

[54] PUTTER

[76] Inventor: Edward Hoglund, 1020 Lois Ave.,  
Park Ridge, Ill. 60068

[22] Filed: Mar. 23, 1972

[21] Appl. No.: 237,361

[52] U.S. Cl. .... 273/164, 273/80 C, 273/167 A,  
273/167 F, 273/167 G

[51] Int. Cl. .... A63b 53/04

[58] Field of Search ..... 273/77 R, 78, 80 C,  
273/80.2-80.8, 163 R, 164, 167-175

[56] References Cited

UNITED STATES PATENTS

|           |         |                  |              |
|-----------|---------|------------------|--------------|
| D185,522  | 6/1959  | Whitney.....     | 273/164 UX   |
| 1,703,199 | 2/1929  | McClure.....     | 273/164 X    |
| D27,732   | 10/1897 | Adams.....       | 273/167 D X  |
| D196,736  | 10/1963 | De Carlo.....    | 273/167 D UX |
| D208,313  | 8/1967  | Machos.....      | 273/164 UX   |
| 581,331   | 4/1897  | Brewster.....    | 273/169      |
| 1,511,479 | 10/1924 | Kelly et al..... | 273/175      |
| 3,343,839 | 9/1967  | Borah.....       | 273/164 X    |
| 3,578,332 | 5/1971  | Caldwell.....    | 273/78 X     |
| 823,082   | 6/1906  | Robertson.....   | 273/167 A    |

|           |         |                  |              |
|-----------|---------|------------------|--------------|
| 2,083,189 | 6/1937  | Crooker.....     | 273/167 E    |
| D192,473  | 3/1962  | Ray.....         | 273/167 D UX |
| D204,002  | 3/1966  | Tanis et al..... | 273/80 C UX  |
| D213,507  | 3/1969  | Koenig.....      | 273/167 G UX |
| 1,654,916 | 1/1928  | Boyce.....       | 273/164      |
| 1,690,388 | 11/1928 | Waldron.....     | 273/167 G    |
| 2,222,534 | 11/1940 | Harris.....      | 273/168 X    |

FOREIGN PATENTS OR APPLICATIONS

|         |         |                    |          |
|---------|---------|--------------------|----------|
| 727,051 | 3/1955  | Great Britain..... | 273/80 C |
| 25,564  | 12/1905 | Great Britain..... | 273/164  |
| 836,949 | 10/1938 | France.....        | 273/168  |

