United States Patent [19]

Anderson

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[54] **INFLATED GAME BALL**

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[73] Assignee: **Hutch Sporting Goods, Inc.,** Cincinnati, Ohio

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[52] **U.S. Cl.** ..... **273/58 BA,** 273/65 EG, 40/327

[51] **Int. Cl.** **A63b 37/12,** A63b 41/08

[58] **Field of Search** 273/58, 65; 40/327

[56] **References Cited**

UNITED STATES PATENTS

1,178,361	4/1916	Van Sciver	40/327
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3,508,750	4/1970	Henderson	273/65 EG

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[57] **ABSTRACT**

The outer surface of an inflated ball, such as a basketball, is composed of a plurality of side sectors and a pair of diametrically opposed end sectors, wherein the side sectors are defined by side cover panels, of conventional color, and wherein the end sectors are defined by a plurality of end cover panels which embody "team" or "school" colors. The balls are adapted to be fabricated and placed in inventory with side cover panels only, that is, without end cover panels. When an order is received for a ball having particular team colors, appropriately colored end cover panels are selected from stock and applied to the end sectors for thereby completing the ball.

3 Claims, 6 Drawing Figures

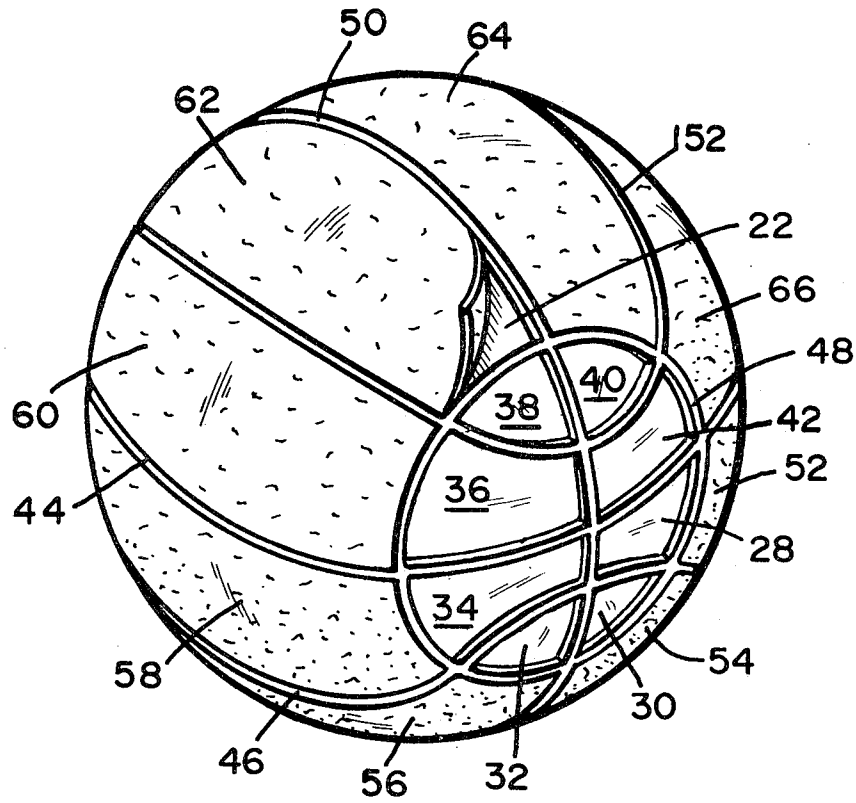


FIG-1

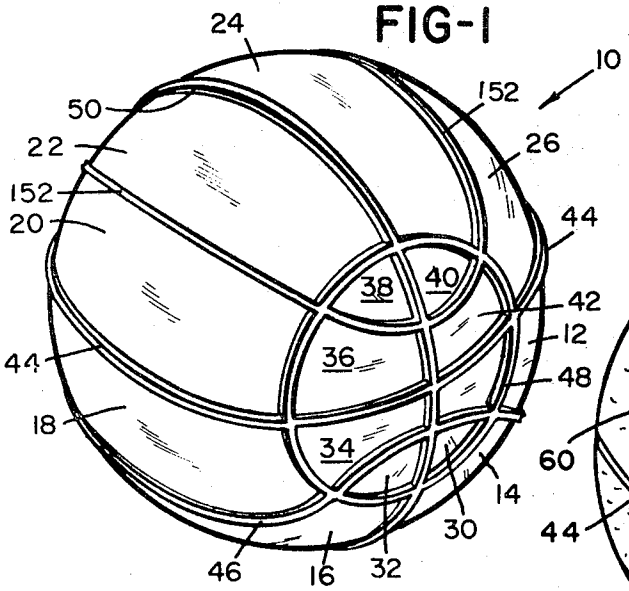


FIG-2

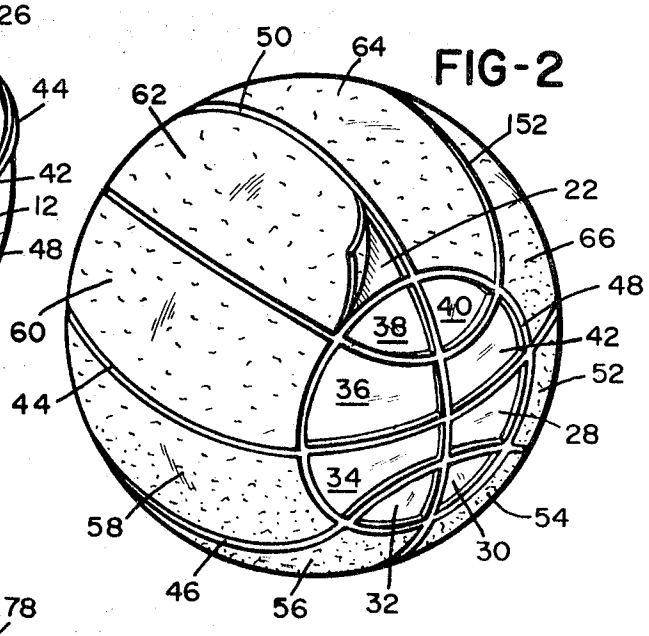


FIG-3

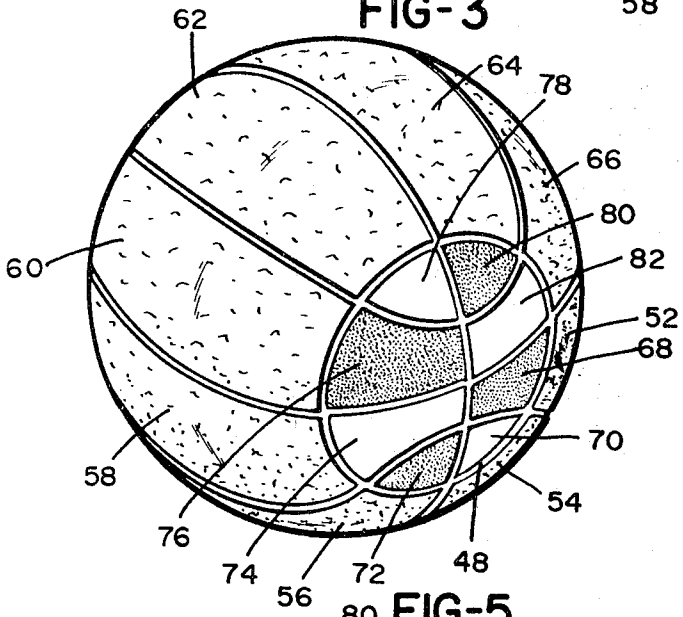


FIG-4

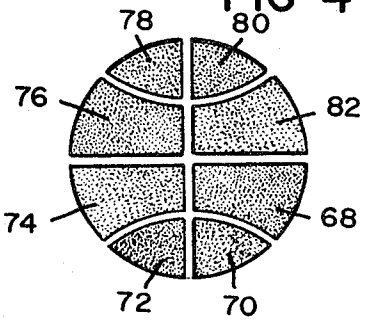


FIG-5

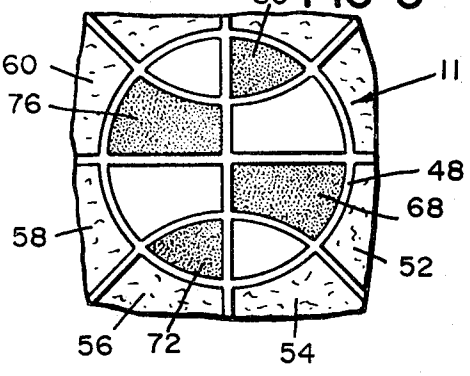
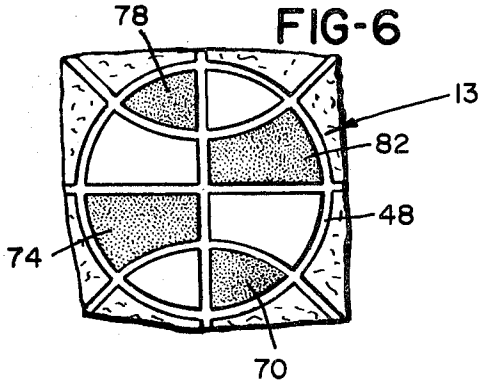


FIG-6



INFLATED GAME BALL

BACKGROUND OF THE INVENTION

Inflated balls, such as, by way of example, basketballs and the like are fabricated by securing cover panels to the outer surface of an inflated bladder. Heretofore the overall length of the cover members has been such as to extend halfway around the circumference of a ball.

