

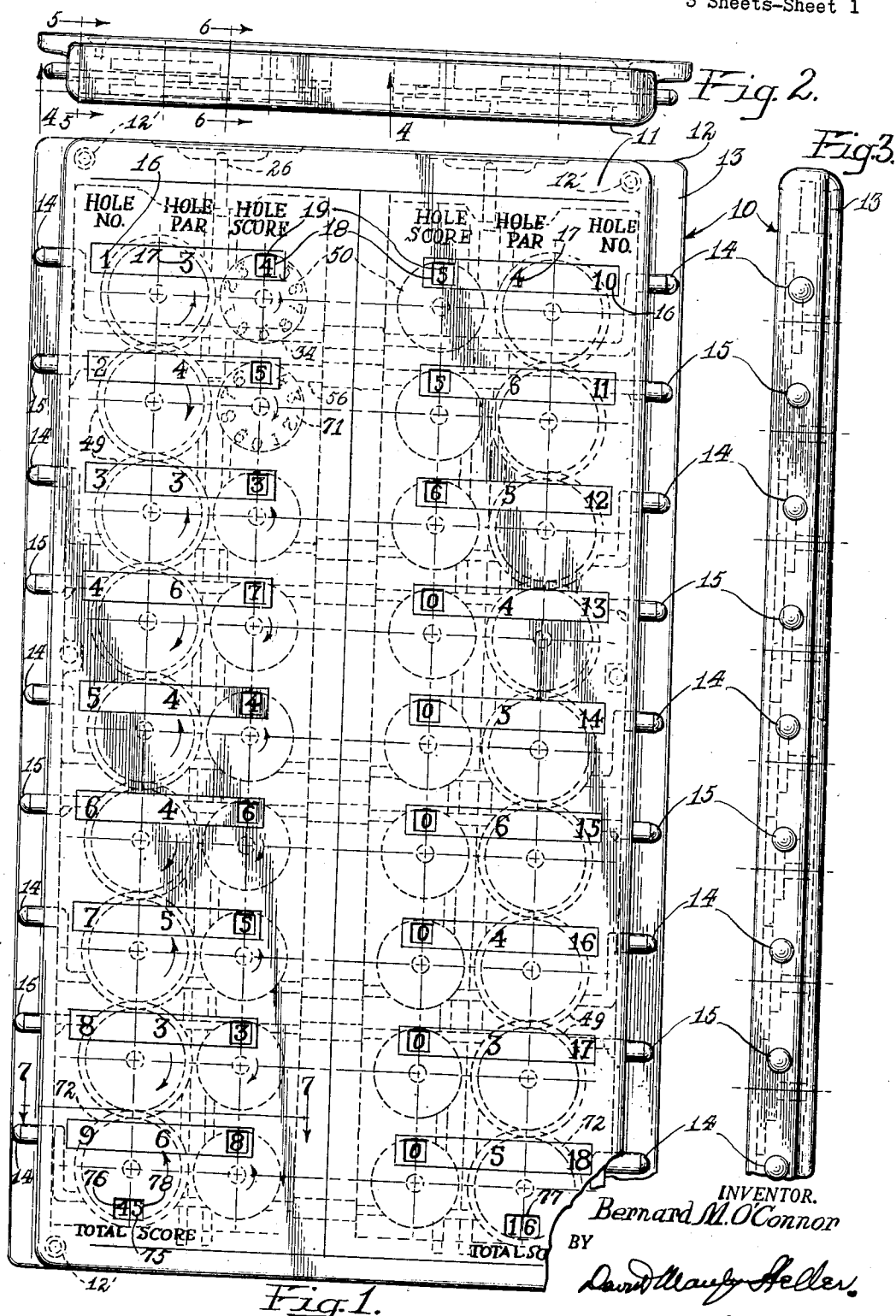
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B. M. O'CONNOR
GOLF SCORING DEVICE

