Nov. 20, 1928. 1,691,935

C. J. PATERSON

GOLF CUP

Original Filed Nov. 14, 1921

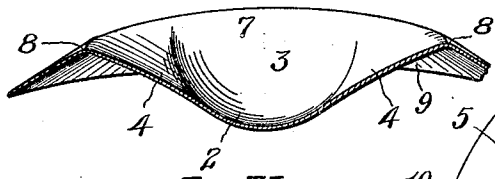


FIG. IV.

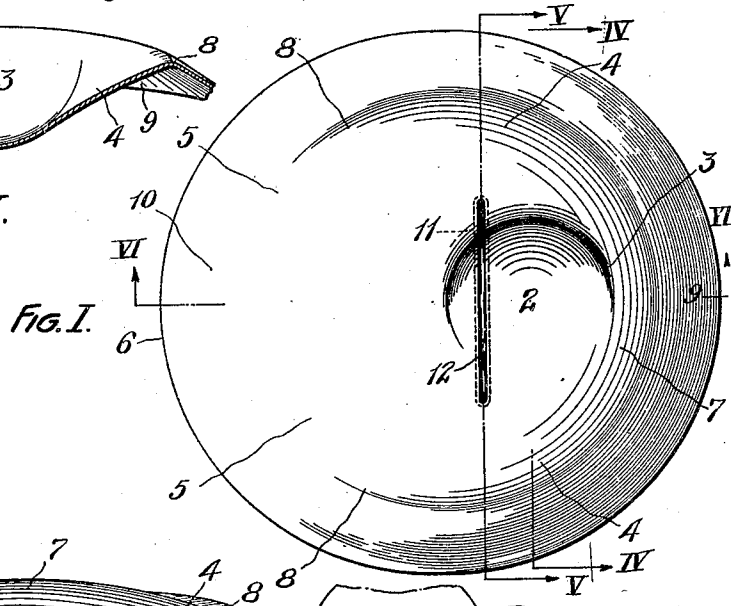


FIG. I.

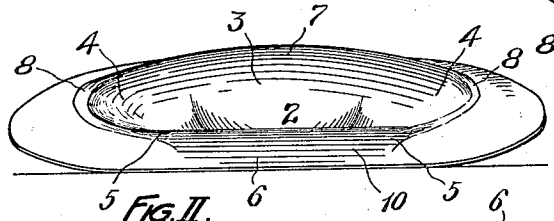


FIG. II.

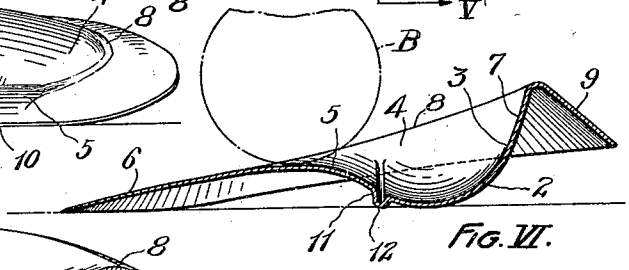


FIG. VI.

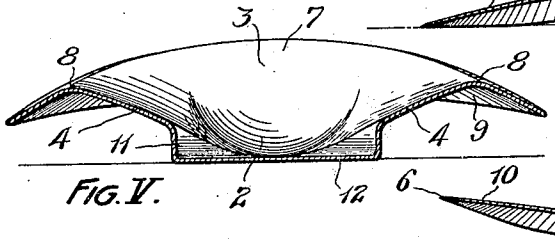


FIG. V.

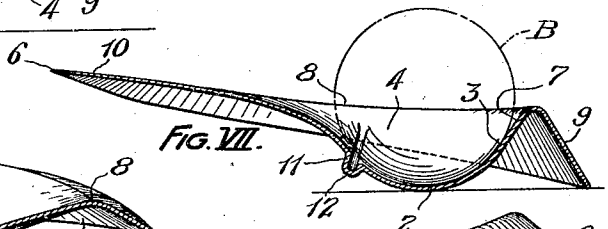


FIG. VII.

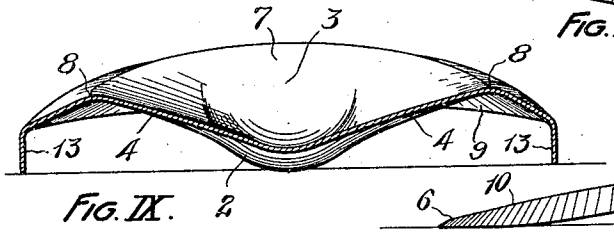


FIG. IX.

