Nov. 29, 1960 W. A. FOWLER ET AL 2,962,321

DEVICE FOR RETRIEVING AND STORING AND DISPENSING GOLF BALLS

Filed July 27, 1955

Fig. 1.

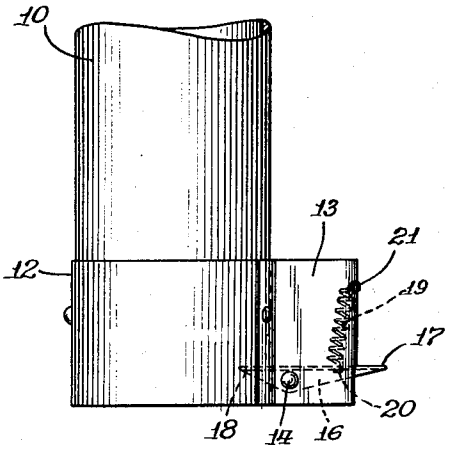


Fig. 3.

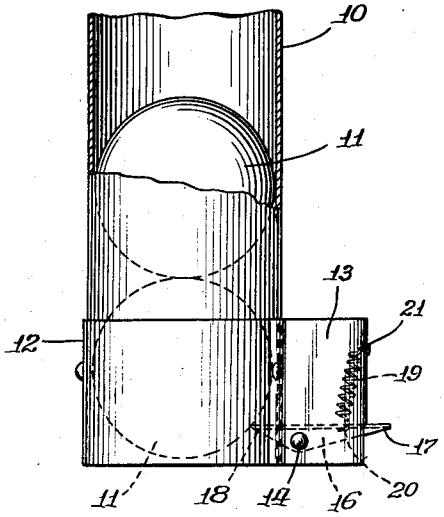


Fig. 2.

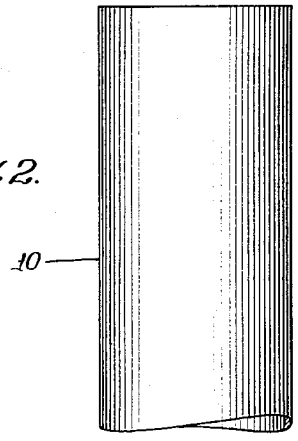
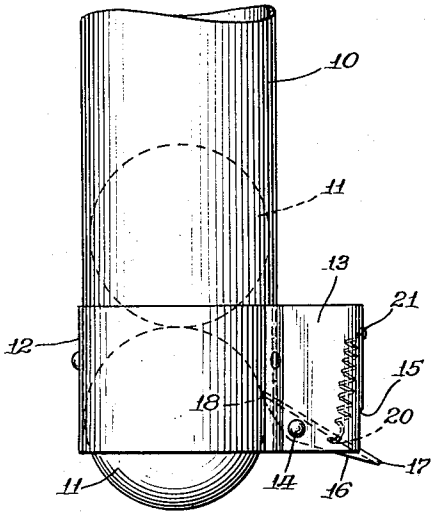


Fig. 4.



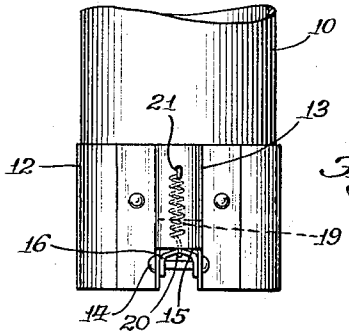


Fig. 5.

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DEVICE FOR RETRIEVING AND STORING AND DISPENSING GOLF BALLS

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10 Claims. (Cl. 294—19)

This invention pertains to improvements in a device for manually retrieving and storing and dispensing golf balls. More particularly stated, this invention relates to an improved and manually operable device usable on golf courses, golf ball driving ranges, etc. for picking up golf balls, storing a limited number of golf balls and dispensing individual golf balls.

The picking up of golf balls by hand is difficult for many individuals who wish to play golf, particularly for those individuals for whom a stooping action is bothersome. Similarly, the picking up of golf balls by hand on golf ball driving ranges is a tedious and difficult task.

It is therefore an object of this invention to provide a new and novel and useful improvement in a relatively simple device which is easy to operate and convenient to handle and which, in its preferred form, will not easily corrode, and which may be used by an operator of the device to easily pick up golf balls and like articles without stooping and may be used to store a convenient number of such golf balls or like articles, as desired, and may be used to dispense the stored balls or like articles one or more at a time to a desired predetermined position.

