July 30, 1957 W. O. ACTON 2,801,105

TENNIS BALL CARRIER

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FIG. 1.

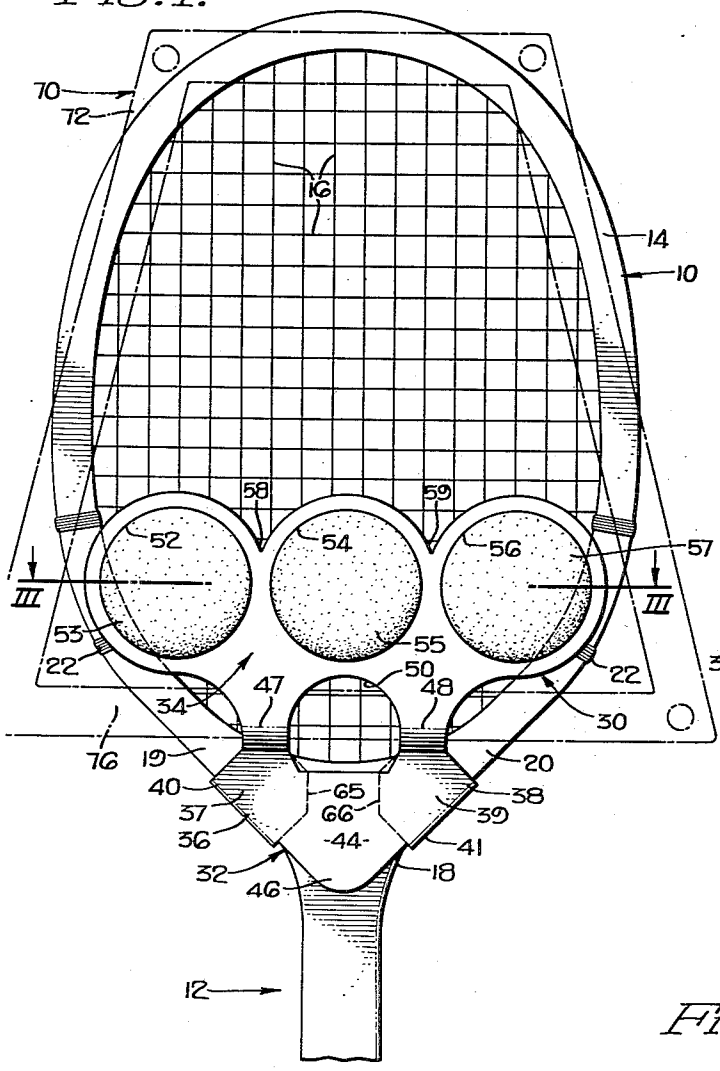


FIG. 2.

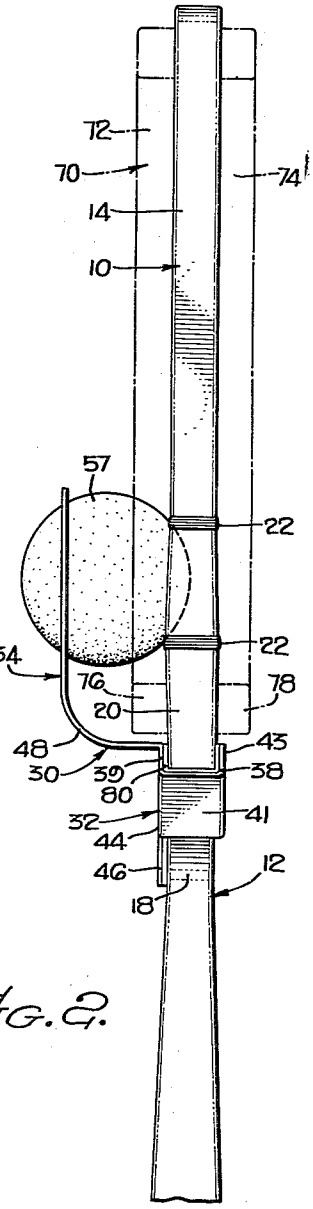
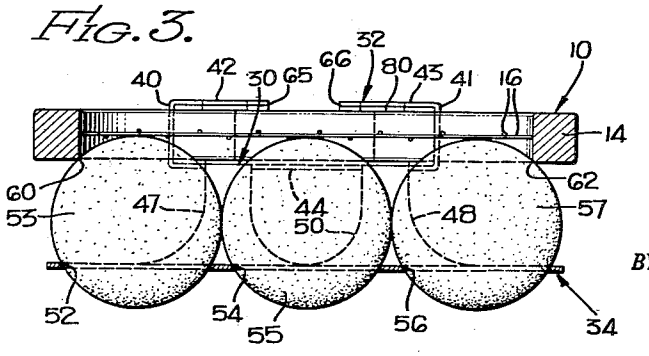