Primary Examiner—Richard C. Pinkham

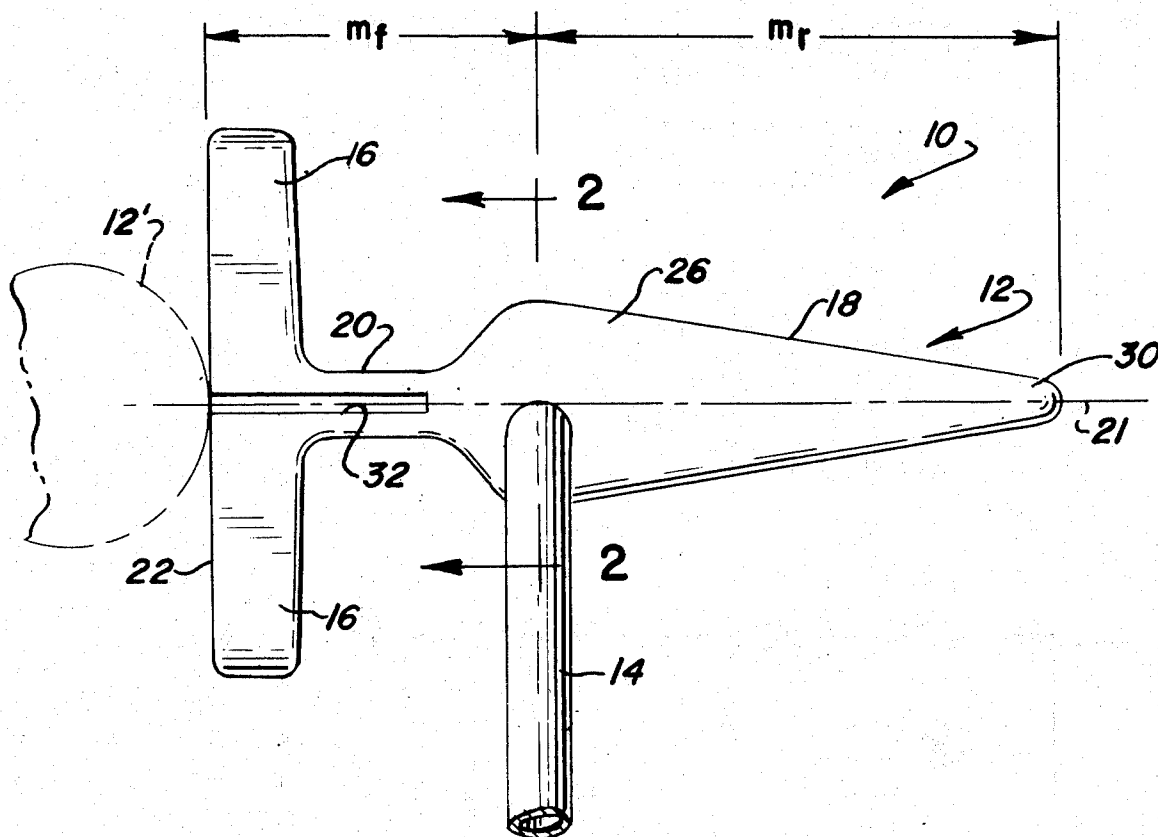
Assistant Examiner—Richard J. Apley

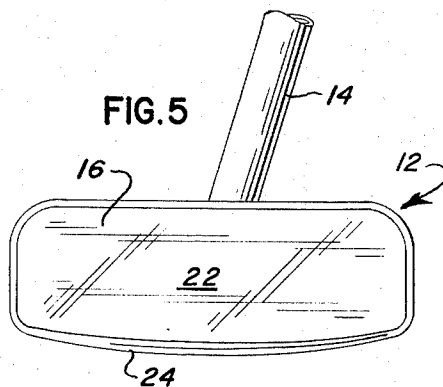
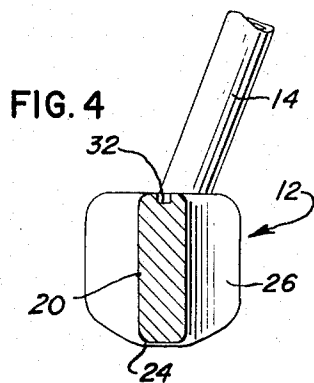
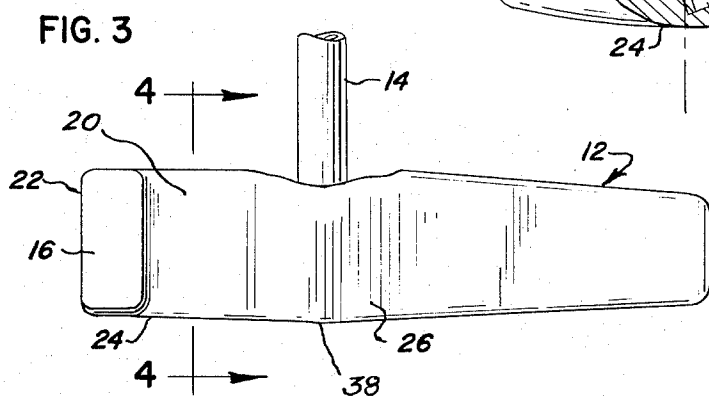
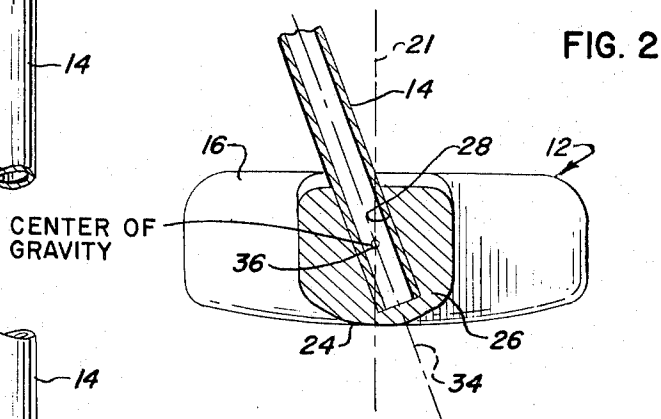
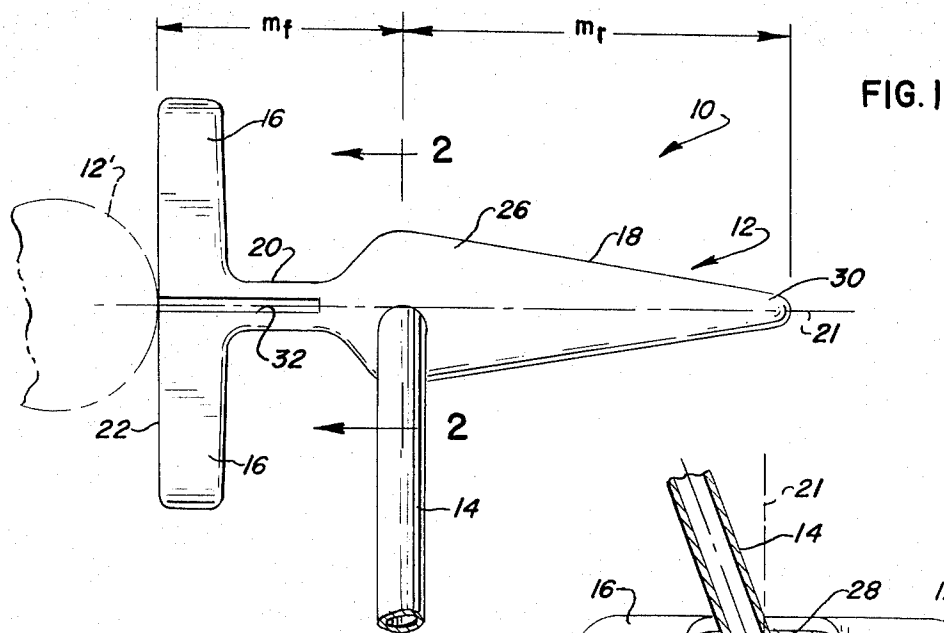
Attorney—I. Irving Silverman et al.

[57] ABSTRACT

A golf putter in which there is an enlarged somewhat elongate body and a transverse planar head connected by a narrow neck portion, the weight of the putter being balanced at least front and rear of the shaft connection and preferably laterally also, the shaft being connected substantially at the center of gravity of the putter.

7 Claims, 5 Drawing Figures





## PUTTER

## BACKGROUND OF THE INVENTION

The game of golf includes the art of putting on greens, this art being considered one of the most important aspects of the game. Considerable development in putter construction has occurred, as a result of which there are many putters known in the prior art.

The best putting stroke is one which is accurate as to direction and of proper striking energy to move the ball to the hole. The designers of putters have always sought for a club whose construction will promote the needed accuracy and will assist the golfer in judging how hard to hit the ball, but the achievement of these ends has been less than universal. As a result, purchasers of putters are presented with a myriad of different constructions and designs which rarely live up to the promises made for them by the sellers.

