May 8, 1956 J. PROCARIO ET AL 2,744,274

BALL WASHING APPARATUS

Filed July 20, 1953

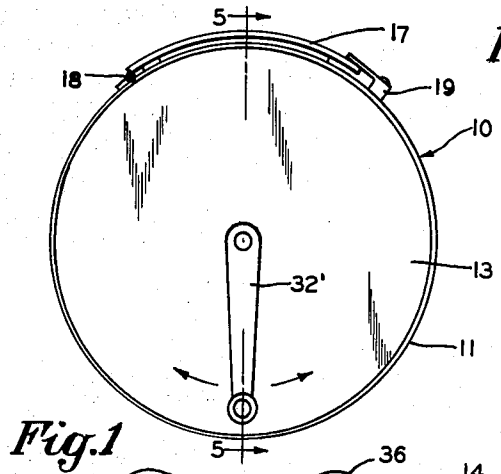

Fig. 1

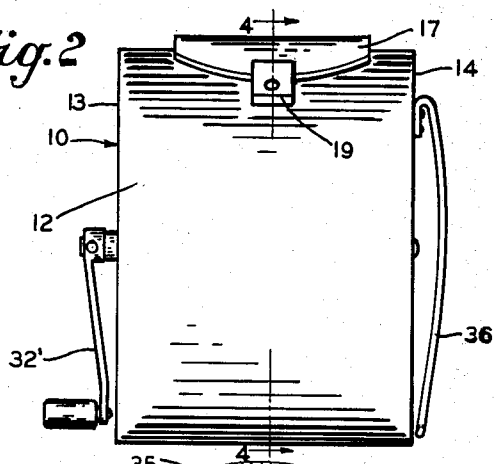

Fig. 2

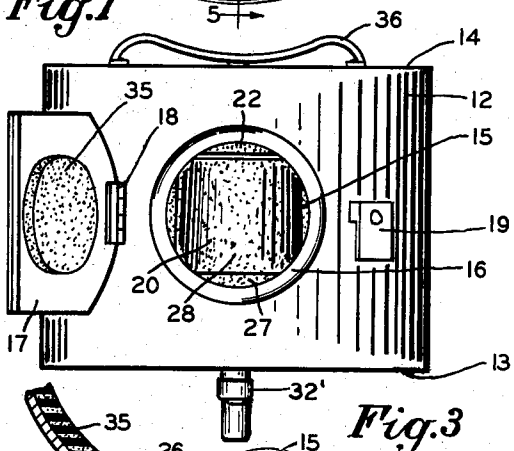

Fig. 3

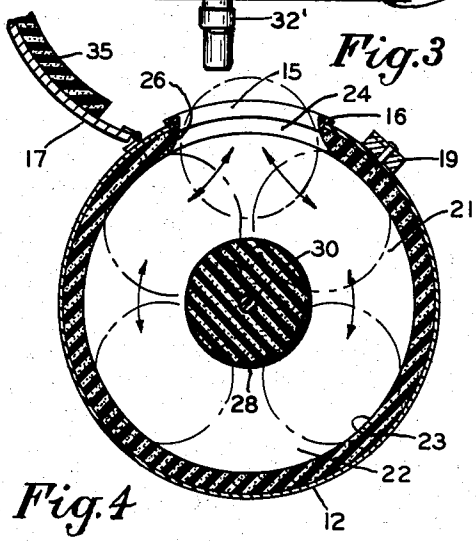

Fig. 4

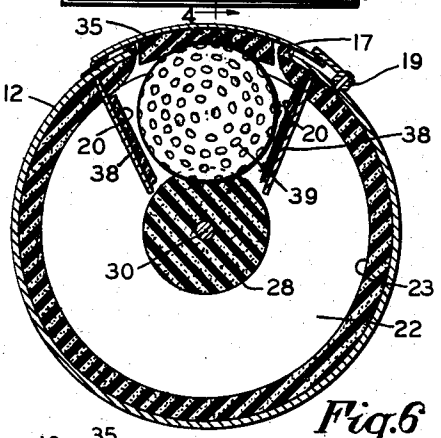

Fig. 6

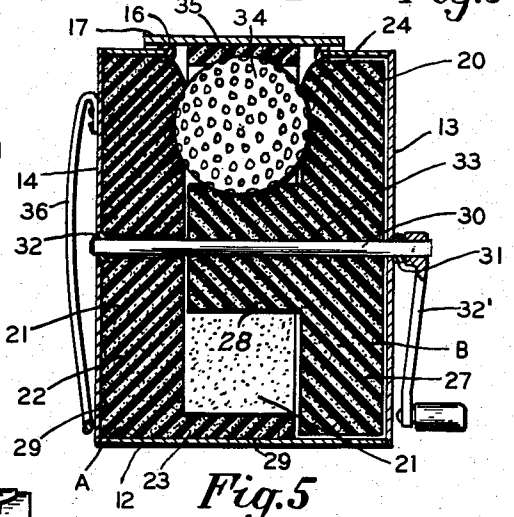

Fig. 5

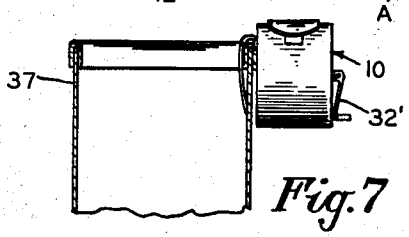

Fig. 7

INVENTORS
Justino Procario
BY Paul F. Procario
Frease & Bishop
ATTORNEYS

United States Patent Office 2,744,274 Patented May 8, 1956

2,744,274

BALL WASHING APPARATUS

Justino Procario, Canton, and Paul F. Procario, Kent, Ohio

Application July 20, 1953, Serial No. 368,983

6 Claims. (Cl. 15—97)

Our present invention relates to ball washing apparatus and more particularly and specifically to a portable golf ball washer which may be conveniently attached to a golf bag, wheeled caddy or the like in a readily available position for use by a golfer during play, and a washer which may be easily and conveniently stored in a pocket of the golf bag during periods of non-use.

Generally, certain golf ball washing apparatus constructions have been used heretofore for the purposes of cleaning dirt, grass stains and the like from the covers of golf balls. However, such prior apparatus as has been heretofore provided has had numerous disadvantages both from the standpoint of construction as well as from the standpoint of function and availability of use.

Certain of these prior golf ball washer constructions include a container provided with a pair of spaced brushes fixed in the container and a paddle like golf ball holder reciprocably supported between the brushes for the purpose of moving a golf ball back and forth in contact with the brush surfaces for cleaning the same.

In these prior constructions, the cleaning of golf balls is accomplished by the brushing action on the ball covers accompanied by the application to the balls of a liquid detergent solution which is carried in the container to a depth of approximately one-half the height of the brushes therein.

In the use of such prior constructions as those above noted, it has been discovered that during the hot days normal to the golfing season the detergent solution contained in the washers will evaporate rapidly thus necessitating constant refilling of the washers by golf course personnel in order to maintain the washers in satisfactorily operable condition. Unfortunately, the time and labor requirements necessary to maintain a program of refilling for washers of this type has resulted in a great laxity toward that end, thereby leaving such ball washers unattended and as such substantially useless to golfers.

