March 17, 1925. 1,529,933

T. R. STOKOE

DEVICE FOR USE IN PRACTICING GOLF

Filed Aug. 7, 1922 2 Sheets-Sheet 1

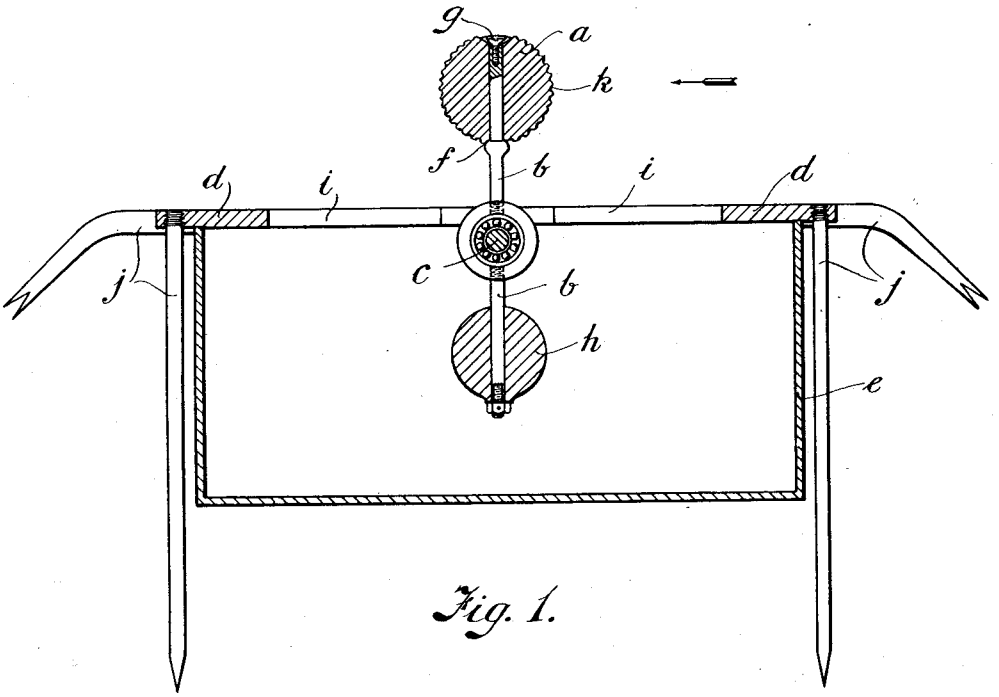


Fig. 1.

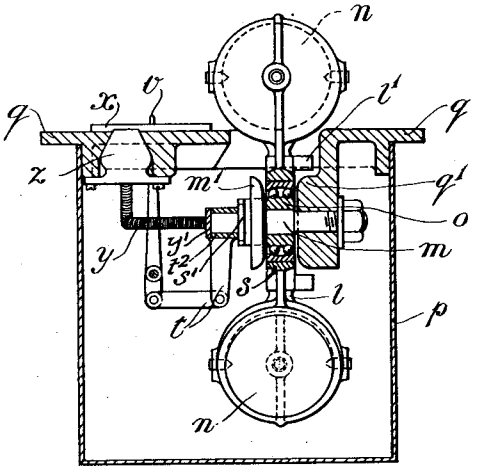


Fig. 3.

Inventor-
Thomas Richard Stokoe
By
B. Singer, Atty.

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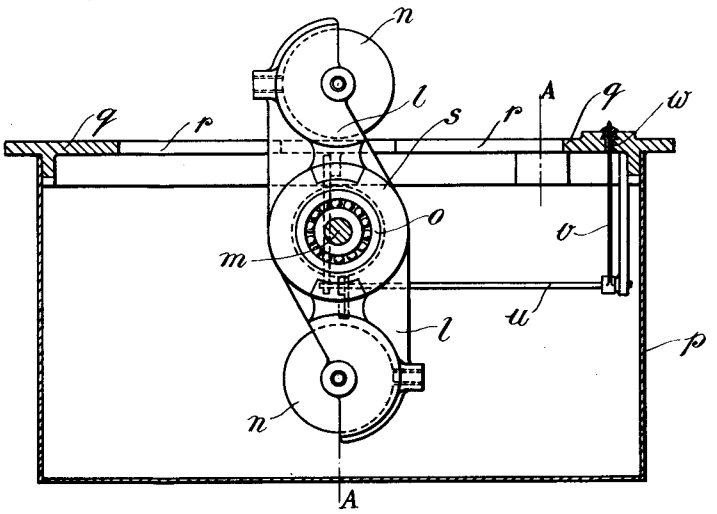


Fig. 2.