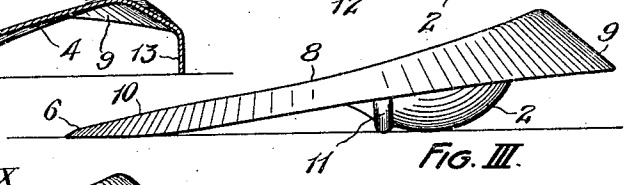


FIG. III.

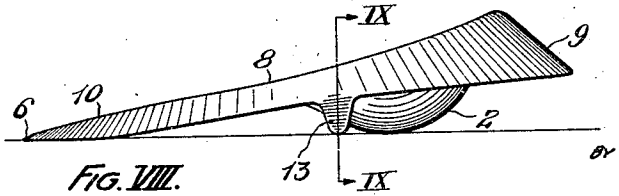


FIG. VIII.

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UNITED STATES PATENT OFFICE.

CHARLES J. PATERSON, OF CLEVELAND, OHIO.

GOLF CUP.

Refiled for abandoned application Serial No. 514,911, filed November 14, 1921. This application filed April 6, 1928. Serial No. 268,086.

My invention pertains to a golf cup and more particularly to an article of the character stated which while adapted to outdoor as well as indoor use is primarily intended to enable a golf enthusiast to practice putting elsewhere than on a real golf course.

The object of my invention has been to design a golf cup which will more nearly establish the conditions attending putting toward a cup on a real course. More specifically, I have striven to fashion a cup cheaply as an integral stamping, so that:

1. A ball can enter and be retained only if it has entered within certain limits of speed.

2. A ball can enter the cup only if it has traveled a path of predetermined width which is slightly less than the diameter of an actual golf cup.

3. A ball may roll into engagement therewith and imitate in action what is known in golfing parlance as "rimming the cup" without settling therein.

4. It will have a depression defined by walls of varying steepness.

5. Its wall of gentlest decline will be nearest the point from which a ball is to be putted, whereas its steepest wall will be directly opposite and the interjacent lateral wall areas will progressively merge from one into the other.

6. A definite measure of its edge will be very thin and rise as a gentle slope from the floor with which it is normally to be in contact.

7. The weight of a ball occupying the cup will be sufficient bodily to rock it thereby lifting its edge of entry from the floor.

8. The rocking movement of the cup will be definitely prescribed.

9. The backward rock imparted to the cup will be limited.

Adverting to the drawing:

Figure I is a plan view of a golf cup embodying my invention.

Figure II is a front elevation thereof.

Figure III is a side elevation.

Figure IV is a cross section on line IV—IV of Figure I looking toward the rear.

Figure V is a cross section on line V—V of Figure I with the same line of vision.

Figure VI is a longitudinal section on line VI—VI of Figure I, a ball being shown about to be deposited within the cup.

Figure VII is a view corresponding to Figure VI showing the cup rocked to its alternative position of rest owing to its being occupied by the ball.

Figure VIII is a side elevation of a modified form.

Figure IX is a section on line IX—IX of Figure VIII.

It is my present supposition that my golf cup will be stamped from a metal blank and subsequently japanned. The hand made model which I have already made has the shape substantially as illustrated in the drawing and is an equivalent structure with the exception of a single detail. It will be observed that the cup has an approximately round bordering edge with respect to which a concavity 2, having a spherically surfaced bottom, is eccentrically located. The concavity 2 is of such a size as to snugly accommodate the standard sized golf ball B.

The walls rising about the concavity 2 are not uniform as to steepness, what is to be considered as the rear wall 3 being the steepest. As the wall 3 proceeds toward the sides it progressively merges with side walls 4 which are less steep, and as the side walls 4 approach the front of the cup they in turn progressively merge with wall surfaces 5 of still more gentle decline toward the bottom of the concavity 2. The walls 5 are moreover flared laterally and along the middle line of the cup in a direction from front to rear merge with a front surface 6 which slopes upwardly from a thin edge contact with the floor. Accordingly, my cup has what is in the nature of a lateral channel or entry-way normally inclined upwardly from the floor and terminating at a scarcely perceptible forwardly presented rim of the concavity 2.