FIG. 3.



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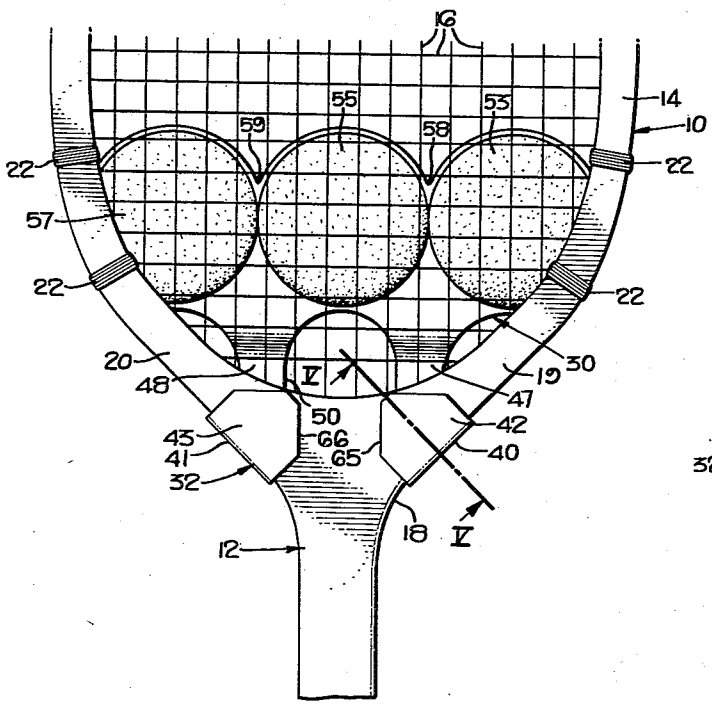


FIG. 4.

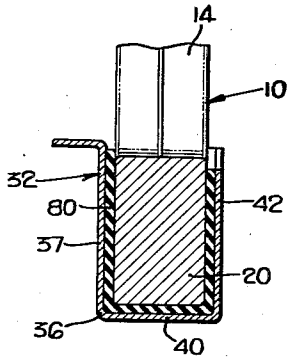


FIG. 5.

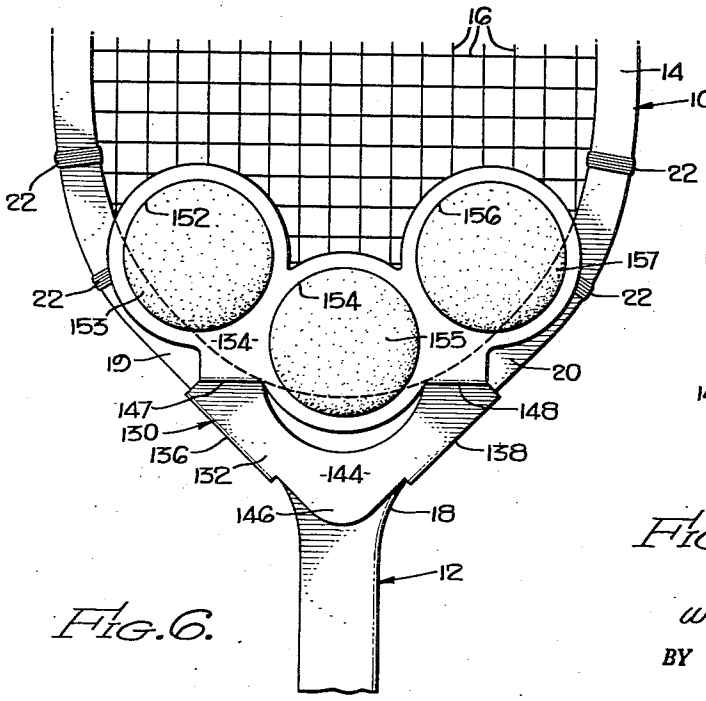


FIG. 6.

