June 4, 1963 J. S. KIVETT 3,092,225

BOWLING EQUIPMENT CARRIER

Filed May 23, 1960

Fig. 1.

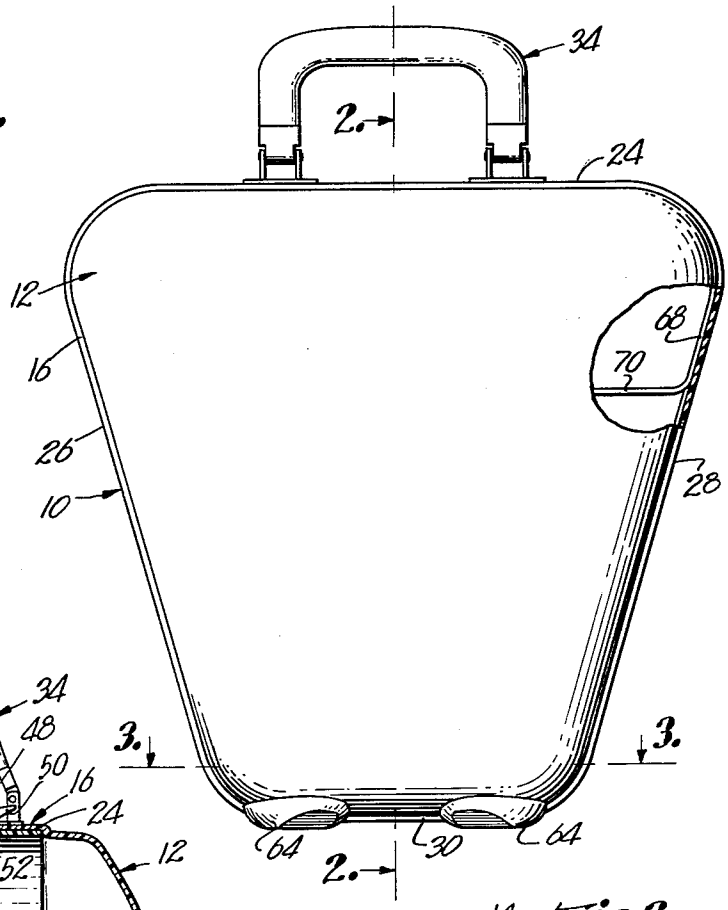


Fig. 2.

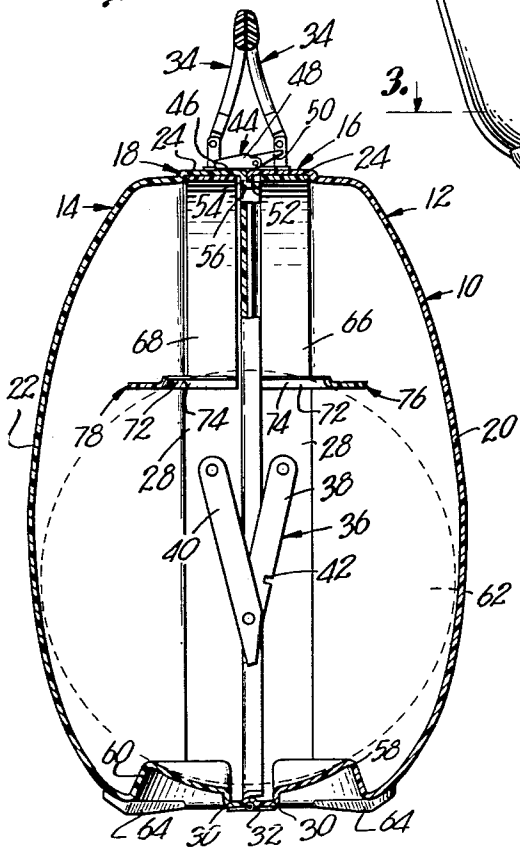
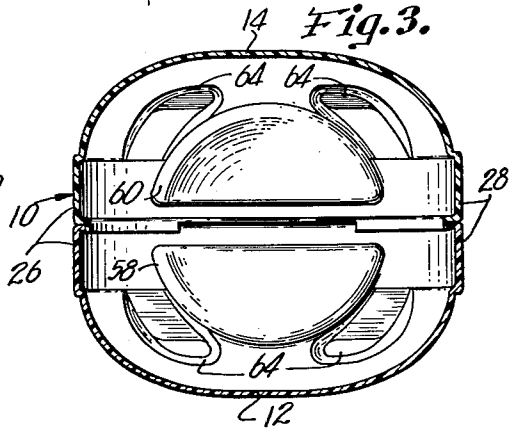


Fig. 3.