It is to be understood that a ball is to be putted toward my cup so that it may first travel over the surface 6, which as viewed say, in Figure VI, appears something like a lateral extension normally adapted, according to the disposition of the mass in the cup as an entirety, to assume an inclined position between the less pronounced rim of the cup and the floor. The front edge of the surface 6 might be straight and about two and one half inches (2½″) wide. My cup is bodily rockable and is adapted to assume one position of rest when empty and another position of rest when the concavity 2 is occupied by a golf ball. I have considered

it preferable to prescribe the rocking movement so that it will occur about an axis within the vertical plane on which the section line VI—VI is shown. The cup comprises a depression having one portion or section of its rim of lower elevation together with a lateral entry or down-turned lip sloping from such relatively depressed rim downwardly toward the floor whereby to enable smooth rolling entry of a golf ball to the depression if the direction of movement which has been imparted to the ball does not vary beyond angular limits so as to make the putt unsuccessful.

The rear wall 3 of the concavity proper merges with an upwardly extending wall 7 which is substantially vertical when the empty cup is in the position shown in Figure III, and such wall 7 is similarly gradually flared on each side as it proceeds around toward the front to provide lateral upper edges or rims 8 of greater width, somewhat lower elevation and less abrupt merging with the walls 5. Extending downwardly from the top of the rear wall 7 is a flange 9 the lower edge of which is adapted to engage the floor to limit the rocking movement in a rearward direction in the manner shown in Figure VII. When the ball B has traversed the channel entry-way 10 and settled in the concavity 2, its weight will hold the bottom of the flange 9 against the floor and the entry 10 in an elevated position. In order to prescribe the character of the rocking movement to be imparted to the preferred exemplification of my cup, the underside of the concavity 2 is exteriorly fashioned with a downward projection 11 located forwardly of the center of gravity and having an edge 12 extending in a direction from side to side and in contact with the floor when the cup is empty.

The modified form shown in Figures VIII and IX shows as the operative equivalent for the single projection 11, a pair of ears 13 projecting downwardly at opposite sides and from lateral continuations in a forward direction of the flange 9. The ears 13 are adapted constantly to be in engagement with the floor. Similarly, the rear flange 9 might be modified as two lateral ears.

As a ball reaches the entry-way 10, depending upon its direction and speed, it will either remain in the cup or enter only to roll out again. If it enters between the rims 8 and at not too great a speed it will roll into gentle engagement with one of the side walls 4 and eventually settle in the concavity 2 to have its weight rock the cup to the position shown in Figure VII. A ball entering in the manner just assumed, but at too great a speed will, if near one lateral limit of the entry 10 (say, more than one and one quarter inches (1¼″) from the middle line), follow the rim 8 and possibly an upper portion of the wall 7, but will continue on over the top of the wall 7 or around it, a course which in reality with the standard four and one quarter inch (4¼″) cup would be termed "rimming the cup." A ball entering at too great a speed along the middle line of the entry way 10 would either roll up over the top of the wall 7 or bounce back or be whirled around too rapidly to be received and held by the concavity 2. Other putts traveling over the entry-way 10 at too wide an angle would continue right on over one of the walls 4 or one of the rims 8. On the other hand, a ball could impact directly against the rear wall 7 to rock the cup and prevent the dislodgment of the ball over the most elevated portion of the entry-way 10. The different kinds of action of the ball with relation to the cup are many and therefore tend to stimulate interest by reason of the uncertainty attending every putt.

It is to be realized that the scope of my invention comprehends many equivalent constructions. The showing of the drawings and the particular description are merely specific exemplifications of a plurality of mechanical embodiments and arrangements.

This application constitutes refiled subject matter after abandonment of applicant's prior application filed November 14, 1921, Serial No. 514,911.

I claim:

1. An unstable golf putting cup consisting of an integral structure intended to be gravitationally supported in its entirety and fashioned with a spherical cavity fitted to a standard golf ball, said cavity having a spherically surfaced bottom adapted during use always to be in contact with the floor, said cup adapted to be tilted on said bottom and to occupy one of two positions of rest depending upon the differing center of gravity owing to the presence or absence of a golf ball therein.

2. A golf putting cup provided on its lower side with a linear projection and adapted to rock on a line and to occupy one of two positions of rest, said cup being fashioned with an extension normally sloping from the floor to its rim in response to gravitational action when the cup is empty, the occupancy of said cup by a ball acting to shift the center of gravity thereby swinging said extension off of the floor about said projection as an axis.

3. A bodily rockable golf cup provided with a single depression having a curved bottom intended constantly and gravitationally to rest on a playing surface, a front portion of the defining wall of said depression being fashioned with a down-turned lip adapted to enable entry to the cup of a rolling golf ball, said lip forming in conjunction with the wall of said depression a ridge adapted to retain the ball in place the occupancy of

said depression by a ball acting to shift the center of gravity thereby swinging said lip off of the floor and a flange depending from the rear wall of said depression and adapted to engage the playing surface to limit the swinging movement.

