April 23, 1963 R. A. GREENE 3,086,307

FOOTBALL DOWNS MARKER

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Fig-1

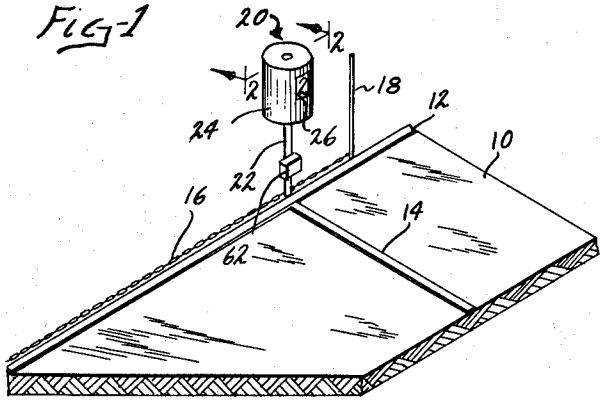


Fig-2

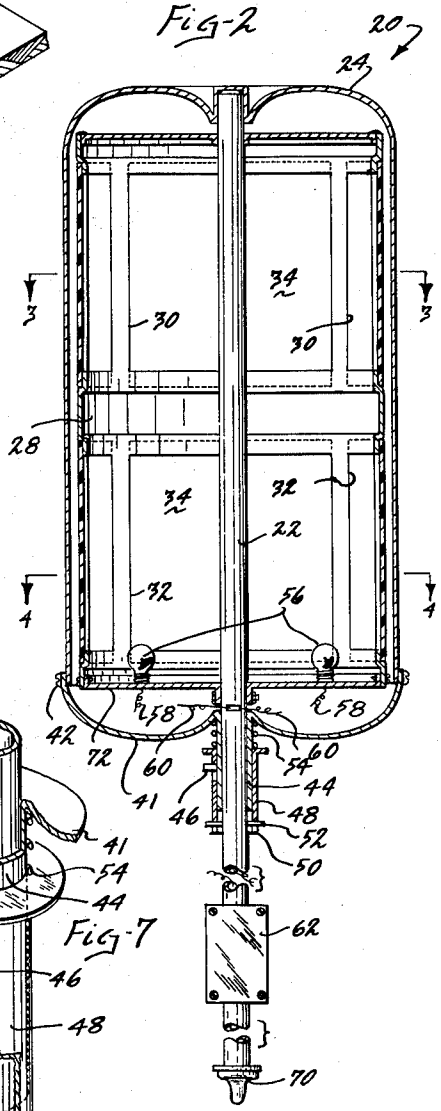


Fig-6

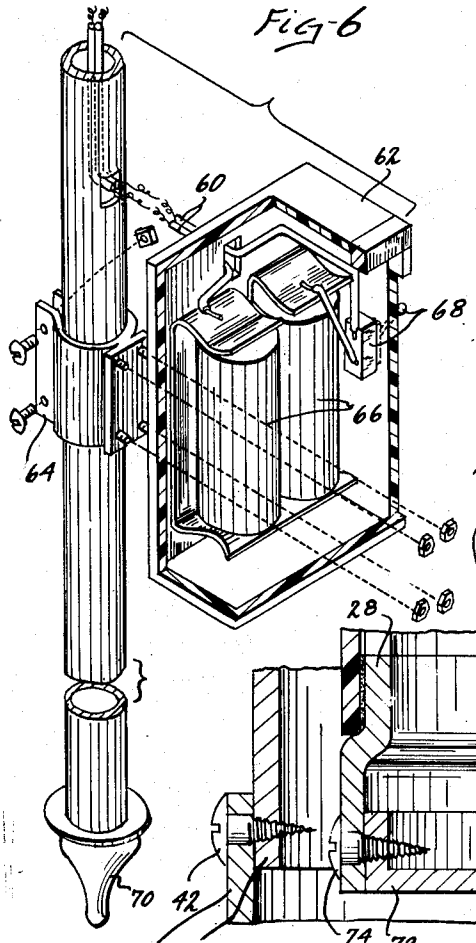


Fig-5

Fig-7

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Fig-3

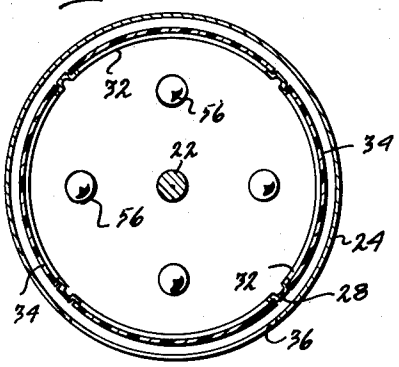


Fig-4

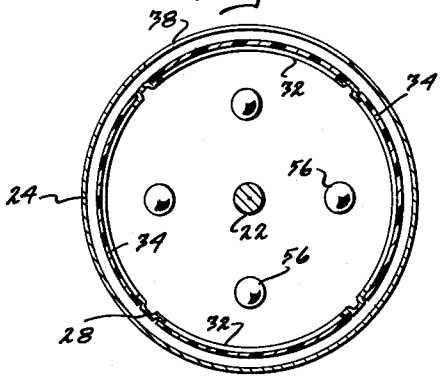


Fig-8

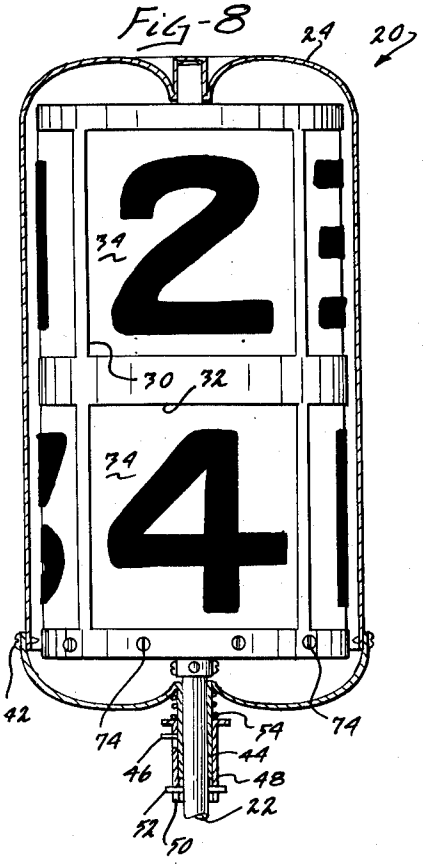


Fig-9

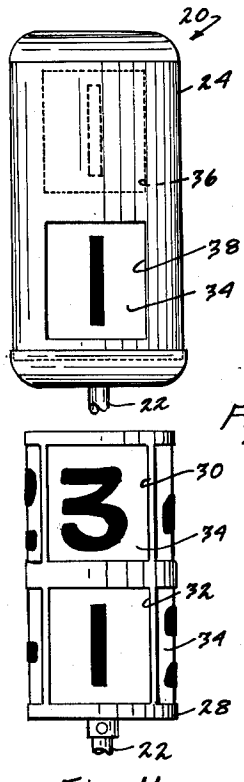


Fig-10

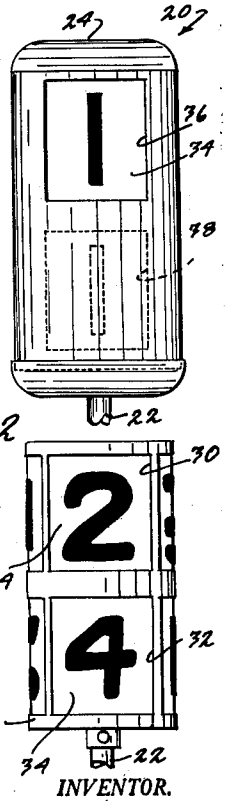


Fig-12

Fig-11

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FOOTBALL DOWNS MARKER

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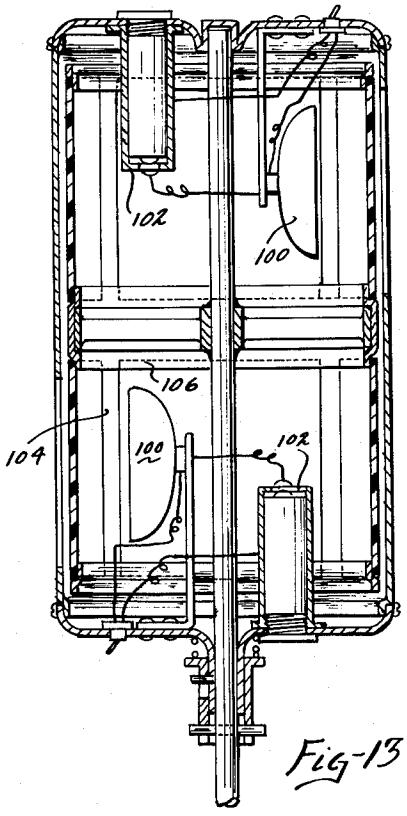


Fig-13

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3,086,307

FOOTBALL DOWNS MARKER

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4 Claims. (Cl. 40—77)

This invention relates to a downs marker for a game of football and is particularly concerned with a downs marker which has greater utility than downs markers heretofore known.

A downs marker is a conventional piece of equipment for use in a football game and consists of a port or rod having at the upper end a device for indicating by a numeral the down that is about to be played or which is in progress in the game. Such downs markers heretofore have not been as useful as they might be because they do not give a visible indication to everyone on the playing field or in the spectator area that might be interested