The foregoing and other objectives, important novel operational and structural features and advantages of this invention, will become more apparent and be more easily understood upon the examination of the following description thereof and the accompanying drawings and appended claims. It should, however, be understood that, without desire of limitation, the invention will be described and illustrated as the preferred embodiment of the invention in a golf ball retrieving and storing and dispensing device. Certain changes and variations may suggest themselves to those skilled in the pertinent arts, which changes and variations may not, however, depart from the spirit of this invention and may come within the scope of the appended claims.

In the accompanying drawings:

Figure 1 is a front elevational view of the lower portion of the improved device;

Figure 2 is an elevational view of a portion of the round tubular storage and handle element of the improved device;

Figure 3 is a view similar to the view shown in Figure 1, illustrating two balls retained in the lower portion of the device;

Figure 4 is a view similar to the view shown in Figure 1, illustrating the position of a ball as it is being inserted into or dispensed from the lower portion of the device; and

Figure 5 is a right hand side elevational view of the lower portion of the improved device which is shown in front elevation in Figure 1.

Referring to the drawings, in which like elements are identified by like numerals, 10 represents an upstanding and elongated and tubular retainer, which may, if desired, be made of transparent colored plastic material, for receiving and storing and dispensing one or more

golf balls or like articles 11 in single vertical file. Retainer 10 has a substantially uniform internal diameter of a size equal to the open lower end of retainer 10, which lower open end is adapted to freely pass over golf balls 11 to be handled. The element 10 also functions as the handle for the improved device.

A substantially ring-shaped reinforcing element 12 is secured, as for example, by riveting, to the lower end of tube 10 with the lower edge of element 12 substantially flush with the lower end of tube 10. A laterally extending bracket element 13 is secured, as by riveting, to the ring-shaped element 12 and the lower end of tube 10. A horizontally disposed pivot element 14 is fixed to and is carried by bracket 13 and is positioned laterally from the lower end of tube 10 and near the lower edge of bracket 13. Bracket element 13 includes a lever stop surface 15 disposed laterally outwardly and slightly above the pivot element 14.

A ball obstructing or gate element or lever 16 is pivotally supported intermediate its outer end 17 and its inner end 18 on the pivot 14 on which it is pivotable upwardly and downwardly in a vertical plane through a limited arc. The upward tilting of the outer portion of the straight lever 16 is limited by engagement of the outer portion of the lever 16 with the motion limiting surface of stop 15, in which position the outer end 17 of lever 16 extends laterally outwardly in a substantially horizontal position beyond the bracket 13, and may be easily engaged by an operator. A tensioned spring or like biasing member 19 has its lower end secured to lever 16 at 20 outwardly of pivot 14 and has its upper end secured to bracket 13 at 21. The tensioned spring 19 operates to urge the outer end of lever 16 upwardly into horizontal position against stop 15.

When the lever 16 abuts against stop 15, the inner end 18 of lever 16 extends diametrically into the lower end of tube 10, immediately above the lower open end of the tube 10, a sufficient distance so that when lever 16 is in horizontal position the distance between the inner end 18 thereof and the opposite inner surface of the tube 10 is less than the diameter of a golf ball 11 to be retained in the tube 10. When in a horizontal position, the lever 16 is in ball supporting and maximum obstructing position.

As shown in Figure 4, the inner end 18 of lever 16 has been moved or pivoted or retracted upwardly to a retracted or non-obstructing position by the downward pivoting of the outer end 17 of lever 16. In such retracted position end 18 of lever 16 is spaced from the opposite inner side of tube 10 a distance greater than the diameter of a ball 11. Downward pivoting of the inner end 18 of the lever 16 will extend the lever 16 into the passage or path of movement of a golf ball 11 passing through the open lower end of tube 10 until the lever 16 again attains the horizontal position of maximum obstruction of the ball passage in the lower end of tube 10. When in such substantially horizontal position, lever 16 will engage stop 15, into which position of stop engagement it will have been urged by the spring 19, and beyond which horizontal position the end 18 of lever 16 cannot continue to pivot downwardly.

When the lever or gate 16 is in the horizontal and maximum obstructing position with respect to the opening in the lower end of tube 10 the balls 11 retained in the tube 10 will rest upon and be supported by the gate 16, and the weight of the balls 11 will tend to hold the outer end of lever 16 against the stop 15, thereby preventing the weight of the balls 11 from further depressing the inner end of gate 16 beyond the position of maximum obstruction.

