Jan. 5, 1926. 1,568,640

F. B. SWEENEY

STROKE COUNTER

Filed March 20, 1925

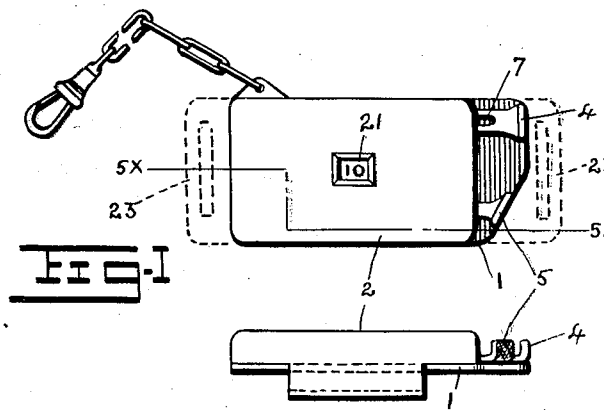



Fig. 1

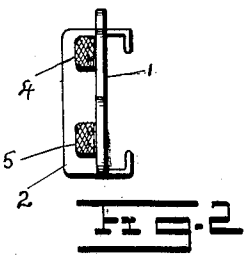



Fig. 2




Fig. 3

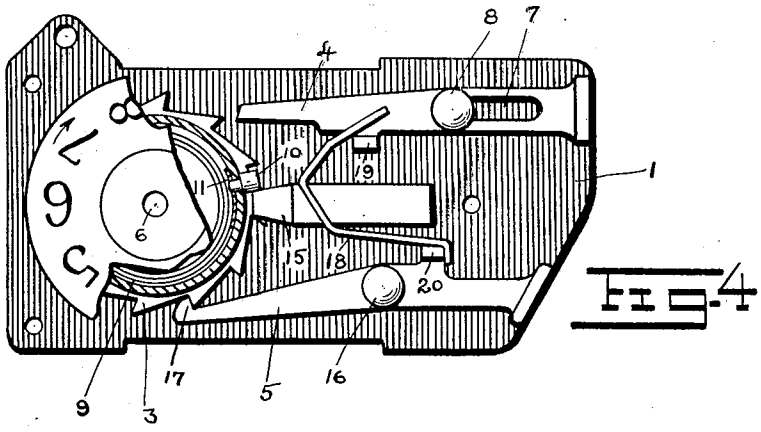



Fig. 4

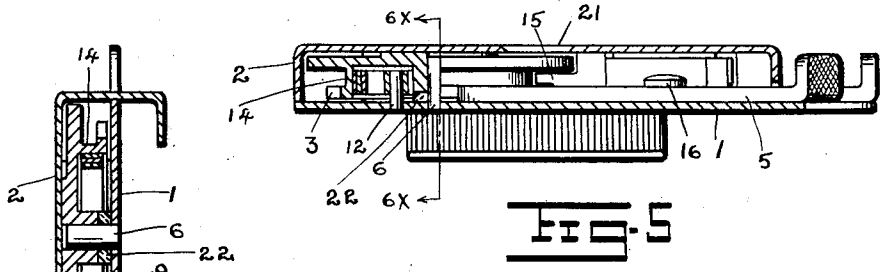



Fig. 5




Fig. 6

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# UNITED STATES PATENT OFFICE.

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## STROKE COUNTER.

Application filed March 20, 1925. Serial No. 16,969.

*To all whom it may concern:*

Be it known that I, FRANCIS B. SWEENEY, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Stroke Counters, of which the following is a specification.

The object of this invention is to provide a new and improved type of counter adapted for counting and recording the strokes taken by a golf player in playing from the tee to the cup.

Another object of this invention is to so construct this counter that it can be conveniently carried by the player and operated by him while playing golf.

These and other objects of the invention will be fully illustrated in the drawing, described in the specification and pointed out in the claims at the end thereof.

In the accompanying drawing:

Figure 1 is a front elevation of the counter.

Figure 2 is an end elevation of the counter.

Figure 3 is a bottom plan view of the counter.

