

[54] **BALL HOLDER**

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a part interest

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224/26 B, 26 D, 26 G, 26 J; 273/32 D;
24/81 CC, 81 A, 83**

[56]

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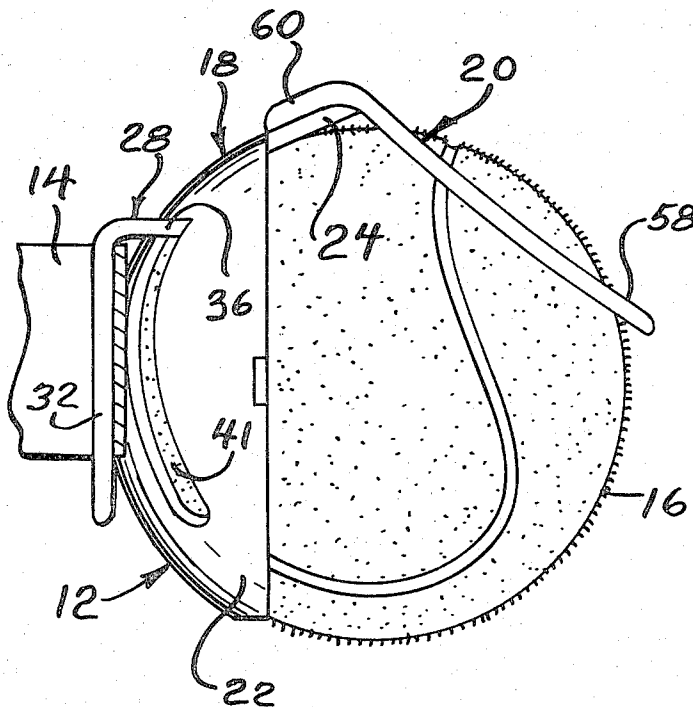
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[57]

ABSTRACT

A ball holder particularly adapted for holding a ball on the person of a player consists of two main parts, a base and a retaining ring. The base includes a clip for mounting the base on the clothing of the player, and has interlocking members for connecting adjacent ball holders to each other. The base has a connector tongue formed integral with one end, which is fixed to a ring connector tongue of the retaining ring. The retaining ring is resilient and has a flat annular body, which is particularly adapted for engaging and holding a ball positioned in the base.

