

[54] **FOOTBALL LIGHTED GOAL POSTS**

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[22] Filed: **Aug. 20, 1973**

[21] Appl. No.: **390,003**

[52] U.S. Cl. **273/55 R, 240/2 R**

[51] Int. Cl. **A63b 67/00**

[58] Field of Search **273/55 R, 127 R, 127 C, 273/102.2 R, 1.5 R, 1.5 A; 240/2 R, 2 B, 3, 84**

[56] **References Cited**

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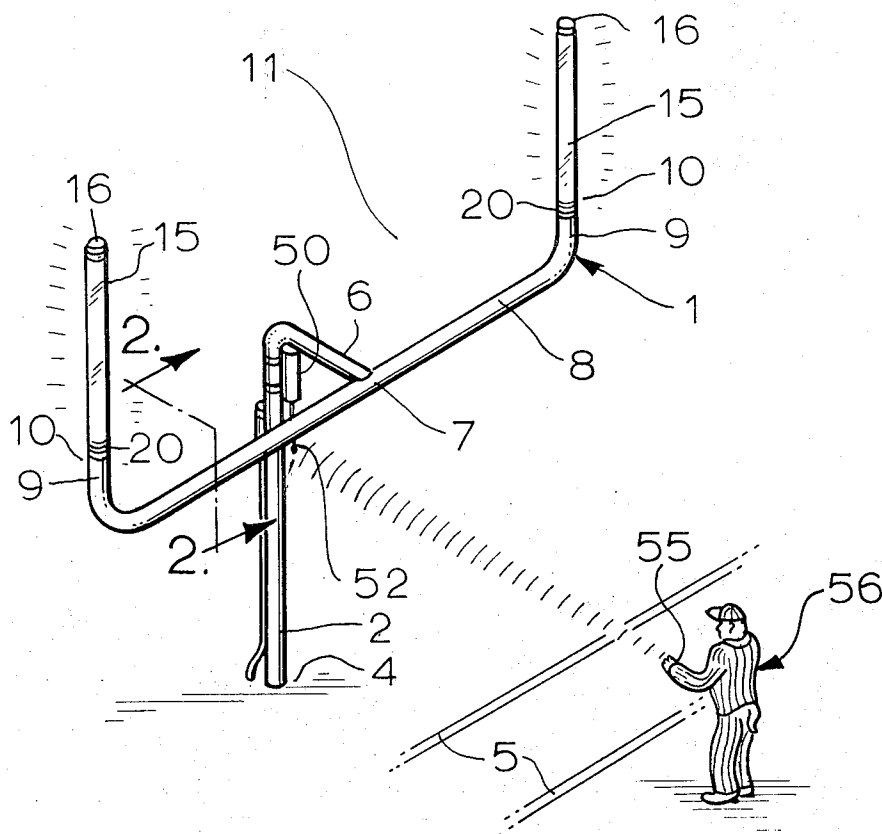
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[57]

ABSTRACT

A goal post structure for football including referee-actuable signaling device for lighting the goal posts to signal a goal. The goal post structure comprises a vertical ground-engaging center post having a horizontal tubular member attached to the upper end of the center post and a vertically extending post or upright attached to each end of the horizontal tubular member; each upright comprises a plastic translucent shield having a bulb mounted therein. Mounted on the ground engaging center post and connected to the bulb is a radio receiver and a timer connected such that a referee may activate an electrical circuit by means of a remote transmitter. The timer is utilized in deactivating the electrical circuit after a predetermined time.

