10, 11 and the winding mechanism 15 is operated, the tension in a top cord 27 of the net 26 tends to pull the uprights 12 inwardly (and would do so if the posts were not restrained).

The pivotal movement of the posts 10, 11 about the feet 18 is opposed by gravitational movement as the posts seek to pivot upwardly about the

foot 25, the tubular members being rigid under tension.

The support assembly and net become balanced in tension when the net is at the correct playing height. If further tension is applied to the net to raise it further, this will tend to overload the tubular sections and they will tend to bow in the horizontal direction, indicating that too much tension has been applied to the net.

As stated above, the tension in the net will tend to pull the posts upwardly and inwardly but as this movement must be about the foot 25 as a fulcrum, the weight of the posts 10, 11 being raised about a relatively long lever arm, will oppose this movement and the uprights will remain vertical. In this manner, heavy bases or feet for the posts are not required.

By varying the dimensions the support assemblies can be used for tennis, volley, or badminton or other racket and ball sports. One particularly suitable application is for the tennis-based game operating under the Trade Mark "COMPACT TENNIS", in which case the posts will be 80-100 cm high and spaced 6-8 m apart.

As the components can be made from eg. tubular steel, aluminium or plastics material and the components are easily coupled together, the support assembly can be compactly packed for transport and easily assembled on site (and disassembled and packed for further transport).

The winding mechanism 15 can be replaced by one located within the post 12 in the manner of a conventional tennis net support post. Further, hooks 17 can be, and preferably are, provided on each strut member 19-24.

Claims

1. A portable net support assembly for a racket and ball game, said assembly including:
 - a pair of self-supporting posts (10,11) for standing on a playing court surface and
 - strut means (19-24) interconnecting the posts (10,11) and spaced above the supporting court surface;
 - characterised in that foot means (25) depend from the strut means (19-24) at the centre thereof to contact the court surface so as to provide a fulcrum to oppose bending movements applied to the posts (10, 11) upon tensioning a net (26) between said posts (10, 11).
2. An assembly as claimed in Claim 1, wherein the posts (10, 11) have tubular detachable feet (18) adapted to be filled with ballast.
3. An assembly as claimed in Claim 1 or Claim 2, wherein each post (10, 11) has a horizontal

arm (13) adjacent its lower end and braced by an oblique member (14) interconnecting the post upright (12) and said arm (13).

4. An assembly as claimed in any one of the preceding claims, wherein the strut means is collapsible and comprises two or more telescopically or otherwise axially connectable members (19-24).
5. An assembly as claimed in Claim 4, wherein the posts (10, 11) have respective horizontal arms (13) which are integral with the terminal members of said collapsible strut means.
6. An assembly as claimed in any one of the preceding claims, wherein net engaging means (17) are provided at spaced intervals along the strut means (19-24) to secure the net (26) to said means.
7. An assembly as claimed in Claim 4, wherein net-engaging means (17) are provided on each of the strut members (19-24).
8. A portable net assembly for a racket and ball game comprising a portable net support assembly as claimed in any one of the preceding claims and a net supported by and extending between the posts thereof.

Patentansprüche

1. Tragbarer, zusammensetzbarer Netzträger für Spiele mit einem Ball und/oder einem Schläger, mit:
 - einem Paar selbsttragender Ständer (10,11) zum Aufstellen auf einer Spielplatzfläche und Verstrebungsmitteln (19 - 24), die die Ständer (10,11) verbinden und gegenüber der Platzfläche beabstandet sind;
 - dadurch gekennzeichnet,**
 - daß vom Zentrum der Verstrebungsmittel (19 - 24) Fußmittel (25) zum Kontakt mit der Platzfläche herabhängen, um so einen Drehpunkt zu schaffen, der dem durch die Spannung eines Netzes (26) auf die Ständer (10,11) ausgeübten Biegemoment entgegenwirkt.
2. Netzträger nach Anspruch 1, bei dem die Ständer (10,11) abnehmbare, röhrenförmige und mit Ballast füllbare Füße (18) aufweisen.
3. Netzträger nach Anspruch 1 oder 2, bei dem jeder Ständer (10,11) an seinem unteren Ende einen horizontalen Arm (13) aufweist, der durch ein schräges Teil (14) versteift wird, das die senkrechte Stütze (12) und den Arm (13)

verbindet.

4. Netzträger nach einem der vorhergehenden Ansprüche, bei dem die Verstrebungsmittel zusammenlegbar sind und zwei oder mehr teleskopartig oder auf andere Weise axial verbindbare Teile (19 - 24) aufweisen. 5
5. Netzträger nach Anspruch 4, bei dem die Ständer (10,11) jeweils horizontale Arme (13) aufweisen, die mit den Abschlußteilen der zusammenlegbaren Verstrebungsmittel integrierbar sind. 10
6. Netzträger nach einem der vorhergehenden Ansprüche, bei dem Netzverbindungsmittel (17) in räumlichen Intervallen entlang der Verstrebungsmittel (19 - 24) angebracht sind, um das Netz (26) mit diesen Mitteln zu sichern. 15
7. Netzträger nach Anspruch 4, bei dem Netzverbindungsmittel (17) auf jeden der Verstrebungsmittel (19 - 24) angebracht sind. 20
8. Tragbarer, zusammensetzbarer Netzträger für Spiele mit einem Ball und/oder einem Schläger, bestehend aus einem tragbaren, zusammensetzbaren Netzträger nach einem der vorhergehenden Ansprüche und einem durch die Träger gehaltenen und zwischen den Trägern sich erstreckenden Netz. 25

