Nov. 1, 1966 M. GLANTZ 3,281,883

BOWLING BALL CARRYING BAG AND ROTATABLE SUPPORT

Filed Dec. 16, 1963

2 Sheets-Sheet 1

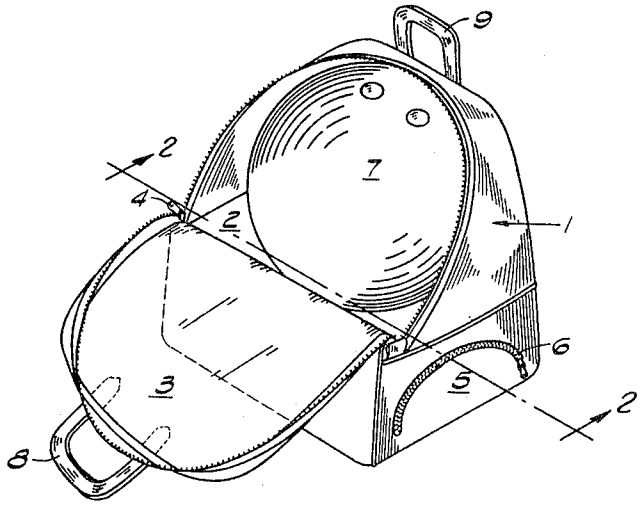

Fig 1

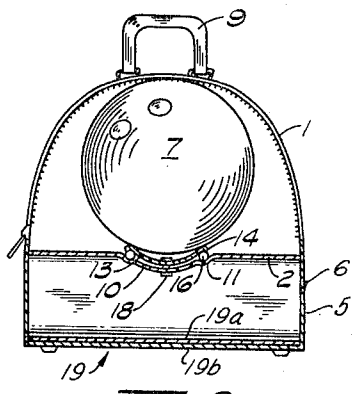

Fig 2

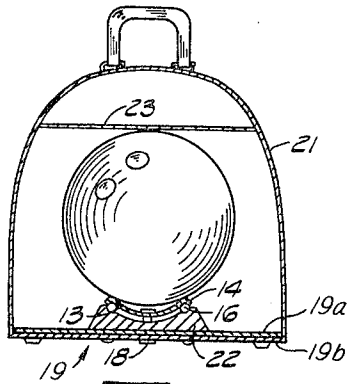

Fig 3

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2 Sheets-Sheet 2

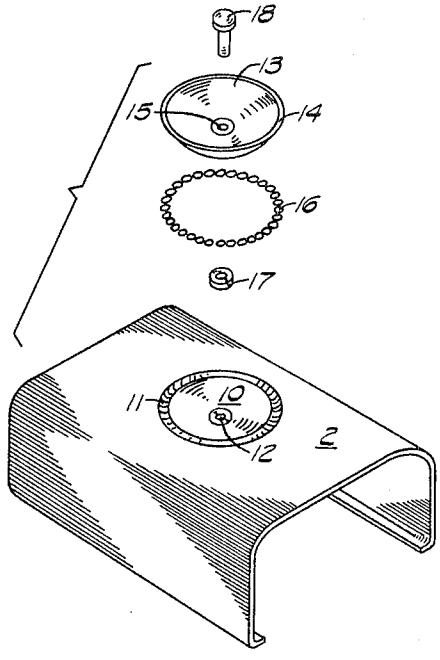

Fig 4

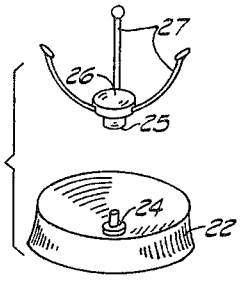

Fig 5

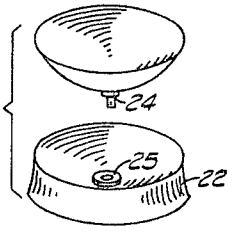

Fig 6

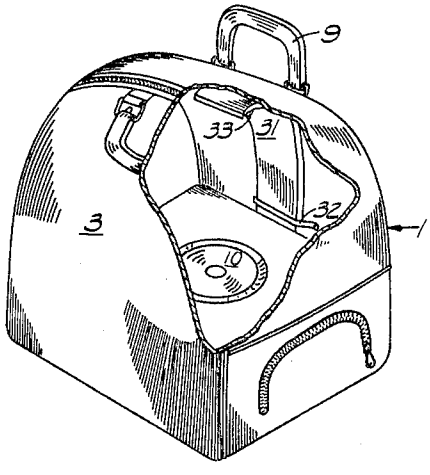

Fig 7

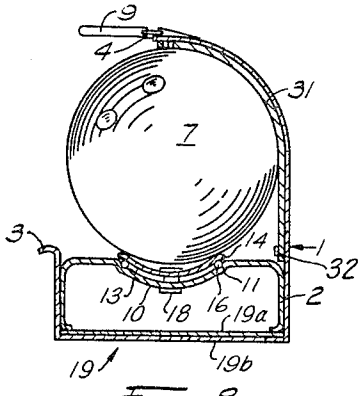

Fig 8

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United States Patent Office

3,281,883

Patented Nov. 1, 1966

3,281,883

BOWLING BALL CARRYING BAG AND ROTATABLE SUPPORT

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Filed Dec. 16, 1963, Ser. No. 330,906

4 Claims. (Cl. 15—210)

This invention relates in general to bowling ball accessories and in particular to a bowling ball carrying bag an rotatable support. Its principal object is to provide new and improved bowling ball accessories of the above character.

Bowling ball carrying bags are known which contain a rigid bowl-shaped receptacle secured to the bottom of the bag for holding bowling ball placed thereon against rolling movement. In this type of bag, it is customary to place bowling shoes in the bag next to the bowling ball. The dust and grit carried by the bowling shoes are deposited on the ball from direct contact therewith or are deposited thereon by indirect transfer from the interior of the bag. In order to prevent these abrasives from pitting or scratching the bowling ball, regular cleaning of the ball is required. This cleaning can be accomplished manually or by free-exacting mechanical cleaners. Manual cleaning of a bowling ball is difficult when no adequate ball holder is available and the noted mechanical cleaners increase the maintenance cost of a bowling ball.