10 Claims, 4 Drawing Figures



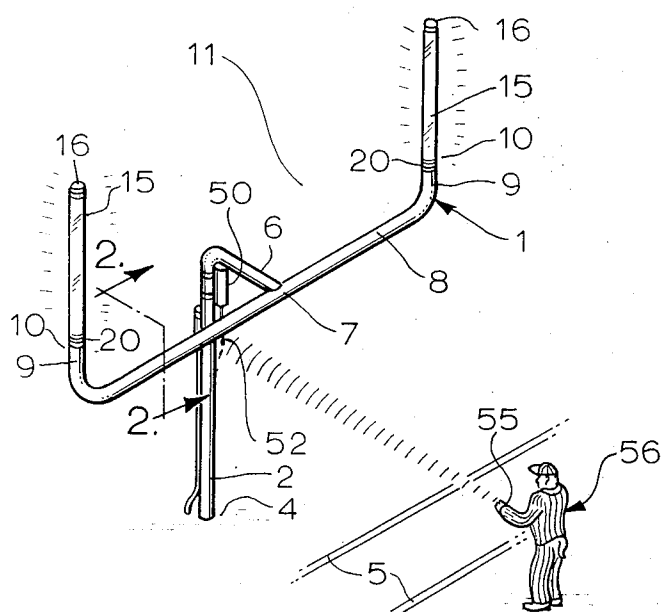


FIG. 1

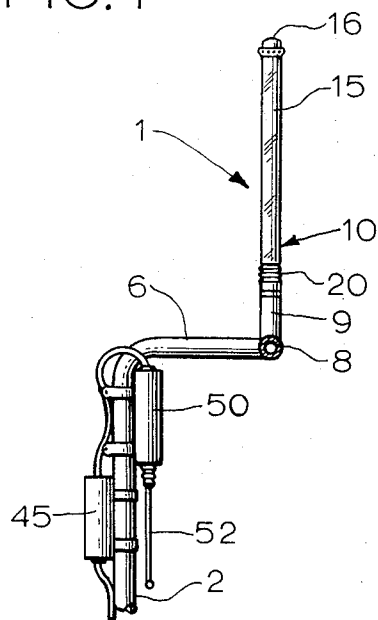
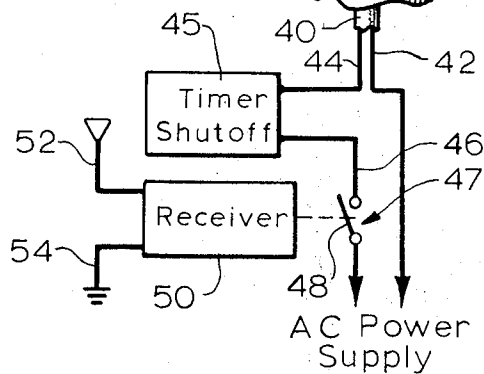
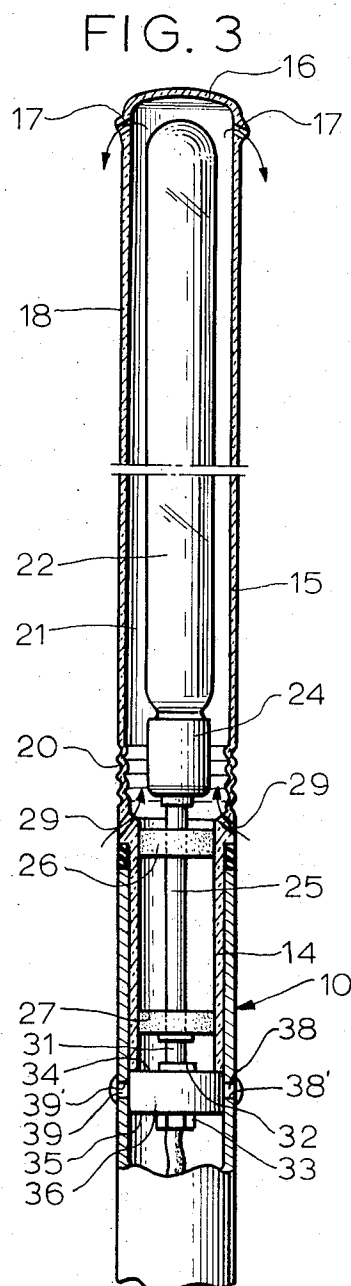


FIG. 2



FOOTBALL LIGHTED GOAL POSTS

DISCUSSION OF THE PRIOR ART

To the best knowledge of applicant, there is no satisfactory method or structure for signaling the making of a goal in football in a night game. The field lights are frequently inadequate and the release is invariably obscured to the majority of the fans.

SUMMARY OF THE INVENTION

The invention is directed to a novel goal post equipped with lights which are adapted to be lighted by the referee operating as transmitter to signal the making of a score.

More specifically, the invention provides a receiver adapted to be mounted upon the goal post and which controls a switching device through a timer to light up the uprights of the goal post.

Another object is to provide novel uprights for a goal post, said uprights being formed of unbreakable plastic tubes which are adapted to withstand the shock of being struck by a football.

A further object is to devise a novel goal post wherein the uprights are formed as light fixtures incorporating means for absorbing shocks of impact if struck by a football.

Another object of the invention is to provide a combined light structure and goal post upright comprising a tubular shield for an elongated bulb mounted therein, the shield being formed of suitable translucent plastic material having a pleated lower end portion secured to a rigid support portion to permit the shield and the lamp therein which is resiliently mounted to deflect under impact.

A still further object is to provide a novel lighted goal post structure which can be inexpensively manufactured, and installed and simply maintained.

These and other objects and advantages inherent in and encompassed by the invention will become more readily apparent from the specifications and the drawings, wherein:

FIG. 1 is a perspective view of the novel goal post assembly;

FIG. 2 is a sectional view taken substantially in line 2—2 of FIG. 1; and

FIG. 3 is an enlarged longitudinal sectional view of the goal post structure shown with a schematic circuit drawing.

DESCRIPTION OF THE INVENTION

The goal post structure generally designated 1 comprises a metal center post 2 having its lower end 3 anchored into the ground 4 of the playing field 5.

The upper end of the post 2 has a right angled generally horizontal metal extension 6 which is connected to the medial portion 7 of a metal crossbar 8 which at its opposite ends is provided with metal upturned extensions 9,9 at the lower ends of uprights 10,10 defining a space 11 therebetween through which the football is intended to be kicked for score.

