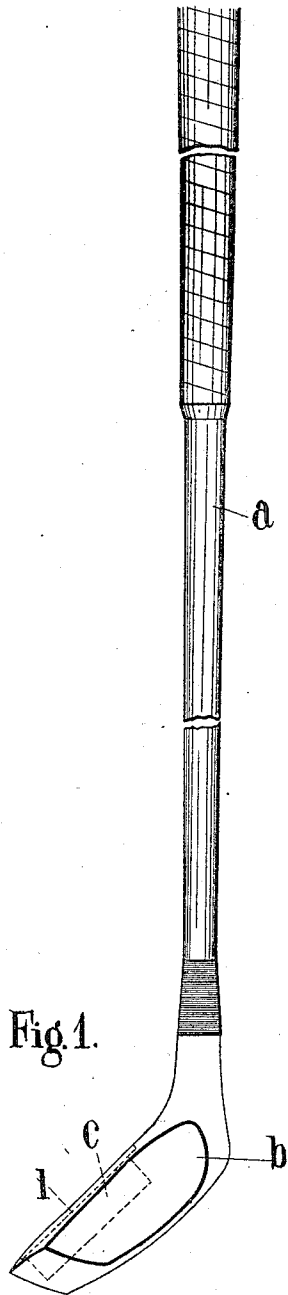
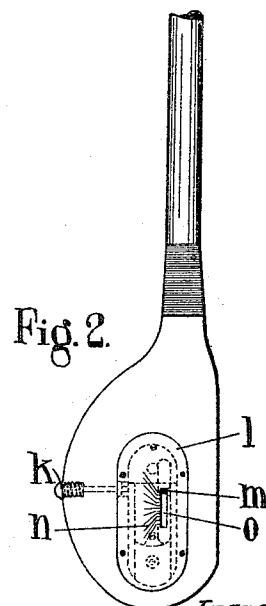


April 29, 1924.

1,492,039

C. LEVEN
APPARATUS FOR OBTAINING PRACTICE IN GOLF OR OTHER GAMES
OR PHYSICAL EXERCISES
Filed July 25, 1922

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

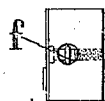


Fig. 4.

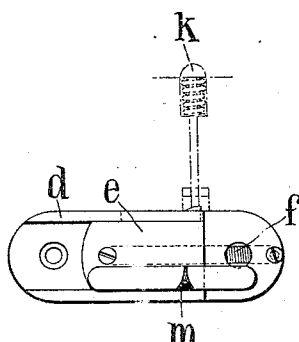


Fig. 3.

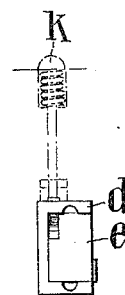


Fig. 5.

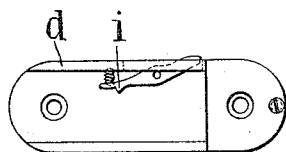


Fig. 6.

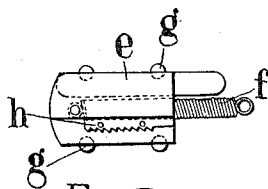


Fig. 7.

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UNITED STATES PATENT OFFICE.

CHARLES LEVEN, OF LONDON, ENGLAND.

APPARATUS FOR OBTAINING PRACTICE IN GOLF OR OTHER GAMES OR PHYSICAL EXERCISES.

Application filed July 25, 1922. Serial No. 577,477.

To all whom it may concern:

Be it known that I, CHARLES LEVEN, a subject of the King of Great Britain and Ireland, and residing at 109-111 New Oxford Street, London, W. C. 1, England, have invented certain new and useful Improved Apparatus for Obtaining Practice in Golf or Other Games or Physical Exercises, of which the following is a specification.

The object of the present invention is to devise a form of apparatus which is primarily intended to enable the user to obtain practice in golf but which may be applied with equal advantage and like effect in connection with practice in other games, such as cricket, baseball, hockey, polo and the like, or for physical games and exercises generally.

