

Sept. 18, 1928.

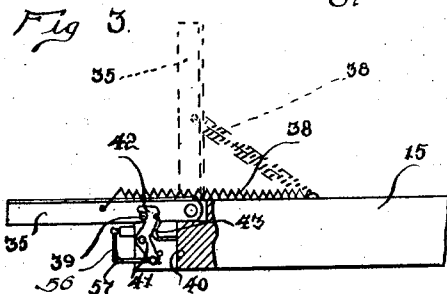
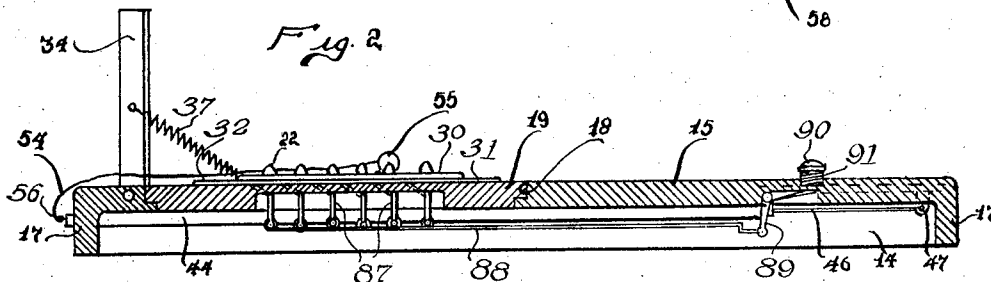
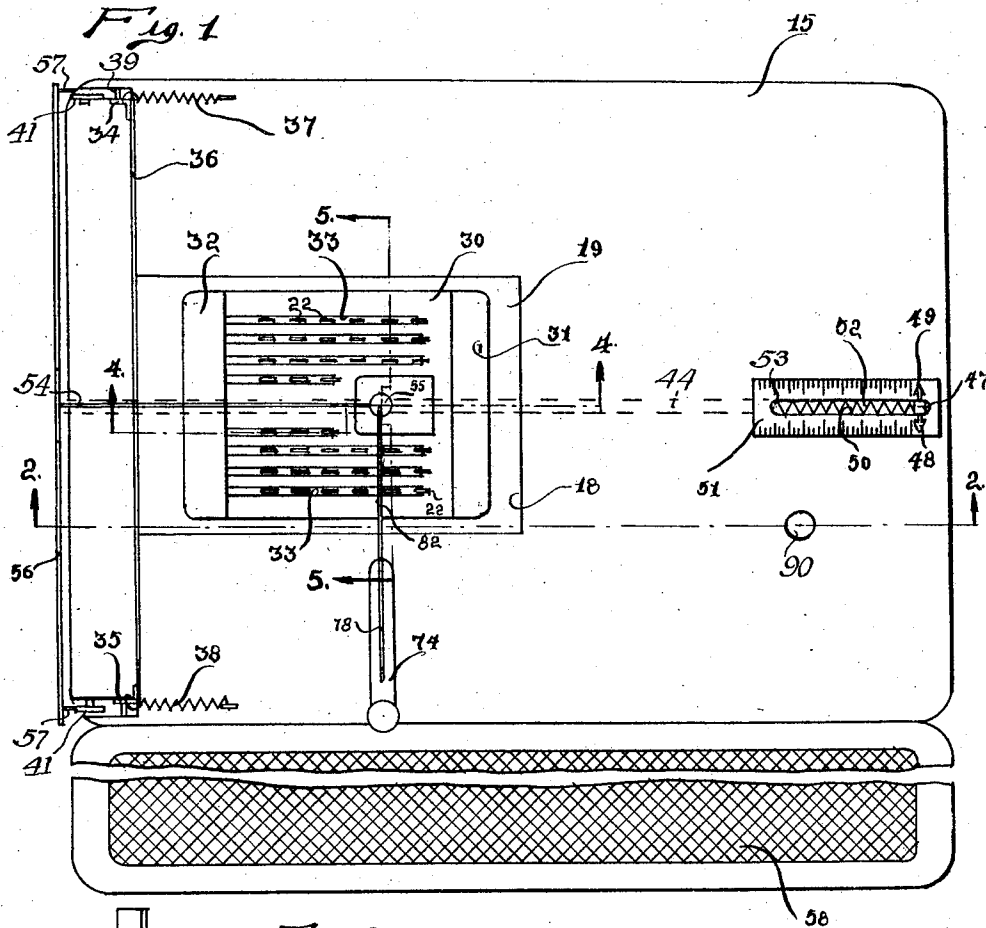
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H. G. CONNER

GOLF INDICATING MECHANISM

Filed Sept. 11, 1926

3 Sheets-Sheet 1



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Fig. 4.