When cover members are fabricated from finished leather the most desirable leather is obtained from that portion of a hide known as the "bend of the back." Leather obtained from the side or belly portion of a hide is less desirable, particularly in longer lengths, because of its tendency to stretch to a greater degree than leather from the bend of the back, however, as a general rule leather from the bend of the back is not as wide as "side" leather.

In those instances in which it has been desirable to provide an inflated ball with team colors it has been the practice of the industry to follow the standard procedure for manufacturing conventional balls but wherein cover panels of the team colors were used in lieu of the conventional panels. Since the "colors" of most teams and schools differ, the manufacture of basketballs embodying team colors has been an expensive, time consuming, tedius process, requiring that the balls be "custom made."

The subject invention is directed to an inflated ball, such as, by way of example, a basketball, which can be economically manufactured to include the "colors" of a team, and wherein the cost of such balls is competitive to the cost of presently available, conventional, single color balls.

An object of the present invention is to provide an inflated ball, the molded carcass of which is provided with a plurality of projecting ribs which subdivide the outer surface of the carcass into a plurality of individual side sectors or segments and a pair of diametrically opposed end sectors, segments or zones, wherein cover panels of leather, rubber, vinyl, and the like are secured to the outer surface of the carcass within the areas defined by the aforesaid ribs. Since the outer periphery of each end zone defines an opposite end of a respective side segment the overall length of each side cover panel is several inches shorter than length of the cover panels presently used on inflated balls. The use of shorter lengths of side cover panels materially decreases the cost of the cover panel material required for a ball.