Certain other types of prior constructions have been tried, but all of such constructions have required the maintenance of a liquid detergent level therein at all times in order to render the construction operative. Thus all prior constructions have the inherent disadvantages common to those above denoted relative to the evaporation of the cleaning solutions.

Another disadvantage in the use of prior constructions is inherent in the fact that such constructions are bulky and thus require stationary foundations for placement at intervals about a golf course where they are available to golfers. However, it has been the practice because of the costs involved in the provision of such washers as well as in the necessity that their placement be at points of normal congregation of all golfers to restrict the placement of such prior apparatus to points adjacent tees or greens about the course. Further, it has been an unfortunate practice for golf courses of the unusal management to space stationary washers of the type above noted at intervals of every other or every third tee about

the course because of the requirements noted as well as the initial costs of installation.

Thus, the average golfer is confronted with a lack of facility to properly wash or clean dirty golf balls at points about the course other than those widely spaced stationary washers of the type above noted.

It is a general object of the present invention to provide a golf ball washer which substantially eliminates those disadvantages inherent in both the construction, use and availability of prior known apparatus.

Another object of the present invention lies in the provision of a portable golf ball washer which may be carried by each individual golfer in his golf bag with a minimum requirement of storage space, and a washer which may be quickly and easily attached to the golf bag or on a wheeled caddy in a position of ready availability for use at any time and at any point in his travels about a course.

Still another object of the present invention resides in the provision of a portable golf ball washer which eliminates the necessity of maintaining free liquid in the washer for washing purposes thus avoiding the spilling of detergent solutions in or on the golf bag of the user, and a washer which will remain in operable washing condition for long periods of time without the necessity of reconditioning the same by the addition of washing solutions.

Still a further object is to provide a golf ball washer which may be removably attached to a golf bag, a wheeled caddy or the like in such a position as to make it readily available for use by either right or left handed persons at any time.