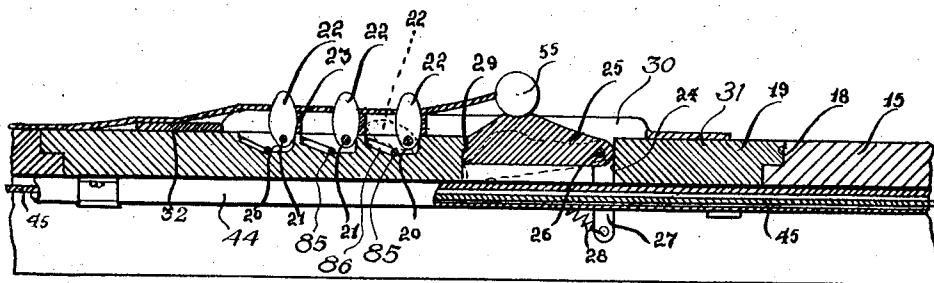


Fig. 5.

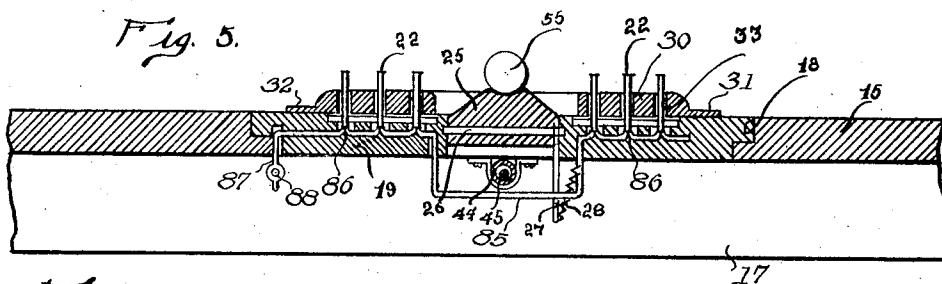


Fig. 6.

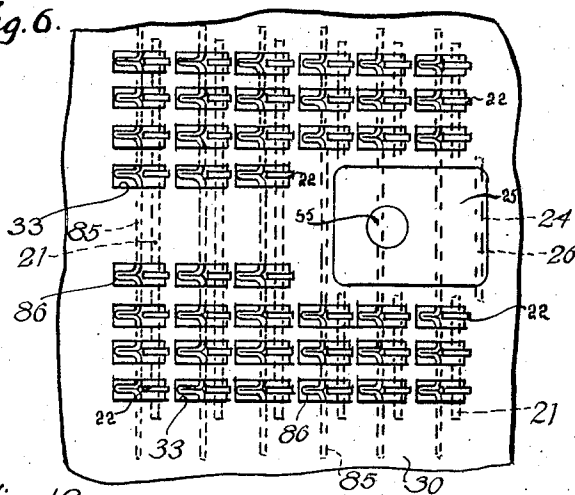
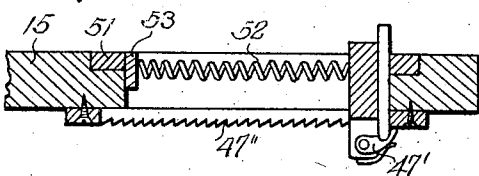


Fig. 13.