The present invention contemplates that a manufacturer will produce a substantial inventory of partially completed inflated balls each of which will include only side cover panels, wherein the diametrically opposed end zones of each ball will be devoid of cover members. The partially completed balls may be removed from inventory and provided with preselected team colors which are applied to the opposed end zones thereby completing, at minimum expense, and with a minimum of time, a ball characterized by team or school colors.

DESCRIPTION OF THE PRIOR ART

The Henderson U.S. Pat. No. 3,508,750 discloses an inflated ball which comprises a molded bladder **12** having a plurality of outwardly projecting, integrally formed ribs **15, 40, 41** and **42** which subdivide the surface of the bladder into a plurality of sectors **43–50** which are then covered with outer cover panels **51–58** which are cemented to the bladder for providing the completed ball of FIG. **3.** It will be noted that panels **51, 54, 55** and **58** cover sectors **50, 47, 46** and **43,** respectively, wherein the overall length of panels **52, 53, 56** and **57** comprise "diameter" of the ball as defined by elevated rib **15.** The length of cover panels **51, 54, 55,** and **58** are determined by ribs **40** and **42.** From the foregoing, it will be noted that in those instances in which the outer cover panels **51–58** are fabricated from first quality, top grain leather that the length and area of each of said cover panels **51–58** is quite substantial. An inherent characteristic of all inflated, bladder-covered balls is that after cover panels have been fixedly secured to the outer surface of a bladder the panels are subject to a condition known in the art as "stretch," which causes the panels to tend to pull away from the raised ribs thereby creating a condition in the ball which will render it unfit for its intended use. The longer the length of the cover panels the more pronounced the stretch. It should be noted that in the event it would be desirable to provide cover panels **51–58** with "team" colors such cover panels could not be applied to the bladder until such time as the manufacturer had received an order for a ball containing particular colors, unless, the manufacturer would be in a position to lay up an inventory of completed balls with cover panels of different teams, schools, and the like.