Revendications

1. Ensemble portable de support de filet pour un jeu de raquettes et de balle, cet ensemble comprenant: 35
 - une paire de poteaux autoporteurs (10, 11) destinés à se dresser sur la surface d'un terrain de jeu, et 40
 - des moyens d'entretoisement (19-24) qui relient les poteaux (10, 11) et sont à distance au-dessus de la surface de support du terrain; 45
 - caractérise en ce que des moyens formant pied (25) font saillie vers le bas sur les moyens d'entretoisement (19-24), au milieu de ceux-ci, pour prendre contact avec la surface du terrain et constituer ainsi un point d'appui qui s'oppose aux mouvements de flexion exercés sur les poteaux (10, 11) au moment où un filet (26) est tendu entre lesdits poteaux (10, 11). 50
2. Ensemble selon la revendication 1, dans lequel les poteaux (10, 11) comportent des pieds tubulaires détachables (18) susceptibles d'être remplis de lest. 55

3. Ensemble selon la revendication 1 ou 2, dans lequel chaque poteau (10, 11) comporte un bras horizontal (13) à proximité de son extrémité inférieure et est maintenu rigide par une pièce oblique (14) qui relie le montant (12) du poteau audit bras (13).
4. Ensemble selon l'une quelconque des revendications 1 à 3, dans lequel les moyens d'entretoisement sont démontables et comprennent deux ou plusieurs pièces (19-24) qui peuvent être assemblées axialement, par emboîtement ou autrement.
5. Ensemble selon la revendication 4, dans lequel les poteaux (10, 11) comportent des bras horizontaux respectifs (13) qui sont formés d'une seule pièce avec les pièces d'extrémité desdits moyens d'entretoisement démontables.
6. Ensemble selon l'une quelconque des revendications 1 à 5, dans lequel des moyens (17) d'accrochage du filet sont prévus à intervalles espacés le long des moyens d'entretoisement pour fixer le filet (26) à ces derniers.
7. Ensemble selon la revendication 4, dans lequel des moyens (17) d'accrochage du filet sont prévus sur chacune des pièces d'entretoisement (19-24).
8. Ensemble de filet portable pour un jeu de raquettes et de balle, comprenant un ensemble portable de support de filet selon l'une quelconque des revendications 1 à 7 et un filet supporté par les poteaux dudit ensemble et s'étendant entre eux.

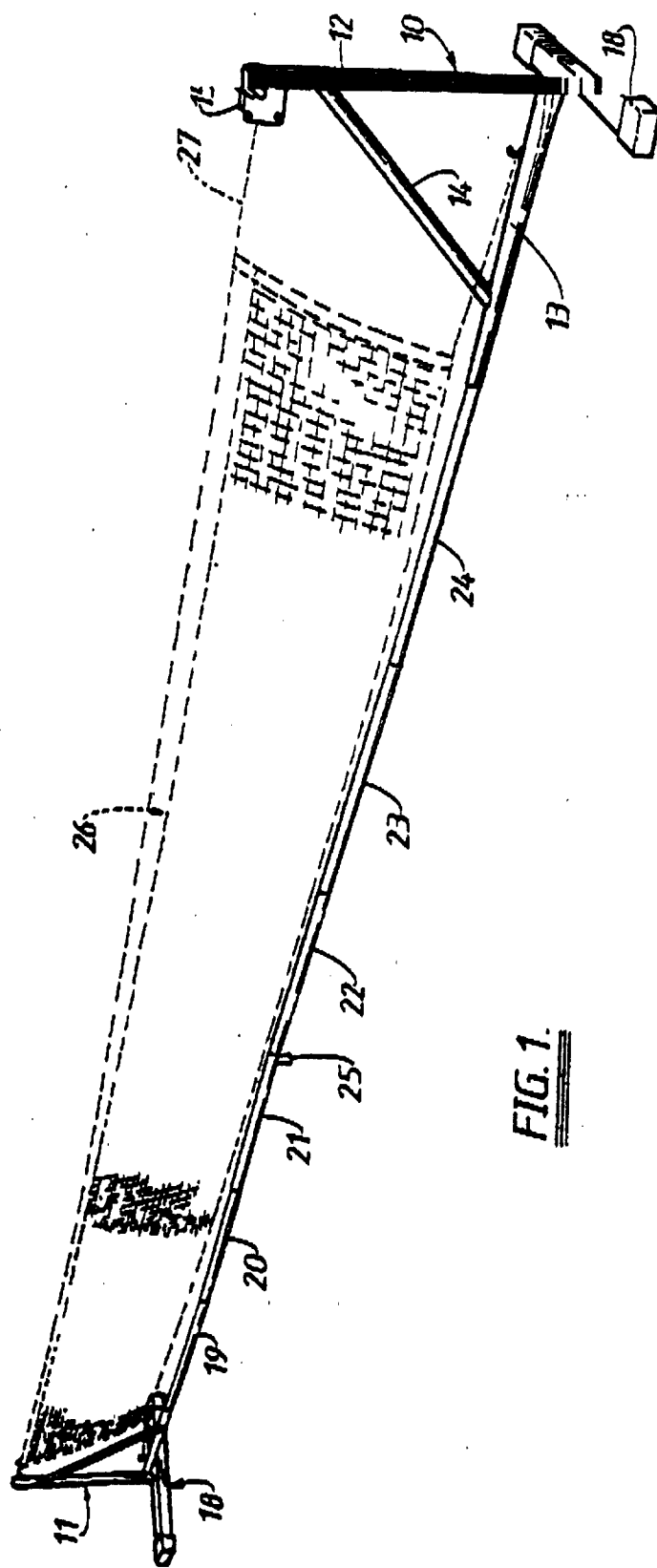


FIG. 1.