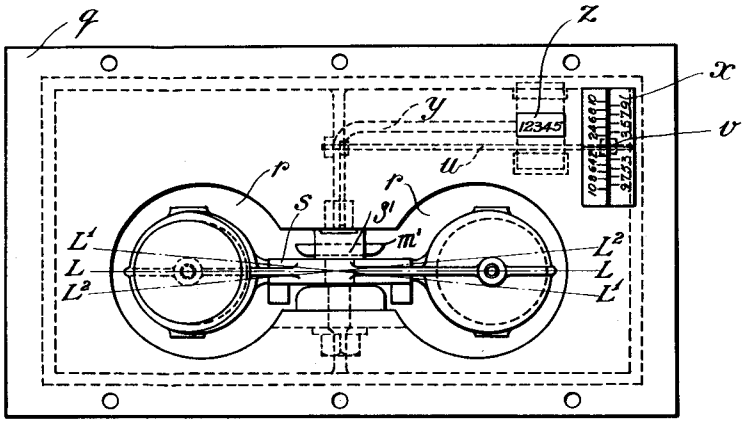


Fig. 4.

Inventor
Thomas Richard Stokoe
By
B. Singer Atty.

Patented Mar. 17, 1925. 1,529,933

UNITED STATES PATENT OFFICE.

THOMAS RICHARD STOKOE, OF WADEBRIDGE, ENGLAND.

DEVICE FOR USE IN PRACTICING GOLF.

Application filed August 7, 1922. Serial No. 580,194.

To all whom it may concern:

Be it known that I, THOMAS RICHARD STOKOE, a subject of the King of Great Britain and Ireland, residing at Gonvena Cottage, Wadebridge, in the county of Cornwall, England, have invented a new and useful Device for Use in Practicing Golf, of which the following is a specification.

This invention relates to devices for use in practicing golf and has for its object to provide an arrangement to enable all golf shots to be practised in any place where there is room to swing a club, to facilitate the detection of errors in shots and to aid the player in the correction of such errors.

According to the invention a ball or balls mounted for movement in a rotary path is or are arranged to give a visual indication when the stroke imparted to the ball is such as would in actual play cause the ball to be "pulled" or "sliced". The ball may be mounted in one end of an arm rotatable in a housing such arm having a counterweight or a second ball at its opposite end. The arrangement being such that when a ball is struck it moves in a rotary path and may rotate on its own axis. Each ball may be marked with a line, displacement of which from a predetermined position indicates whether the stroke would produce deviation, whilst according to another form of the invention the arm in which the balls are mounted may itself be inclined from normal position and the extent of the inclination be indicated on a scale marked on the exterior of the housing. A device may also be provided to indicate the extent of ball carry which would be obtained if the ball were free.

Reference will now be made to the accompanying drawings which illustrate by way of example, constructions according to the invention and in which:—

Figure 1 is a longitudinal sectional elevation.

Figure 2 is a longitudinal sectional elevation of a modified form of the invention.

Figure 3 is a cross sectional elevation taken on the line A—A of Figure 2 and,

Figure 4 is a plan of Figure 2.

In the form illustrated in Figure 1, *a* is a golf ball mounted on an arm *b* secured to a spindle *c* freely rotatable, preferably in ball bearings, in the cover *d* of a box *e*. The ball *a* is rotatable on the arm *b* and is held thereon between a shoulder *f* and the head of a screw threaded stud *g* which enters a socket in the outer end of the arm. The opposite end of arm *b* is screw threaded to receive a counterweight *h* which is adjusted so that the spindle normally remains vertical with the ball *a* uppermost. The cover *d* is formed with openings *i* to allow complete rotation of the ball around the axis of spindle *c*. The box *e* may be provided with legs or prongs *j* adapted for pressing into the ground for outdoor use or the box may be adapted to be secured in any convenient manner to a floor. The ball is painted white with a black line marked at *k*. This line appears vertical when looked at in the direction of the arrow, that is the direction in which the club is swung in making a shot.

The device above described serves to correct a common error in golf caused by the player, when swinging the club to make a stroke, involuntarily turning his head to follow the flight of the ball, before the club has made contact with the ball, thereby altering the level of the swing of the head of the club and causing the ball to be "topped" or the ground "fluffed". Whilst practicing with a device according to the present invention the ball can only rotate when struck, instead of moving onwards. The player thereby becomes accustomed to watching the ball up to the moment of striking it thus avoiding the error above referred to.

