Aug. 2, 1932. C. WOOLMAN 1,869,642

GOLF DRIVE REGISTERING DEVICE

Filed May 26, 1930 2 Sheets-Sheet 1

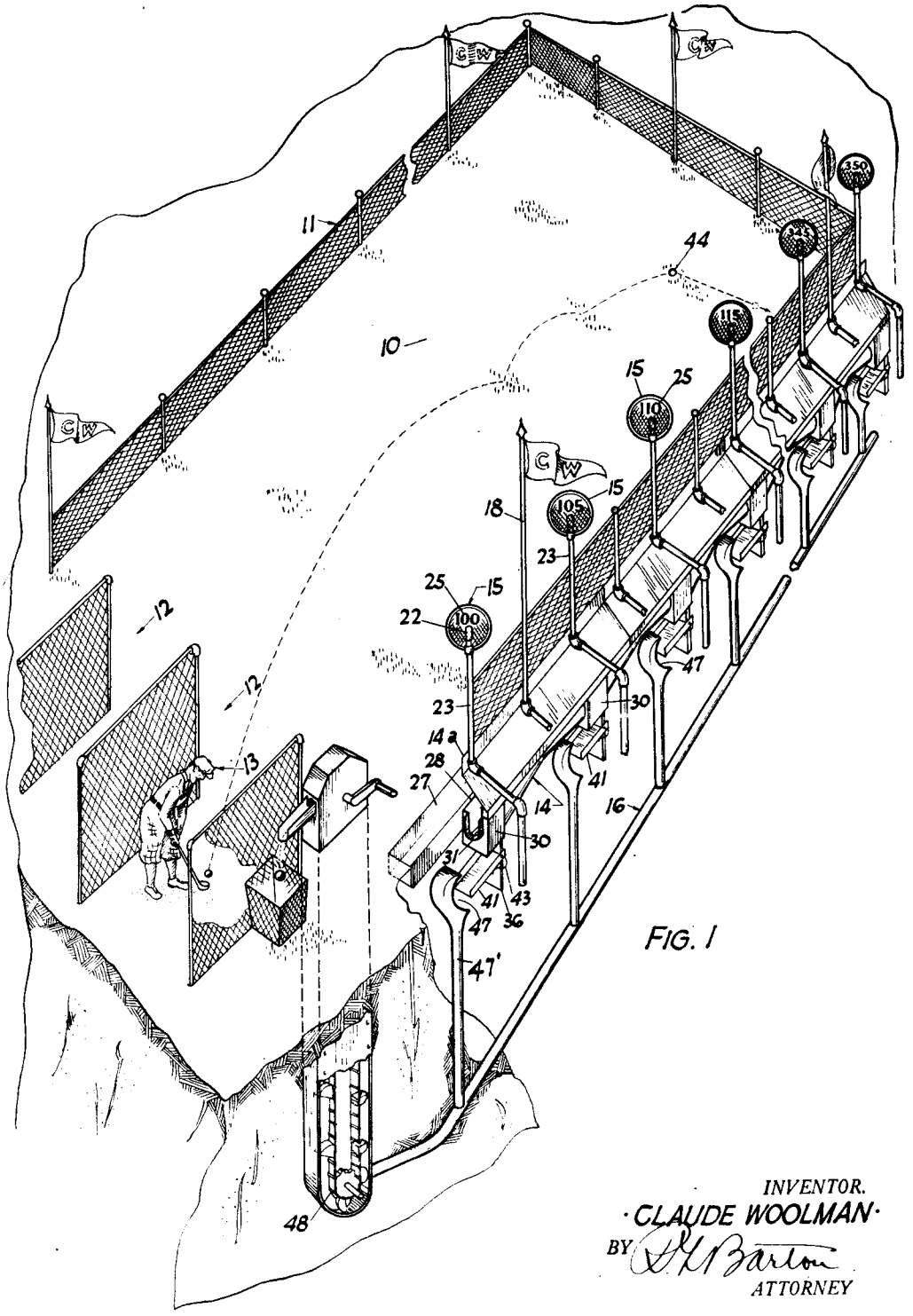

FIG. 1

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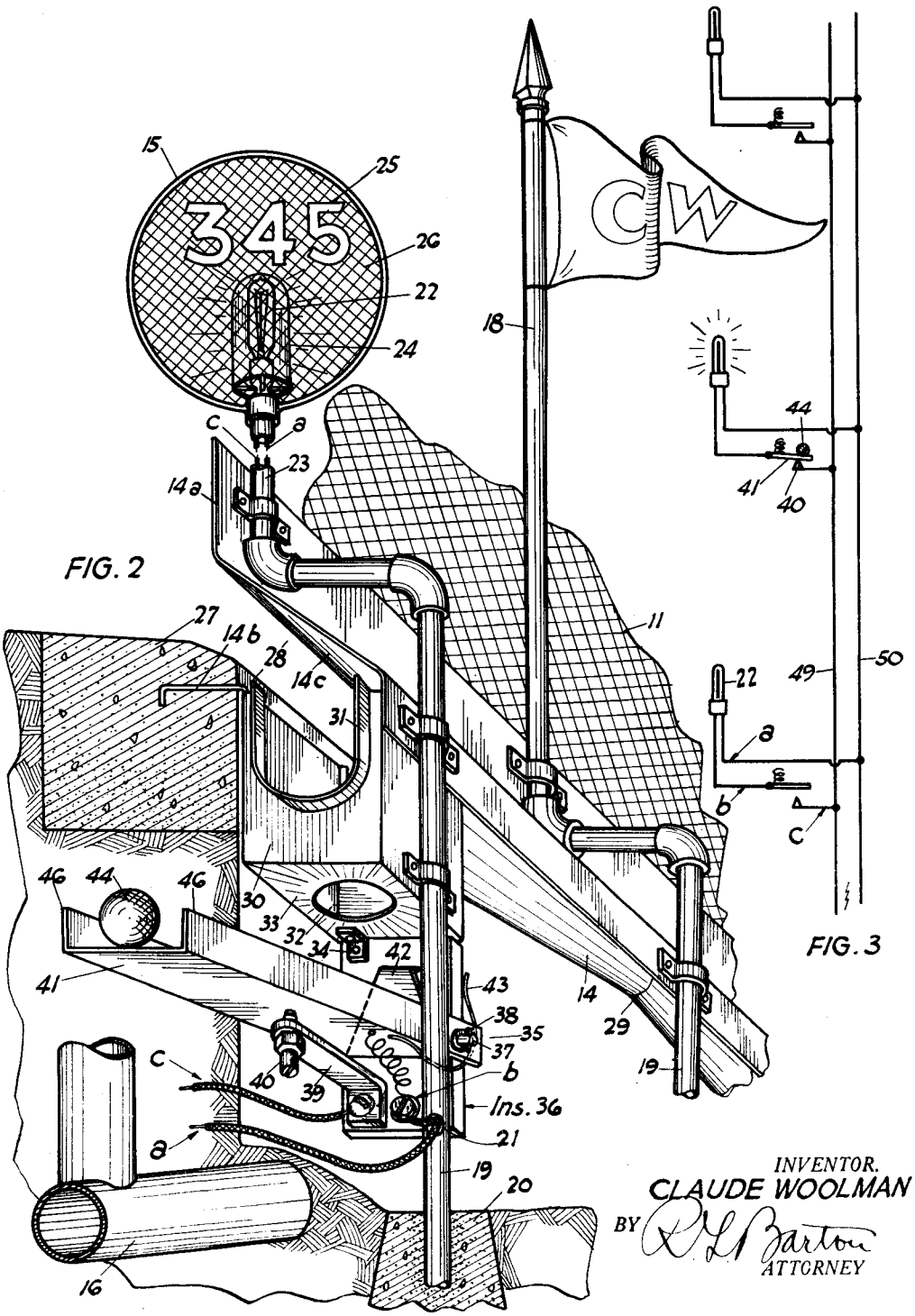

FIG. 2

FIG. 3

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Patented Aug. 2, 1932 1,869,642

UNITED STATES PATENT OFFICE

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GOLF DRIVE REGISTERING DEVICE

Application filed May 26, 1930. Serial No. 455,736.