To retract gate 16, which necessitates the upward pivoting of end 18 thereof, the supported balls 11 must be

raised sufficiently to permit the lever **16** to assume the retracted position shown in Figure 4, in which retracted position the balls **11** may freely pass gate **16** to be discharged from or inserted into tube **10**. In the event that all the balls **11** are to be dispensed or emptied from tube **10**, lever **16** may be held in the mentioned retracted position to permit all the balls **11** to pass at one time through the thus substantially unobstructed lower open end of the tube **10**. The balls **11** may, of course, also be emptied from tube **10** through the upper end of tube **10** by sufficiently tilting the tube. In the event that only one ball **11** is to be dispensed from tube **10**, then the outer end **17** of lever **16** is rapidly pushed down until the inner end **18** is in retracted position whereupon end **17** is then again quickly released so that the inner end **18** will rapidly return to the horizontal and obstructing position under the influence of the spring **19**. During such cycle of movement of the lever **16** one ball will be permitted to pass downwardly beyond the gate or lever **16**. To insert a ball resting on the ground into the lower end of tube **10**, it is only necessary to center the lower end of the tube **10** over the ball **11** and press downwardly. Such downward pressure on the ball will prevent the escape of the ball and will cause the ball **11** to engage and raise the inner end **18** of lever **16** to the retracted position until the horizontal diameter of the ball **11** has reached a position above the inner end **18** of the retracted lever **16**, whereupon the lever **16** will quickly move past the ball and be returned to the horizontal position by the action of spring **19**. That operation may be repeated to retrieve as many balls as desired. To accomplish such operation it is obviously necessary that the elevation of the inner end **18** of lever **16**, when in retracted position, be spaced from the lower end of tube **10** a distance less than the radius of a ball **11**.

From the foregoing description of this invention and from the accompanying drawings, it will be apparent that this invention realizes the introductorily enumerated objectives respecting the improvements in the described device. It will similarly be apparent that the invention also possesses the hereinbefore listed advantages and provides a new, novel and useful device for handling golf balls.

Having thus described and illustrated the preferred embodiment of this invention in an improved device for retrieving and storing and dispensing golf balls, the invention is not to be interpreted as being restricted to the specifically illustrated and described embodiment of the invention as set forth in the drawings and as hereinbefore described, except insofar as is necessitated by the appended claims and the disclosures of the prior art.

The invention is hereby claimed as follows:

1. In combination, a manually portable hand tool including retaining means for articles to be received into and discharged from said retaining means, an opening in said retaining means of a size through which articles to be received and discharged may pass one at a time, movable obstructing means for said opening, said obstructing means being carried by said tool and being adapted to be moved into and retracted from article obstructing position at said opening whereby to obstruct the passage through said opening of an article to be discharged from said retaining means when said obstructing means is in obstructing position, and biasing means carried by said tool for normally biasing said obstructing means to normally maintain said obstructing means in maximum article obstructing position, said obstructing means being movable out of article obstructing position responsive to the pressure of an article being manually pressed thereagainst while said article is being moved into said retaining means through said opening and being movable manually out of obstructing position to discharge retained articles from said retaining means through said opening.

2. In combination, manually portable and manually operable retaining means for articles to be handled, an opening in said retaining means of a size through which articles to be handled may freely pass one at a time, movable gate means supported by said retaining means and adapted to be moved into and out of article obstructing position at said opening whereby to obstruct the movement through said opening of an article to be handled when said obstructing means is in obstructing position, biasing means supported by said retaining means and normally biasing said gate means into article obstructing position, and fixed stop means carried by said retaining means and engageable with said gate means to limit the movement of said gate means in one direction when said gate means is in maximum article obstructing position and engages said fixed stop means, said gate means being movable out of article obstructing position responsive to the pressure of an article being manually pressed thereagainst while being moved into said retaining means through said opening and being movable manually out of obstructing position to discharge retained articles from said retaining means through said opening.