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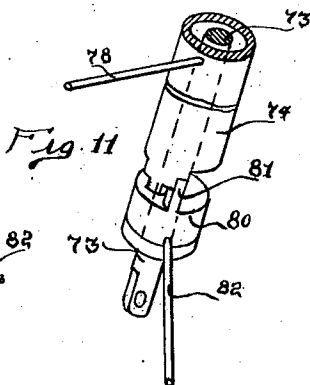
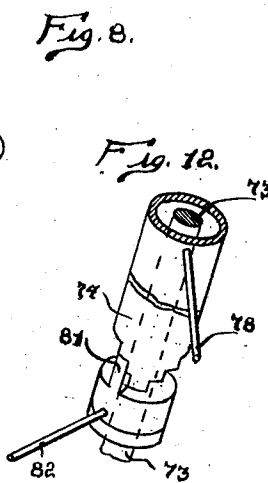
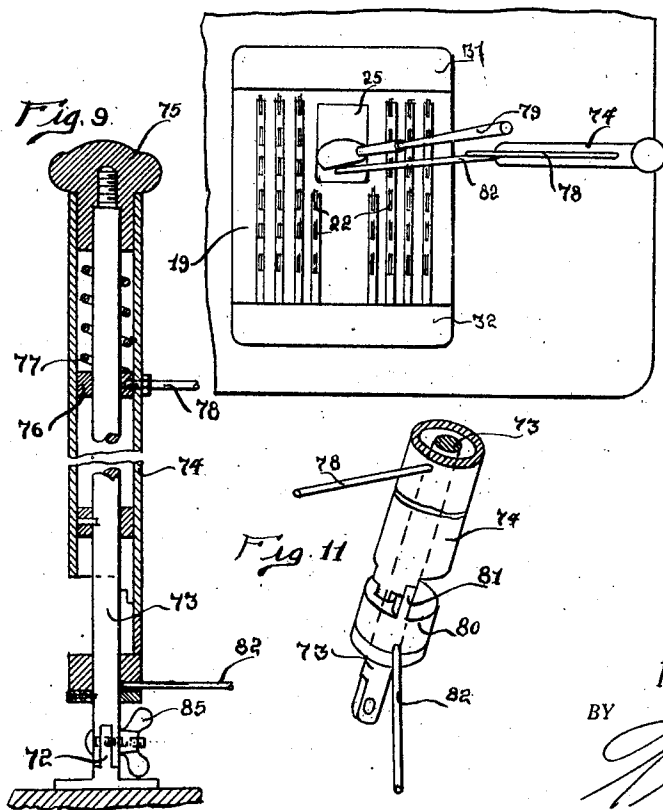
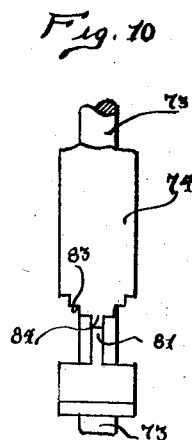
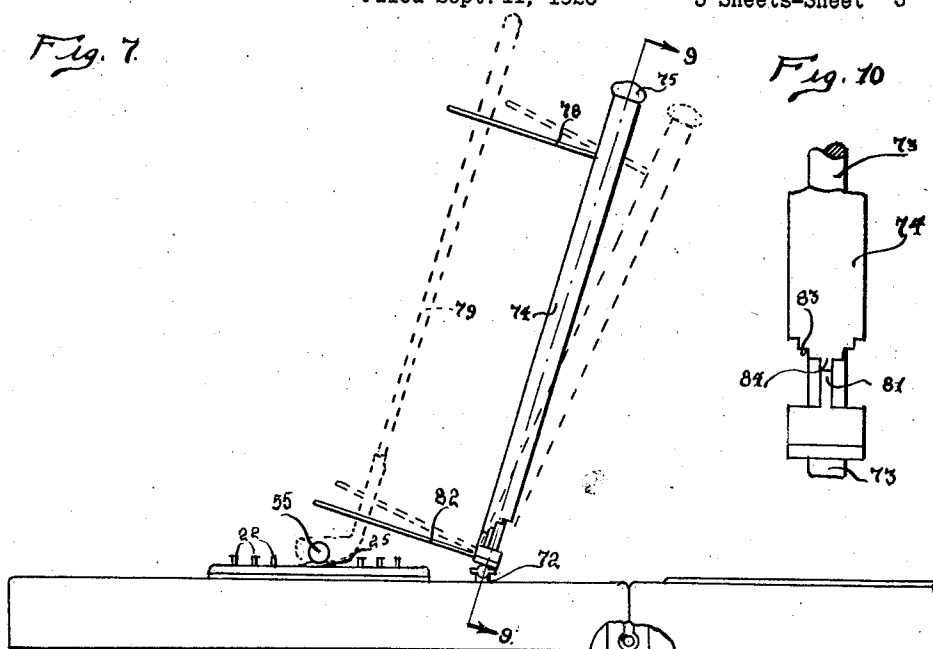
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GOLF INDICATING MECHANISM

Filed Sept. 11, 1926

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE.

HARRY G. CONNER, OF DETROIT, MICHIGAN.

GOLF INDICATING MECHANISM.

Application filed September 11, 1926. Serial No. 134,805.