INVENTOR.
Jerome S. Kivett

BY
Hovey, Schmidt, Johnson & Hovey
ATTORNEYS.

United States Patent Office

3,092,225

Patented June 4, 1963

3,092,225

BOWLING EQUIPMENT CARRIER

Jerome S. Kivett, Kansas City, Mo., assignor to Regal Plastic Company, Kansas City, Mo., a corporation of Missouri

Filed May 23, 1960, Ser. No. 31,073
2 Claims. (Cl. 190—48)

The present invention relates to a bowling equipment carrier and more particularly to a case for carrying a bowling ball, bowling shoes and the like made of a relatively rigid material.

The present invention proposes to provide a bowling equipment carrier or the like wherein the carrier is constructed of a pair of generally identical half-shell members adapted to be joined together to form a container for bowling equipment or the like.

It is therefore an object of the present invention to provide a carrier for bowling equipment or the like constructed from two generally identical half-shell members adapted to be joined together to form a container.

It is a further object of the present invention to provide a carrier of the type above described wherein the half-shell members are molded from a plastic or a similar moldable material.

It is a still further object of the present invention to provide a carrier for bowling equipment or the like as above described wherein the half-shell members have integrally molded therein means which cooperate to support bowling equipment or the like contained therein when the shell members are joined to form a container.

It is still another object of the present invention to provide a carrier of the type above described wherein means are molded in the half-shell members which cooperate when the members are joined to form a container for supporting a spherical object in the container and further means are provided fixed to the shell members for supporting the spherical object at a point on its surface opposite from the point where the molded means support said object.

Further objects and advantages will appear as this description proceeds as being inherent in the structure and are intended to be covered by the scope of the appended claims.

In the drawings:

FIGURE 1 is a front elevational view of structure embodying the present invention having portions broken away to show details of construction;

FIG. 2 is a transverse vertical cross section taken on line 2—2 of FIG. 1, looking in the direction of the arrows; and

FIG. 3 is a horizontal transverse cross section taken along line 3—3 of FIG. 1, looking in the direction of the arrows.

There is shown in the drawings a bowling equipment carrier generally designated by the numeral 10. Carrier 10 is principally formed by a pair of shell members 12 and 14 which are joined together in a manner which will be subsequently described to form a container for a bowling ball and bowling shoes or the like.

As can be seen from the drawings and particularly from FIG. 1, each of the shell members 12 and 14 are generally trapezoidal in their area of greatest cross section. Inasmuch as the preferred construction is to mold the shell

members 12 and 14 from a material such as plastic or the like which is semi-rigid or rigid, the area of trapezoidal cross section is defined by a marginal band extending around the periphery of shell members 12 and 14 and numbered 16 and 18, respectively. The cross-sectional expanse defined by the marginal bands 16 and 18 is enclosed by dished side walls or faces 20 and 22, respectively, which are integrally molded with oppositely facing edges of bands 18 and 16 as shown in FIG. 2.

Each of the marginal bands 18 and 16 generally define a top 24, opposing sides 26 and 28 and a bottom 30. The bottom portions 30 of marginal bands 16 and 18 are pivotally joined in a well-known manner by hinge means generally designated by the numeral 32. Each of the top portions 24 is provided with handle structure generally designated by the numeral 34 which are well known and need not be further described in this specification.