10 Claims, 10 Drawing Figures



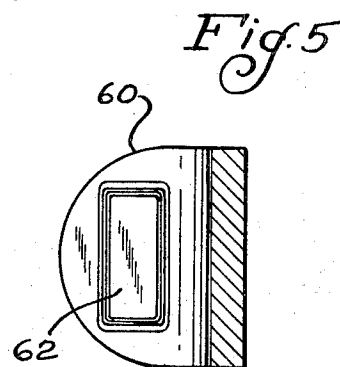
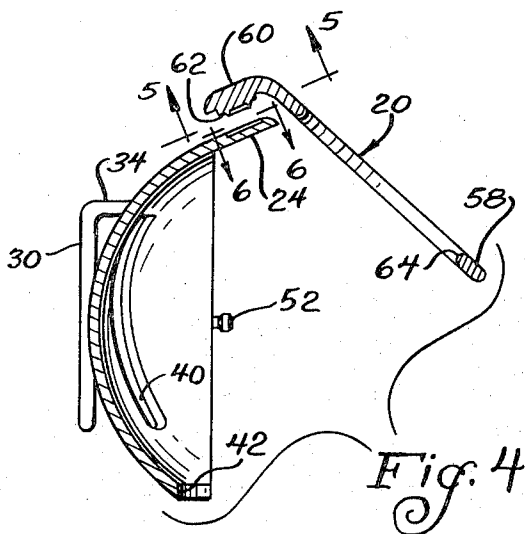
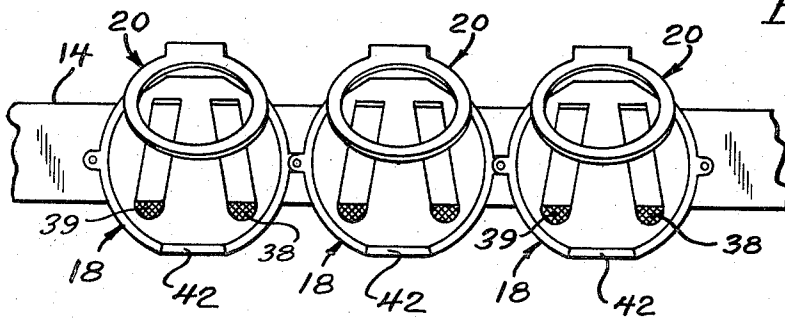
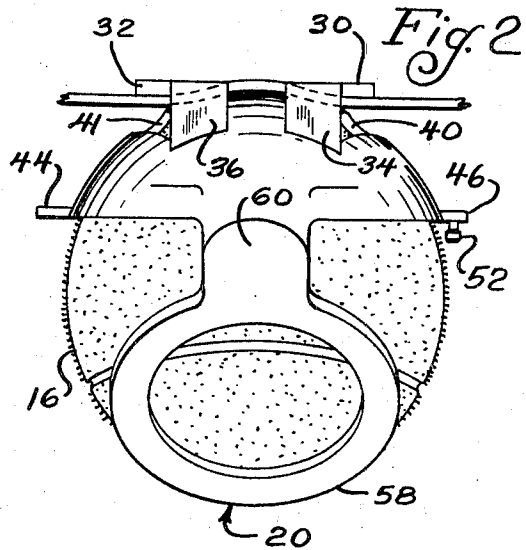
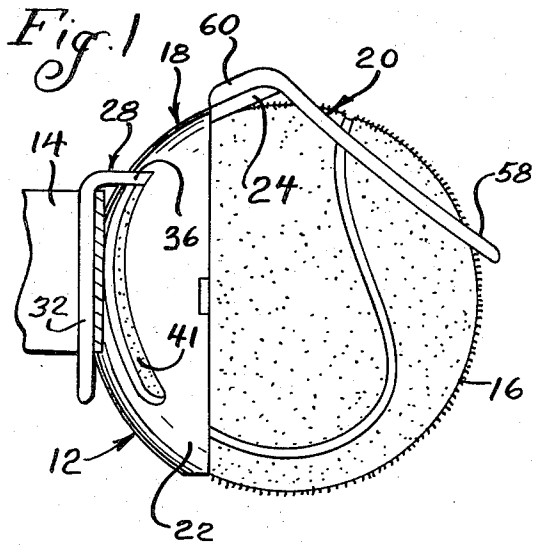


Fig. 6

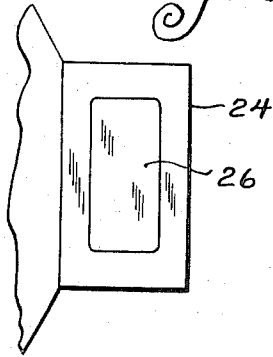


Fig. 7

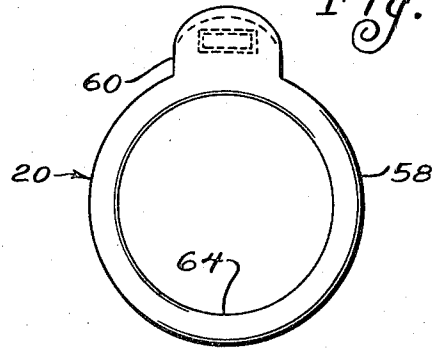


Fig. 8

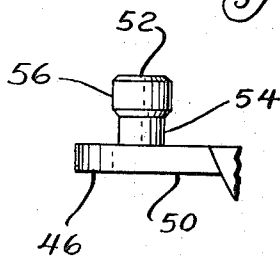


Fig. 9

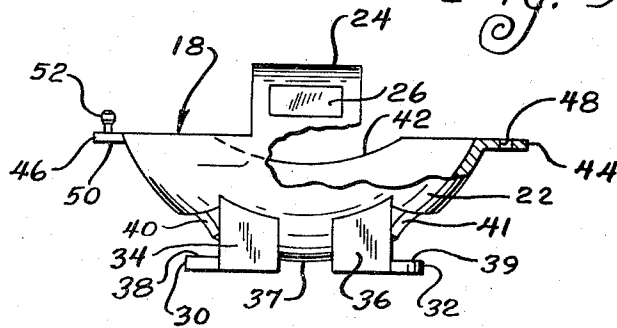
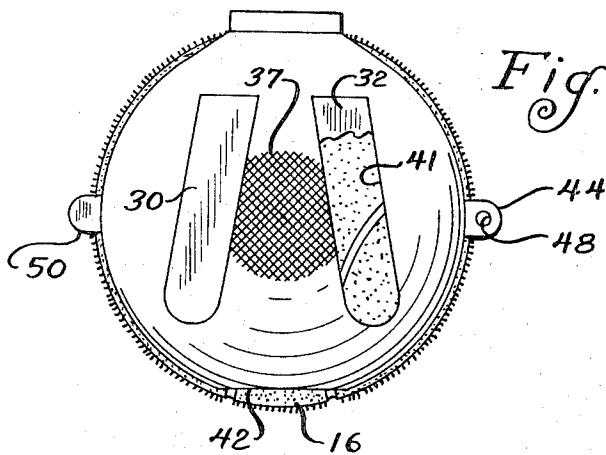


