

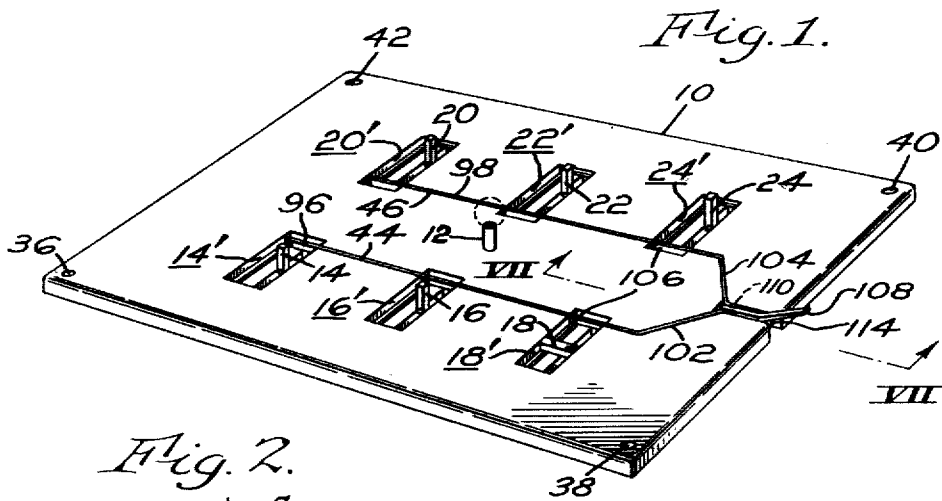
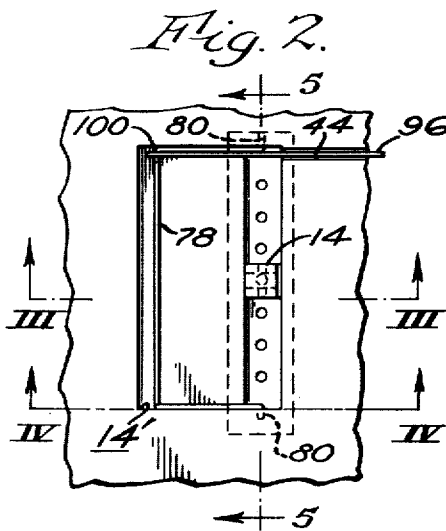
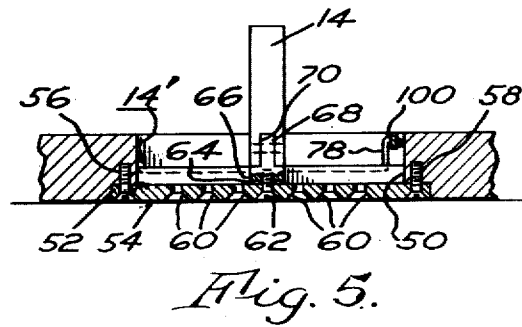
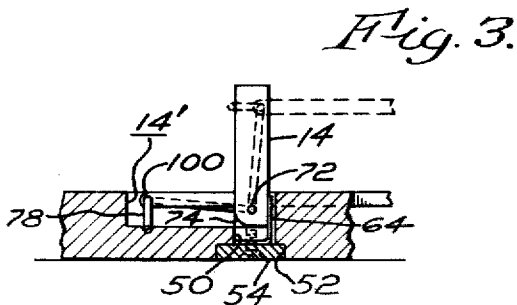
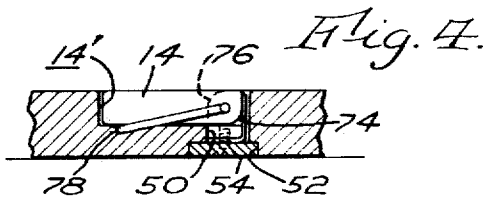
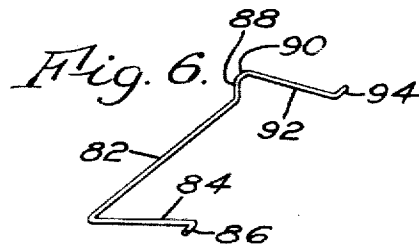
Aug. 6, 1957