The foregoing problem has been alleviated somewhat by providing a compartmentized bowling ball bag having one compartment exclusively for the ball and a second compartment for the bowling shoes. However, in compartmentized bags, while the dust and grit from the shoes are not transferred to the bowling ball, the ball does, form normal use, collect sufficient abrasive material that regular cleaning is still required for proper maintenance.

Accordingly, it is an object of this invention to provide bowling ball accessories which obviate this need for using coin-operated cleaning devices. This is accomplished by the present invention in providing a simplified device arranged to rotatably support a bowling ball so that manual cleaning thereof can be accomplished by holding a cleaning cloth against a portion of the surface of the ball and rotating the ball.

It is another object of this invention to provide a bowling ball bag having a rotatable support for a bowling ball located therein with at least one portion of the bag forming a part of, or supporting, a cleaning cloth such that rotation of the ball results in an automatic cleaning operation.

A feature of this invention relates to a rotatable support for a bowling ball bag which serves the dual purpose of a bag divider and of an automatic cleaning device. Also, this rotatable support may be arranged for ready removal so that it can be used for display of the bowling ball or used as an external support for cleaning of the ball outside of the bag.

Other features relate to the construction of the inventive bag, particularly the flap portion, for maximum ease in inserting and removing the ball from its carrying bag and also relate to the simplified holding arrangement of the cleaning cloth within the bag to permit disposal or laundering of used cloths.

An outstanding advantage of the inventive rotatable support aside from cleaning purposes, is the ease in rotating the bowling ball to bring the finger holes into the best position for removing the ball from the carrying bag.

