May 26, 1959 A. K. MELIN 2,888,266

SWING PRACTICING DEVICE

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FIG. 1.

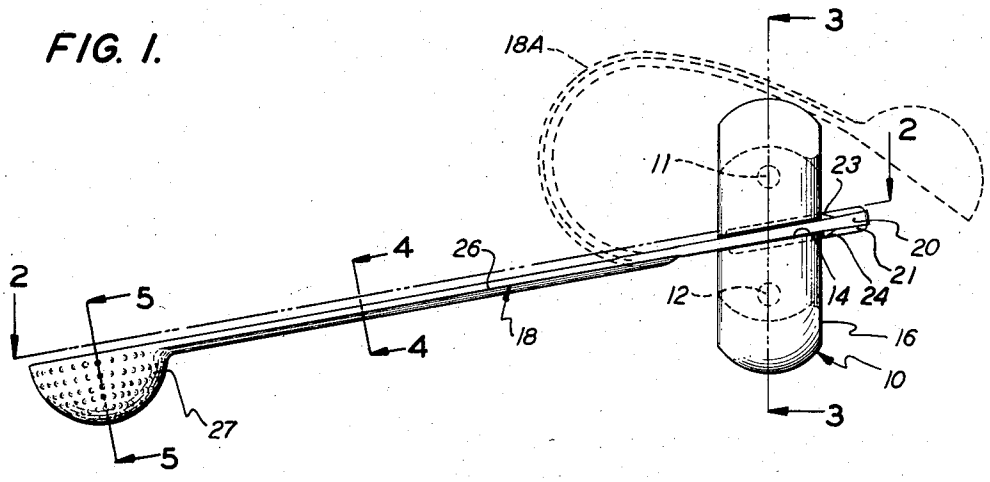


FIG. 3.

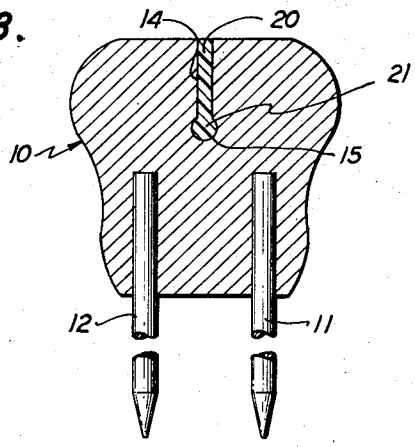


FIG. 4.

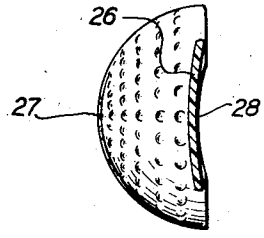
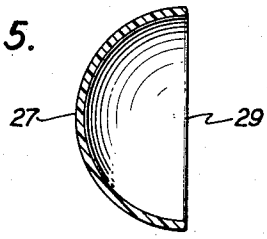


FIG. 5.



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FIG. 2.