2,489,805

Filed Jan. 31, 1947

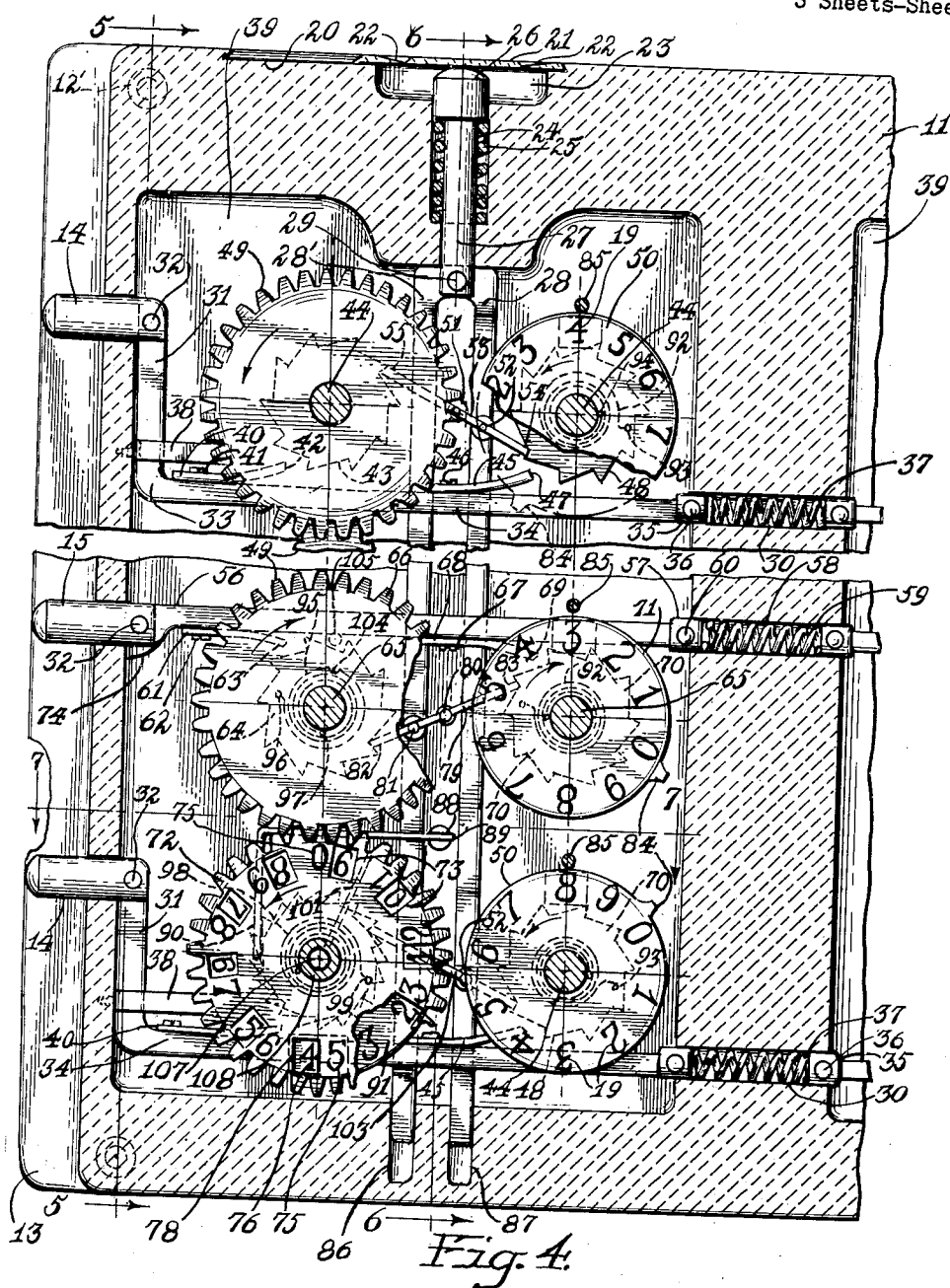
3 Sheets-Sheet 1



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3 Sheets-Sheet 2



INVENTOR.
Bernard M. O'Connor
BY
David Mauley Heller.
Attorney

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INVENTOR.
Bernard M. O'Connor
BY
David Maule Heller.
Attorney

UNITED STATES PATENT OFFICE

2,489,805

GOLF SCORING DEVICE

Bernard M. O'Connor, Chicago, Ill.