Other objects and features of the invention will become apparent and the invention will be best understood when the specification is read in conjunction with the

accompanying drawings comprising FIGS. 1 to 8 in which:

FIG. 1 shows an isometric view of the bowling ball bag with the inventive rotatable support positioned therein and supporting a bowling ball;

FIG. 2 shows a sectionalized side view of the bag of FIG. 1 taken on section line 2—2, with the rotatable support serving as a bag divider;

FIG. 3 shows a sectionalized side view of a conventional bowling ball bag with the inventive rotatable support secured to the bottom of the bag;

FIG. 4 shows an exploded view of one embodiment of the inventive rotatable support of FIG. 1;

FIGS. 5 and 6 show other embodiments of the inventive rotatable support with different support and bearing configurations;

FIG. 7 shows the bowling bag of FIG. 1 with a portion cut away to show the position mounting arrangement of a typical cleaning cloth; and

FIG. 8 shows a sectionalized end view of the bag and the support of FIG. 1, with the cleaning cloth in contact with the surface of the ball with flap 3 broken away.

Referring now to FIG. 1 of the drawings, a brief description will be given of the inventive bowling ball bag and rotatable support.

The bowling bag 1 is divided into an upper and lower compartment by a ball support stand 2 which rests on the bottom of bag 1. A flap 3, provided with suitable closure means, such as a zipper 4, provides access to the upper compartment and is arranged to flex across the front of bag 1 at a level substantially equal with the top of support 2. A second flap 5, also provided with suitable closure means, such as zipper 6, provides access to the lower compartment and is arranged to flex near the bottom of the bag. It is to be understood that these flaps, 3 and 5, could be arranged to flex at any one of a number of levels. A ball 7 may be positioned on support 2 completely within the confines of bag 1. As will be described in detail hereinafter, ball support stand 2 contains a rotatable section which permits ball 7 to revolve freely within the bag. A pair of handles 8 and 9 are provided near the top of carrying bag 1.

FIG. 2 shows a cross-sectional side view of bag 1 in order to more clearly depict the noted rotatable support section of stand 2. This figure will be best understood when taken in conjunction with FIG. 4.

The support stand 2 comprises an elongated and inverted U-shaped element of length and width dimensions equal to or less than the interior dimensions of the lower section of bag 1. It is to be understood that support 2 could be of wire frame construction, hollow rectangular construction or solid construction. Ball support stand 2 has a bowl-shaped depressed portion 10 with a lower bearing raceway 11 located near the upper edge thereof. An aperture 12 is provided in the center and bottom of portion 10. The raceway 11 could be depressed in the inverted bowl-shaped portion 10 as shown or could be a separate insert or liner suitably secured to portion 10.

A disc 13, of a configuration generally similar to the noted depressed bowl-shaped portion 10, contains an upper bearing raceway 14 located on the underside of the disc, but near the outer periphery thereof. Upper raceway 14 is of the same diameter as lower raceway 11. An aperture 15 is provided in the center and bottom of disc 13. As described for lower raceway 11, upper raceway 14 could be formed directly in disc 13 or provided by means of a suitable insert or liner. The radius of curvature of disc 13 is preferably less than that of a conventional bowling ball. Because the ball has a larger radius it frictionally contacts disc 13 at a minimum of points

and thus, abrasives collected within the bowl-shaped disc do not contact the ball when it is placed on the stand **2**.

A train of ball bearings **16** are placed in lower raceway **11**. A spacing washer **17** could be placed in the interior of pressed portion **10** in direct alignment with aperture **12** if desired. The disc **13** is placed above the spacing washer, if used, with the upper raceway cooperating with the lower raceway to encompass the ball bearings. A stud, bolt or rivet **18** is passed through apertures **15** of disc **13** and aperture **12** of the depressed portion **10** of support **2** where it is suitably secured in place by a nut or by a flanging operation. Disc **13** is then in position in direct alignment with the cooperating lower depressed portion **10**.

A bowling ball placed on the top of disc **13** in the manner shown in FIG. 2 has sufficient friction between the ball and disc to impart rotation to disc **13** when the ball is rotated. The noted friction between the disc **13** and the ball is small enough to permit easy rotation of the ball within the disc **13** about an imaginative axis disposed at an angle with the longitudinal axis of element **18**.

As shown in FIG. 2 the bottom of the bag has a base **19** comprising an inner layer **19***a* and an outer layer **19***b*. Of course, it should be understood that any well known bowling ball bag bottom can be used.