Fig. 10



BALL HOLDER

BACKGROUND OF THE INVENTION

In many games where a ball is used, it is necessary for a player to use a second or third ball, as the case may be, should the first ball go out of play for any reason. Typical of the games in which the players utilize several balls is lawn tennis. In lawn tennis, the person who has the service serves a ball. If it does not land in the proper court, he then has an opportunity to serve another ball. Customarily, he does not wait for the first ball to be returned; but, rather, in order to keep the momentum of the game going, he serves a second ball. Typically, tennis players will have three balls on a court.

The balls which tennis players have on the court are usually held by the player who has the service. Ordinarily, the player who has the service will hold two balls in one hand on the first serve. If the serve is good, he then must play the remainder of the point with a ball in one hand. Many players find this to be uncomfortable, so they will place a ball in a pocket rather than hold it. Again, this is uncomfortable for the player; and it slows down the play because the player must extract the ball from his pocket for the second serve. Various ball holders are known for holding balls; but none is lightweight and easy to use on a tennis court.

SUMMARY OF THE INVENTION

The present invention relates to a ball holder which is particularly adapted for holding a tennis ball. The ball holder is made of two molded plastic parts, a base and a retaining ring, which are joined together. The base has a cavity defining a portion of a sphere less than a hemisphere. A pair of fingers is mounted on the base to provide a clip for securing the base to a player's clothing. The base also has interconnecting outwardly extending members mounted diametrically opposed to each other on the edge thereof for connecting adjacent bases.

The retaining ring includes a resilient flat retaining ring, with a tongue formed thereon for connection to the base. A ball is inserted in the ball holder by pushing the ball against the resilient force of the retaining ring to displace the ring sufficiently to insert the ball between the base and the ring; and the retaining ring then urges the ball in toward the base. The ball extends through the aperture in the annulus, so that the ball is held securely in the ball holder but may be removed with relative ease.

It is therefore a principal object of this invention to provide a ball holder which readily receives a ball and securely holds the ball, but which allows ready removal of the ball.

It is another object of the present invention to provide a ball holder which is lightweight.

It is a further object of the herein-disclosed invention to provide a ball holder which may be easily and securely mounted on the clothing of a player.

It is a still further object of this invention to provide a ball holder which may be economically manufactured.

Other objects and uses of the herein-disclosed invention will become readily apparent to those skilled in the art upon a perusal of the following specification in light of the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevational view of a ball holder embodying the present invention, shown mounted on an article of clothing and shown with a tennis ball held therein;

FIG. 2 is a top view of the tennis ball holder of FIG. 1;

FIG. 3 is a front elevational view of three ball holders identical to the ball holders of FIGS. 1 and 2, mounted on a belt and shown interconnected;

FIG. 4 is a cross-sectional view of a side elevation of an exploded view of the tennis ball holder of FIG. 1;

FIG. 5 is an enlarged partial cross-sectional view taken on Line 5—5 of FIG. 4;

FIG. 6 is an enlarged fragmentary view taken on Line 6—6 of FIG. 4;

FIG. 7 is a plan view of a retaining ring, which constitutes a portion of the ball holder;

FIG. 8 is an enlarged fragmentary view of a portion of an interlocking member, which is formed integral with the base;

FIG. 9 is a top view of the base, but with portions broken away in order to show better the construction of the base; and

FIG. 10 is a rear view of the base of the ball holder of FIG. 1, but with a finger of the clip broken away in order to show better the construction of the base.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings, and especially to FIG. 1, a tennis ball holder generally indicated by numeral 12 is shown therein mounted on a belt 14, with a tennis ball 16 held in the holder 12. The ball holder 12 generally consists of two main portions, an injection-molded plastic base 18 and an injection-molded plastic retaining ring 20. In this instance, the plastic for each of the parts is an acetal resin; and, specifically, Delrin 500, manufactured by E. I. du Pont de Nemours & Co.