My invention relates to a new and useful improvement in a golf indicating mechanism adapted for use by golfers and intended to indicate, when used, the errors in the driving of the golfer.

The golfer when playing the game of golf has opportunity to observe his striking only a comparatively few times around a course and the interval between periods of striking the ball is such that it is difficult for a player to consistently and methodically improve on his striking.

It is an object of the present invention to provide a mechanism whereby the error in striking may be indicated and the flight of the ball, as to direction and distance, indicated and computed.

Another object of the invention is the provision of a mechanism whereby the user may ascertain whether or not in driving he is slicing or hooking.

Another object of the invention is the provision of a plurality of displaceable members outlining a thorough course of flight of the ball and adapted for displacement upon engagement with the ball so that the driving of the ball out of its true course of flight may be indicated by the displaced members.

Another object of the invention is the provision of a mechanism of this class whereby the distance of the flight of the ball may be computed.

Another object of the invention is the provision of an automatically operated shield for preventing the return of the ball to the indicating movable members.

Another object of the invention is the provision of a mechanism for placing these movable members in operative position after striking a ball.

Another object of the invention is the provision of a pivotally mounted tee on which the ball is rested preliminarily to being struck.

Another object of the invention is the provision of a device of this class which will be simple in structure, economical of manufacture and highly efficient in use.

Other objects will appear hereinafter.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood by a reference to the accompanying drawings which form a part of this specification and in which,

Fig. 1 is a top plan view of the invention with parts broken away.

Fig. 2 is a sectional view of the invention taken on substantially line 2—2 of Fig. 1.

Fig. 3 is a fragmentary sectional view of the shield used in the invention.

Fig. 4 is a fragmentary sectional view taken on substantially line 4—4 of Fig. 1.

Fig. 5 is a fragmentary sectional view taken on substantially line 5—5 of Fig. 1.

Fig. 6 is a fragmentary top plan view of the lifting mechanism used in the invention.

Fig. 7 is a side elevational view illustrating the club positioned indicating mechanism.

Fig. 8 is a fragmentary top plan view of Fig. 7.

Fig. 9 is a fragmentary sectional view taken on substantially line 9—9 of Fig. 7.

Fig. 10 is an enlarged side elevational view of the club positioning mechanism in one position.

Fig. 11 is a fragmentary perspective view of Fig. 10 showing another position.

Fig. 12 is a fragmentary perspective view of Fig. 10 showing still another position.

Fig. 13 is a sectional view illustrating the spring release used.

As shown in the drawings I provide a platform 15 having downwardly directed flanges 14 and 17 which serve to support the platform in elevated position relatively to the surface upon which it is placed. Formed in the platform 15 is an opening 18 in which is adapted for positioning a plate or supporting member 19 which serves to carry a portion of the mechanism used in the invention. Formed in the plate 19 are a plurality of recesses 20.

Projecting through the recesses 20 transversely are spaced rods 21, upon which are loosely mounted indicating pins 22, each of these pins being independently movable on the rods 21. As clearly appears from Fig. 4 abutment members 23 are provided against which the pins 22 rest so as to prevent the falling of the pins in one direction. As shown in Fig. 4 in dotted lines, the pins 22 may be moved downwardly into inclined position. Formed in the plate 19 is an opening 24 in which is positioned a tee 25 swingably mounted on the rod 26. Swingably mounted on the rod 26 and connected to the tee 25 is a depending link 27, to the lower end of which is secured one end of the spring 28, the other end being suitably secured to the under surface of the plate 19 so as to normally retain the tee 25 in the position shown in full lines

in Fig. 4, a suitable shoulder 29 serving to limit the upward movement of the tee 25. Mounted on the plate 19 is a mat 30 having a portion 31 and 32 at its opposite ends of reduced thickness. Formed in the mat 30 are parallel extending slots 33, through which project the indicating pins 22 when in upright position. Projecting upwardly from the rear side of the platform 15 are angle irons 34 and 35, to which is secured a suitable screen member, 36, formed from canvas or the like. These angle irons 34 and 35 are pivotally mounted on the platform 15 and normally retained in upright position between springs 37 and 38. Projecting outwardly from the sides of the angle irons 34 and 35 is a pin 39. Pivotaly mounted on each side of the platform 15, in a suitable recess 40, is a dog 41, the nose 42 of which is adapted for engaging the pin 39 and preventing the spring 38 from moving the shield to upright position, a suitable leaf spring 43 serving to normally retain the nose 42 in engagement with the pin 39. Upon disengagement of the nose 42 with the pin 39 the angle irons will move into vertically extending position so as to bring the screen into operative position as shown in dotted lines in Fig. 3. Extending beneath the platform 15 and projected along the medial line of the plate 19 is a tube 44, through which projects a cord 45, said cord being secured at one end to a rod 46, the other end of said cord being secured to a pointer block 47 carrying the pointer arms 48 and 49, said pointer block projecting upwardly through a slot 50 formed in the platform 15 and in a dial plate 51, which is mounted on the platform. Positioned in the slot 50 is a coil spring 52 which engages an abutment pin 53 at one end, and at its opposite end the pointer block 47, so that the pointer block is normally retained in the position shown in full lines in Fig. 1 and a longitudinal movement of the block 47 in the slot 50 will effect a compression of the spring 52, this particular mechanism serving as a scale for measuring the force of the blow delivered to the ball.