4. A bodily rockable golf cup provided with a depression provided with a spherically surfaced bottom constantly in engagement with a supporting surface, said cup being also formed on one side with a down-turned lip merging with the floor and adapted to enable entry to the cup of a rolling golf ball and means extending crosswise of the direction of downward extension of said lip and adapted to contact said supporting surface to determine the direction of initiation of rocking movement.

5. A golf cup including a depression suited to the reception of a golf ball, said cup being fashioned with a lateral extension adapted to constitute with the bottom of said depression a double line support for the cup, said extension adapted in weight to be rocked to a raised position when a golf ball occupies said depression.

6. A golf cup including a depression suited to the reception of a golf ball, said cup being fashioned with a single lateral extension adapted to constitute with the bottom of said depression a three point support for the cup, said extension adapted in weight to be rocked to and held in a raised position when a golf ball occupies said depression.

7. A golf cup including a depression suited to the reception of a golf ball, said cup being fashioned with a single lateral extension adapted to constitute with the bottom of said depression a three point support for the cup, said extension adapted in weight to be rocked to and held in a raised position when a golf ball occupies said depression, the conformation of the bottom of the cup being furthermore such as constantly to afford alined point contacts with the floor whereby to prescribe the rocking movement.

8. A golf cup having a curved bottom on which it is constantly supported solely by gravity the disposition of the mass of said cup being such that it assumes one position of rest when empty and another position of rest when occupied by a golf ball, the bottom of said cup constantly having contact with the floor at alined points whereby to tilt about a predetermined axis.

9. A bodily rockable golf cup having a curved bottom on which it is constantly gravitationally supported, the disposition of the mass of said cup being such that it positively and invariably assumes one position of rest when empty and another position of rest when occupied by a golf ball and means for prescribing the rocking action of said cup.

10. A bodily rockable golf cup having a curved bottom on which it is intended to be gravitationally supported and fashioned on one side with an inclined extension between the rim of the cup and the floor, said extension acting to cause the cup when empty gravitationally to assume a position in which said extension contacts the floor, the disposition of the mass of said cup being so contrived that said extension is raised and held at rest off the floor when a golf ball has been deposited in the cup.

11. A bodily rockable golf cup having a curved bottom on which it is intended to be gravitationally supported and fashioned on one side with an extension adapted to assume an inclined position between the rim of the cup and the floor, the disposition of the mass of said cup being such that it normally assumes a certain position of rest with said extension in contact with the floor, and a different position in which the extremity of said extension is raised when a golf ball has traveled over said extension and become deposited in the cup.

12. A golf cup having a curved bottom on which it is intended to be gravitationally supported and adapted to rock solely on one horizontal axis and including a depression suited to reception and retention of a golf ball, and a lateral run way normally inclined upwardly from the floor to the rim of the cup, said runway adapted to be raised from the floor by the weight of a ball occupying said depression.

13. A golf cup formed with a cavity having a curved outer surface adapted to rock upon and assume various positions in contact with a supporting surface, said cup being also formed with an extension in turn fashioned with an approaching surface downwardly inclined from the upper rim of the cavity, the center of gravity being so contrived that said extension is adapted to be tipped up by the weight of a ball at rest in said cavity.

14. A bodily rockable golf cup provided with a cavity the exterior surface of which is intended gravitationally to rest on a floor, said cup being formed with differently located extensions from the rim of said cavity adapted to move relatively to the floor about said exterior surface as a pivot.

15. A golf cup having a cavity defined by a convex bottom adapted constantly and gravitationally to engage a supporting surface, said cup adapted to assume one position when empty and a different position when occupied by a golf ball corresponding to altered centers of gravity and downward extensions at its front and rear, one of which engages said supporting surface in each of the alternative positions of rest.

16. A golf cup bodily tiltable in response to deposition of a golf ball therein, said cup being fashioned with a cavity having a bot-

tom surface intended constantly to engage the floor and having depending portions also adapted alternately to engage the floor on different sides with respect to the point of engagement therewith of said bottom surface whereby to prescribe and to limit respectively its tilting movement.

17. A golf putting cup provided on its lower side with projections adapted to contact the floor at spaced points whereby to permit it to rock on a line, said cup being fashioned with an extension normally sloping from the floor to its rim in response to gravitational action when the cup is empty, the occupancy of said cup by a ball acting to shift the center of gravity thereby swinging said extension off of the floor about the line between said points as an axis.

Signed by me, this 30th day of March, 1928.

CHARLES J. PATERSON.