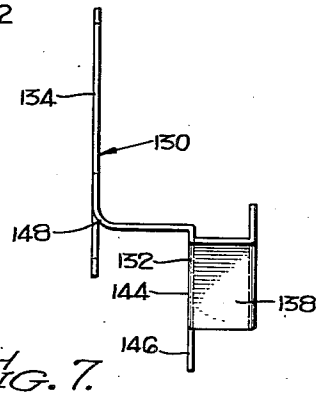


FIG. 7.

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TENNIS BALL CARRIER

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Application October 12, 1953, Serial No. 385,373

6 Claims. (Cl. 273—73)

This invention relates generally to a carrier for removably supporting tennis balls on a tennis racket and particularly describes such a device which is inexpensive in construction and which may be demounted from the tennis racket at will.

The device may be made of suitable plastic material or of metal such as spring steel or the like having sufficient resiliency to retain the balls firmly pressed against the strings of the racket and at the same time to allow the user to remove the balls by manually springing the carrier away from the strings. Two or more balls may be thus carried, the preferred embodiments of the invention herein shown and described being adapted to carry three balls, this being the customary number carried by a player. In one form of the invention, the device may be conveniently applied to a racket provided with a conventional press, although the presence or absence of the racket press is immaterial to the successful functioning of the carrier.

An object of my invention is therefore to provide a unitary, easily demountable ball carrier to be used in connection with a tennis racket.

Another object of the invention is to disclose a device of the class described which may be inexpensively made of plastic or spring metal having sufficient resiliency as will be later understood.

A further object is to disclose a tennis ball carrier which may be demountably attached to the racket in operative position whether or not the racket is provided with a press.

A still further object is to disclose a novel carrier having the above characteristics whereby tennis balls are retained in position having abutting contact with the peripheral frame member of the racket head.

These and other objects and purposes of the invention will become clear from a study of the following description of preferred embodiments thereof taken in connection with the accompanying drawings, in which:

Fig. 1 is a front elevational view of the upper portion of a tennis racket including the head and having a carrier of my invention mounted thereon retaining three balls in position. A conventional press shown in dotted outline is mounted upon the racket head.

Fig. 2 is an end elevational view of the structure of Fig. 1.

Fig. 3 is a sectional view taken upon line III—III of Fig. 1.

Fig. 4 is a fragmentary rear elevational view of the racket head seen in Fig. 1 together with the carrier and balls mounted thereon, the press being omitted.

Fig. 5 is a fragmentary sectional view taken upon line V—V of Fig. 4.

Fig. 6 is a fragmentary front elevational view of the lower portion of a racket head with a modified form of carrier in accordance with the present invention mounted thereof.

Fig. 7 is an end elevational view of the modified form of carrier shown in Fig. 6.

Referring now in detail to the drawings and first to Figs. 1 and 2 thereof, there is shown a tennis racket having a head indicated generally at 10 and a handle the upper portion of which is indicated generally at 12. The tennis racket shown is conventional in every respect, the head 10 including a peripheral wooden frame member 14 formed in a substantially ovoid shape and including conventional strings 16 which extend in mutually perpendicular directions longitudinally and transversely of the head. The upper end of handle 12 is conventionally bifurcated at the throat 18 forming two flanking shoulders extending upwardly into arcuate elements 19 and 20 bound to the frame 14 by conventional means 22.