The opposite end of the rod 46 is secured to the cord 54 which is attached to a golf ball 55. Projecting outwardly to each side of the platform is a rod 56, the opposite ends thereof being angularly twined and connected to the cord 57 which is secured to the dog 41.

In operation the ball 55 is placed on the tee 25 and the operator stands on the platform 58. The shield is moved preliminary to striking the ball into the position shown in full lines in Fig. 3. The ball when struck through its force will serve to move the dial block 47 against the tension of the spring 52, the distance of movement of the dial block 47 being dependent upon the force of the blow delivered to the ball. The dial block 47 when moved longitudinally is prevented re-

taining to normal position by means of the dog 47' riding over the corrugations of the plate 47''. In this way the direct pull of the ball will be indicated on the dial plate, the various graduations representing a certain force or power directed against the spring 52. At the same time the dogs 41 will be released so that the shield may swing to upright position and prevent the return of the ball 55 to the upper surface of the platform 15, the rod 56 being attached to the cord 54 and rocked thereby.

It will be noted from Fig. 1 that the indicating pins are placed at opposite sides of the ball 55 leaving a clear path centrally of the platform 15, so that as the ball is struck squarely and driven straight from its seat on the tee 25, it will travel parallel to the tube 44, neither the ball or club disturbing any of the indicating pins 22. However if the ball is driven laterally out of its path it will indicate its path of travel by the indicating pins 22, which will be knocked down by the club head so that the player, by observing the pins 22 which have been misplaced, will recognize the path of travel of the club head or the ball, thus indicating the error in striking the ball. By computing the mass of the ball with the power indicated by the dial plate and the pointers 48 and 49 the distance of drive may be ascertained and in this connection in the practical operation and use of the device a chart may be provided to indicate the distance of flight, the computation involving the indication on the dial plate 52. In such computation, of course, the angle of flight must also be considered but a mean angle of flight may be used for giving quite closely accurate results.

Rotatably mounted in the platform 15 are rods 85, each of which is provided with a plurality of angularly turned portions 86 lying in the pockets or recesses 20 so that when rotated in one direction these angularly turned portions 86 will engage the members 22 and move them to upright position. As shown in Fig. 5, the ends 87 are turned downwardly and connected to the rod 88 shown in Fig. 2, this rod being connected to one end of a bell crank 89, the other end of which is secured to the plunger 90 which is normally held by the spring 91 in upwardly pressed position. The construction is such that after the blow has been struck and some of the members 22 displaced, the operator may, by stepping on the plunger 90, raise the members 22 to upstanding or operative position.

Considering the pins which have been displaced the errors in driving will be noted but to more accurately indicate whether the head of the golf club precedes the hands of the user or the hands of the user precedes the head of the golf in striking, I have provided a mechanism which is adapted for mounting on the platform 15. Projecting upwardly

from the platform 15 is a lug 72, upon which is pivotally mounted a shaft or rod 73 which projects through a tube 74 and is provided on its upper end with a knob 75. Positioned in the tube 74 and embracing the rod 73 is a block 76, against which engages one end of a spring 77, the other end of which engages the inner end of the knob 75 so as to exert downward pressure on the tube 74. Projecting outwardly from the block 76 and projecting through the tube 74 is an engagement arm 78 adapted for rotating the tube 74 relatively to the rod 73 when this engagement arm is struck by the golf club 79. Rotatably mounted on the rod 73 is a collar 80 having a tongue 81 projecting upwardly from its upper end and provided with a radially outwardly extending engagement arm 82. As shown in Fig. 10, Fig. 11 and Fig. 12, the tube 74 is provided on its lower end with a number of steps 83, the centrally positioned step 84 serving as a tongue for engaging the tongue 81.