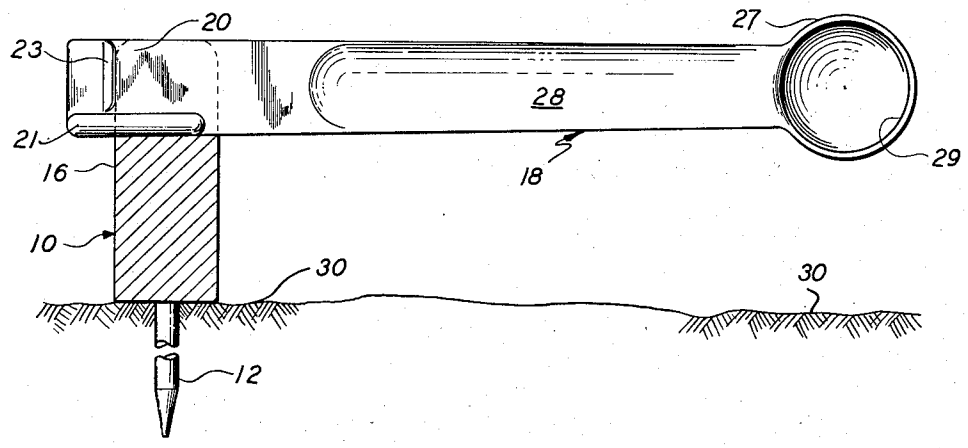
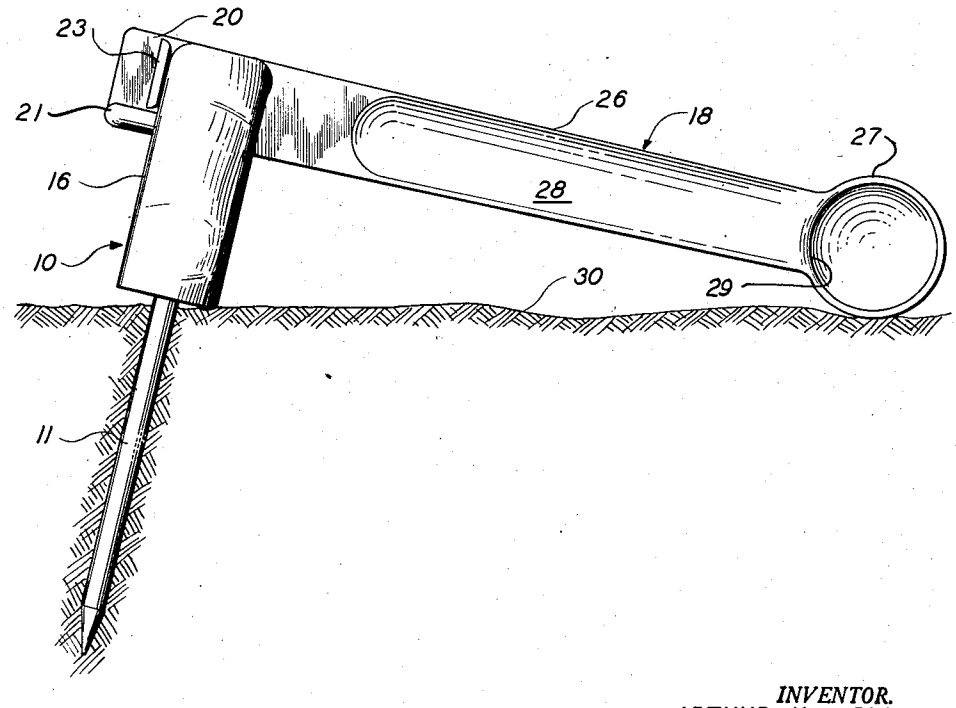


FIG. 6.



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SWING PRACTICING DEVICE

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3 Claims. (Cl. 273—200)

The invention relates to swing practicing devices and most particularly to golf swing practicing devices.

Many devices have been developed to aid athletes to perfect a particular phase of their chosen sport. In those games in which a ball is struck an average practice of training device must surmount the problem of returning the ball to the practicer so that time is not wasted between practice swings or motions. It is also desirable in training devices of this category for the device to have some means of indicating the effectiveness of the swing or motion.

The apparatus of the invention provides a target or ball which returns to the same position relative to the practicer after each swing, and also gives an audible indication when the swing is executed correctly.

The invention contemplates a swing practicing device that comprises a support member and means fixing the support member with respect to the practicer. A flexible arm extends substantially horizontally from the support member toward the practicer and a hollow simulated ball is formed integrally at the end of the flexible arm.

A preferred form of the invention particularly useful for practicing golf swings comprises a support member and a flexible arm having a hollow hemispherical simulated golf ball at the end of the arm. The support member has a slot extending transversely through the support member which is enlarged along its bottom edge. The flexible arm has a key portion whose thickness is equivalent to the width of the slot. The bottom edge of the key portion is beaded to fit the enlarged slot portion.

The flexible arm has a vertical dimension much greater than the thickness of the arm so that it is flexible primarily in a horizontal direction. The arm decreases in thickness from the key portion to the ball while the vertical dimension is constant. The arm extends horizontally from the support member which is fixed to the playing surface by means of a pair of spikes projecting downwardly from the support member. Preferably, the support member has several times the weight of the hemispherical simulated golf ball. Best results are obtained when the simulated ball has a weight about 1/20 of that of the support member. If the ball has too great a weight with respect to the support member, the momentum engendered when the ball is struck tends to move the support member with respect to the playing surface. Therefore, the hollow hemisphere is preferred to simulate the ball.