Still another important object of the present invention is to provide a portable golf ball washer which is of substantially simple and inexpensive design and manufacture and which is highly efficient and easily operable in use for the purpose of cleaning those dirty substances from golf balls which are normally incurred with the use of the same.

These and other objects are accomplished by the parts, constructions, arrangements, combinations and subcombinations comprising the present invention, the nature of which is set forth in the following general statement, and preferred embodiments of which—illustrative of the best modes in which applicants have contemplated applying the principles—are set forth in the following description and illustrated in the accompanying drawings, and which are particularly and distinctly pointed out and set forth in the appended claims forming a part hereof.

The nature of the present invention may be stated in general terms as including a cylindrical container taking the form of a housing, a pair of members of a spongy, liquid absorbent material substantially filling the housing, an arcuate passage formed in said spongy material between said members, said passage being of slightly lesser breadth than the diameter of a golf ball, an opening in said housing communicating with said passage to permit the insertion of a golf ball into said passage and its removal therefrom, a portion of said spongy material defining said passage being mounted for rotation relative to said container and said golf ball, whereupon a golf ball inserted in said passage will be resiliently abraded by those areas of the spongy material defining the passage, a hand crank means on said container having operable engagement with said movable portion of said spongy material, closure means on said container for said opening, and clip means on said container for removably securing the container to a golf bag, wheeled caddy or the like.

In the accompanying drawings in which like numerals designate similar parts throughout the several views;

Figure 1 is a side elevation of the washer;

Fig. 2 is an end view of the washer;

Fig. 3 is a plan view of the washer with the closure member in open condition;

Fig. 4 is a vertical section on line 4—4, Fig. 2 with the closure member in open condition;

Fig. 5 is a vertical section on line 5—5, Fig. 1 looking in the direction indicated;

Fig. 6 is a vertical section similar to Fig. 4 illustrating a modified construction of the washer; and

Fig. 7 is a pictorial illustration of the washer attached to a golf bag.

Referring now in particular to the accompanying drawings, the ball washer constituting the present invention is generally indicated at **10** and includes a cylindrical container **11** forming a housing having a continuous cylindrical wall **12** closed at each end by end walls **13** and **14**. The cylindrical wall **12** is provided with a substantially circular access opening **15** therein which opening is of a slightly greater diameter than the diameter of a golf ball. The peripheral edges of the opening **15** are finished off with a circular rubber grommet **16** which is of general U-shaped configuration in cross section and which is applied as an edging strip to the container edges defining the opening. A curved or arcuate cover plate **17** is hinged as at **18** to the continuous cylindrical wall of the housing to form a closure member for the access opening **15**. A suitable releasable catch member **19** is secured to the housing in such a manner as to selectively engage that edge of the cover plate opposite its hinged connection to lock the cover plate in closed condition over the access opening.

Interiorly the housing is provided with separate, complementary portions of a spongy, liquid absorbent material **20**, which portions are so arranged within the container so as to define generally between them an annular passage **21** which is located within the container concentrically of the cylindrical wall thereof and which is centered substantially equi-distant between the end walls of the container, as is best seen in Fig. 5.

Referring to Fig. 5, one of those portions A of the spongy, liquid absorbent material **20** located in the washer housing takes the form of a circular cup **21** having a circular body portion **22** provided with a perpendicular ring flange or rim **23** extending outwardly about the entire circumference of the body portion except where it is broken off to provide a channel **24** therethrough, having tapered edges **26**, (Fig. 4) to coincide with the peripheral edges of the access opening **15** in the container. A second portion B of the spongy, liquid absorbent material takes the form of a circular disc **27** provided with a circular hub **28** extending outwardly centrally from one face of the disc **27**, said circular hub extending outwardly from the disc a distance substantially equal to the depth of the peripheral rim flange **23** of the cup member **21**.

The cup member **21** is disposed with the base portion thereof against the inner face of the end wall **14** of the housing to which it is secured by suitable adhesive means **29** and which disposition places the outer face of the rim flange **23** thereof in juxtaposition with the inner face of the cylindrical wall **12** of the housing substantially centrally between the ends thereof with the channel **26** in the rim flange coinciding with the access opening **15** in the container as is best seen in Fig. 4. The outer face of the rim flange **23** is also connected as at **29** to the inner face of the cylindrical wall **12**.

A shaft **30** is extended through said container on the longitudinal axis thereof and is journaled in bearings **31** and **32** carried by the end walls **13** and **14** of the container respectively. Externally of the container wall **13**, and beyond the bearing **31**, the shaft **30** is provided with a crank handle **32'** for manual rotation of the shaft **30** in the bearing.

