

M. W. HOLLINGSWORTH.

GOLF CLUB.

APPLICATION FILED SEPT. 14, 1909.

976,176.

Patented Nov. 22, 1910.

FIG. 1.

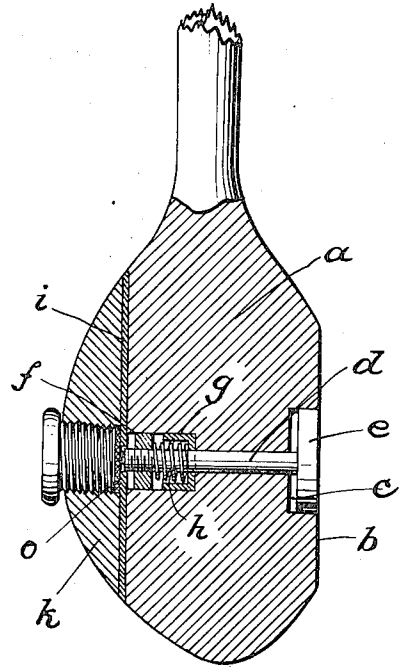
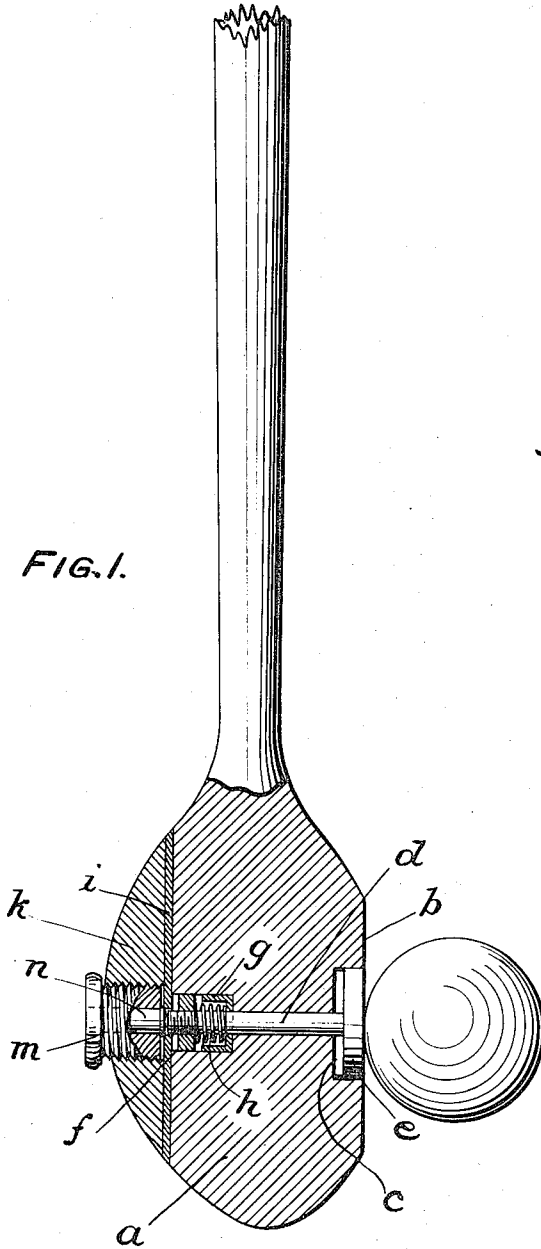


FIG. 2.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

MERRILL W. HOLLINGSWORTH, OF SANTA BARBARA, CALIFORNIA.

## GOLF-CLUB.

976,176.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed September 14, 1909. Serial No. 517,556.

### *To all whom it may concern:*

Be it known that I, MERRILL W. HOLLINGSWORTH, a citizen of the United States, residing at Santa Barbara, county of Santa Barbara, and State of California, have invented a new and useful Improvement in Golf-Clubs, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

The object of my invention is to so construct a golf club that the accuracy with which the ball is hit by the club may be measured by means of indicating mechanism preferably of an audible character.

In striking a ball with a club, it is of the utmost importance that the blow be delivered approximately upon the center of the face of the club, this being a factor that, associated with the force of the blow, determines distance of flight, and associated with the direction in which the club is swung toward the ball, determines the direction of flight. With the ordinary golf club, when an error in delivery is made, as evidenced by the flight of the ball being too far or not far enough or too high or too low or to the right or to the left of the proper direction, the cause of the error cannot usually be determined.

My invention consists of means whereby the success or failure of the attempt to hit the ball at an approximately central point or spot on the face of a club will be signaled or registered, thereby enabling the player to determine, with more certainty than heretofore, the cause of a faulty drive.