In operation the tube 74 is positioned with its tongue 84 in engagement with the tongue 81 as shown in Fig. 10. When in this position the engagement arm 78 will be in alignment with the engagement arm 82. These engagement arms project outwardly into the path of travel of the golf 79 when the ball is being struck, the tiltable mounting of the rod 73 serving to permit the necessary adjustment to bring these arms into proper position so as to project across the path of travel. A wing nut 85' will serve to clamp the rod 73 in its desired position of adjustment. When the hands and head of the golf are traveling uniformly the arms 78 and 82 will be simultaneously engaged, so that the collar 80 will rotate in unison with the tube 74, the tongues 84 and 81 remaining in engagement with each other. Should the hands of the user precede the head of the golf the arm 78 will be first engaged, thus moving the tube 74 so as to permit the tongue 81 to fall behind the tongue 84, as shown in Fig. 12. Should the head of the golf precede the hands of the user the engagement arm 82 will be first engaged moving the tongue 81 out of engagement with the tongue 84 into the position shown in Fig. 11, so that by observing the position of the tube 84 and the collar 80 the user may know whether or not his hands and the head are traveling in the same plane when the ball is being struck. In this way the slicing and hooking errors in a golfer's driving may be recognized and the necessary practice and experiments undertaken to correct these errors.

With a mechanism of this class the user may very easily and quickly ascertain the various errors which he is making in driving so that he may, with accurate information as to what the errors are, take the necessary steps for correction. In that the user may

practice driving at frequent intervals, immediately after checking up on the errors, much practice may be had in a short time with substantially the same results as though the driver were driving the ball over a regular course.

In addition to the features of the mechanism noted above it is believed obvious that the device may be constructed for a game of indoor golf, a suitable chart of a golf course being provided and the users travel over the golf course accurately and quite closely computed.

While I have illustrated and described the preferred form of my invention, I do not wish to limit myself to the precise form of structure shown, but desire to avail myself of such variations and modifications as may come within the scope of the appended claims.

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

1. In a device of the class described a golf ball; a yieldable indicating member; means for attaching said golf ball to said indicating member, said indicating member indicating the force of said ball in a flight; a plurality of movable members for indicating departure of said ball from the normal path of flight; and means for preventing a rebounding of said ball into engagement with said movable members.

2. A golf indicating mechanism of the class described for indicating the path of travel of a golf club when used for striking a ball, comprising a pair of independently movable engagement members, one adapted for engaging the golf club adjacent its head, and the other adapted for engaging the golf club adjacent its other end.

3. A golf indicating mechanism of the class described, comprising: a ball supporting member; a plurality of parallel extending rods; a plurality of independently movable bodies positioned in spaced relation on each of said rods about said ball, and adapted, upon travel of said ball from its supporting member in other than a predetermined direction, to engage said ball, said members being, upon engagement with said ball, moved out of normal position; a plurality of rods extending parallel to said first mentioned rods and buckled upon themselves at spaced intervals to provide fingers projecting therefrom; means for rocking said last mentioned rods at will, said fingers, upon rocking in one direction, moving said movable bodies into normal position.

4. A golf indicating mechanism of the class described, comprising: a platform; a ball supporting member on said platform; a plurality of movable bodies positioned about said ball and adapted, upon travel of said ball from its supporting member in other than a predetermined direction, for engaging said

ball, said bodies being moved out of normal position upon engagement with said ball; a swingably mounted shield at one end of said platform; releasable means for normally retaining said platform in reclined position; resilient means normally tending to move said platform to upright position; a cord on said ball; and means attached to said cord adapted upon the striking of said ball for releasing said releasable retaining means.

5. In a golf indicating mechanism of the class described; a platform; an upwardly projecting rod on said platform, said rod being swingable to positions of inclination relatively to said platform; means for locking

said rod in various positions of inclination; a collar rotatably mounted on said rod; a tongue projecting outwardly from said collar axially thereof, adjacent its periphery; an arm projecting radially outwardly from said collar; a tube rotatably mounted on said rod; a downwardly projecting axially directed tongue on said tube adapted, upon rotation of said tube on said rod a predetermined distance, for engaging said tongue; and a radially extending arm on said tube.

In testimony whereof I have signed the foregoing.

HARRY G. CONNER.