U.S. Pat. No. 3,506,265 discloses a multiple-ply inflated ball the bladder of which is provided with outwardly projecting ribs **6** which subdivide the outer surface of the ball into a plurality of sectors, areas or zones. Cover panels **5** are adhesively secured to the outer surface of the ball into those areas defined by the raised ribs.

U.S. Pat. Nos. 2,091,455; 2,218,919; 3,119,618; 2,305,409; and 1,002,789 each relate to and disclose inflated balls having outwardly projecting ribs which subdivide the outer surface of the ball into plurality of sectors which are adapted to be covered by and contain cover panels which are stitched to the ribs or adhesively secured to the bladder for providing a completed ball.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of a molded carcass with a plurality of projecting ribs which define a plurality of side sectors or segments and a pair of diametrically opposed end zones each of which are subdivided into individual segments or sectors.

FIG. **2** is a view similar to FIG. **1** with all but one of the side cover panels in place, illustrating the semi-completed ball as fabricated for placement in inventory.

FIG. **3** is a perspective view of a completed ball embodying the teachings of the present invention.

FIG. **4** is a plan view of a piece of material from which the end cover panels are obtained.

FIG. **5** is a fragmentary end view of the end zone illustrated in FIG. **3.**

FIG. **6** is a fragmentary end view of the end zone at the other end of the ball of FIG. **3.**

PREFERRED EMBODIMENTS OF THE INVENTION

With particular reference to FIG. **1,** the numeral **10** denotes generally a molded carcass having a plurality of integral ribs projecting therefrom and subdividing

the surface of the carcass into a plurality of side sectors or segments or depressions **12–26** and into a pair of diametrically opposed end zones or areas **11** and **13** (see FIGS. **5** and **6**) which are subdivided into sectors or segments or depressions **28–42.**

Side sectors or segments **12** and **18** are defined by ribs **44, 46,** and rib pairs **48**; sectors or segments **14** and **16** are defined by ribs **46, 50** and rib pairs **48,** sectors or segments **20** and **26** are defined by ribs **44, 152,** and rib pairs **48**; sectors or segments **22** and **24** are defined by ribs **152** and **50** and rib pairs **48.**

From the foregoing, it will be noted that the overall length of each of the side cover panels **12–26** is defined and determined by rib pairs **48** at opposite end zones **11** and **13.** The length of the side cover panels **52–66** (FIGS. **2** and **3**) is from 2–4 inches less than the length of cover panels such as, by way of example, are required in a ball as illustrated in Henderson U.S. Pat. No. 3,508,750. The shorter length of the side cover panels enables the manufacturer to purchase smaller pieces of finished leather at more economical prices and the problem of "stretch" in the side cover panels of a completed ball is substantially minimized, if not eliminated.

The side cover panels **52–66** are adapted to be fixedly secured within their respective segments **12–26** by means of a suitable adhesive, wherein the peripheral edges of each of the side cover panels extend to and abut against the upstanding side surfaces of those ribs which collectively define the side segment or sector areas of the carcass to which the particular side cover panel is applied.

As best illustrated in FIG. **1,** it will be noted that one peripheral edge of each of the end sectors segments is defined by the end zone defining rib **48,** which extends about a circular path and thus defines a circular area at the end of the ball.

End segments or sectors **28** and **34** are defined by ribs **44, 46, 48** and **50**; segments or sectors **30** and **32** are defined by ribs **46, 48,** and **50**; segments or sectors **36** and **42** are defined by ribs **44, 48, 50** and **152**; and segments or sectors **38** and **40** are defined by ribs **48, 50** and **152.**

The numerals **68–82** represent end cover panels which correspond respectively with end segments **28–42.**

It should be understood that end segments **28–42** are duplicated at the other diametric end of the ball.