in the status of the game. In particular, there is not at the present time any satisfactory downs marker for employing in connection with night games which would give a good indication that would not be influenced by poor lighting that may exist in certain regions.

Also, downs markers as presently known, are at fault in that they do not always simultaneously give an indication toward the playing field and toward the spectator area and also give no indication toward the ends of the playing field so that spectators that might be a substantial distance down field from the point of action cannot tell what down is being played except by reference to a score board if such is provided.

Having the foregoing in mind it is a primary object of the present invention to provide a downs marker for a football game having greater utility than downs markers heretofore known.

A still further object is the provision of a downs marker of the nature referred to which will give indications in four directions instead of only one or two directions.

A still further object of this invention is the provision of a downs marker which, although of substantial size, is relatively light in weight and easy to manipulate and carry about.

A still further object of this invention is the provision of a downs marker which is so constructed as substantially to eliminate sharp corners and the like so that in the case of a player accidently running into the downs marker, there is little likelihood of injury resulting therefrom.

It is also an object of this invention to provide an illuminated downs marker in which batteries are provided for energizing light bulbs that will illuminate the numerals thus giving a clear indication of the downs shown on the marker from a great distance from the marker.

Still a further object of this invention is the provision of a downs marker of the nature referred to in which batteries are provided so constructed and arranged that the downs marker is not top heavy and therefore can readily be handled.

These and other objects and advantages of this invention will become more apparent upon reference to the following specification taken in connection with the accompanying drawings in which:

FIGURE 1 is a fragmentary perspective view showing a portion of the playing area of a football field with a downs marker according to this invention associated with the lineman's chain at the side of the field;

FIGURE 2 is a vertical sectional view indicated by line 2—2 on FIGURE 1 with the post or rod of the downs marker broken away;

FIGURE 3 is a plan sectional view indicated by line 3—3 on FIGURE 2;

FIGURE 4 is a plan sectional view indicated by line 4—4 on FIGURE 2;

FIGURE 5 is an enlarged fragmentary view showing a lower corner of the device indicating the manner in which the marker is detachably assembled;

FIGURE 6 is a perspective view showing the battery case associated with the downs marker for containing batteries to energize the light bulbs therein and illustrating how the wires leading to the lights are lead from the battery case upwardly through the support rod;