J. R. STRUNK
GOLF PRACTICING DEVICE

2,801,857

Filed April 1, 1954

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

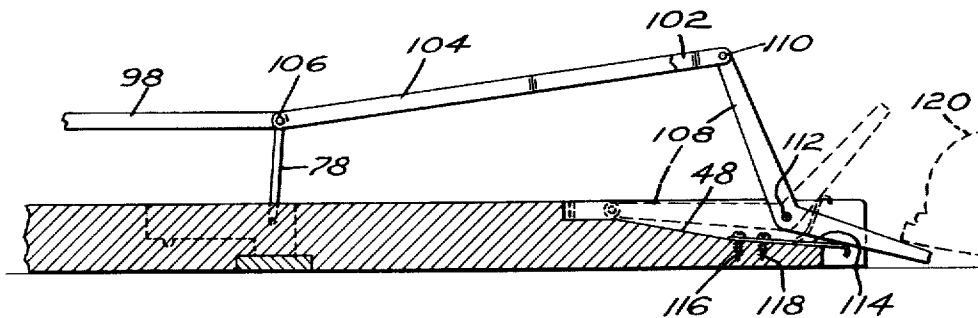


Fig. 7

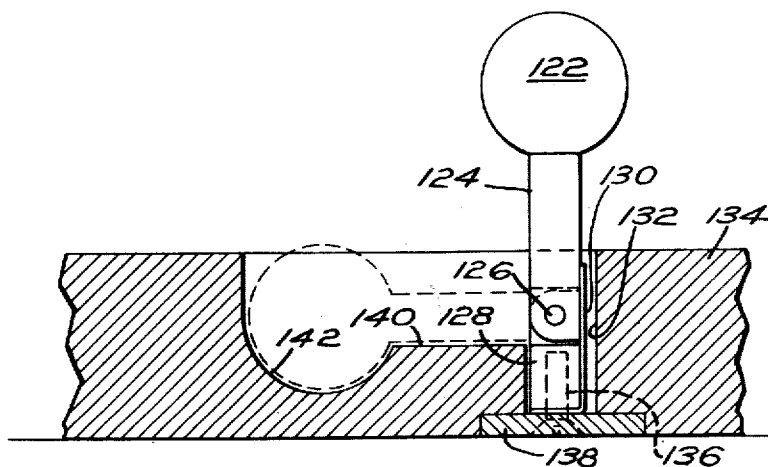


Fig. 8.

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GOLF PRACTICING DEVICE

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5 Claims. (Cl. 273—186)

This invention relates generally to an improved golf practice device and more particularly to a device of this type which is adapted to indicate in an improved manner the course of a golf club head in passing through the ball striking area of a golfing stroke.

It has been determined that the correct course of a club head at the base of a swing of a golf club through the ball hitting area is in a forwardly and angularly outwardly directed path of travel relative to a player when viewed in plan view both before and after impact with the ball. Conversely, hitting has been found to be faulty and misdirected when the course of the club head has been directed along a line forwardly and angularly inwardly relative to a player, also when viewed in the aforesaid manner.

In view of the fact that timing is of vital importance in the golfing stroke, that is, bringing the club head against the ball at the instant of achieving greatest velocity, the club head is not swung against the ball, but is whipped against it with a sort of lash, as if the shaft were flexible not rigid. Therefore, the speed of a club head in the hitting area is very fast and its path of travel relative to the ball may be discerned neither by the player who must keep his eyes fixed on the ball, nor an experienced golf coach—this being especially true for wood club play. For this reason, practice may be futile and fruitless for many players since continued play will only more deeply ingrain incorrect swing characteristics in the individual at a progressively increasing rate with continuance of practice.

Accordingly, it is a primary object of the invention to provide an improved golf practice-device of the aforesaid type having a novel control marker means arranged in predetermined orientation around a ball-supporting tee.

Another object of the invention is to provide an improved device of the aforesaid type which is adapted to more easily aid a golfer in identifying and eliminating faulty and incorrect swing characteristics.