The base 20, as was mentioned above, is an injection-molded part. The base has a cavity defining a portion of a sphere less than a hemisphere, for reasons which will become apparent hereinafter. The base has a body 22, which generally has a substantially uniform thickness. A connector tongue 24 is formed integral with one edge of the body 22. The connector tongue 24 includes a recess 26 for connection to the retaining ring 20.

The base 18 has a clip 28 formed integral with the exterior surface of the body adjacent to tongue 24. The clip 28 includes a pair of cantilever clip fingers 30 and 32. The clip fingers have posts 34 and 36 formed integral therewith and formed integral with body 22. As may be seen in FIGS. 3 and 10, the posts 34 and 36 are positioned adjacent to the tongue 24. The fingers 30 and 32 extend outwardly and away from each other in a general V shape, so that a portion of the base body extends between a portion of the fingers 30 and 32. A portion 37 of the outside surface of the base body is knurled to provide a friction surface. Interior surfaces 38 and 39 of fingers 30 and 32, respectively, are also knurled to provide friction surfaces for the fingers.

The body 22 has a pair of apertures 40 and 41 adjacent to the fingers 30 and 32, respectively. The outline of each of the apertures 40 and 41 is a projection of the outline of the respective fingers 30 and 32 on the body

22. The formation of the apertures allows for easy manufacture of the base 12 and provides a recess for clothing to enter into body 22 to improve the holding of the clip.

The body 22 has a recess opening 42 in the edge opposite the edge on which is formed the tongue 24. The recess opening 42 provides a convenient guide for a player to position properly a ball for pushing the ball against the retaining ring 20 for easy entry of the ball into the holder.

The body 22 also has a pair of interlocking members 44 and 46 formed integral therewith. The members 44 and 46 are diametrically opposed to each other, and are equidistantly spaced from the tongue 24 and the recess opening 42. The interlocking member 44 is a flat ear formed integral with the edge of the body 22. The flat ear has an aperture 48 formed therein. The interlocking member 46 includes a base ear 50 formed integral with the body 22 and a stud 52 formed integral with the ear 50. The stud 52 includes a shank 54, with a head 56 formed integral with the shank. The head 56 has a diameter slightly greater than the diameter of the aperture 48, so that the stud 52 may be locked into an ear 48. In order to connect adjacent ball holders, the stud 52 is forced into the aperture 48, so that the ball holders are interconnected and held together.

The retaining ring 20 includes a flat resilient annulus 58 and a ring connector tongue 60 formed integral with one edge of the annulus 58. The tongue 60 includes a mounting protrusion 62, which mates with the recess 26 of tongue 24. As may be seen in FIGS. 1 and 4, the tongue 60 is offset from the plane of the flat annulus 58. The annulus 58 has a rounded or curved inner surface 64 for engagement with a ball.

The retaining ring 20 is secured to the base 18 by positioning the mounting protrusion 62 in the recess 26 and sonically welding the two tongues together.

A plurality of ball holders 12 may be mounted on an article of clothing by slipping the article of clothing between the fingers 30 and 32 and the body 22. A belt 14 is shown in this instance. However, it may be appreciated that the ball holder may be slipped over the top of a pair of tennis shorts or a tennis skirt. The V position of the fingers and the knurled surfaces 38 and 39 of the fingers, in cooperation with the knurled portion 37 and the apertures 40 and 41 behind the fingers, serves to hold securely the wearing apparel in engagement with the ball holder, so that the ball holder does not slip off. Ball holders are interconnected by forcing the stud 52 into the aperture 48 of the adjacent ball holder, as described hereinabove.

When the ball holder is used, the player simply takes a tennis ball 16, aligns it on the recess opening 42, and pushes it upward so as to displace the retaining ring 20. The tennis ball fits into the cavity in the base 18 since the cavity has approximately the same curvature as the exterior of a tennis ball. Once the tennis ball is in position, the tennis ball protrudes through the opening of the annulus 58, so that the tennis ball is securely held in the base by the retaining ring. The ball holder is light-weight, so that the player experiences no discomfort in carrying about one or more tennis ball holders. In order to remove the tennis ball 16 from the holder, the player merely inserts his thumb into the opening in the retaining ring and pushes the ball downward to disengage the ball from the retaining ring and thereby

allow removal of the ball from the base and free the ball from the holder.