Each upright 10 comprises a lower rigid tubular support portion 9 within which is telescoped a lower tubular flexible portion 14 of a plastic translucent tubular shield 15. The shield 15 is a cylindrical structure with a top wall 16 adjacent to which there are formed vent openings 17,17 in the sidewall 18 of the shield, the sidewall having at its lower end a pleated or accordion-

shaped portion 20 which permits the shield to deflect laterally for a limited amount in the space 21 independently of the elongated lamp or bulb 22 which is mounted therein.

The bulb 22, which may be an incandescent lamp or florescent tube, has its base end threaded into a socket 24 which is mounted upon the upper end of a tubular metal stem 25 which extends through a pair of elastomer, preferably synthetic rubber, grommets 26,27. The grommets not only hold the stem yieldably in upright position, but also accommodate lateral deflection if the shield should be deflected beyond the spacing provided at 21.

The elastomer grommets are prevented from deteriorating by providing lower vent holes 29,29 in the shield below the pleated portion whereby a chimney effect is provided with the cool air being aspirated below the socket for the bulb, and the air ascending in space 21 to cool the bulb and the shield, the hot air passing out of the upper bent openings.

The lower end 31 of the stem is clamped by nuts 32,33 threaded thereon against the upper and lower ends 34,35 of a metal shell encased elastomer block assembly 36, the shell 37 of which has diametric rivets 38,39 extending through and headed over openings 38',39' in the related lower support portion 12.

A two lead wire 40, which is connected to respective contacts of sockets 24 as well known, extends through the stems and the tubular portions of the post assembly and has one lead 42 connected to the power source and the other lead 44 connected to a timer 45 which is in turn connected to one contact 46 of a switch 47 which has its other contact 48 connected to the electric power source.

The switch 47 is controlled and operated by a radio receiver 50 as well known, said receiver may either be connected to the power source or may have an independent battery power source.

The receiver has an electrical signal receiving antenna 52 on a ground connection 54. The antenna may be located in non-obstructing position in transverse alignment with the center post for line of sight exposure to a transmitter 55 which is adapted to be operated by the appropriate field official indicated 56, who being in position to observe the play may actuate the system to indicate a score, if such occurs.

It will be appreciated that the embodiment of the invention chosen for the purposes of illustration and description herein is that preferred based upon requirements for achieving the objects of this invention and developing the utility thereof in the most desirable manner, due regard being had to existing factors of economy, simplicity of design and construction, production methods and improvements sought to be effected. It will be understood that the particular structure and functional aspects emphasized herein are not intended to exclude but rather to suggest such other modifications and adaptations as fall within the spirit and scope of the invention as set forth in the appended claims.

I claim:

1. A football goal post assembly comprising a pair of laterally spaced uprights, means for illuminating said uprights;

receiver means mounted on said post assembly including signal receiving means and including

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means for switching the illuminating means to an on position; and

transmitter means adapted to be carried by an official for transmitting a signal to said receiver for switching said illuminating means to an on position.

2. The invention according to claim 1 and timer means associated with said switching means for turning the switching means to an off position after a predetermined time.

3. The invention according to claim 1 and each upright comprising a lamp and means flexibly mounting said lamp to absorb impact shocks upon the goal post being struck.

4. The invention according to claim 1 and each of said uprights comprising a tubular translucent shield, and means flexibly mounting the shield to associated rigid structure of the goal post assembly.

5. The invention according to claim 1 and each upright comprising a tubular translucent plastic shield having a closed upper end,

a pleated lower portion on the shield, a rigid portion of the upright connected to the lower end of the shield, a heat producing light lamp in the shield, and

said shield having vent holes below and above said lamp to effect a flow of convection air currents between the shield and lamp for cooling the lamp.

6. The invention according to claim 1 and said goal post assembly having a vertical ground-anchored center post,

and said receiver having vertically disposed antenna located in front of said center post in nonobstruct-

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ing transversely aligned relation thereto.

7. The invention according to claim 6 and said goal post assembly having a forward extension upon the upper end of said center post and a horizontal cross-bar connected to said extension and having upturned end portions forming the lower ends of said uprights;

each said upright comprising a light-transmitting envelope extending from the associated upturned rigid portion and having a flexible connection therewith accommodating transverse deflection of the envelope.

8. The invention according to claim 7 and said envelope being formed of plastic material and said connection including an accordin-pleated section of the envelope.

9. The invention according to claim 8 and a lamp in the envelope, and a socket mounting at least the lower end of the lamp,

and means resiliently mounting said socket in the associated upturned portion.

10. The invention according to claim 9 and said means mounting the socket comprising an elastomer disk,

said envelope having a lower portion telescoped into the respective upturned section,

said envelope lower portion being deformable and elastic and said disk being loaded in compression within said lower portion and expanding the same into tight engagement with the respective upturned portion.

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