FIGURE 7 is a perspective view showing the construction of the portion of the device that is utilized for changing the downs indication;

FIGURE 8 is a view similar to FIGURE 2 except that the inside member on which the numerals indicating the downs is carried is shown in elevation whereas the housing of the device is shown in section;

FIGURE 9 is an elevational view of the device taken from one side showing the indication of down one;

FIGURE 10 is a view like FIGURE 9 but looking in from the other side showing how the same indication is visible through a window on the opposite side of the device;

FIGURE 11 is a view of the member bearing the indicia shown in elevation;

FIGURE 12 is a view like FIGURE 11 but looking in at the device from the side; and

FIGURE 13 is a vertical sectional view through a modified arrangement similar to the FIGURE 2 arrangement but illustrating the use of a different type of illuminating means.

Referring to the drawings somewhat more in detail, FIGURE 1 shows a portion of a football playing field **10** having a side line **12** and one of the yardage indicator lateral lines **14**.

One of the pieces of equipment employed in connection with the chain **16**, which extends **10** yards between poles **18** is a downs marker generally indicated at **20** which is separate from the chain and which is employed for indicating the down that is either in progress or is about to be played.

This device comprises a post **22** having at the top an enlarged housing **24** having window means at **26** through which a numeral is visible that indicates the down being played.

Reference to FIGURES 2 through 12 will make the structure of the device clear. As will be seen in these figures there is located inside housing **24** an inner drum member **28** that is attached to the post **22**. This drum member **28** is provided with a plurality of apertures **30** toward the upper end and **32** toward the lower and disposed 90 degrees apart about the frame. In each of these apertures there is mounted a transparent or translucent member **34** bearing an indicia that is visible through one of the upper window means **36** (FIGURE 3) or the lower window means **38** (FIGURE 4).

The housing portion **24**, as will be noted, has rounded end parts and at the bottom has a removable cap **41** held in place as by the screws **42** so that access can be had to the interior of the housing if necessary.

The cap **41** comprises a sleeve portion **44** surrounding post **22** and a pin **46** extends outwardly from this sleeve at one side. A slotted outer sleeve member **48** is mounted on sleeve portion **44** and is vertically movably thereon but is prevented from rotating thereon on account of pin **46**. Sleeve member **48** is provided with four slots **50** in its lower edge positioned 90 degrees apart which are adapted for receiving another pin **52** in post **22**. It will be evident that by lifting the sleeve member **48** to detach it from the pin **52**, the said sleeve member and the entire housing **24** can be rotated and brought to a new position of downs

indication and then the sleeve member **48** can be lowered whereupon pin **52** will again engage a pair of the slots **50** and hold the housing **24** fixedly in its new location.

A spring **54** can be provided for urging the sleeve member **48** downwardly and to prevent accidental movement thereof.

It may be desirable, especially for night games, to provide illumination inside the device and this can be accomplished by utilizing two or more light bulbs **56** inside the device which are connected by wires **58** with the wires **60** that extend into the inside of the post and downwardly therein to a battery box **62**. Battery box **62**, as will be seen in FIGURE 6 is supported on the post by a clamp **64** and within the battery box are batteries **66** connected by metal support clips to the wires **60** with there being a switch **68** for controlling the supply of current to the wires **60** so that switch **68** can be availed of for turning the lights on and off.

This battery box is advantageously supported on the post adjacent the bottom and this is to assist in stabilizing the device so that it does not become top heavy and can easily be supported in upright position or can be placed in position with point **70** on the lower end thereof driven into the ground whereupon it will stand upright.

Access to the light bulbs inside the inner drum member **28** can readily be had by removing the lower cap **72** which is held in place by screws **74** which will be seen in FIGURE 5.

In the modification described above, it will be noted that the inner drum member carrying the indicia is stationary with the post **22** while the outer frame part is rotatable. When the downs indication is changed thereon, the outer housing part is rotated to its new position and then the entire marker is rotated to present the windows **36** and **38** of he housing in the proper direction.