Still another object of the invention is to provide an improved device of the aforesaid type having control marker means arranged to indicate whether or not a golf club head meets a golf ball correctly; that is, in alignment with the center of mass of the club head.

Still another object of the invention is to provide an improved device of the aforesaid type having a ball tee flanked in spaced relation by a plurality of individually positionally adjustable marker means and thereby permitting selective spacing thereof relative to the tee to accommodate various size clubs; the various positions thereof being adapted to be calibrated for various club head sizes having variously situated centers of mass.

Still another object of the invention is to provide an improved device of the aforesaid type which is of highly simplified construction so as to be adapted to be easily mass produced at relatively low cost with minimum investment in plant and equipment.

Still another object of the invention is to provide an improved device of the aforesaid type which is of highly

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compact organization so as to be easily stored and transported by a user thereof.

And, still another object of the invention is to provide an improved device of the aforesaid type having improved foot actuated marker means set up means arranged to be normally resiliently urged into retracted position within a mounting pad of the device.

In the drawing:

Fig. 1 is a perspective view showing an embodiment of the invention;

Fig. 2 is a fragmentary enlarged plan view showing a portion of the embodiment of Fig. 1;

Fig. 3 is a fragmentary generally sectional view taken along the line III—III of Fig. 2;

Fig. 4 is a fragmentary generally sectional view, taken on the line IV—IV of Fig. 2, but showing the marker member in down position;

Fig. 5 is a fragmentary generally sectional view, taken along the line V—V of Fig. 2;

Fig. 6 is a perspective enlarged view showing an element of the embodiment of the invention shown in Figs. 1 to 5, inclusive;

Fig. 7 is a fragmentary enlarged partially sectional view, taken generally along the line VII—VII in Fig. 1, but showing the marker set up means in raised position; and

Fig. 8 is a fragmentary enlarged partially sectional view illustrating a modification of the invention.

Referring now more particularly to the drawing, the embodiment of the invention illustrated therein includes a generally planiform mat-like member 10 having a centrally disposed golf ball tee 12 which is flanked by a row of pivotally mounted individually positionally adjustable markers 14, 16, 18 on one side and 20, 22, 24 on the other side, each being mounted for movement into and out of a plurality of recesses 14', 16', 18', 20', 22', 24', respectively, provided in the mat 10.

The member 10 may be made from a suitable plastic material, or the like, formed for example by an injection moulding process to have a plurality of holes 36—42, inclusive, to aid in securing the member to a floor or, when outdoors to the earth, in addition to the aforesaid recesses 14' to 24', inclusive, which are arranged in a pair of longitudinally aligned rows flanking the tee 12 and being interconnected at their inner ends by a pair of link grooves 44—46 which extend rearwardly of the recesses 14' to 24' and then angularly inwardly to end in a medial slot portion 48 arranged to taper rearwardly downwardly and then out through the back end of the mat 10 in the manner illustrated most clearly in Fig. 7.

The recesses 14' to 24', inclusive, are each preferably formed to be of generally rectangular shape and of sufficient depth to accommodate the thickness of an indicator member so that in the down position of the latter it will be flush with the top face of the mat 10. In order to mount the markers 14 to 24, inclusive, for selective positional adjustments along the above recesses, the rear bottom portions of each of these recesses are formed with slots 50, which are enlarged at the lower portion thereof to provide longitudinally aligned slots 52 adapted to accommodate a perforated marker mounting bar 54 set flush with the bottom face of the mat 10. This mounting bar 54 may be fixed to the mat 10 at its ends by means of a pair of screws 56—58 and will be provided intermediate thereof with a plurality of spaced countersunk apertures 60 through which may be inserted a screw 62 for passage through the flange of a flat spring 64 and then into the bottom of a marker mounting pedestal portion 66.