The invention aims at providing a form of apparatus which in addition to enabling the user to obtain the necessary practice will also afford a satisfactory indication of the state of proficiency at which he has arrived and the invention consists in apparatus comprising a stick, bat or other like article or device having a weight or other member movable thereon or in connection therewith under the action of centrifugal force and preferably against a suitable spring or like resistance, means being provided to maintain the weight or the like in any position which it may be forced to take up under the action of the centrifugal force so that it will serve as an index of the power of the swing or other movement imparted to the device.

The accompanying drawings illustrate two modes of carrying out the invention in its application, for example, to a practice golf club:—

Figure 1 shows a side elevation of a golf club fitted in accordance with the invention;

Figure 2 is a plan of the head of the club shown in Figure 1;

Figures 3 to 7 are views illustrating in detail the mechanism contained within the club head as shown in Figures 1 and 2.

In carrying my invention into effect in one convenient manner as, for example, in its application to a golf club, I may form my golf club somewhat in the usual manner with handle or shaft *a* and head *b* but within the head *b* of the club I provide a cavity

or chamber *c* in which is mounted a slide or guide *d* in which is movable a weight *e* against the action of a spring *f*, the axis of movement of the weight being preferably in the vertical plane containing the axis of the shaft or handle.

The spring *f* controlling the movement of the weight may either be a tension or compression spring and in order to reduce friction and make the device as accurate as possible the weight may be adapted to slide in its guide by means of suitable ball or roller bearings *g*, it being obvious that the arrangement enables me to use a weight of comparatively small mass and a relatively light spring proportioned to suit the weight and the scale of distances provided to give an index of the power of the swing or other movement imparted to the device.

For the purpose of temporarily securing the weight into any position in which it may be moved under the action of centrifugal force I may provide a ratchet *h*, rack or the like thereon or in connection therewith and adapted to co-operate with a spring-pressed pawl *i* which may be actuated by a suitable button *k* for the purposes of release.

The cavity or chamber within which the weight with its attendant parts is located may be closed by a metal or other plate *l* preferably arranged so as to be substantially flush with the outer or upper surface of the club head and a disc, pointer *m* or other index upon or movable with or by the weight may co-operate with a suitable linear, circular or other scale *n* to indicate the extent of movement of the weight, the index being either external to the device or being adapted to be visible direct or through a celluloid or other transparent window or through a slot *o* in the plate *l*.

The arrangement is such that when the club is used in the manner of an ordinary golf club the weight will move outwards against the action of centrifugal force and the indicator *m*, in conjunction with the scale *n*, will show the extent of such movement which is an index of the power, rapidity or skill of swing of the club.

If desired, a leather loop or other like device may be provided at that part of the stick or tube member which is gripped so that the hand of the user may be passed

through such loop, thus facilitating the gripping operation and serving to maintain the hold upon the stick or handle.

It is to be understood that the foregoing details and the particular application described are given by way of explanation and not of limitation, as it will be clear that the invention may be applied to various devices used in the playing of games or in the carrying out of physical exercises and the form of member influenced by the centrifugal force, the manner of disposing the same and the means adopted for enabling it temporarily to maintain any position in which it may be set may all be modified to suit the particular purpose for which the invention is to be employed or any practical requirements that may have to be fulfilled.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A swingable game-piece comprising a body part and means operated by centrifugal force to indicate the power or skill of the swing and located wholly within said body part.

2. A swingable game-piece comprising a body part with a recess therein and a weight within said recess acted upon by centrifugal force to indicate the power or skill of the swing.

3. A swingable game-piece comprising a body part with a recess therein, a weight within said recess acted upon by centrifugal force to indicate the power or skill of the swing and means for temporarily retaining the weight in any position to which it may be moved under the action of centrifugal force.

4. A swingable game-piece having a body part with a recess therein, a ball bearing guide in said recess, a weight slidable in said guide under the action of centrifugal force and means for temporarily holding said weight in any position to which it may be moved under the action of centrifugal force.

5. A swingable game-piece according to claim 4, in which the recess is closed by means of a cover bearing a scale, while a visible indicator movable with the weight co-operates with said scale.

6. A swingable game-piece according to claim 3, having hand-operated means carried by said body part to release the means temporarily holding the weight against the action of a spring.

In testimony whereof I have signed my name to this specification.

CHARLES LEVEN.

Witness:

A. TURNBULL.