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1 Claim. (Cl. 235-144)

1

My invention relates to golf scoring devices or totalizers.

An important object of my invention is to provide a device of the aforementioned character wherein manipulative button controls register each and every stroke played in a game of golf, a scoring register being provided for each hole played, and totalizing or accumulator means indicating the total number of strokes played in a game.

Another object of my invention is to provide safety ledges to prevent accidental actuation of the said button controls.

A further object of my invention is to provide a totalizing device provided with simple and effective clearing means.

A further object of my invention is to provide a golf scoring device having means for registering the number of strokes played for each hole of golf, to permit comparison with par requirements.

A still further object of my invention is to provide a device of the aforementioned character having two columns of independently operative registers for each hole played, and an accumulator or totalizer for each column.

A further object of my invention is to provide a golf scoring device or totalizer which is practical in construction, efficient in its cumulative and clearing operations, and of such elemental structure as to lend itself readily to economical manufacture in quantity production.

Other objects, ancillary features and advantages inherent in my invention will become apparent from an examination of the accompanying drawings having more particular reference to the ensuing description, wherein, like parts are designated by like numerals, and in which:

Fig. 1 is a front view of my golf totalizer.

Fig. 2 is a top view of my golf totalizer.

Fig. 3 is a side view of my golf totalizer.

Fig. 4 is a sectional view taken substantially on lines 4-4 of Fig. 2.

Fig. 5 is a sectional view taken substantially on lines 5-5 of Figs 2 and 4.

Fig. 6 is a sectional view taken substantially on lines 6-6 of Figs. 2 and 4.

Fig. 7 is a sectional view taken substantially on lines 7-7 of Figs. 1 and 4.

Fig. 8 is a sectional view taken substantially on lines 8-8 of Figs. 5 and 7.

Fig. 9 is a sectional view, enlarged, taken substantially on lines 9-9 of Fig. 7.

My invention is generally designated 10, consisting of a case 11 with two recessed parts 39 and made preferably of a plastic material, and

2

having the outside or front printed or embossed with various insignia, as shown in Fig. 1. The back 12 of the case 11 is detachable by means of a number of screws 12' and has an extended ledge-like part 13 to facilitate the holding of the totalizer 10 in the hand without danger of pressing any one of the series of buttons called 14 and 15. Button 14 is attached by means of rivet 32 to arm 31 which is bent at a right angle at 33 to form arm 34 to which are attached two pawls 40 and 45 by means of screws 41 and 46 respectively. When button 14 is pressed inwardly, the teeth 42 and 47 of pawls 40 and 45 are caused to impart a counterclockwise movement as shown by arrows to ratchet gears 43 and 48. Arm 31 is held in alignment by bracket 38.

To the end of arm 34 is attached a collar 35 by means of rivet 36. Collar 35 rides in a bore 30 in case 12 and bears against compression spring 37 also confined in bore 30. The spring 37 causing arm 34 together with pawls 40 and 45 and button 14 to return to their normal positions when pressure is removed and serving in like manner the oppositely identical parts in the other half of case 11. Button 15 is attached by means of rivet 32 to arm 56 which has a shoulder 74 that bears against the side of case 11 acting as a stop for bar 56. To bar 56 are attached pawls 61 and 68 by means of screws 62 and 67, and when button 15 is pressed inwardly, teeth 63 and 69 of pawls 61 and 68 impart a clockwise movement, as shown by arrows, to ratchet gears 64 and 70. Collar 57 fastened to the end of arm 56 by rivet 60 rides in bore 58 in case 11 and bears against compression spring 59 causing button 15 to return to its normal position after being released, as previously described for button 14.