The pedestal portion 66 is preferably formed with a reduced width upstanding lug portion 68 slidably fitted into a slot 70 cut from the underside of the marker members as shown most clearly in Fig. 5 and being nestingly fitted against the flanges of the flat spring 64. A pivot

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pin 72 is loosely journaled centrally through the upper portion of the lug 68 and is embedded at its opposite ends in the walls of the slot 70 at the base of the marker members as shown in Figs. 2, 3, 4 and 5. Further, the lower forward edge of the marker members will be rounded as indicated at 74 to clear the shoulders at the base of the pedestal lug 68 during pivotal movement, while the forward upper edge of the pedestal portions 66 will be similarly rounded, as shown at 76 to clear the base of the marker slot 70 during pivotal movement (Figs. 3 and 4), whereby the marker will be free to pivot between an upright and a horizontal down position, and will be retained at these limits of movement by the resilient urge of the flat spring 64 acting against the back face and the bottom face thereof, respectively, depending upon its position and thereby providing marker members which will move by a snap-lock action into and out of their end limits of movement.

As shown most clearly in Figs. 2 to 5, each of the recesses 14' to 24', inclusive, are provided with a wire bail member 78 preferably arranged to be pivotally mounted at its opposite end portions in the side walls of the recesses in longitudinal alignment with the marker pivot pin 72, as shown at 80—80 in Fig. 2. The wire bail member 78 is preferably formed from a piece of steel wire, or the like, having a central marker lifting portion 82 bent laterally rearwardly at one end and then again laterally outwardly into a mounting part as shown at 84 and 86, respectively. The opposite end of the bail portion 82 extends into a laterally bent portion 88 extending upwardly from a plane containing the portions 82 and 84 and then laterally outwardly into a portion 90 and then rearwardly and angularly downwardly in a portion 92 to the plane containing the portions 82 and 84 and then again laterally outwardly into a mounting part 94 in longitudinal alignment with the opposed mounting part 86 along a line parallel to the central portion 82 (Fig. 6).

A pair of bail actuating bar members 96 and 98 are mounted in loosely fitted relation in the parallel grooves 44 and 46, respectively. These bar members will be pivotally connected at their ends and intermediate thereof to the bail members 78 in the manner indicated most clearly at 100 in Figs. 2, 3 and 5 in order that the plane containing these pivotal connections preferably will be positioned above the points of the pivotal connections 80—80 between the ends of the bail members 78 and the end walls of the recesses 14' to 24'.

A pair of connecting bar link members 102 and 104 are shown to be pivotally connected to the back ends of the bars 96 and 98, respectively, as at the points of pivotal connection of the latter to the bail members 78 in the opposed recesses 18' and 24', respectively, as indicated at 106—106 in Fig. 7. The bar link members 102 and 104 extend rearwardly and then angularly inwardly in loosely fitting relation in the grooves 44 and 46 for pivotal connection to the inner end of an obtuse-angled bell crank member 108 as shown at 110 (Figs. 1 and 7). The bell crank 108 is pivotally mounted by means of a pin 112 journaled through the crank angle apex portion and embedded in the side walls of the slot 49 (Fig. 7) so as to be adapted when rotated about its fulcrum 112 to actuate the bail marker raising member 78 by means of the connecting bar links 44—46 and 102—104, respectively.

As shown in Fig. 7, the outer arm of the bell crank 108 will be resiliently urged upwardly by means of a flat spring 114 fixed to the base of the slot 48 by a pair of screws 116—118, and bearing against such crank arm to maintain it in the normal position thereof shown in dotted lines in Fig. 7.

It will be appreciated that upon completion of a marker lifting operation as by releasing the pressure of the toe portion of a player's shoe 120 (Fig. 7) from the outer arm of the crank 108, the spring 114 will act upon the crank to return the bails 78 and their connecting linkages

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back to their normal positions flush with the upper surface of the mat preparatory to another practical stroke. Thus, a player during practice may return the markers 14 to 24, inclusive, to their upright position simply by stepping upon the outer arm of the crank 108 which is preferably arranged to extend acutely angularly backwardly relative to the mat 10 so as not to interfere in any way with the player's stroke and then releasing the crank as aforesaid.