Referring now to FIG. 3 of the drawings, the inventive rotatable support is shown applied to a conventional one-compartment bowling ball bag **21**. The construction of this support stand is similar to that described in connection with FIGS. 2 and 4 except that the depressed bowl-shaped portion is formed in a separate base section **22** which is suitably secured to the bottom of bag **21**. The assembly and operation of the rotatable support stand of FIG. 3 is as described above. A separate shelf **23** may be provided in bag **21** to support bowling shoes, if desired.

FIG. 5 shows the base portion **22** substantially similar to that of FIG. 3 having a central shoulder stud **24** secured to base **22**. The rotatable spider, comparable to disc **13** of FIGS. 2 and 4, contains a hub section **26** having a plurality of equal-lengthed arms **27** extending outwardly and upwardly therefrom. The hub **26** contains a female element **25** for rotatably engaging the shouldered stud **24**. The arms **27** contact the surface of a bowling ball at three points rather than a continuous line of points on the ball as described for FIG. 2.

FIG. 6 shows another variation of the rotatable support by utilizing the pivot techniques of FIG. 5 applied to the disc configuration of FIGS. 2 to 4. Elements **24** and **25** of FIG. 5 may be reversed as shown in FIG. 6.

FIG. 7 shows the bag **1** of FIG. 1 with the rotatable disc **13**, bearings **16** and stud **18** removed and a portion of the bag cut away. A cleaning cloth **31** is shown suitably attached, as by elastic bands **32** and **33** to the portion of the bag opposite flap **3**, but band **33** being omitted from the showing of FIG. **8** for convenience. As seen more clearly in FIG. 8, the cloth **31** extends from a point near the top of support **2** to the edge of the closure means **4** near the top of the bag. It is to be understood that cloth **31** could be a part of the bag or suitably secured thereto for ready removal by clamps, bands or other mounting means.

FIG. 8 shows a cross-sectional view of the inventive bag and support with the cloth **31** in contacting relation with the surface of ball **7**. The handle **9** can be grasped and pulled forward and downwardly to vary the pressure applied to the ball by cloth **31**. When flap **3** is opened as shown in FIG. 8, the ball can easily be manually spun about the axis of element **18** or can easily be rotated about a different axis and then spun to provide cleaning of the entire surface of the ball.

As mentioned before, the rotatable support such as supports **2** or **13** can be removed from the bowling bag for visual display of the bowling ball or for cleaning purposes independently of the bowling bag.

While I have described my invention in conjunction with specific apparatus, it is to be clearly understood that this description is made only by way of example and not as a limitation on the scope of the invention.

What is claimed is:

1. In combination, a carrying bag for a bowling ball and bowling accessories, divider means for separating said bag into a bowling ball compartment and a bowling accessory compartment, separate openings for each of said compartments, and rotatable means included in said divider means for supporting said ball coaxially therewith for rotation in said bag.

2. In combination a carrying bag for a bowling ball, ball support means in said bag, rotatable arcuate means shaped to receive the ball in a contiguous relationship therewith in at least three points, said arcuate means having bearing means associated therewith, mating bearing means on said ball support means, and attaching means for attaching said arcuate means to said support means to enable cooperation between said bearing means and said mating bearing means so that said arcuate means can rotate coaxially and hold said bowling ball to also rotate coaxially with respect to said attaching means while said arcuate means is attached to said support means.

3. In the carrying bag of claim **2** wherein said bearing means and mating bearing means comprise raceways, bearings provided between said raceways and wherein said attaching means comprises stud means.

4. In combination a carrying bag for a bowling ball, ball support means in said bag, arcute means shaped to receive the ball in a contiguous relationship therewith in at least three points, said arcuate means having a first bearing surface on the side opposite the side that has the said at least three points thereon, a second bearing surface on said ball support means, means for attaching said arcuate means to said support means to enable cooperation between said first and second bearing surfaces so that said arcuate means can rotate and hold the bowling ball to rotate coaxially with respect to said attaching means while said arcuate means is attached to said support means, said bag comprising flexible sides, ball cleaning means affixed to at least one of said flexible sides inside the bag, and means for providing access to the interior of the bag to rotate the ball while maintaining contact between the surface of the ball and said cleaning means.

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