There are five buttons 14 and four buttons 15 on each side of totalizer 10, as shown in Fig. 1, each button representing one of the eighteen holes which constitute a round or game of golf, the holes being numbered consecutively, one through eighteen, the hole numbers being designated 16. There is also on the face of the totalizer 10 a numeral designated 17 indicating the par number of strokes for each numerically designated hole. An opening 18 appears in line with the buttons 14 or 15 through which may be seen a number designated 19 imprinted on the face of a dial 50. The numeral 19 designates the number of strokes used on each individual hole in a game of golf. Recessed square holes 78 opposite and below hole numbers nine and eighteen are labeled "Total score," and the digits designated 75 and 76

seen through openings 78 and 77 represent the total score for nine holes of golf.

To operate.—When button 14 opposite hole #1 is pressed inwardly, it causes pawls 40 and 45 to advance ratchet gears 43 and 48, one tooth at a time, as previously described. Attached to ratchet 48 and riding a common shaft 44 which is secured to remain stationary in case 11, is a dial wheel 50 which is numbered 0 through 9 in clockwise sequence. Since there are ten numbers on dial 50 and there are ten teeth on ratchet 48, one push of button 14 causes the numeral designated 19 as seen through opening 18 to advance one division e. g. from 0 to 1.

Attached to ratchet gear 43 is a cog wheel 49 which is in mesh with remaining similar cog wheels 49, one for each of the nine holes. Since ratchet gear 43 also has ten teeth, one push of the button 14 also imparts to ratchet 43 and cog wheel 49 a counterclockwise movement of one tenth of their circumferences. Since the cog wheels 49 are in mesh this movement is imparted to each cog wheel down to the ninth cog wheel which is designated 72.

Cog wheel 72 alone has a dial face numbered 0 through 9 in clockwise order. In front of each numerical designation 75 on dial 72 an opening 73 is provided, see Fig. 4. Through opening 73 on cog dial 72 may be seen a numeral designated 76 which is on a second dial 91 behind the dial 72 and riding the same shaft 107. The numbers 76 read 0 through 9 in clockwise order. Cog dial 72 and ratchet 43 of hole nine are attached to a tubular shaft 108 which revolves on shaft 107. At the inner end of tubular shaft 108 is set a pin 101, see Fig. 8.

Since cog wheels 49, 66 and 72 are in mesh the inward movement of any one of the buttons 14 and 15 will advance either of the corresponding cogs 49 and 66 which in turn advance the cog 72 one division. To the before mentioned dial wheel 91 is also attached a ten-toothed ratchet gear 109 against a tooth of which rests the end 90 of a bent spring 89 attached at 88 to the back 12 of totalizer 10. Spring 89 is offset at 110 so that part 90 will clear pin 101 attached to shaft 108 as it revolves. However, the tip 111 of pin 101 comes into a sliding contact with the upper portion of spring 101, see Fig. 8, once, each revolution of the cog dial 72 lifting tip 90 of said spring 89 into the next tooth of ratchet 109, and, as pin 101 is further revolved, sliding off contact with spring 89, ratchet 109, together with dial 91 are advanced one place, e. g. 0 to 1 so that the number seen through the opening 76 on the face 12 of the totalizer will be advanced from 09 to 10, making a total of ten. In the illustration, Figs. 1 and 4, the cog wheel 72 has been caused to make four and one-half revolutions, thus causing the number 45 to be visible through opening 78 at total score. This is the total of nine holes of golf, the individual hole scores being visible through the opening 18 opposite each of the buttons on the face of totalizer 10.

A clearing device consists of a button 26 set in a recessed portion 23 at the top of case 11 with a cover 21 having indentations 22 to permit sliding in a dovetail groove 20. This is to prevent premature clearing of the board by accidentally touching button 26. The button 26 is attached to shaft 27 which passes through counterbore 24 furnishing a housing for the compression spring 25 holding the button 26 in an inoperative position. Attached to the end of shaft 27 by rivet 29 is an elongated fork having two legs 28 and

28' and offset at 106 for clearance. Pivoted between each of the nine sets of cog wheel and dial are pawl-like bars 53 and 79, being pivoted at 51 and 80.