As can be seen by virtue of the structure described, the shell members 12 and 14 are pivotally movable relative to each other by virtue of their pivotal coupling through hinge means 32 in such a manner that the shell members 14 and 16 can be pivoted into abutting engagement to form a container. In order to limit the pivotal movement of shell members 12 and 14 divergingly away from abutting engagement, limiting means generally designated by the numeral 36 are provided connecting the interior surfaces of side portions 28 of marginal bands 16 and 18. A similar limiting means to that shown at 36 in the drawing is provided connecting the side portions 26 of bands 16 and 18 but is not shown in the drawings. The limiting means 36 include a first link 38 pivotally mounted at one end to the interior of side portion 28 of band 16, and a second link 40 pivotally mounted at one end to the interior of side portion 28 of band 18. The respective links 38 and 40 are pivotally coupled proximal the ends of links 38 and 40 remote from the pivotal connections with sides 28. Link 38 is provided with a notch 42 in the lower marginal edge thereof and link 40 is provided with a flange turned outwardly toward the interior surface of sides 28 and for this reason not shown in the drawings. The groove 42 and the flange (not shown) are respectively positioned such that when the shell members 12 and 14 are pivoted about hinge means 32 the links will pivot to an extended horizontal position wherein the flange engages notch 42, thereby limiting further diverging movement of shell members 12 and 14.

It can be seen by virtue of the limiting structure above described that the shell members 12 and 14 are pivotable between a first position wherein the marginal bands 18 and 16 are in abutting engagement and a second position determined by the engagement in notch 42 of the outturned flange (not shown).

Latch means generally designated by the numeral 44 are provided on the tops 24 of bands 16 and 18 and comprise a catch 46 and a pawl 48. Catch 46 is mounted on the outwardly facing surface 24 of marginal band 18 and the pawl 48 is pivotally mounted on the outwardly facing surface of top 24 of marginal band 16. The catch 46 and pawl 48 are of course positioned for engagement with each other, and for the purpose of engaging pawl 48 with catch 46 a manually operable handle 50 is provided coupled with pawl 48 which is operable to engage pawl 48 with catch 46 and to disengage the same. It can be

seen by virtue of the structure above described that means are provided for latching the shell members 12 and 14 when they are in their position of abutting engagement.

The shell members 12 and 14 differ only in the following respect. The marginal edge of band 16 is a downwardly turned flange 52 which can best be seen in FIG. 2, flange 52 being integral with band 16 and shell member 12 and in the preferred embodiment molded into the half-shell member in a well-known manner. Shell member 14 is provided with a downwardly turned flange 54 similar to the flange 52 except that it extends toward the interior of the container defined by shell members 12 and 14, a slightly greater distance than flange 52. From the innermost extremity of flange 54 a shoulder 56 extends generally toward shell member 12 as shown in FIG. 2. It will be apparent from the structure above described that when the shell members are latched in abutting engagement as previously described flange 52 will abut flange 54 and the downwardly facing edge of flange 52 will engage shoulder 56. When the shell members 12 and 14 are in the latched position, therefore, it will be apparent that they will be in overlapping sealed abutting engagement. It should be explained at this point that the flanges 52 and 54 and the shoulder 56 are all molded in their respective shell members 12 and 14 and that portions of the flanges 52 and 54 and the shoulder 56 must be cut away along the bottoms 30 of marginal bands 16 and 18 in order to permit pivotal movement of the shell members 12 and 14 relative to each other.

The bottoms 30 of marginal bands 16 and 18 and the lowermost portion of side walls 20 and 22 are molded such that each shell member 12 and 14 has a semicircular portion extending upwardly into the interior of the container defined by the shell members, said arcuate segments being indicated generally by the numerals 58 and 60, respectively. Each of the segments 58 and 60 is dished toward the bottom of the container defined by shell members 12 and 14 and are therefore adapted to position within the container a spherical object such as a bowling ball indicated in dotted line in FIG. 2 and designated by the number 62 or, for that matter, any object of comparable size having arcuate surfaces which could be received in the segments 58 and 60. A plurality of feet or cleats 64 are molded in the exterior surface of the bottom portions of side walls 20 and 22 for the purpose of providing points of support so that the carrier 10 may be set upon a relatively level surface and will stand in a normal upright position. Cleats or feet 64 also provide a means of protecting the remaining surfaces of the carrier 10 against wear and damage which would otherwise be caused by setting the carrier 10 upon a rough surface.

