

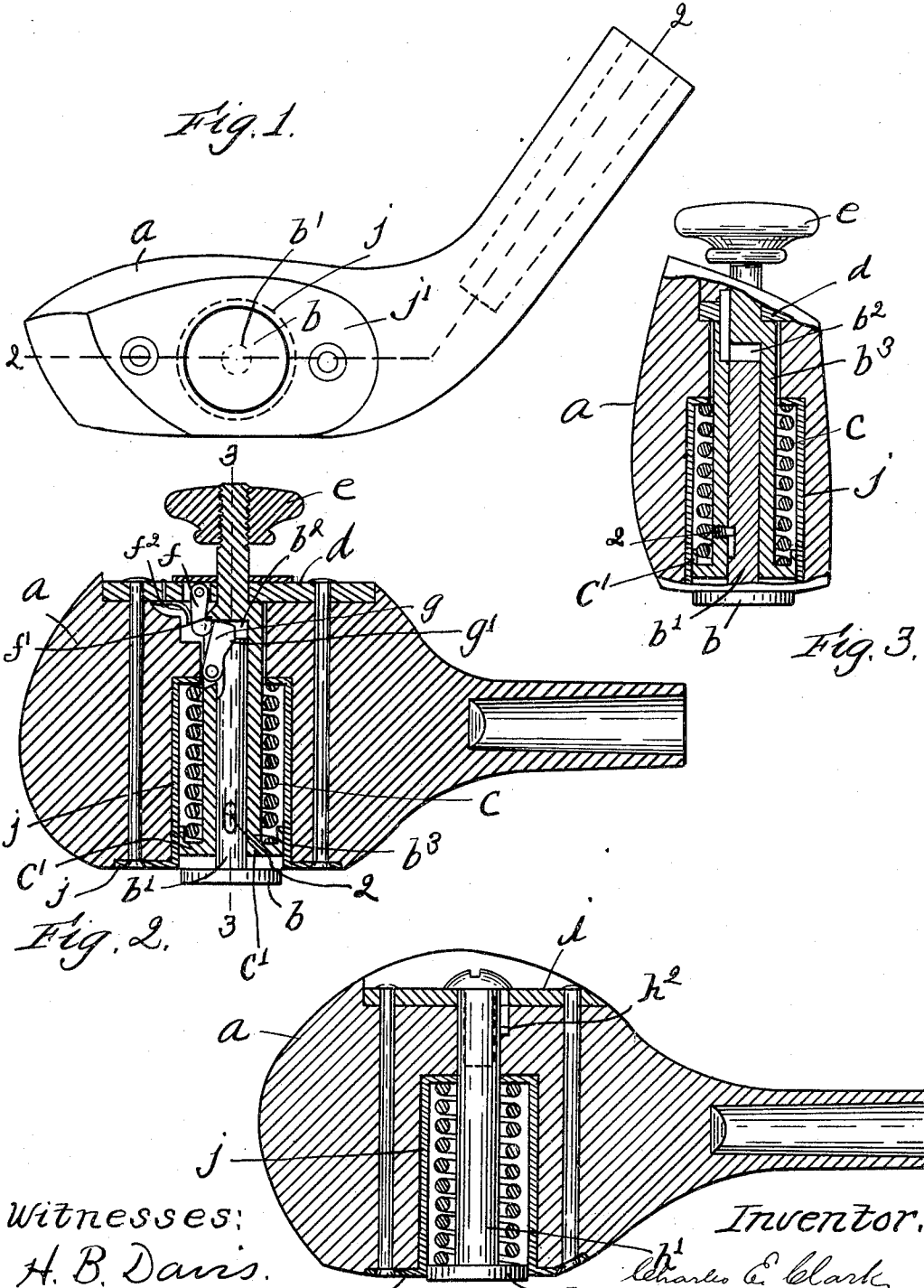
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PATENTED SEPT. 13, 1904.

C. E. CLARK.
GOLF CLUB.

APPLICATION FILED NOV. 14, 1903.

NO MODEL.



Witnesses:
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Fig. 4.

UNITED STATES PATENT OFFICE.

CHARLES E. CLARK, OF LYNN, MASSACHUSETTS.

GOLF-CLUB.

SPECIFICATION forming part of Letters Patent No. 769,939, dated September 13, 1904.

Application filed November 14, 1903. Serial No. 181,143. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. CLARK, of Lynn, county of Essex, State of Massachusetts, have invented an Improvement in Golf-Clubs, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to golf-clubs, and has for its object to provide the head of the club with an improved ball-accelerating device adapted to be brought into activity by engagement with the ball and to deliver a sudden and severe thrust to the ball to increase the drive by accelerating its speed.

The invention consists, essentially, in a golf-club having a ball-accelerating device comprising, essentially, a spring-actuated driving member or plunger which is adapted when brought into engagement with the ball to react thereupon and accelerate the speed of the ball, a cup set in a socket in the head of the club which contains the spring, having a flange at its outer end which engages the head of the club and having a bottom wall against which the spring bears.

Figure 1 shows in front elevation the head of a golf-club embodying this invention. Fig. 2 is a horizontal section of the head of the club shown in Fig. 1, taken on the dotted line 2 2. Fig. 3 is a vertical section of the head of the club shown in Fig. 1, taken on the dotted line 3 3. Fig. 4 is a horizontal section of the head, showing a modified form of accelerating device for the ball.