The second portion B of the spongy material is mounted on the shaft **30** with the shaft extending centrally through

the hub portion **28**. The mounting of sponge portion B on shaft **30** positions hub **28** centrally within the cup-shaped member **21**. The disc **27** and hub member **28** constituting the second spongy portion B are cemented as at **33** to the shaft **30** to space the extended end of the hub portion at a slight clearance from the base portion of the circular cup member **21**, and to cause rotation of the disc and hub with the shaft. The aforedescribed complementary assembly of the first sponge portion A and the second sponge portion B provides for the formation of the annular passage **21** defined in cross section between the base portion and the rim flange of the sponge portion A and the disc portion and extended hub of the sponge portion B.

The cross sectional area of the annular passage **21** is such that when a golf ball **34** is placed downwardly through the access opening **15** of the container into the passage through the channel **26** in the rim flange **23** of the first sponge portion A, limited areas of the ball cover will resiliently embed themselves in the spongy material in the portions A and B as is best seen in Fig. 5.

A section of spongy, liquid absorbent material of general circular configuration is applied as at **35** to the inner face of the cover plate **17** so that when said cover plate is closed this section of spongy material will complete the continuity of the circular rim flange **23** on the sponge portion A by filling in the channel **26** therein.

Thus, when a ball is inserted into the annular passage **21** and the cover is closed, those portions of the golf ball immediately surrounding the intersecting perpendicular axes of the ball will be impressed into the spongy material and will be subject to resilient abrasion upon relative movement of the ball and portions of said spongy material.

To complete the construction of the ball washer as described heretofore, a resilient, substantially U-shaped clip **36** is secured to the outer face of the end wall **14** of the housing for the purposes of permitting detachable connection of the washer housing to a golf bag by any one of several possible modes of connection, one of such modes being illustrated in Fig. 7 where the clip is inserted downwardly over the top edge of a golf bag **37** adjacent the inner face of the bag with the washer **10** disposed adjacent the outer face of the bag with the access opening **15** therein disposed upwardly for the convenient insertion of a ball thereinto, and with the handle **32'** disposed outwardly away from the bag to facilitate rotation of the shaft **30** and rotation of the sponge portion B and the golf ball **34**.

To condition the ball washer for use, a liquid detergent solution is introduced into the container wherein the spongy material portions A and B absorb a substantial portion of such detergent solution for retention therein.

After completely wetting the spongy portions within the container, all free liquid remaining in the container is emptied out and the cover is closed and secured thus permitting the easy storage and transportation of the ball washer. The closure plate **17** also substantially seals the housing preventing loss of the detergent solution through evaporation.

When the washer is attached to a golf bag, as shown in Fig. 7, the cover plate **17** may be opened and one or more golf balls **34** inserted into the annular passage **21** in the container through the access opening **15**. These golf balls will be moved through the annular passage **21** in either a clockwise or counterclockwise direction, as indicated by arrows in Fig. 4, dependent upon the direction of operation of the crank handle **32'** by the resilient, frictional movement of the disc **27** and hub **28** in engagement with the ball **34**. When such ball or balls return to a position immediately beneath the access opening **15** the resilience of the central hub portion **28** will cause the balls to spring upwardly to positions partially clear of the access opening **15** permitting their ready removal from the washer.

During movement of the golf balls **34** through the annular passage, the balls will be oscillated and rotated without any uniform pattern by reason of the frictional braking action applied to the ball by the stationary cup member **21** and the frictional impelling action of the disc **27** and hub **28** whereby all surface areas of the ball cover will be resiliently abraded or rubbed by the detergent solution bearing spongy material thereby cleaning all foreign substances from the cover of the ball.

Referring to Fig. 6, a modification of the present ball washer is shown wherein the construction of the container and the spongy portions therein are identical with those aforedescribed. In this modified construction, a pair of stop members or gates **38** are secured to the inner face of the container at spaced positions on either side of the access opening **15** in the general direction of the annular passage. The stop members **38** are faced with spongy material **20**. These stops extend substantially radially inwardly into the annular passage **21** to restrict movement of a golf ball **39** positioned in said passage and to maintain the ball within a fixed region immediately below the access opening **15** in the container. In this modified construction, a ball positioned in the annular passage **21** between the stop members or gates **38** will, when the cover plate **17** is closed and locked, have portions thereof embedded on all sides in spongy material **20**, as aforedescribed relative to the previously disclosed construction, and rotation of the sponge portion B will cause oscillation, twisting and rotation of the ball in contact with the spongy material thereby cleaning all foreign substances from the cover of the ball. Upon opening of the cover plate **17** there will be a resilient projection of the ball by hub **28** upwardly and outwardly of the access opening **15** for its removal from the container.