As shown in Fig. 1, the tee 12 is fixed in the mat 10 and is preferably constructed from a round tubular piece of flexible material such as rubber, or the like. Thus, the upper end of the tee 12 will provide a circular rim for mounting a regulation golf ball or light weight practice ball for use in the practice of driving strokes.

A modification of the invention, as shown in Fig. 8, provides a simulated practice ball 122 which is arranged to be pivotally mounted in place of the tee 12 shown in Fig. 1. Thus, the practice ball 122 will be fixed to a stem portion 124 which is pivotally mounted by means of a pin 126 to a pedestal portion 128. The stem 124 and the pedestal 128 are nested between the flanges of a flat spring 130 and may be fitted by way of example in a slot 132 through the mat 134 for selective positional connection by means of a screw 136 fitted through countersunk perforations in a mounting plate 138, all being constructed and arranged in a manner similar to that hereinabove described for mounting of the marker members 14 to 24, inclusive, whereby the simulated practice ball will be movable into horizontal and upright positions. The ball 122 will, of course, also be retained in these positions by the resilient urge of the spring 130 acting upon the bottom and rear lower edge portions, respectively, of the stem 124. Thus, the simulated ball may be selectively positionally adjusted between the markers as desired for correct positional alignment therebetween to adjust the device for various positions of center of mass of various club heads to truly indicate whether or not the path of the center of mass of the club head is aligned with the center of the ball mounting tee, in addition to indicating whether or not the swing was properly directed through the hitting area as aforesaid. Thus, this device is adapted to indicate whether or not the player would have made a solid hit for maximum driving distance under actual conditions of play. Also, it will be appreciated that a recess 140 will be provided forwardly of the slot 132 and having a radially grooved depression 142 at its forward end to accommodate the simulated ball 122 in its horizontal position as shown in dotted lines in Fig. 8.

It will further be appreciated that the recess 140 might readily be provided with a suitable bail member (not shown) similar to members 78 and arranged to be actuated by the link bars 44—46 in order that the simulated practice ball 122 might be raised into its upright position simultaneously with lifting of the markers by foot actuation of the outer arms of the bell crank 108 in the aforesaid manner. Thus, a player would not be required to bend after each practice stroke to place a golf ball on a tee but could concentrate on achieving good golfing form and a proper swing characteristic.

Thus, it will be appreciated that when addressing a golf ball mounted on the tee 12, or the simulated ball 122, all the marker members 14 to 24, inclusive, will be in an upright position. Then, upon completion of the down-stroke portion of a properly directed swing the marker members 18 and 20 will be knocked over by the club head into a down position indicating an "inside-out" direction of club head travel in the hitting area. In the event that marker members 14 and 24 are knocked over, an incorrectly directed outside-in direction of travel of the club head through the hitting area is indicated and shows a need for correcting the swing and also the kind of correction required.

Furthermore, in either of the above instances if the markers 22 or 16, respectively, are also knocked over it would indicate, as more fully described above, that the

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ball was not being met at the center of mass of the club head even in the event of a proper directionally aligned swing through the hitting area—at the heel of the club head in the first instance and at the toe of the club in the latter instance.

It will be appreciated to be a particular feature of the present invention to position the marker members 14 to 24, inclusive, in critically spaced relation to the tee 12 depending upon the size of the club and its center of mass. Thus, since the center of mass is toward the heel of a club head the markers 20, 22 and 24 will be spaced further away from the tee 12 than the opposite row of markers 14, 16 and 18 flanking the opposite side of the tee. The precise spacing will, of course, be determined by the location of the center of mass of the club head relative to the toe and heel thereof with allowances so that the spacing between the opposite rows will be slightly greater than the length of the club head for the purpose of providing some clearance to permit passage of the club head therebetween during a properly directed club stroke. Thus, the club head will clear the markers 16 and 22 in an outwardly directed course thereby indicating that the ball was hit squarely at the club head center of mass to impart the most effective and properly directed driving force to the ball.

It is also to be appreciated that not only are the markers readily positionally adjustable to accommodate various size clubs having variously located centers of mass, but that the marker mounting arrangement is flexible enough to permit either right or left hand use thereof simply by shifting the relative spacings between the tee and the rows of markers 14, 16, 18 and 20, 22, 24, respectively.