While the signaling or registration of a blow may be either of a visible or of an audible nature, I prefer that embodiment of my invention wherein a center blow will actuate mechanism for exploding a cartridge, while a blow off center will fail to produce an explosion.

In the drawings: Figure 1 is a sectional view of the striking end of a golf club embodying my invention in its preferred form. Fig. 2 is a similar view of a modification.

*a* indicates the driving end or head of a golf club and *b* the driving face thereof.

*c* is a cup formed by a recess sunk in the center of the driving face of the club.

*d* is a rod or firing pin having a head *e* that fits within the cup *c*. The shank of the pin extends into a suitable hole in the golf club, being movable therein in the direction

of the length of the pin, and is threaded at its opposite end to receive a nut *f*. A recess is formed within the head of the club for the reception of the nut *f* and of a fixed cup *g*. A coil spring *h* surrounds the pin and is seated in the cup *g* and is confined between the cup and the nut *f*.

*i* is a plate acting as a stop for nut *f* and as a breech block for the cartridge herein-after mentioned. The plate is confined between the rear flat face of the main part of the club head and a removable section or cap *k*. The part *k* has a socket within which fits a threaded barrel or holder *m*. Within the barrel *m* is placed a cartridge *n*. The barrel *m* carrying the cartridge *n* is threaded into the socket in the rear of the head of the club until the cartridge engages the point of the firing pin *d* and pushes it until the head *e* of the firing pin is flush with the driving face of the club and the nut *f* has been retracted from the plate *i*.

When a ball is hit fairly at an approximately central point or spot in the face of the club, the firing pin *d* will be driven inwardly against the cartridge *n* and explode it. If the ball is not struck squarely the firing pin will move in the opposite direction to the extent permitted by the spring *h* and cup *g*.

In Fig. 2 is shown a modification in which in place of employing a cartridge as an indicating device, a disk *o* of stiff paper or other readily puncturable material is used. A squarely delivered blow will cause the firing pin to puncture the paper, while a blow off center will not have that effect.

While the invention is more particularly intended for registering the accuracy of blows, and while the embodiment of the invention comprising explosive-producing means is preferable for this purpose, it will also be understood that such embodiment of my invention is useful for other purposes even though it were modified so as not to accomplish the chief object of my invention. For example, the explosion will attract the attention of the caddy, who may be out of sight over a hill.

While the invention is not limited to golf clubs it will doubtless find its most useful application to that form of club. Nor is it intended to apply the invention to a club or paddle of any kind, but preferably to such clubs as are provided with a substan-

tially flat driving face presenting a plane surface of considerable area as distinguished from a club like a base ball bat on which there is only a single line of possible contact points in a given plane.

Having now fully described my invention, what I claim and desire to protect by Letters Patent is:—

1. A golf club having a head presenting a recessed, but otherwise substantially flat, driving face and comprising indicator actuating mechanism within the interior of the club composed of a pin head extending within said recess and presenting a face forming part of the driving face of the club and a pin shank within the club beneath said recess, said pin being movable under the impact of a blow delivered upon its head, and an indicating device and a holder therefor adapted to be adjusted to move said pin outwardly until said head is flush with the flat driving face of the club.

2. A golf club having a head presenting a recessed, but otherwise substantially flat, driving face and comprising indicator actuating mechanism within the interior of the club composed of a pin head extending within said recess and presenting a face forming part of the driving face of the club and a pin shank within the club beneath said recess, said pin being movable under the impact of a blow delivered upon its head, means located within the club and engaging the said pin and tending to pull it inwardly, and an indicating device and a holder therefor adapted to be adjusted to move said pin

outwardly until said head is flush with the flat driving face of the club.

3. A golf club presenting a driving face and comprising indicator actuating mechanism extending within the interior of the club composed of a part presenting a face forming a portion of the said driving face and movable within the club under the impact of a blow delivered upon its said face, a removable holder inserted within the club from its opposite face and adapted to carry an indicating device in position to be acted upon by said movable part, and a stop plate adapted to limit the movement of the pin in the direction of impact.

4. A golf club comprising a recessed head, a pin movable across the head, a head on the pin extending within said recess, a nut threaded on the pin, a fixed cap through which said pin extends, a spring confined between said cap and nut, a removable holder inserted within the club from its opposite face, and adapted to carry an indicating device in position to be acted upon by said pin, and a stop plate, through which said pin extends, adapted to engage the nut and thereby limit the movement of the pin in the direction of impact.

In testimony of which invention, I have hereunto set my hand, at Santa Barbara, on this 28th day of August, 1909.

MERRILL W. HOLLINGSWORTH.

Witnesses:

LEWIS G. DREYFUS,  
DENE CULLEY.