Because of the keyed means of attaching the flexible arm to the support member, the two components are readily disassembled and may be carried in a small space. The arm may be of a common commercial plastic, such as polyethylene, which enables the swing practicing device to be mass-produced at a very low unit cost.

These and other advantages of the invention are explained in the following detailed specification and drawings, in which:

Fig. 1 is a plan view of a preferred embodiment of the invention in position for use;

Fig. 2 is an elevation, partly in section, taken along line 2—2 of Fig. 1;

Fig. 3 is a sectional elevation taken along line 3—3 of Fig. 1;

Fig. 4 is a transverse sectional elevation taken along line 4—4 of Fig. 1 showing the configuration of the flexible arm at that point;

Fig. 5 is a sectional view of the simiulated ball taken along line 5—5 of Fig. 1; and

Fig. 6 is an elevational view of the device of Fig. 1 illustrating an alternate positioning of the device.

In the device illustrated in Figs. 1 through 5, a support member **10**, has a pair of parallel spikes **11** and **12** embedded in the support member and protruding several inches below the bottom of the support member. A vertical slot **14** extends transversely through the upper portion of the support member at an angle to the face of the support member. The bottom of the slot opens into an enlarged cylindrical slot portion **15** which extends from back face **16** of the support member parallel to the slot but does not extend all the way through the support member.

The support member may have any outer configuration that is pleasing to the eye and must be thick enough to contain a slot affording sufficient bearing surface for a flexible arm **18**. The part of the arm that fits into the slot is a key portion **20** whose thickness is substantially equal to the width of the slot. The bottom edge of the key portion has a cylindrical bead **21** extending along it. The diameter of the bead is substantially the same as the diameter of enlarged slot portion **15**. Near its outboard end vertically extending stops **23, 24** protrude outwardly from the sides of the key portion.

An intermediate arm portion **26** extends from the key portion to a simulated golf ball **27**. The intermediate arm portion has less thickness than the key portion and the thickness diminishes from the key portion to the ball. The intermediate arm portion is contoured so that it presents a concave face **28** in the direction of the practice swing. The length of the arm portion locates the ball away from the support and is sufficient to give the proper arc of bending when the ball is struck.

Simulated golf ball **27** is a hollow hemisphere having an opening **29** that also faces in the direction of the practice swing. The outer surface of the ball is dimpled in the same manner as a conventional golf ball to give the same "feel" that a golf ball gives when struck with a club.

Referring to Fig. 2, the view in partial section shows the flexible arm in place in the support member. The spikes are driven into the ground or other playing surface **30** so that the bottom of the support member is flush with the playing surface. The support member is more or less vertical so that the ball **27** is suspended above the playing surface at a distance equivalent to a teed golf ball. This distance may be altered as shown in Fig. 6 by changing the angle at which the spikes are driven through the playing surface. In Fig. 6 the spikes and support member are positioned at such an angle that the ball **27** rests lightly upon playing surface **30**. By varying the angle of penetration, the ball may be located at any desired distance above the playing surface.

Preferably, a pair of spikes is used to fix the support member with respect to the playing surface. However, any means that will prevent rotation of the support member while holding it downwardly against the playing surface may be used. Spikes are preferred because of the relative ease of driving them into various types of soil.

The device of the invention is conveniently carried in two pieces, since easy and swift assembly is inherent in the invention. The flexible arm is assembled with the support member by inserting the thinner intermediate

portion of the arm downwardly into the slot to its full depth with the key portion adjacent the rear face of the support member. The flexible arm is then drawn through the slot until the vertically extending stops register against the rear face of the support member. The limiting action of the vertical stops is supplemented by the fact that the enlarged slot portion does not extend entirely through the support member and therefore the end of the bead will register against the end of the enlarged slot portion and act as an auxiliary stop.