As a result of considerable study, I have determined that the forces and effects which come into play in the use of a putter are complex and must be considered in building a putter. These forces and effects include, but are not limited to (a) balance of the club front to rear (considering the direction in which the ball is to be propelled as the forward or front) during swinging, (b) deflection of the club when striking the ball and (c) the transmission of energy to the ball when striking the same.

The best putting stroke will be one in which the movement of the club is smooth and along a natural swinging line, in which the ball is struck by the center of the club along the line of the club's center of gravity, in which the maximum of kinetic energy is transmitted directly to the ball at a point or at most a very narrow area. Other factors are involved as will be mentioned, but these seem to be the most important, and I have provided a putter which takes these requirements into consideration in a novel and efficient manner.

The putter of the invention is intended primarily to be used in the more conventional method of putting, where the golfer stands laterally of the line of movement of the ball and swings the club towards the hole either from his right or left side, as opposed to the mallet method of putting in which the golfer straddles the line of movement of the ball and uses his putter like a croquet mallet. The principles of the invention may be applied to the mallet type of putter, but the greater advantages of the invention occur when used in the more difficult to construct putter, in which the shaft is connected on an angle with respect to the normal upright disposition of the putter.

## SUMMARY OF THE INVENTION

The putter of the invention is constructed as a generally T-shaped member having a head and a body, the head being generally rectangular in configuration with the longer sides arranged horizontally and the shorter side vertically, the body being generally elongate in the front to rear direction of the putter movement and having the shaft connected thereto. The body and head are connected by a narrow neck. The center line of the shaft passes through the center of gravity of the entire T-shaped member, giving front to rear and lateral balance, promoting natural pendulum-like swinging. The ball is struck by the center of the face of the head, eliminating likelihood of deflection. The narrow neck concentrates the application of force at the center point of

the head or at most to a small area at the center so that the maximum of available force is applied to the struck ball, even though the player misjudges slightly and strikes the ball slightly off center. A line of movement indicia structure is provided on the top of the club to aid in aiming the club properly. Lateral balance is maintained by symmetry of configuration and mass on opposite sides of center.

## BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a top plan view of a golf putter constructed in accordance with the invention, the shaft being shown fragmentarily;

FIG. 2 is a sectional view of the golf putter taken generally along the line 2—2 of FIG. 1 and in the indicated direction;

FIG. 3 is a side elevational view of the golf putter;

FIG. 4 is a sectional view taken generally along the line 4—4 of FIG. 3 and in the indicated direction and

FIG. 5 is a front-on elevational view of the putter.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

In FIG. 1 there is illustrated a top plan view of a putter 10 constructed in accordance with the invention, this being the view that the player will see as he looks down upon the green in preparation for striking the ball 12' toward the hole on his left. (It will be assumed hereinafter that the putter 10 is intended for use by a right-handed golfer. In the case of a left-handed golfer, the shaft will be on the opposite side of center.)

The putter 10 comprises a T-shaped member 12 normally cast or otherwise formed out of a suitable material, preferably metal such as brass, steel or aluminum to give the member 12 concentrated weight secured to a shaft 14. The shaft 14 is of conventional construction and may be hollow steel or aluminum or even wood or plastic. The T-shaped member 12 comprises a front head 16, a rear body 18 and a connecting neck portion 20, all preferably being formed integrally. The configuration of the T-shaped member is symmetrical on opposite sides of a vertical plane 21 passing through the center of the member 12 from front to rear.

The head 16 has a rectangular striking face 22 which is planar, the plane of the face being normal to the intended line of movement of the ball 12' in alignment with plane 21. The bottom edge of the head is somewhat arcuate providing a crown 24 formed on its lower side which continues as shown along substantially the entire front to rear length of the T-shaped member 12. This compensates to some extent for the heights of different players by enabling the angle which the member 12 makes with the ground to vary slightly without causing drag or other interference when the putter is used by different players.