Further, it is noted that the device of the invention is adapted to be even less expensively made for sale as part of a particular practice set by fixing the relative spacing of the markers 14 to 24, inclusive, and then making the mounting of the tee 12 positionally adjustable for use with either a right or left hand club, as the case may be.

Therefore, it will be understood that although only one form of the invention has been shown and described in detail it will be apparent to those skilled in the art that various changes may be made therein without departing from the spirit of the invention or the scope of the appended claims.

What is claimed is:

1. A golf practicing device, comprising a mat-like platform having a ball-supporting tee rising therefrom substantially centrally thereof and a longitudinal row of recessed openings disposed in spaced relation at laterally opposite sides of the tee with certain of the companion openings in such rows being transversely aligned with said tee and others being longitudinally spaced fore and aft of the tee, a positionally displaceable indicator being pivotally mounted in each of said openings for pivotal movements forwardly and then downwardly from a normally upright position into a horizontal position so as to be flush with the upper surface of said platform, pivotally mounted wire bail means positioned in each of said openings and being pivotally interconnected by bar link means to a foot-actuated bell crank member arranged to be actuated arcuately to swing said bail means to lift the indicators into said normally upright position, and resilient means normally operable to urge said bell crank means to maintain said bail means inoperative, the lateral spacing of the indicators of one row of said openings at one side of the tee being somewhat greater than those of the other row and the spacing of those indicators in each row of said openings fore and aft of the tee being substantially the same as the aforesaid lateral spacing of the first-named row of indicators from the tee.

2. A golf practicing device, comprising a mat-like platform having a ball-supporting tee rising therefrom substantially centrally thereof, a longitudinal row of nor-

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mally-upright displaceable indicators disposed in spaced relation at laterally opposite sides of and fore and aft of the tee, said platform having transversely-extending guideways in which said indicators are pivotally supported for movement thereinto so as to be flush with the upper surface thereof, and means fitted in the guideways and correlated with said indicators for adjustably setting them in one or another of a plurality of positions in said guideways and including bail means arranged to be foot actuated to raise said indicators out of said guideways into an upright position.

3. A golf practicing device, comprising a mat-like platform having a ball-supporting tee rising therefrom, a longitudinal row of normally-upright displaceable indicators disposed in spaced relation at laterally opposite sides of and fore and aft of the tee and having pivotal connections intermediate their ends at a point below the upper surface of said platform, said platform having transversely-extending guideways in operating planes of said indicators, and supports for the latter in operative engagement with said guideways for adjustment to one or another of a plurality of transversely set positions, whereby said indicators will be pivotable from their normally upright positions into generally horizontal positions inwardly of said guideways when struck by a golf club head to thereby indicate the path of the club head relative to said tee through the hitting area and will be adapted to be spaced away from said tee corresponding to the distance from the center of mass of the club head to the corresponding end thereof.

4. A golf practicing device, comprising a mat-like platform having a ball-supporting tee rising therefrom and transversely extending guideways therein in spaced relation to said tee, a supporting member fitted in each of said guideways for adjustment to one or another of a plurality of selective positions, a normally-upright indicator hingedly connected to each of said supporting members to rock in one direction into generally horizontal position flush with the upper surface of said platform and restrained from swinging in the opposite direction, and foot-actuated means including pivotally mounted bail means in each of said guideways being operable to raise said indicators from their horizontal position into their normally upright position.

5. A golf practicing device, comprising a mat-like platform having a ball-supporting tee rising therefrom substantially centrally thereof, a longitudinal row of normally-upright displaceable indicators disposed in spaced relation at laterally opposite sides of and fore and aft of the tee, said platform having transversely-extending guideways in which said indicators are pivotally supported, for movements thereinto from normally-upright positions, means fitted in the guideways and correlated with said indicators for adjustably setting them in one or another of a plurality of positions in said guideways, and foot actuated indicator lifting means arranged to be normally resiliently urged into inactive condition in said platform.

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