3. In combination, an upstanding and slender and manually portable and manually operable retaining means for articles to be handled, an opening in the lower portion of said retaining means of a size through which articles to be handled may freely pass, movable obstructing means pivoted to and carried by said retaining means adjacent said opening to engage and support articles retained in said retaining means immediately above said obstructing means, said obstructing means being adapted to be moved into and retracted from article obstructing position at said opening whereby to obstruct the passage through said opening of articles to be handled when said obstructing means is in obstructing position, and fixed motion limiting means carried by said retaining means and engageable with said obstructing means to prevent the weight of retained articles supported upon said obstructing means from moving said obstructing means out of position in which said opening is obstructed when said fixed motion limiting means is in engagement with said obstructing means, said obstructing means being movable out of article obstructing position responsive to the pressure of an article to be handled while being manually pressed thereagainst while being moved into said retaining means through said opening and being movable manually out of obstructing position to discharge retained articles from said retaining means through said opening.

4. A ball retrieving and storing and dispensing device of the manually portable and manually operable type, comprising, in combination, an upstanding and manually portable retaining means for balls to be handled, an opening in the lower portion of said retaining means of a size through which a ball to be handled may freely pass, movable gate means carried by said retaining means and pivoted thereto adjacent said opening to engage and support a ball resting upon said gate means when said gate means is in ball obstructing position, said gate means being pivotable to move a ball supported thereby out of the path of pivoting of said gate means and being pivotable to retract said gate means out of the path of movement of a ball passing through said opening, whereby a ball may freely pass through said opening when said gate means is pivoted to a retracted position, said gate means being pivotable out of ball obstructing position responsive to the pressure of a ball being manually pressed thereagainst while being moved into said retaining means through said opening and being movable manually out of obstructing position to discharge retained balls from said retaining means through said opening.

5. A ball retrieving and storing and dispensing device of the manually portable and manually operable type, comprising, in combination, an upstanding and manually portable retaining means for balls to be handled, an opening in the lower portion of said retaining means of a size through which a ball to be handled may freely pass, movable gate means carried by said retaining means and pivoted thereto adjacent said opening to engage and sup-

port a ball resting upon said gate means when said gate means is in ball obstructing position, said gate means being pivotable upwardly to move a ball supported thereby upwardly out of the path of pivoting of said gate means and to retract said gate means upwardly out of said obstructing position in the path of movement of a ball passing through said opening and said gate means being pivotable downwardly from the upwardly pivoted position to thus return said gate means to said obstructing position, whereby when said gate means is pivoted upwardly to a retracted position a ball may freely pass through said opening and when said gate means is pivoted downwardly from a retracted position to said obstructing position said opening will be thereby obstructed to the movement of a ball therethrough, said gate means being movable out of ball obstructing position responsive to the pressure of a ball being manually pressed thereagainst while being moved into said retaining means through said opening and being movable manually out of obstructing position to discharge retained balls from said retaining means through said opening.

6. A ball retrieving and storing and dispensing device of the manually portable and the manually operable type, comprising, in combination, an upstanding and manually operable retaining means for balls to be handled, an opening in the lower portion of said retaining means of a size through which a ball to be handled may freely pass, movable gate means carried by said retaining means and pivoted thereto adjacent said opening to engage and support a ball resting upon said gate means when said gate means is in ball obstructing position, said gate means being pivotable upwardly to move a ball supported thereby upwardly out of the path of pivoting of said gate means and to retract said gate means upwardly out of said obstructing position in the path of movement of a ball passing through said opening and said gate means being pivotable downwardly from the upwardly pivoted position to thus return said gate means to said obstructing position, stop means carried by said retaining means to limit the movement of said gate means in one direction when said gate means is in said obstructing position, whereby when said gate means is pivoted upwardly to a retracted position a ball may freely pass through said opening and when said gate means is pivoted downwardly from a retracted position to said obstructing position said opening will be thereby obstructed to the movement of a ball therethrough and the lowermost retained ball will be supported upon said gate means, said gate means being movable out of ball obstructing position responsive to the pressure of a ball being manually pressed thereagainst while being moved into said retaining means through said opening and being movable manually out of obstructing position to discharge retained balls from said retaining means through said opening.