The body 18 as shown is generally of elongate configuration with a bulbous or thickened portion 26 at the front end where the shaft 14 is mounted, to give good weight distribution for the purpose to be explained. Other designs may not have as marked an increase in size, but in any event there must be sufficient stock at this point to enable the drilling of the socket 28 to receive the bottom end of the shaft 14 as shown in FIG. 2. The entering end of shaft 14 is frictionally held in place or may be riveted, soldered or cemented in position on an angle which will dispose the striking face 22 horizontally for a person of average height. The rear

end 30 of the putter body 18 tapers to a point which is an aid in aiming the putter member 12 during use.

The neck portion 20 is a connecting structure between the head 16 and the elongate body 18 whose lateral thickness is as narrow as practical commensurate with the strength of the putter member 12. Typically, the horizontal length of the striking surface 22 of one putter was 3 inches, the neck portion 20 of this putter being somewhat less than one quarter inch laterally. The height of the neck portion 20 was substantially the same as the vertical height of the head 16, but this dimension is not as critical as the lateral dimension, as will be explained.

In order to assist in the use of the putter 10, that is to help the golfer swing it in the direction the ball 12' is to travel, besides the elongate construction of the body 18 there is an indicia to indicate the said direction. In the structure illustrated, this is a groove 32 formed in the top of the T-shaped member 12 normal to the face 22, extending from the said face rearwardly to the juncture of the shaft 14 with the top of the body 12. This groove 32 may be filled with contrasting color paint or otherwise visually emphasized. Any kind of indicia applied will be of assistance.

The shaft 14 is mounted to the member 12 in such a manner that its center line 34 passes through the center of gravity 36 thereof. Thus the mass of the member 12 is balanced with respect to the shaft to give substantially perfect pendulum swinging. This is indicated in the front to rear direction of FIG. 1 by the notation  $m_f$  and  $m_r$ , which signifies front mass and rear mass. According to the invention, the shaft 14 is mounted to make these two masses equal. The lateral mass is also balanced on both sides of the plane 21 by virtue of the location and the connection of the shaft 14 with the member 12. Note that the socket 28 continues down to the bottom of the body 26. An effort is made to choose the depth of the socket 28 so that the amount of material drilled out on both sides of the plane 21 is equal in weight and likewise the shaft end is inserted in the socket at such depth that the weight disposed on opposite sides of the plane 21 is equal.

The putter 10 departs in construction radically from L-shaped putters and thus eliminates lateral deflection of the putter blade at impact which is a fault with L-shaped putters. In addition, the construction with the neck portion 20 gives an unusual advantage to the putter of the invention. The swinging of the putter 10 provides a moving mass, giving kinetic energy which is to be transmitted to the ball 12'. Most of the weight of the putter is in the body 18 and the energy produced is all concentrated in alignment with the neck portion 20, thereby producing the greatest concentration of impact energy at the center of the face 22, either at a point or at most a very small area. A ball struck here will receive the energy at the most efficient location, and even if slightly off center the ball will get the advantage of a concentrated application of force. Thus, it takes less effort to propel the ball and the club therefore has great sensitivity and accuracy. The stroke is a natural pendulum type of stroke with no tendency to twist or shock when the ball is struck.

As stated, the crown 24 is carried fully back toward the rear of the member 12, but in addition, it is preferred to arc the bottom of the club convexly downwardly from the front to rear as best shown at 38 in FIG. 3 to prevent interference or dragging. Actually the

club is swung in an arc when used and this should be considered in constructing the sole of the putter member 12.

Considerable variation in the design of the putter can be made without departing from the spirit or scope of the invention as defined in the appended claims.