Pawls 53 are also slidably positioned in the articulate pivot 52 secured to leg 28, whereas the duplex pawls 79 are likewise assembled slidably at 81 to the articulate pivot secured to the opposite leg 28'. The teeth 54 and 55 serve to arrest the movements of the ratchets 43 and 48. In like manner, pawls 79 serve to intercept ratchets 64 and 70. The pawl 79, which acts as stop for the holes numbered 9 and 18 has an extra arm 103 to act as stop and for clearing the extra dial 91. The lower ends of legs 28 and 28' are guided longitudinally in bores 86 and 87 respectively, of case 11. Coiled about and attached at 94 to each of the right hand shafts 44 and 65 is a coiled spring 92, the other end of which is attached at 93 to ratchets 48 and 70. Thus the pawls 53 and 79 act as stops to ratchets 43, 48, 64 and 70 as said ratchets are revolved by means of buttons 14 and 15 as heretofore described. This action causes springs 92 to wind up. Coiled spring 95 attached at 96 to ratchet 64 and at 97 to shaft 65 is also wound up, as is coiled spring 98 attached to ratchet 109 at 99 and to shaft 107 at 100. Therefore, when at the end of a game of golf button 26 is depressed teeth 54, 55, 82, 83 and 112 of pawls 53, 79 and 103 are disengaged from the toothed parts of ratchets 43, 48, 64, 70 and 109, allowing springs 92, 95 and 98 to unwind, turning back dials 53 and 71 until nubs 84 strike fixed pins 85 and the numeral 0 is visible in place at openings 19 of totalizer. Pin 102 on dial 91 is stopped by contacting part 90 of spring 101.

Since cog wheels 49 and 72 generally make more than one complete revolution, a stop comprising a bent pocket formation 104 on spring 95 engages with fixed pin 105 when the spring is completely unwound, the pin 105 being so placed that the numerals 00 come visibly into place at the opening 77 on the face of totalizer 12.

Thus all numerals 19, 75 and 76 read 0 as seen through the openings 18 and 77, and the totalizer is in readiness for use again. The spring 25 urges the clearing button 26 back to normal position setting the pawls 53, 79 and 103 in their normal position preparatory to clearance the device, subsequently to totalizing actions resulting from the manipulation of the various buttons 14 and 15.

I believe I have herein described rather succinctly the construction and operation of my invention, so that those familiar with the art will readily grasp the principles and teachings thereof. Inasmuch as my invention is susceptible of changes and improvements, I reserve the right to all such changes and improvements coming within the spirit and scope of my invention, as well as all those embraced in the accompanying drawings, and also those falling within the purview of the foregoing disclosure; my invention to be limited only to the subjoined claim.

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

In a golf totalizer of the character described including a case, a cover removably secured to the said case, and a pair of totalizing mechanisms mounted within the said case and subdivided into mechanism for registering the score for each hole of golf, and cumulator mechanism for registering the sums of the scores for nine holes of golf simultaneously effected through the actuating means of the mechanism for registering the score

REFERENCES CITED

The following references are of record in the file of this patent:

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	881,926	Hose	Mar. 17, 1908
10	930,595	Ferguson	Aug. 10, 1909
	1,501,398	Eacrett	July 15, 1924
	1,502,662	Fox	July 29, 1924
	2,012,023	Richardson	Aug. 20, 1935
15	2,324,321	Peters	July 13, 1943

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	Number	Country	Date
	15,056	Great Britain	June 23, 1914

of each hole of golf; zero resetting or clearing mechanism comprising, spring urged bifurcated means mounted intermediate the said mechanism for registering the score for each hole of golf and the said cumulator mechanism, ratchet means on the said mechanism co-operating in the registration of the score for each hole of golf, ratchet means on the said cumulator mechanism, and check pawl means mounted articulately on the said case and articulately and slidably on alternate legs of the said bifurcated means, the said check pawl means being mounted diagonally to engage a tooth of each of the said first-mentioned and the said second-mentioned ratchet means, the said check pawl means being disposed in alternate diagonal relationship with respect to adjacent rows of the said totalizing mechanisms.

BERNARD M. O'CONNOR.