My invention relates to games of outdoor amusement, more especially to a condensed game of golf.

An important object of the present invention is to provide a fairway of lesser proportions than is usually allotted to a golf course, but without limiting the distance a ball can be driven, and having in conjunction therewith a means for registering drive distances of individual participants indulging in the sport. The fairway provided by this invention is adapted for use either as a means for learning to drive, practicing to drive, as an athletic exercise, or in a game of skill wherein of two or more participants each one desires to demonstrate his supremacy over the other; and it also takes into consideration an element of chance.

Another object of the invention is to provide, in conjunction with the registering means, an improved means for redelivering the golf balls to the scene of driving.

Another object of the invention is the provision of a game which may be practiced or played at night, and a game made more fascinating at such a time through the incorporation of a light or signal to identify a distance marker in juxtaposition therewith, as a means for ascertaining the yardage of the drive.

Another novel object of the game is the provision of means whereby a player is able to list the yardage and number of his drives so as to complete a certain predetermined hole course as in the usual procedure and later finish up on a putting green which may be constructed adjacent to the fairway. In the present instance, however, it is thought unnecessary for the purpose of disclosure to show the putting green, and therefore it is purposely omitted.

These, and other objects in view, will become more readily apparent as the description proceeds and the nature, purpose and operation of the game is unfolded. Especially will this be true when taken in conjunction with the accompanying drawings forming an important addition to the disclosure and wherein:

Figure 1 is a perspective view of a miniature golf course or "fairway" and a golf drive registering mechanism.

Figure 2 is an enlarged perspective view showing in detail one of the registering devices, and

Figure 3 is a part wiring diagram of the electrical circuit.

There is a prevailing feeling among the more humble class of people that the game of golf is intended and provided only for the well-to-do people ordinarily possessed with means enabling them to be members of expensive clubs, having a major part of their recreation and sport devoted to the game of golf. The ordinary layman is often precluded from indulging in the sport on account of this generally prevailing feeling and belief.

In the daytime, the busy person is also hampered by the fact of not always being able to leave business, and when able to do so a long distance to be traversed to some suburban club deters him from carrying out his purpose, and therefore a much needed recreation if ofttimes forfeited.

The method in vogue now in ascertaining the length of drives and practicing driving is as follows:

A player is given a bucket of golf balls and a position facing an objective consisting of a number of standards upon which are indicated yardage numbers.

These standards are promiscuously placed and when viewed from a distance appear as a conglomeration of indicia so that a player has to rely on the estimated distance of the drive given by a caddy positioned near the distance markers.

The player therefore has no authentic check on what his drives really tally and has to also await the collecting of the balls by the caddy before he can continue. Much time, error, and inconvenience is thus experienced which detracts from the sport of the game and may make it wearisome and unpleasant.

In my invention it is quite obvious that the foregoing perplexities existing in the present mode of playing have all been deleted and the beginner as well as the pioneer

will find sport and renewed interest while indulging in a close-in fairway such as will now be disclosed; one which may be easily found within the confines of any city and available to him during the cool evening hours as well as the daytime.

Referring now to the drawings, I show in Figure 1 a fairway 10 partly surrounded by a fence 11.

At one end of the fairway, which may be designated as the driving end, are installed a plurality of golf ball driving booths or stalls 12, in one of which a player 13 is shown positioned to drive.

Said fairway may have a floor constructed of natural earth, sod, cement, or any other preferred substance.

The linear dimensions of the fairway may, for example, be approximately 200 feet wide and 350 yards long.