A carrier embodying the present invention is indicated generally at 30 and includes a lower base portion 32 and an integrally formed rack indicated generally at 34. Means are provided in the base portion 32 for demountably gripping the divergent shoulders above the throat 18 of the racket. In the present illustrations such means comprise a pair of symmetrically disposed flanking members 36 and 38 provided with planar sections 37 and 39 respectively adapted to overlie the shoulders of the racket 10. The members 36 and 38 also include integrally formed rearwardly extending surfaces 40 and 41 disposed substantially perpendicularly to the common plane of the flat portions 37 and 39, and the surfaces 40 and 41 terminate rearwardly in integrally formed upturned rear tabs 42 and 43 respectively (see Fig. 4). It will be seen that the members just described constitute upwardly directed frame-gripping channels or troughs, the rear members 42 and 43 of which being spaced apart for reasons appearing hereinafter. The planar sections 37 and 39 previously referred to are portions of a flat plane 44 overlying the throat 18 and desirably including a downwardly projecting tip 46 overlying the upper end of handle 12.

The rack 34 is desirably formed integrally with the base 32 just described, the rack being joined to the base by integrally formed arcuate sections 47 and 48. Centrally of the arcuate connecting sections 47 and 48 there may be formed a cut-away aperture 50 in order to reduce the overall weight of the carrier. The rack 34 is provided with a plurality of apertures, in the present instance three, the apertures being indicated at 52, 54 and 56. Each of the apertures is preferably circular in shape having an inside diameter somewhat smaller than the diameter of a tennis ball to be used in conjunction with the carrier. Thus, as will be best understood by reference to Fig. 2, a tennis ball 57 is retained in position by reason of being partially received in the aperture 56 and being forced on its opposite side into an abutting position relative to strings 16 of the racket 10, the strings being tangent to the ball. Similarly balls 55 and 53 are retained in position abutting strings 16 by being received in the respective apertures 54 and 52 formed in the rack 34. In order to lighten the entire structure the material of which the carrier is made may be indented between adjacent ball-retaining apertures as at 58 and 59 so that the major portion of the circumference of each of the apertures 52, 54 and 56 is defined by a relatively narrow strip of the material used.

The rack is so arranged relative to the racket 10 that the flank balls 53 and 57 are retained in position not only by the rack 34 and strings 16 as just described but are also held in abutting contact with a portion of the frame 14. As best appears in Fig. 3, such contact exists between ball 53 and frame 14 at point 60 while ball 57 abuts the frame 14 at point 62. Because the side members of frame 14 are downwardly convergent in the lower portion of the racket 10 where rack 34 is disposed, it will be seen that the flank balls 53 and 57 tend to prevent downward movement of the entire car-

rier 30 relative to racket 10. In this way the carrier and its carried balls are held in the position shown until released from that position manually by forcing the rack 34 away from the head 10 against the resiliency of the arcuate members 46 and 48, thereby permitting one or more balls to be released from their engagement with their respective retaining apertures in rack 34. After the balls are thus released, the entire carrier 30 may be slid downwardly relative to racket 10 until the inwardly extending tabs or panels 42 and 43 reach the narrowest portion of the handle 12 immediately beneath throat 18. The opposed edges 65 and 66 of the panels 42 and 43 are spaced apart a distance somewhat greater than the width of the narrowest portion of the handle 12 whereby the carrier 30 may be completely removed from the racket 10 after being moved downwardly as just described.

As will be noted in Figs. 1 and 2, a conventional press indicated generally at 70 may be used in conjunction with the carrier of the present invention. The press 70 includes a pair of substantially identical frames 72 and 74 in the form of isoceles trapezoids, and the base sections 76 and 78 of the respective frames 72 and 74 extend across the face of the racket head adjacent the bottom of the head. As is best seen in Fig. 2, the base 76 of the press 70 is immediately adjacent the frame of the racket 10 and does not interfere in any way with the use or removal of the carrier 30.

In order to insure that the wood of the tennis racket will not be marred or scratched by the use of the carrier of the present invention, I desirably provide within each of the frame-gripping members 36 and 38 a lining of fabric or similar soft material 80 fixed to the inner surface of the frame-gripping members by suitable adhesive or the like (see Fig. 5). The opposite walls 37 and 42 of the frame-gripping members are spaced apart by substantially the same distance as the thickness of the shoulders of the frame 14 so that the entire rack 30 is held snugly in position on the racket by reason of the resiliency of the material of which the carrier is made.