Although a specific embodiment of the present invention has been shown and described in detail above, it is readily apparent that those skilled in the art may make various modifications and changes in the subject invention without departing from the spirit and scope of the present invention. It is to be expressly understood that the instant invention is limited only by the appended claims.

What is claimed is:

1. A ball holder adapted for readily removably holding a ball on the person of a player comprising, a base having a cavity defining a portion of a sphere less than a hemisphere, said sphere having a diameter approximately the diameter of the ball, a clip connected to the base for securing the ball holder to an article of clothing worn by the player, and a retaining ring resiliently connected to the base, said retaining ring having an annular portion spaced away from the base and adapted for engagement with the ball positioned in the cavity of the base with the ball protruding through the center of the annular portion.
2. A ball holder adapted for readily removably holding a ball on the person of a player as defined in claim 1 wherein the clip includes a pair of cantilever fingers, each of said fingers mounted adjacent to one edge of the base and extending outwardly from one another from the respective points of attachment to the base.
3. A ball holder adapted for readily removably holding a ball on the person of a player as defined in claim 2 wherein the base has an opening aligned with each of the fingers, each of said openings having its form being identical to a projection of the outline of the respective clip finger on the base.
4. A ball holder adapted for readily removably holding a ball on the person of a player as defined in claim 1, including a pair of interlock members mounted on the edge of the base, each of said interlock members mounted on opposite sides of the base, each of said interlock members being adapted for connection to a mateable interlock member on an adjacent ball holder to secure releasably the ball holders together.
5. A ball holder adapted for readily removably holding a ball on the person of a player as defined in claim 1 wherein the base includes a recess opening in its edge opposite to that portion of the edge to which the ring is connected, said recess opening being adapted to facilitate alignment of the ball for insertion into the holder.
6. A ball holder adapted for readily removably holding a ball on the person of a player as defined in claim 1 wherein the ring has the surface of the interior of its annulus curved in order to engage securely the ball protruding through the annulus.
7. A ball holder adapted for readily removably holding a ball on the person of a player as defined in claim 1, including a base connector tongue formed integral with one edge of the base, said base connector tongue having a recess, and a ring connector tongue formed integral with one edge of the retaining ring, said ring connector tongue having a protrusion mateable with the recess in the base connector tongue for joining of the two tongues.
8. A ball holder adapted for readily removably holding a ball on the person of a player as defined in claim 1 wherein the base includes a recess opening in its edge

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opposite to that portion of the edge to which the ring is connected, said recess being adapted to align the ball for insertion of the ball into the holder, and including a pair of interlock members mounted on the edge of the base, each of said interlock members mounted on opposite sides of the base and being equidistantly positioned from the recess opening and that portion of the edge to which the ring is connected, each of said interlock members being adapted for connection to a mateable interlock member on an adjacent ball holder to secure releasably the ball holders together.

9. A ball holder adapted for readily removably holding a ball on the person of a player as defined in claim 1, including a base connector tongue formed integral with one edge of the base, said base connector tongue having a recess, and a ring connector tongue formed integral with one edge of the retaining ring, said ring connector tongue having a protrusion mating with the recess in the base connector tongue and being welded to said base connector tongue, and said base including a recess opening in its edge opposite to the base connector tongue.

10. A ball holder adapted for readily removably holding a ball on the person of a player as defined in claim 1, including a base connector tongue formed integral with one edge of the base, said base connector tongue

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having a recess, a ring connector tongue formed integral with one edge of the retaining ring, said ring connector tongue having a protrusion mating with the recess in the base connector tongue and being sonically welded thereto, said base including a recess opening in its edge opposite to the base connector tongue, said clip including a pair of cantilever fingers, each of said fingers having one end mounted adjacent to the base connector tongue, said fingers extending outward from one another from the respective points of attachment to the base, each of said fingers having a friction surface on its surface adjacent to the base, an aperture aligned with each of said fingers, each of said apertures having its form being identical to a projection of the outline of the respective clip finger on the base, said base having a base friction surface on its exterior surface between the apertures, and a pair of interlock members mounted on the edge of the base, each of said interlock members mounted on opposite sides equidistantly spaced from the base connector tongue and the recess opening, each of said interlock members being adapted for connection to a mateable interlock member on an adjacent ball holder to secure releasably the ball holders together.

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