Said fairway is given a transverse inclination consistent with the material of which the fairway is made, so that no matter what the terrain may be, a golf ball driven from one of the booths will keep rolling from the momentum it acquires after being hit or attains after alighting, until it rolls into the trough or gutter 14, constructed along the lower edge of the fairway.

Along the lower side of said fairway where the troughs or gutters 14 are located are mounted at spaced intervals therealong registers 15 whereby the lengths of drives may be indicated and ascertained, and directly underneath the gutters is provided a means 16 whereby the balls may be automatically redelivered to the driving stalls.

Said registers 15 are preferably placed five yards apart and midway there-between is either a post 17 or a combination post and pennant standard 18 for supporting the fence; said post and standard, in turn forming a supporting means for fastening the gutters thereto.

In each case there is provided a hollow pipe construction 19 which is grouted into a concrete pier 20. The hollow pipe furthermore is utilized as an electric conduit. In Figure 2 the circuit wires *a* and *c* are shown leading into an opening 20 in the pipe, which are adapted to energize the glow lamps 22 mounted on top of the pipe 23. There is placed around the lamp 20 a protector 24 to prevent any damage being done to the lamp.

Upon the register 15 are conspicuously mounted a sequence of numerical indicia 25, ranging in fives from 100 to 350, each representing yards.

They are supported directly above the lamps 22 by a wire mesh cloth 26 covering the entire face of the register, said mesh serving as a screen and guard for the lamps from a fast moving golf ball.

Said posts 19 are offset in the manner shown in Figure 2 to accommodate supporting the troughs or gutters later to be described.

All along the lower edge of the fairway is preferably constructed a cement curb 27, which forms with an upstanding flange 14*a* of the gutters 14, a shield 14*c* slantingly arranged there-over, a mouth 28 into which all the golf balls struck, enter, said gutter having a flange 14*b* struck from its inner face to key said gutter to said curb.

The gutters 14 have a two way pitch or inclination extending from their half way point or peak 29 and connecting with a signal post at either end. When a ball enters the trough between two signals it goes in one of two directions. If in advance of the half way point 29 it will register the higher signal, and if in the rear of the half way point it will register the lower signal.

It will therefore be seen there is a slight element of chance and a certain approximation of error in reckoning the distance at which a ball is struck, all depending on just how near the ball enters the trough at the half way point.

At either end of the gutters 14 is a box receptacle 30 into which the golf ball is directed from the inclined floorway of the gutter 14, said floorway being preferably made oval in character to fit around a flange on said box now to be described.

Extending outwardly from said box receptacle is a flange 31 on either side which with exact nicety fits another section of guttering to which it is attachable and which has a like curvature.

In the bottom side of each box receptacle is a hole 32 through which the ball has egress, said side being slightly bulged. Supported from said bottom side 33 by angle clips 34 is an electric circuit making and breaking device 35. Said device 35 comprises an insulating board 36 suspendingly held by said clips 34, and through the board 36 is extended a pivot pin 37 held in place by a cotter pin 38. On to said board 36 is fastened a bracket 39, and screwed into said bracket is an adjustable contact screw 40. Pivotally mounted upon said hinge pin 37 is a trip switch tray 41, said switch having a bent up back-stop flange 42.

There is also provided a spring 43, looped about the hinge pin 37 and fulcrumed to the insulation board 36. Said spring has one end adapted to bear on the under side of the switch 41 whereby to disrupt the switch after contact is made of the bottom side of the switch with the contact screw 40 by reason of a golf ball 44 dropping through the hole 32 and falling thereonto; the circuit being completed through the wire *b*.

The switch 41 is slightly tilted and is provided with flanges 46 to keep the ball from rolling off at the sides thereof and to direct it into the spout 47, thence falling through a discharge pipe 47′ into a gravity conducting

means 16 which conveys it to the elevator 48 where it may be manually elevated to the surface.