In Figs. 6 and 7 there is shown a modified form of carrier of the present invention indicated generally at 130 and including a rack 134 providing a slightly different arrangement of the balls from that previously shown. In the modified form of rack 134, the central ball 155 is held in a position abutting the lower edge of the frame 14, the flank balls 153 and 157 being, as before, held by the rack 134 in abutting relationship with the side edges of the frame 14. The rack 134, as will be observed in Fig. 6, is provided with circularly formed apertures 152, 154 and 156 having diameters appreciably smaller than the diameter of tennis balls to be used therewith, whereby the three spherical balls are held in contact with rack 134 along a small circle of the respective spheres. In the form of invention shown in Figs. 6 and 7 any tendency for the rack to move downwardly relative to the racket 10 is resisted not only by the flank balls 153 and 157 but also by the central ball 155, since the central ball is also in abutting contact with the bottom of the frame 14. The base portion 132 of the carrier 130 includes frame-gripping members 136 and 138 similar to the corresponding members heretofore described in connection with Figs. 1 and 2, and the base portion 144 of the carrier 130 is connected to the rack 134 by arcuately formed members 147 and 148. The base portion 144 includes a downwardly projecting tip 146 overlying the upper end of handle 12.

Accordingly it will be seen that I have provided a conveniently used tennis ball carrier of very lightweight construction which may be demounted from the tennis racket practically instantaneously when desired. Obviously the racks 34 and 134 of the preferred forms of the carrier hereinabove described might be extended parallel to the strings of the racket in order to accommodate more than three balls if desired, and such an arrangement of my carrier is within the contemplation of the present invention. It will be observed that in both forms of the invention it is necessary that the rack 34 or 134 be resiliently connected with the respective base portion 44 or 144 of the carrier. In this way the rack may be manually bent outwardly by the user in order to remove balls from the carrier, such bending movement being afforded by the resiliency of the material used in the arcuate connecting sections 47 and 48 and 147 and 148. The material selected for use in making the carrier must be tough and resilient and should desirably be light in weight. Certain plastic materials have suitable characteristics which permit their use in the manufacture of the present invention or if it is desired to use metal, spring steel is satisfactory.

Modifications and changes from the specific forms of the invention hereinabove shown and described will occur to those skilled in the art. Such modifications and changes not substantially departing from the invention are intended to be embraced within the scope of the appended claims.

I claim:

1. A tennis ball carrier for selective attachment to a tennis racket having a narrow axially extending throat merging into broadened shoulders forming the lowermost portion of the frame of the racket head, comprising: a unitary member having a lower base portion, an upper ball-retaining rack, and arcuate resilient connecting members joining the base and rack, the base portion having a transversely extending planar section provided with a pair of spaced symmetrically disposed frame gripping members, the rack including a flat portion provided with a plurality of spaced circular apertures each adapted to contact a tennis ball along a small circle thereof, said rack being disposed upwardly of said base portion and lying in a plane spaced outwardly from and substantially parallel to the plane of said planar section.

2. The invention as stated in claim 1 wherein said apertures are disposed in horizontal alignment.

3. The invention as stated in claim 1 wherein said apertures comprise a pair of spaced horizontally aligned flank apertures and a third centrally disposed aperture below said flank apertures.

4. A carrier for demountable attachment to a tennis racket comprising: a base portion having a flat central section adapted to overlie the upper end of a tennis racket handle and a pair of spaced frame-receiving members flanking said central section and integral therewith; a rack including a substantially planar member provided with a plurality of ball-receiving apertures formed therein, said member being substantially parallel to and spaced upwardly and outwardly from said flat central section; and a resilient portion extending upwardly and outwardly from the upper end of said base portion and connecting said rack therewith.

5. The invention as stated in claim 4 wherein said base portion, rack and resilient portion are integrally formed of resilient material.

6. The invention as stated in claim 4 wherein said frame-receiving members constitute upwardly directed channels adapted to receive and springingly engage racket frame shoulders.

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