7. A ball retrieving and storing and dispensing device, comprising, in combination, an upstanding retaining means for balls to be handled, an opening in the lower portion of said retaining means of a size through which a ball to be handled may freely pass, movable gate means pivoted to said retaining means adjacent said opening to engage and support a ball resting upon said gate means when said gate means is in ball obstructing position, said gate means being pivotable upwardly and downwardly to move a ball supported thereby upwardly out of the path of pivoting of said gate means and to retract said gate means upwardly out of said obstructing position in the path of movement of a ball passing through said opening and to return said gate means to said obstructing position, stop means to limit the movement of said gate means in one direction when said gate means is in said obstructing position, biasing means normally biasing said gate means into ball obstructing and supporting position, whereby when said gate means is pivoted upwardly to a retracted position a ball may freely pass through said opening and when said gate means is pivoted downwardly from a retracted position said opening will be thereby obstructed to the movement of a ball therethrough and the lowermost retained ball will be supported upon said gate means.

8. A ball retrieving device, comprising, in combination, retaining means for retaining balls and having an opening in the lower portion of said retaining means of a size through which said balls may freely pass, bracket means extending laterally from the lower portion of said retaining means, lever means pivotably supported upon said bracket means, said lever means having an inner end and an outer end and having said inner end of said lever means disposed adjacent and above the opening in the lower portion of said retaining means and normally extending into the path of movement of a ball passing through said opening and having said outer end of said lever means disposed outwardly of the point of pivoting and below and adapted to engage a stop means, stop means fixed to and carried by said retaining means, and biasing means normally biasing said outer end of said lever means against said stop means, whereby upon the pivoting of said outer end of said lever means away from said stop means said inner end of said lever means will be pivoted out of the path of movement of a ball moving through said opening in the lower portion of said retaining means.

9. A retrieving and storing and dispensing device, comprising, in combination, retaining means for articles to be retrieved and dispensed, said retaining means having an opening in the lower portion thereof of a size through which said articles to be retrieved and dispensed may freely pass, lever means carried by pivot means and pivotably mounted upon said retaining means adjacent the opening in the lower portion of said retaining means, said lever means having an inner end and an outer end and having the inner end thereof disposed above and adjacent the opening in the lower portion of said retaining means and normally extending into the path of movement which would be followed by an article passing into said opening while being retrieved and having the outer end thereof disposed outwardly of the point of pivoting and normally disposed against stop means supported on said retaining means, biasing means urging said outer end of said lever means against said stop means, said lever means and said pivot means and said stop means and said biasing means and the opening in the lower end of said retaining means being so constructed and arranged that upon the pivoting of the outer end of said lever means away from said stop means against the bias of said biasing means the inner end of said lever means will be removed from the path of movement of articles moving through said opening to permit an article to pass through said opening and upon the rapid depression of the outer end of said lever means against the bias of said biasing means and the subsequent rapid return of said outer end of said lever means against said stop means the inner end of said lever means will be rapidly and simultaneously retracted from article obstructing position and then returned to article obstructing position in a cycle of movement to permit the dispensing of an article from said retainer when said inner end of said lever means is retracted from article obstructing position.

10. A golf ball retrieving and storing and dispensing device, comprising, in combination, an upstanding and elongated and tubular retainer for golf balls to receive a series of golf balls in single vertical file and having an open lower end of a size through which a golf ball may freely pass and having a substantially uniform inner diameter of substantially the same size as said open lower end, laterally extending bracket means including stop means fixed to the lower end of said retainer outwardly thereof, substantially horizontally disposed pivot means fixed to said bracket means, lever means pivoted on said pivot means and pivotable in a substantially vertical plane and having an inner end and an outer end, spring means en-

gaging said bracket means and said lever means and biasing the outer end of said lever means into engagement with said stop means, the inner end of said lever means being disposed above said lower open end of said retainer and being extendable by the downward pivotable movement thereof from a retracted elevated position wherein the path of movement of a golf ball through the open lower end of said retainer is free of obstruction to a substantially horizontal position wherein the depressed inner end of said lever means obstructs the path of movement of a golf ball through the open lower end of said retainer and the lowermost golf ball in said retainer rests upon and is supported upon the inner end of said lever means and the outer end of said lever means is simultaneously pivoted upwardly from a depressed position into engagement with said stop means when the inner end of said lever means assumes a substantially horizontal position, said lever means and said stop means and said pivot means and the lower open end of said retainer being so constructed and arranged that the inner end of said lever means is precluded from pivoting downwardly beyond a position wherein the inner end of said lever means obstructs the path of movement of a golf ball through the opening at the lower end of said retainer and the inner end of said lever means may be shifted to regulate the movement of a golf ball into and out of said retainer through the open lower end of said retainer and supports the balls retained in said retainer.

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