The trip switch tray is slightly pitched or tilted so as to keep the lamp signal burning all the time the ball is rollingly poised on the bottom of the switch tray and until it finally rolls off, thus allowing the player to clearly interpret the yardage displayed at that particular signal.

In Figure 3 I show a portion of the wiring of the various signals. Off from the main lead wires 49 and 50, which communicate with any source of energy (no shown), the leads *a*, *b*, and *c* extend to the glow lamps. The circuit is closed as shown in Figure 2; and this lamp is also indicated centrally of the group shown in Figure 3; only while the ball is rollingly poised on the trip switch, and upon its freedom from the ball the switch under the action of the spring 43 disrupts the circuit.

Operation

A player takes a position in a driving stall as shown in Figure 1. He strikes the ball and the ball falls upon the terrain as shown, it being a long drive the ball rolls down the inclined fairway into the gutter between registers 345 and 350. Since the ball entered the trough nearer 345 than 350 it rolled down the incline of the gutter on to the trip switch tray 41 as shown in Figure 2. The weight of the ball 44 overcomes the resistance in the loop spring 43 so as to make contact between the bottom of the switch tray 41 and contact screw 40, thus permitting current to travel through wire *c*, bracket 39, and contact screw 40 to switch tray 41, thence through wire *b*, closing the circuit through the lamp 22.

The lamps will be energized during the time the ball 44 is rollingly poised upon the switch tray 41, and when it drops into the spout 47 the circuit, under the action of the spring 43, will be disrupted.

The ball 44 then passes into the subway 16 where it is conducted by gravity to the elevator 48, where an attendant may manually operate the crank elevating the balls in the manner shown, to the surface of the fairway.

The player after noting his yardage on a score board or card, which is provided for each player by the manager of the fairway, repeats his allotted number of drives, after which he departs to an adjacent fairway and putting green to finish his game. Or two contestants may continue to drive as long as they choose to indulge simply in a driving contest. In either case the player may furnish his own balls or they may be furnished by the management of the fairway. Some players may choose a better grade ball and therefore desire to furnish their own.

It will be noted that 100 yards is the minimum yardage recorded by the indicators shown. It is thought that any person indulging in the sport, either male or female may easily drive that far. However, this tabulation may be made variable at will, such a feature not being limited by the scope of the invention as will now be set forth in the claims.

1. In a golf playing apparatus, a fairway having a transverse inclination sufficient to convey golf balls to the lower side thereof, means to automatically convey balls rolling to the lower side of said fairway to one end thereof, and automatic visual indicators adapted to indicate to players at one end of the field the approximate distance to which balls are driven.

2. In a golf playing apparatus a fairway having a transverse inclination sufficient to convey golf balls to the lower side thereof, a gutter extending along the lower edge of said fairway and a guide having a throat portion adapted to direct golf balls from the lower edge of said field into said gutter.

3. In a golf playing apparatus a fairway having a transverse inclination sufficient to convey golf balls to the lower side thereof, a gutter extending along the lower edge of said fairway, a guide having a throat portion adapted to direct golf balls from the lower edge of said field into said gutter, and automatic means to carry said ball from said gutter to one end of said fairway.

4. In a golf playing apparatus a fairway having a transverse inclination sufficient to convey golf balls to the lower side thereof, a gutter extending along the lower edge of said fairway, a guide having a throat portion adapted to direct gold balls from the lower edge of said field into said gutter, an incline conduit located below said gutter to carry balls to one end of the fairway, and an elevator to lift the ball from said conduit to the surface of the fairway.

5. In a golf playing apparatus, a fairway having a transversely inclined surface, receivers located at various distances from one end of the fairway into which golf balls are directed as they roll from the inclined surface of said fairway, electric switches against which the balls are directed by said receivers, and electric signals operated by said switches to indicate the approximate distances said balls travel.