FIGURE 8 shows the appearance of the inner drum member of the device and FIGURES 9 and 10 show the appearance of the device from the outside.

FIGURES 11 and 12 show two views of the inner drum member in different rotated positions in elevation.

The modification of FIGURE 13 is quite similar to the first described modification except that in the FIGURE 13 modification there are positioned inside the device the enlarged reflector members **100** which are mounted light bulbs and which bulbs are connected with the battery units **102** carried inside the housing.

The FIGURE 13 arrangement permits individual batteries to be provided for the upper and lower portions of the rotatable indicia bearing drum thus adding assurance against the possibility of failure while the device is being used. This arrangement also permits more energy to be delivered to each light bulb to provide for greater illumination where this might be necessary.

The construction of the FIGURE 13 modification is substantially identical with that of the first described modification except the inner indicia bearing drum **104** is open at both ends and in the center there is a spider portion **106** supporting the inner indicia bearing drum on the post so that it can be rotated relative to the windowed outer housing part in order to change the downs indication when the device is in use.

It will be understood that this invention is susceptible to modification in order to adapt it to different usages and conditions; and, accordingly, it is desired to comprehend such modifications within this invention as may fall within the scope of the appended claims.

I claim:

1. In a football downs marker; a rod or post, a housing on the upper end of the post, a drum rotatably mounted in the housing and bearing indicia at upper and lower levels respectively, said housing having a window therein at each of said levels and on respectively opposite sides

of the housing, means for rotating said housing and drum relatively to cause the indicia on the drum at each level to register selectively with the window in the housing pertaining thereto, means for latching the drum and housing in the various relative indexed positions thereon, means inside the drum member forming a source of illumination for illuminating the indicia to enhance the visibility thereof through said window means, said drum being formed of light transmitting material.

2. In a football downs marker; a post or rod, a housing rotatably mounted on the upper end of the rod, a drum in the housing fixed to the rod and formed of light transmitting material, indicia circumferentially spaced about the drum at upper and lower levels thereon, a window on each of opposite sides of the housing member at the said upper and lower levels respectively for observation of the indicia on the drum therethrough, means for rotating the drum and housing relatively to cause selective registration of the said indicia with the windows, means for retaining the drum and housing in their several relatively indexed positions, illuminating means carried by the drum member on the inside thereof, battery means carried by said post connected in circuit with said illuminating means.

3. In a football downs marker; a post or rod, a housing rotatbly supported on the upper end of the rod, a drum in the housing fixed to the rod and formed of light transmitting material, indicia circumferentially spaced about the drum at upper and lower levels thereon, a window on each of opposite sides of the housing member at the said upper and lower levels respectively for observation of the indicia on the drum therethrough, means for rotating the drum and housing relatively to cause selective registration of the said indicia with the windows, means for retaining the drum and housing in the several relatively indexed positions thereof, illuminating means carried by and within the drum member, said battery means carried by the post and being located toward the bottom of said post whereby to counter-balance the weight of said housing and drum, and wires in the post, extending between the battery means and the illuminating means to connect the illuminating means in circuit with the battery means.

4. In a football downs marker; a support rod or post, a housing carried at the upper end of the post, a drum in the housing fixed to said post, said drum having indicia thereon spaced circumferentially thereabout at upper and lower levels, a window in said housing at each of said upper and lower levels and on respectively opposite sides of said housing for observation of said indicia, means connecting said housing with said post releasable for indexing movement of the housing on the post to cause registration of the indicia on said drum with said windows, the said drum comprising panels of light transmitting material that bear the said indicia, and illuminating means inside the drum for illuminating the inside of the drum to enhance the visibility of the indicia thereon through said windows, said illuminating means being carried by said housing and including battery means connected in circuit with the said illuminating means, said drum having a central spider attached to the said post with the ends of the drum being open, said illuminating means being mounted on the opposite ends of said housing inside the housing and extending into the open ends of the drum.

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