The head *a* of the club is of any usual or suitable shape and is bored or recessed to receive the accelerating device for the ball to be described. The essential element of the accelerating device is the spring-actuated driving member. This member is shown in Figs. 1 to 3 as a plunger having a flat-surfaced or otherwise-formed engaging head *b* of circular or other suitable shape and a stem *b'*, with which it is integrally formed or otherwise attached. The stem *b'* is adapted to slide longitudinally in a bore *b²*, centrally formed in a sleeve *b³*, the movement of said member *b b'* being limited relative to the sleeve in one direction—that is, outward—by a pin 2, which

passes through the sleeve and projects into a longitudinal slot in the stem *b'*, and inward by the head *b* striking against the outer end of the cam. The sleeve is fitted to slide longitudinally in suitable bearings provided for it extending crosswise the head *a* of the club, and a spring *c* encircles the sleeve, one end of which bears against a flange *c'* on the sleeve and the other end against the inner end of a steel cup or bushing *j*, which is driven into the hole provided for it in the head *a*, the tendency of said spring being to thrust the sleeve outward. The cup is flanged at its outer end, as at *j'*, and said flange resists the thrust of the spring against the cup. The sleeve *b³* is made shorter than the width of the head *a* of the club, so that when moved in one direction, as represented in Fig. 2, one end will bear against the plate *d*, which is fixed to the head *a* and which serves as a stop for it, and the other end will terminate a short distance inside of the engaging face of the head *a*, said distance being substantially equal to the thickness of the head *b* of the member *b b'*. The sleeve *b³* is drawn into this position by hand, it being provided with a finger-piece *e*, which projects from its rear end from the rear side of the head *a* of the club sufficiently to be easily engaged by the user and when so drawn rearwardly is set ready for action, the spring *c* being severely compressed. To set the sleeve when drawn rearward, it is locked by means of a dog *f*, which engages a detent *f'*, formed on the sleeve, said dog being pivoted to the plate *d* or to the head *a* and being pressed into engagement with the detent by a spring *f²*. Whenever the dog *f* is released, the sleeve will be instantly thrust forward or outward by the spring *c* and will act to correspondingly thrust forward or outward the member *b b'*. The member *b b'*, which is supported by the sleeve and slides longitudinally within it, is employed as the means for releasing the dog *f*, and in order that it may perform this function another dog, *g*, is pivoted to the sleeve, the outer or free end of which occupies a position contiguous the dog *f*, so as to engage said dog and move it out of engagement with the detent on the sleeve, and said dog *g* has a projection *g'* with an in-

clined side which extends into the central bore of the sleeve far enough to be engaged by the innermost end of the stem b' , which latter has also an inclined face which engages the inclined side of said projection. As the member $b b'$ is thrust longitudinally inward the dog g is moved and the dog f correspondingly moved to disengage the detent on the sleeve, and thereby release said sleeve, so that it will in turn be instantly thrust outward by the spring c and the member $b b'$ correspondingly thrust outward. The member $b b'$ is moved inward by engagement with the ball, and the action is so quickly effected that the outward thrust of the member $b b'$ incident to the action of the sleeve is imparted to the ball and materially accelerates the speed of the ball. A longer drive can be made by the club having an accelerating device embodying this invention.

It will be seen that in the form just described the member $b b'$ constitutes a spring-actuated driving member or plunger to give the additional drive to the ball and the sleeve constitutes an actuating device for said member and the spring c serves as the actuator.

Having thus described one of the many forms of my invention, I will now proceed to describe another one of the more simple forms, although I desire it to be understood that I do not limit my invention to either of the particular forms herein shown, as I desire to broadly include within the spirit and scope of my invention any other form or forms of spring-actuated driving member or plunger adapted to be suddenly brought into activity by the engagement with the ball to increase the drive of the ball by accelerating its speed.

In Fig. 4 the driving member consists of a head h of circular or other shape, formed integral with or attached to a stem h' , which head extends crosswise through the head a of the club and through a plate i , which is fixed to said head a . Into a socket in the rear end of said stem h' a headed screw is turned, the head of which normally bears against the outer side of the plate i . A strong spring encircles the stem h' within the head a of the club, one end of which bears against the head h of the driving member and the other end bears against the inner end of the steel cup j , the action of said spring being to normally thrust

the driving member $h h'$ forward or outward until checked by the head of the screw bearing upon the plate i . The stem h' has a small projection h^2 , which enters and slides in a keyway formed in the head a of the club for the purpose of holding the driving member against rotation as the screw is turned in or out. The head h of the driving member normally occupies a position substantially flush with the striking-face of the head a , so as to engage the ball, projecting, however, ever so little, and when brought severely into engagement with the ball the spring will be suddenly compressed and will quickly react and thrust the driving member outward and give to the ball an additional drive by materially accelerating its speed. The spring-actuated driving member or plunger is the essential element of the accelerating device in this instance, as in the form heretofore described, although the construction differs materially, yet it will be observed that in a broad sense it embodies the same invention.

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

1. A golf-club having a ball-accelerating device provided in its head consisting of a driving-plunger formed with a head and stem, a spring encircling said stem, a cup contained in a socket in the head, and containing said spring, said cup having a bottom wall against which said spring bears and having at its outer end a flange which engages the head, substantially as described.

2. A golf-club having a ball-accelerating device provided in its head, having a driving-plunger, a spring-actuated sleeve in which said plunger is longitudinally movable, a locking device for said sleeve, a releasing device for said locking device adapted to be operated by said driving-plunger, and means for withdrawing said sleeve into engagement with its locking device, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES E. CLARK.

Witnesses:

B. J. NOYES,
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