While in the instant disclosures the annular passage **21** is shown with a rectangular cross section, since such a configuration constitutes the most economical construction, it is fully contemplated that the sponge portions defining the annular passage could be so shaped as to provide an annular passage of round or oval cross-sectional configuration without departing from the spirit and scope of this invention.

It is further contemplated that any wet retaining material such as sponge rubber, neoprene or the like could be utilized as the abrading detergent holding means within the container of the washer construction shown and described.

Accordingly, a portable golf ball washer is provided which has inherently all those attributes, objects and advantages set forth above, and which provides an extremely new and useful article of manufacture of a type and function unique in the light of prior constructions.

In the foregoing description, certain terms have been used for brevity, clearness and understanding, but no unnecessary limitations are to be implied therefrom beyond the requirements of the prior art, because such words are used for descriptive purposes herein and are intended to be broadly construed.

Moreover, the embodiments of the improved construction illustrated and described herein are by way of example, and the scope of the invention is not limited to the exact details of construction.

Having now described the invention, the construction, the operation and use of preferred embodiments thereof, and the advantageous new and useful results obtained thereby; the new and useful constructions, and reasonable mechanical equivalents thereof obvious to those skilled in the art, are set forth in the appended claims.

We claim:

1. A portable golf ball washer including a housing, a generally cup-shaped mass of spongy absorbent material having a body portion and a generally perpendicularly

extending rim flange terminating in an open end, the cup-shaped mass mounted in the housing, a second mass of spongy absorbent material mounted in the housing adjacent the rim flange open end and substantially closing said open end, a third mass of spongy absorbent material mounted telescoped within and spaced from the cup-shaped mass rim flange between the cup-shaped mass body portion and second mass forming a continuous passage within the cup-shaped mass rim flange and between the cup-shaped mass body portion and the second mass, at least one of the second and third masses being mounted for rotation in reference to the housing, means for rotating said one mass, and the housing having an opening formed therein in communication with the continuous passage to permit the insertion of a golf ball into said passage and the removal therefrom.

2. Golf ball washer construction as defined in claim 1 in which the rim flange of the cup-shaped mass is provided with a channel formed therethrough, in which the opening in the housing communicates with the continuous passage through said channel, in which a removable cover plate is mounted over the opening in the housing, and in which a section of spongy absorbent material is mounted on said cover plate to fill said channel.

3. Golf ball washer construction as defined in claim 1 in which both the second and third masses are mounted for rotation in reference to the housing; and in which the means for rotating is for rotating both the second and third masses.

4. Golf ball washer construction as defined in claim 3 in which the rim flange of the cup-shaped mass is provided with a channel formed therethrough, in which the opening in the housing communicates with the continuous passage through said channel, in which a removable cover plate is mounted over the opening in the housing, and in which a section of spongy absorbent material is mounted on said cover plate to fill said channel.

5. A portable golf ball washer including a cylindrical housing having circular end walls, a circular cup of spongy absorbent material having a circular body portion and a perpendicularly extending rim flange, the circular body portion of the cup fixedly mounted against one end wall of the housing, a circular disc of spongy absorbent material having a circular hub extending outwardly of one face thereof a distance substantially equal to the depth of said cup rim flange, said disc rotatably mounted against the end wall of the housing opposite from said one end wall with said hub positioned centrally within the cup forming an annular passage between the cup and disc, said housing having an opening formed therein in communication with said annular passage to permit the insertion of a golf ball between said disc and its removal therefrom, and a handle on said housing operably connected to said rotatable disc to permit rotation thereof; whereby a golf ball inserted in the annular passage may be moved by rotation of the circular disc throughout the length of the passage in resilient abrading contact with the cup and disc.

6. Golf ball washer construction as defined in claim 5 in which the rim flange of the cup is provided with a channel formed therethrough, in which the opening in the housing communicates with the annular passage through said channel, in which a removable cover plate is mounted over the opening in the housing, and in which a section of spongy absorbent material is mounted on said cover plate to fill said channel.

References Cited in the file of this patent

UNITED STATES PATENTS

1,920,960	Cogsdill	Aug. 8, 1933
1,954,738	Lerch	Apr. 10, 1934
2,622,257	Lemonds	Dec. 23, 1952