Across the interior surface of tops 24 of marginal bands 16 and 18 and extending downwardly along sides 26 and 28 of bands 16 and 18 to a point spaced above the mounting of the limiting means 36 is a strap made from leather or leatherette or similar material which is both adhesively mounted to the interior surfaces and additionally secured to the surfaces by common means such as screws and nuts. These straps are indicated generally by the numerals 66 and 68, and terminate in inwardly turned flanges 70 at each end. Only one such flange 70 is shown as at FIG. 1 in the drawing, but for purposes of clarity there are four such flanges, two for each strap. Extending across the interior of the carrier 10 defined by the shell members 12 and 14 between the flanges 70 are bight portions 72 made of similar material to the straps 66 and 68 and adhesively secured to the flanges 70 at each side of the carrier 10. Intermediate the ends of bight portions 72 which are secured to the flanges 70 is a generally U-shaped median portion 74. The closed end of the U of each bight 72 extends towards the respective side wall 20 or 22 of the side to which it is mounted. It is apparent from the structure above described that when the container or carrier 10 is in the latched position and a bowling ball 62 is present therein the straps 66 and 68, flanges 70, bight portions 72 and median portion 74 form a pair of supports generally designated by the numerals 76 and 78, respectively, which will support the oppositely facing surface of the ball 62 or other object placed in the container at a point opposite to the portion of the surface supported by the arcuate segments 58 and 60, thereby holding the object in relatively fixed position within the container. Such positioning of the ball or other object within the container as above described enables the equipment to be more easily carried inasmuch as there is no shifting of the weight and the center of gravity of the carrier when loaded.

It should be further apparent from the description that the upper surface of the bight portions 72 is spaced below the inner surface of tops 24 of marginal bands 16 and 18 and below the top portions of the sides 20 and 22 such that sufficient space remains within the carrier so that bowling shoes or the like may be placed upon the top surfaces of bight portions 72 and supported in relatively fixed position within the container or carrier 10. The case, therefore, provides a means for carrying all of the equipment necessary for bowling in a manner such that the equipment does not shift or interfere with other pieces of equipment within the container. It should be further apparent that manufacture of the container as described from two molded pieces will provide a relatively inexpensively manufactured carrier and, further, that molding the carrier from a relatively rigid material will protect the equipment and particularly the ball carried therein from damage such as chipping which might otherwise occur in carriers of the conventional type made from cloth or other flexible material.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is:

1. A bowling equipment carrier comprising a pair of shell members, each of said members having a face, a top, a bottom and a pair of opposed sides, said members having abutting margins and coupled along common abutting margin portions for relative pivotal movement, said shell member defining an enclosed container when said margins are abutting; first retaining means on said shell members and disposed to receive a bowling ball thereon in supporting relationship to the latter when the container is closed; and a pair of second retaining means, each of said second retaining means comprising straps fixedly secured to the opposed sides of one of said shell members and a median arcuate portion carried by said straps and extending toward the face of said one shell member, said arcuate portion being spaced directly above said first retaining means and disposed to engage a bowling ball when carried by said bowling equipment carrier.

2. A bowling equipment carrier comprising a pair of shell members molded from a relatively rigid material, each of said members having a face, a top, a bottom and a pair of opposed sides, one of said members including a marginal edge having a shoulder and the other of said members including a marginal edge having a flange complementary to said shoulder, said marginal edges being coupled along common portions thereof for relative pivotal movement of said shell member; handle means on said shell members adapting the latter for manual carrying; limiting means further coupling said shell members for limiting the extent of relative movement between the latter; latching means on common portions of said marginal edges; said shell members being pivotable between a first position wherein said marginal edges are in abutting engagement and said shell members form a container and a second position determined by said limiting means wherein said shell members have their marginal edges out of engagement, said latching means latching said members in said first position; a pair of dished generally semi-circular first retaining means

molded in said members, said means cooperating when said members are in said first position to support a bowling ball in said container; and a pair of second retaining means, each of said second retaining means comprising straps fixedly secured to the opposed sides of one of said shell members and a median arcuate portion carried by said straps and extending toward the face of said one shell member, said arcuate portion being spaced directly above said first retaining means and disposed to engage a bowling ball when carried by said bowling equipment carrier.

References Cited in the file of this patent

UNITED STATES PATENTS

D. 125,988	Anderson	Mar. 18, 1941
2,302,802	Roberts	Nov. 24, 1942
2,454,366	Worley	Nov. 23, 1948
2,580,958	Robinson	Jan. 1, 1952
2,617,012	Westley	Nov. 4, 1952
2,872,029	Cart	Feb. 3, 1959
2,922,453	Le Goff	Jan. 26, 1960
2,945,582	Abraham et al.	July 19, 1960
2,991,859	Kaplan	July 11, 1961