Figure 4 is an enlarged elevation of the counter and mechanism mounted thereon.

Figure 5 is an enlarged vertical longitudinal sectional view of the counter, the section being taken on the line $5^{\times}$—$5^{\times}$ of Figure 1.

Figure 6 is an enlarged transverse sectional view of the counter, the section being taken on the line $6^{\times}$—$6^{\times}$ of Figure 5.

In the several figures of the drawing like reference numerals indicate like parts.

The counter forming the subject matter of this invention is constructed so as to be convenient for carrying and operating by golf players. The counter may be carried on the belt or on the wrist and its operating levers and indicator are so arranged on the base and casing of the counter that anyone can use the counter without being distracting from his play or interfered with in his concentration on the game so necessary in playing a good game of golf.

As illustrated in the figures of the drawings the counter comprises a base 1 having a casing 2 mounted thereon. The base carries the operating and counting mechanism which consists of a ratchet wheel or counter wheel 3, the operating dog 4 and the release lever 5. The ratchet or counter wheel 3 is provided on the under side with a concentric channel which surrounds the hub 6 of the ratchet wheel. The top of the ratchet or counter wheel forms a disc that overhangs the ratchet teeth of the wheel and provides space for the numerals from 0 to 10 to be evenly spaced thereon.

The operating dog 4 is mounted to slide on the base 1 and is provided with a slot 7. A stud 8 suitably anchored in the base passes thru the slot 7 of the bar and holds the dog in place on the base as well as guides it when it is moved to operate the counter mechanism. The end of the dog is normally located adjacent to the ratchet wheel 3 and when pushed toward the ratchet wheel engages a ratchet tooth. The length of the movement of the dog is governed by the length of the slot 7 and is long enough to advance the counter or ratchet wheel one tooth at each movement of the operating lever.

In the concentric channel in the ratchet wheel is provided the coil spring 9. One end of this spring is fastened to the inside of the ratchet wheel by means of the pin 10 as illustrated at 11 in Figure 4. The other end of the coil spring 9 is fastened to the pin 12 anchored in the base plate and projecting into the concentric channel adjacent to the pivot pin 6 on which the ratchet wheel is mounted to rotate.

The pin 10 with which the coil spring is attached to the inside of the ratchet wheel also serves as a stop pin and as such projects from the annular groove 14 provided in the perimeter of the ratchet wheel. A stationary lug 15 is provided on the base plate 1 and its outer end is adapted to project into the annular groove 14 and engage the stop pin 10. The coil spring 9 within the ratchet wheel is normally under tension and tends to rotate the sprocket wheel in the direction of the arrow illustrated in Figure 4. The action of the spring thus normally holds the pin 10 in engagement with the lug 15 for the starting position of the ratchet or counter wheel.

Mounted to swing on the base plate 1 adjacent to the lug 15 is the release lever 5. This lever rocks on the pivot pin 16 and has a hook 17 formed on the left hand end thereof, with which it engages with one of the ratchet teeth being held in engagement with it by the spring 18. The spring 18 is a leaf

spring and is mounted with its central portion on the lug 15. This leaves the two free ends of the spring to project from either side of the lug so that one end can engage the lug 19 on the sliding rod 4 and normally holds this rod away from the ratchet teeth. The other end of the spring 18 engages the lug 20 on the release lever 5 and normally holds its hooked end in engagement with one of the ratchet teeth of the ratchet or counter wheel.

In the top of the casing is provided the opening 21 thru which opening the numerals on the counter wheel can be observed. In its normal starting position the numeral 0 is visible thru this opening. The numerals change at each operation of the sliding rod which for each operation advances the counter wheel step by step and progressively places the numerals from 1 to 10 below the opening in the casing. The end of the casing 2 is notched to allow the sliding rod 4 and release lever 5 to project therethru and the sides of the notch thru which the sliding lever projects serve as guides for the lever while the sides of the notch in the casing thru which the release lever 5 projects serve as stops that limits its movement in either direction.