Uniformly satisfactory results have been obtained in those instances in which the diameter of end zones **11** and **13** approximate 4¾ inches for a ball having an overall diameter of 9 inches.

When it becomes desirable to apply "team colors" to a ball, a partially completed ball of FIG. **2** will be removed from inventory at which time the end cover panels **68–82** may be selected from a stock of precut, colored cover panels after which the selected end cover panels are adhesively secured to the carcass within their corresponding end segments.

With particular reference now to FIG. **1,** it will be noted that certain of the end segments, viz segments **30** and **38**; **32** and **40**; **34** and **42**; **36** and **28** are similar in size and shape, therefore, cover end panels **70** and **78**; **72** and **80**; **74** and **82**; **76** and **68** are interchangeable.

It should be understood that the individual end cover panels for a particular color may be fabricated from a circular piece of cover panel material subdivided into eight sub-panels **68–72,** as illustrated in FIG. **4,** for thereby providing cover panels of a particular color for opposite ends of the ball. With particular reference to FIGS. **4, 5,** and **6,** it will be noted that the eight panels **80, 68, 72** and **76** have been applied to one end of the ball, as in FIG. **5,** whereas panels **78, 82, 70** and **74** have been applied to the opposite end of the ball thereby effectively utilizing all portions of the piece of material illustrated in FIG. **4.**

It will be noted that the material of FIG. **4** designates a particular color, such as, by way of example, red, wherein panels **80, 68, 72** and **76** of FIG. **3** would be red, whereas end panels **70, 74, 78,** and **82** are of different color.

In those instances in which an inexpensive ball is desired, all of the various side and end cover panels may be applied at one time. It should be understood that the cover panels may be fabricated from various grades of leather, rubber, vinyl, and the like. Uniformly satisfactory results have been obtained in those instances in which the various cover panels are secured to the outer surface of the carcass by means of cold vulcanization, however, it should be understood that the subject invention is neither directed to nor concerned with the particular manner in which the carcass, per se, and its outwardly projecting ribs is initially fabricated, nor with the particular means by which the various cover panels are permanently secured to the carcass.

To summarize, the ball of the present invention permits the use of shorter lengths of top grade, high quality finish leather from the bend of the back of a hide for use as side cover panels in the manufacture of a ball having or characterized by a plurality of smaller cover panels within end zones of the ball. The method of fabrication enables a manufacturer, or even a distributor having suitable equipment, to take from inventory partially completed balls, that is, balls as illustrated in FIG. **2** in which the side cover panels **52–66** have been associated with, that is, permanently secured to the carcass, but wherein the end sectors or segments **28–42,** within end zones **11** and **13,** are devoid of cover panels, and apply end cover panels **68–82** of desired color combinations for thereby completing the ball.

It should be understood that the present invention is not limited to any particular number or shape of side sectors or segments, nor to any particular number or shape of end sectors or segments.

What is claimed is:

1. An inflatable game ball comprising an inflatable bladder having a plurality of upstanding ribs thereon defining a plurality of side panel receiving depressions therebetween at the sides of the ball and a plurality of separate end panel receiving depressions at the opposite ends of the ball, said ribs including a rib at each end of the ball extending in a circular path and defining closed circular areas at each of the ends of the ball, and further ribs subdividing said circular areas into a plurality of smaller end panel receiving depressions, a plurality of side cover panels secured in said side panel receiving depressions, said side panels all terminating at their opposite ends at said ribs defining the circular areas, and said end panel receiving depressions being devoid of end cover panels whereby desired end panels may be subsequently secured in the end panel receiving depressions to economically produce a ball having a desired appearance.

2. A ball as in claim 2, wherein the ribs comprise a pair of circumferentially extending ribs extending about diametral portions of the ball spaced 90° from one another and intersecting each other at the centers of the opposite end areas, a pair of elliptically shaped ribs spaced approximately 45° from one of said pair of circumferentially extending ribs and intersecting at their opposite ends one of the circumferentially extending ribs on opposite sides thereof, said points of intersection of the elliptical ribs with said one circumferentially extending rib lying within the circular areas at opposite ends of the ball, and the portions of the ribs lying within said circular areas comprising said further ribs.

3. A ball as in claim 1, wherein said circular areas include end cover panels of different colors.

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