6. In a game, a transversely inclined golf fairway, a golf ball receiver disposed along a side edge of said fairway, said golf ball receiver having two-way inclined sections, box receptacles having outwardly extending flanges connectable with said sections, a switch tray in juxtaposition with said box, a lamp, an electric circuit in which said switch tray and said lamp are included, means to close the circuit by a golf ball falling on said

switch tray whereby said lamp may be energized and yieldable means to open said circuit whereby the lamp is de-energized.

7. The subject matter contained in claim 6, and a distance marker in juxtaposition with said lamp.

8. The subject matter contained in claim 6, and a number in juxtaposition with said lamp and means for re-delivering said ball to the end of said fairway from whence it was struck.

9. In a condensed golf game, a transversely inclined fairway, a golf ball receiving means having a downwardly reversed bottom portion into which golf balls falling on said fairway are to be directed, a tally, a visual signal positioned at the extremity of said receiving means adapted to identify said tally by a ball struck from one end of said fairway after having been directed into said golf ball receiving means and rolled down to the end thereof, and a switch to operate said signal by said golf ball rolling from said receiving means thereupon.

10. In a game, a transversely inclined terrain, a series of two-way inclined gutters located along the lower side edge of said terrain, a driving stall, means to indicate relative distances of golf ball driven from said stall alighting on said inclined terrain and thence directed into said two-way inclined gutters, said means comprising an electric circuit, switch trays at each end of said two-way inclined gutters to close said circuit by a golf ball rolling from said gutters thereonto, a distance marker, and a signal actuated by the closing of said switch cooperating with said distance marker.

11. In a game, a golf fairway, a plurality of two-way inclined gutters located along a side edge of said fairway, a driving stall, said fairway being transversely inclined whereby to direct a golf ball driven from said driving stall and alighting on said fairway into said gutter.

12. In a game, a golf fairway, gutters located along the side edge of said fairway, a driving stall, said fairway being transversely inclined so as to direct a golf ball driven from said driving stall and alighting on said fairway into said gutters, said gutters each having a two-way inclination and joinable end to end and a switch at the end of each inclination operable by a golf ball rolling from its respective inclined gutter thereonto.

13. The substance contained in claim 12, and a signal operable by the closing of said switch to indicate a distance at which a ball is struck.

14. In a game, a golf fairway, gutters along a side edge of said fairway, a driving stall, said fairway having a transverse inclination so as to direct a golf ball driven from said driving stall and alighting on said fairway into said gutters, said gutters each having a downwardly reversed pitched bottom portion and provided with box receptacles joinable end to end, a switch at the extremity of each inclination operable by a golf ball rolling from its respective pitched gutter thereunto, a signal operable by said switch to indicate a distance at which a ball is struck, and gravity means to re-deliver said ball to the driving end of said fairway.

15. The substance contained in claim 14, and an electric circuit in which said switch is included and means to energize said circuit.

16. A fairway having an inclined surface, a gutter juxtaposed therewith, a series of signals, said gutter having a two-way inclined bottom, one incline being directed to one signal and the other incline being directed to another signal, a switch, a golf ball adapted to roll down one incline of said two-way inclined bottom onto said switch, an electric circuit in which said signals and said switch is included and means to energize said circuit.

17. In a golf playing apparatus, a fairway having a transversely inclined surface, means comprising gutters having reversely pitched bottoms and receptacles joinable end to end to receive golf balls rolling from said inclined surface at different distances from one end of the fairway, and a series of signal devices in juxtaposition with said receptacles, said signal devices being individually operable by said balls rolling from said receptacles to indicate the approximate distance a ball has travelled.

18. In a game, a golf fairway, a golf ball receiver having a plurality of two-way inclined sections disposed along the side edge of said fairway, said fairway being transversely inclined whereby to direct a golf ball alighting on the surface thereof into said receiver, a plurality of distance markers positioned at the ends of the inclined sections of said golf ball receiver, a signal to identify said distance marker, a switch, and means operable by a golf ball contacting with said switch to actuate said signal.

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