The invention is also designed to indicate to the player whether a stroke imparted to the ball would be such as in actual play would cause the ball to be "pulled" or "sliced". If the ball is struck truly, the black line *k* will remain in its initial position but if the stroke is not true the ball will rotate on the arm *b*, the rotation being indicated by an alteration in the position of the black line *k*.

In the construction illustrated in Figures 2, 3, and 4 an arm *l* rotatably mounted on a fixed spindle *m* carries at each end a ball *n* mounted to rotate on axes normally parallel to that of the axis of the spindle *m*. The spindle *m* is mounted in a casing *p* the cover *q* of which is formed with apertures *r* to allow of rotation of the balls. The arm *l* is mounted on ball bearings *o* on the spindle *p*, and the ball bearing *o* is so constructed as to allow the arm *l* to rock to a limited extent in the plane of the axis of the spindle *m*.

This may be conveniently effected by providing the outer race with a spherical bearing surface.

The arm l is mounted so that its axis L—L which passes through its centre of rotation and through the axes of rotation of the balls n and which lies normally in a plane perpendicular to the axis of the spindle m, may become inclined to the latter axis. The hub s of the arm l is connected by links t with one end of a rock shaft u the opposite end of which carries a pointer v projecting through a slot w in the casing cover q a scale x being marked adjacent the slot to indicate deviation to right or left if the ball is struck in such a manner as in ordinary play would produce deviation.

The hub s is connected by a flexible shaft y with a counting device z of any suitable type to indicate the length of ball carry which would be obtained if the ball were free. The hub has an extension s' on one side arranged with a recess in which a fixed disk m' is located, one of the links t being swivelly connected at t^2 to a central boss on said extension and the shaft y having one end firmly secured as at y'.

Instead of employing two balls as shown, one ball and a counterweight may be arranged on the arm l as described in connection with Figure 1. When the device shown in Figures 2, 3, and 4 is in use, the arm l will rotate when one of the balls is struck, the axis L—L remaining in a plane perpendicular to the axis of spindle m if the stroke is true. If, however, the stroke is such as would in practice cause the ball to be "pulled" or "sliced" the axle L—L will become inclined to its normal position as shown for example by the dotted lines L'—L' and L^2—L^2, the deviation being indicated by movement of the pointer v to right or left of its normal mid-position. To limit the movement thus imparted to the arm l it may be provided with lugs or shoulders l' adapted to co-operate with a shoulder q' formed integral with the cover q.

I claim:—

1. A device for use in practicing golf comprising a casing, a spindle secured therein, a pair of arms freely rotatable round said spindle, a pair of balls mounted upon said arms and independently rotatable about their own axes, and means for giving a visual indication when either of said balls is struck in such a manner as to produce deviation to right or left.

2. A device for use in practicing golf comprising a casing, a spindle mounted therein, a pair of arms extending in diametrically opposed directions and freely mounted on said spindle, a bearing between said arms and spindle allowing lateral inclination of said arms, a golf ball mounted to rotate on its own axis in the end of each of said arms, means for indicating the extent of lateral inclination of said arms and means for limiting such inclination.

3. A device for use in practicing golf comprising a casing, a spindle mounted within said casing, an arm secured to said spindle, a golf ball rotatably mounted on said arm and means for giving a visual indication when the stroke imparted to the ball is such as would produce deviation to right or left.

4. A device for use in practicing golf comprising a casing, a spindle mounted within said casing, an arm freely rotatable on said spindle, a golf ball rotatably mounted on one end of said arm, a counterweight mounted at the opposite end of said arm, a perforated cover to said casing, means for securing said casing to the ground and means operated when the ball is struck to indicate deviation of the stroke to right or left.

5. A device for use in practicing golf, comprising a casing, a spindle mounted within said casing, an arm freely mounted at its mid portion on said spindle, a golf ball rotatably mounted at each end of said arm, a bearing on the spindle allowing deviation of said arm from a perpendicular to an inclined position relatively to said spindle and means for communicating the extent of such deviation to an indicating device on the exterior of said casing.

6. A device for use in practicing golf comprising a casing, a spindle mounted within said casing a freely rotatable arm mounted at its mid portion on said spindle, a golf ball freely rotatable in each end of said arm, a bearing interposed between said spindle and arm to allow lateral inclination of said arm to said spindle, stops for limiting the extent of said inclination, a cover to said casing having perforations to allow rotation of said arm and balls, a scale marked on said cover to indicate the extent of inclination of said arm, a pointer mounted adjacent said scale, connections between said arm and said pointer, a revolution counter and a flexible shaft connecting said spindle and said counter.

In witness whereof I affix my signature.

THOMAS RICHARD STOKOE.