To operate the counter the player forces the dog 4 toward the casing and this advances the ratchet wheel with its counter one tooth and when this is done and the dog is released the spring 18 returns the dog to its normal position. The ratchet wheel is advanced against the action of the spiral spring mounted within it as above described and in order to hold the ratchet wheel in the advanced position after the dog 4 has advanced it one tooth the hook shaped end of the release lever is adapted to engage behind each tooth that it is brought in contact with on the counter clockwise rotation of the ratchet wheel by the dog 4. This prevents the coil spring 9 from returning the ratchet wheel after each advance on the operation of the dog. The counter wheel may be operated until the ratchet wheel has been given a complete revolution and can not be turned any further because of the engagement of the pin 10 with the opposite side of the lug 15. At this point the counter wheel presents the numeral 10 in the opening in the casing indicating that ten strokes have been registered by the counter. To release the counter or ratchet wheel for the purpose of registering another series of strokes the release lever 5 is rocked so as to disengage the hooked end from the ratchet tooth which it engages. This leaves the coil spring 9 within the ratchet wheel free to return the wheel to its original starting position in which the pin 10 rests against the lug 15.

In order to prevent the ratchet wheel from spinning back at a high rate of speed on the release thereof a friction washer 22 is placed on the pivot pin 6 between the base plate and the end of the hub. The friction that this washer places on the ratchet wheel is sufficient to retard the ratchet wheel back so that the spring can not return the ratchet wheel too quickly.

As illustrated in Figure 1 the base plate 1 extends from the casing 2 underneath the projecting ends of the sliding rod 4 and the release lever 5. This protects these levers against accidental operation.

The base plate is also provided with a projection 23 in which a suitable hole is provided so that a supporting chain in the form of a watch chain can be attached to the counter. The casing of the counter is provided with two flanges that extend below the base plate and are turned in on the ends to form a rectangular sleeve thru which a belt can be passed. This form of the counter is thus made suitable for carrying on the belt of the player. It, of course, is understood that the counter can be made equally adaptable for carrying on the wrist of the player should it be found desirable to do so.

I claim:

1. In a stroke counter, the combination of a base plate, a casing mounted on said base plate, a ratchet wheel mounted to rotate on said base plate within said casing, a spiral spring attached to said ratchet wheel and adapted to rotate said ratchet wheel in one direction, a sliding dog adapted to engage the teeth of said ratchet wheel on one side thereof and advance said wheel step by step, a release lever mounted to rock on said base plate and engage the teeth of said ratchet wheel on the opposite side thereof and prevent its rotation in the return direction, a lug carried on said base place intermediate of said sliding dog and said release lever, a stop pin projecting from said ratchet wheel and engaging said lug at the end of a complete revolution in either one or the other direction, a leaf spring carried by said lug and having its ends projecting from either side thereof, one end of said leaf spring engaging said sliding dog and normally holding said dog out of engagement with said ratchet wheel, the other of said ends of said leaf spring engaging said release lever and normally hold said release lever in engagement with said ratchet wheel.

2. In a stroke counter, the combination of a base plate, a casing mounted on said base plate, a ratchet wheel mounted to rotate on said base plate within said casing, a spiral spring attached to said ratchet wheel and adapted to rotate said ratchet wheel in one direction, a sliding dog adapted to engage the teeth of said ratchet wheel on one side

thereof and advance said wheel step by step, a release lever mounted to rock on said base plate and engage the teeth of said ratchet wheel on the opposite side thereof and prevent its rotation in the return direction, a lug carried on said base plate intermediate of said sliding dog and said release lever, a stop pin projecting from said ratchet wheel and engaging said lug at the end of a complete revolution in either one or the other direction, a leaf spring carried by said lug and having its ends projecting from either side thereof, one end of said leaf spring engaging said sliding dog and normally holding said dog out of engagement with said ratchet wheel, the other of said ends of said leaf spring engaging said release lever and normally hold said release lever in engagement with said ratchet wheel, said base plate overhanging said casing at one end thereof, said casing having slots at one end thru which said sliding dog and said release lever can project for the operation thereof, said overhanging section of said base plate forming a guard for the end of said sliding dog and said release lever.

In testimony whereof I affix my signature.

FRANCIS B. SWEENEY.