After assembly the support member and its spikes are positioned on the playing surface as desired, with the angle to the playing surface being determined by the desired height of the simulated ball above the playing surface.

Because of the length of the flexible arm, the playing surface in the area beneath the ball is free of any obstruction that might impede the free swing of the club head. Therefore, the practicer may use a normal swing in striking the simulated ball, regardless of the height of the ball above the playing surface. He may practice iron shots which require the taking of a little grass with the shot, equally as well as he may practice drives with the ball positioned at tee height.

As may be noted in Figs. 2, 4 and 6, the vertical dimension of the arm is much greater than the thickness of the arm. The thickness of the arm diminishes from the key portion to the ball and this results in an arm of very light weight with little or no vertical flexibility compared with the flexibility in a horizontal direction. The tapering arm permits the arm to bend throughout its length rather than at a hinge line adjacent its full end. Therefore, when the convex surface of the simulated ball is struck, the arm bends around in the pattern shown in Fig. 1 in dotted lines. The stress of bending is distributed through the length of the arm and the arm is therefore more durable. The dotted arm 18A has swung around and is striking the side of the support member. When the simulated ball is struck correctly, the impact sound due to the hollow ball plus the slapping sound from the arm striking the support member results in a distinctive combination of sounds which indicates the correctness of the swing.

Swing faults are indicated by differing reactions of the flexible arm when struck.

The ball is made in a hollow herispherical configuration to minimize the momentum of the struck ball by reducing its weight. If the proportionate weight of the ball with respect to the support member is increased, the momentum becomes great enough to move the support member from its fixed position with respect to the playing surface and the ball will not return to the same position relative to the practicer. Momentum is further decreased by the air resistance of the ball and arm resulting from the unique design of the ball and arm. The hollow ball forms a cup, impeding the speed of the ball, and the broad surface of the arm adds to this impedance. The momentum is reduced sufficiently to allow the use of a flexible arm in place of more expensive swivel mechanisms which do not return quickly to playing position.

The slot in the support member is set at an angle with respect to the faces of the support member to compensate for the forward set that the flexible arm takes after some usage.

While the illustrated embodiment is most suitable for practicing golf swings, the principle of the invention is applicable to any sport such as baseball or tennis in which it is desired to simulate as nearly as possible the swing used to strike a ball.

I claim:

1. A golf swing practice device for use on a playing surface comprising a support member, a vertical slot in the support member, an enlarged slot portion at the bottom of the slot, an arm flexible in a horizontal direction removably seated in the slot and extending horizontally therefrom, the arm having a vertical dimension exceeding its thickness, a key portion near one end of the arm having a thickness equal to the thickness of the slot and a bead along a part of its lower edge fitting the enlarged slot portion, vertically extending stops projecting from the key portion near its end to limit movement of the arm through the slot, a hollow herispherical simulated golf ball formed integrally on the flexible arm at an end remote from the support member, and a pair of spikes extending from the support member to fix the member with respect to the playing surface, the support member having several times the weight of the hemispherical simulated golf ball.

2. A golf swing practice device for use on a playing surface comprising a support member, a vertical slot in the support member, an enlarged slot portion at the bottom of the slot, an arm flexible in a horizontal direction removably seated in the slot and extending horizontally therefrom, the arm having a vertical dimension exceeding its thickness, a key portion near one end of the arm having a thickness equal to the thickness of the slot and a bead along a part of its lower edge fitting the enlarged slot portion, vertically extending stops projecting from the key portion near its end to limit movement of the arm through the slot, a hollow hemispherical simulated golf ball formed integrally on the flexible arm at an end remote from the support member, the arm tapering in thickness from the key portion to the ball, and a pair of spikes extending from the support member to fix the member with respect to the playing surface, the support member having several times the weight of the hemispherical simulated golf ball.

3. A swing practicing device comprising a support member, means fixing the support member with respect to a playing surface, an arm having a vertical thickness exceeding its horizontal thickness so as to be flexible in a horizontal direction and rigid in a vertical direction, means fixing an end of the flexible arm rigidly within the support member so that the arm extends horizontally therefrom, and a hollow simulated ball formed integrally with the flexible arm at an end thereof remote from the support member.

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