What it is desired to secure by Letters Patent of the United States is:

1. A golf putter comprising a substantially T-shaped member having a top surface and a sole surface and having a shaft connected thereto, said T-shaped member comprising

A. a head portion having a rectangular striking face defined between head side surfaces, a head top surface and a head sole surface, said head top and sole surfaces being longer than said head side surfaces and extending generally horizontally and the striking face defining a plane normal to the direction in which the putter is to strike a golf ball in propelling same forward,

B. an elongated body portion having a forward end and a rearward end and arranged at a right angle to the head portion and extending rearwardly relative to the center of said head portion, said elongate body portion being symmetrical about its center axis, said center axis passing substantially through the center of said head portion,

C. a neck portion having a lateral thickness between said top and sole surfaces which is substantially less than the thickness of at least said forward end of the body portion and connecting the body portion to the rear of the head portion, said neck portion being arranged at a right angle to the head portion and being symmetrically formed and coaxial with said body portion center axis,

D. said shaft being connected to the forward end of the body portion and rearwardly of the neck portion, said body portion being sufficiently laterally thickened at said forward end thereof to accommodate said shaft, the center line of said shaft being aligned substantially with at least the front to rear center of gravity of the T-shaped member whereby the swinging of the club is closely a balanced pendulum type of swinging, and

E. said body portion having an acutely angled shaft socket relative to a vertical plane passing through said center axis and terminating within said body portion adjacent said sole surface and having equal volumes on opposite lateral sides of said vertical plane, and the bottom end of said shaft is engaged in said socket with portions of equal weight disposed on opposite sides of said plane.

2. The putter as claimed in claim 1 in which the said center line passes through substantially the complete center of gravity of the said T-shaped member.

3. The putter as claimed in claim 1 in which there are indicia means on said top surface of said T-shaped member along the geometric center thereof to assist in aiming the putter during use.

4. The putter as claimed in claim 1 in which the shaft is arranged at a lateral angle to the T-shaped member and said sole surface of said member being generally laterally convex to enable putting stances at slightly different angles without interference.

5. The putter as claimed in claim 1 in which said sole surface of said member is arcuate convexly between

5

said striking face of said head portion and said rearward end of said body portion.

6. A golf putter comprising a substantially T-shaped member having a top surface and a sole surface and having a shaft connected thereto on an angle with the vertical, said T-shaped member comprising

A. a head portion having a rectangular striking face defined between head side surfaces, and horizontally extending head top and sole surfaces of said head portion, said head top and sole surfaces being longer than said head side surfaces, said head sole surface between said head side surfaces being slightly convex, the striking face defining a plane normal to the direction in which the putter is swung to strike a golf ball in propelling same forward,

B. an elongate body portion having a forward end and a rearward end arranged at a right angle to the head portion and extending rearwardly relative to the center of the said head portion, said elongate body portion being symmetrical about its center axis, said center axis passing substantially through the center of said head portion,

C. a neck portion having a lateral thickness between said top and sole surfaces which is substantially less than the thickness of at least said forward end of the body portion and connecting the body portion to the rear of the head portion, said neck portion being arranged at a right angle to the head portion and being symmetrically formed and coaxial with

6

said body portion center axis,

D. an acutely angled socket formed relative to a vertical plane passing through said center axis and terminating within said body portion adjacent said sole surface and being located said forward end of said body portion rearwardly of said neck portion and said shaft being engaged in said socket, said body portion being sufficiently laterally thickened at said forward end thereof to accommodate said shaft, the center line of the shaft being substantially aligned with the center of gravity of the T-shaped member whereby to provide mass balance front and rear of the shaft as well as laterally thereof for pendulum swinging of said putter,

E. indicia means on said top surface of said T-shaped member arranged on a line extending from the center of said striking face to said shaft to assist in aiming said putter during use thereof,

D. said angled shaft socket having equal volumes on opposite lateral sides of said vertical plane, and the bottom end of said shaft is engaged in said socket with portions of equal weight disposed on opposite sides of said plane.

7. The putter as claimed in claim 6 in which said sole surface of said member is slightly convex between said striking face of said head portion and said rearward end of said body portion.

\* \* \* \* \*

30

35

40

45

50

55

60

65