Jan. 31, 1967 W. H. LAUGHLIN 3,302,192

FOUL INDICATOR FOR BASKETBALL GAMES

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Fig. 1

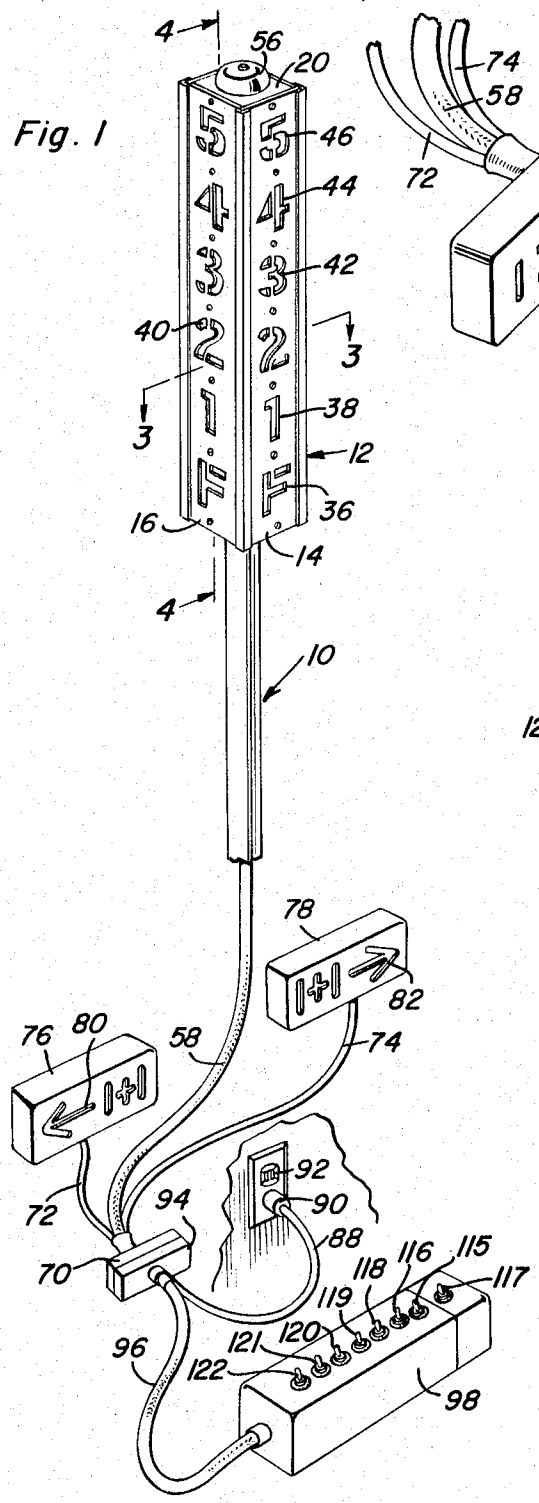

Fig. 2

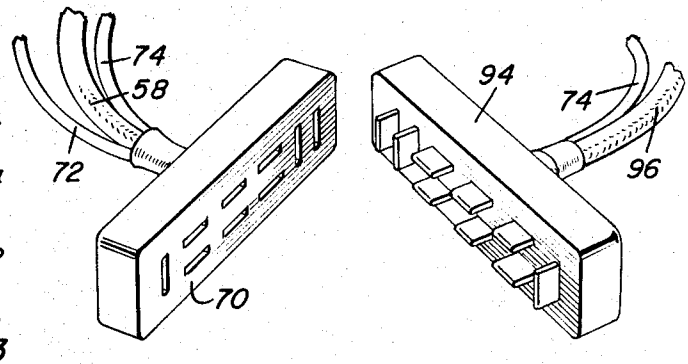

Fig. 3

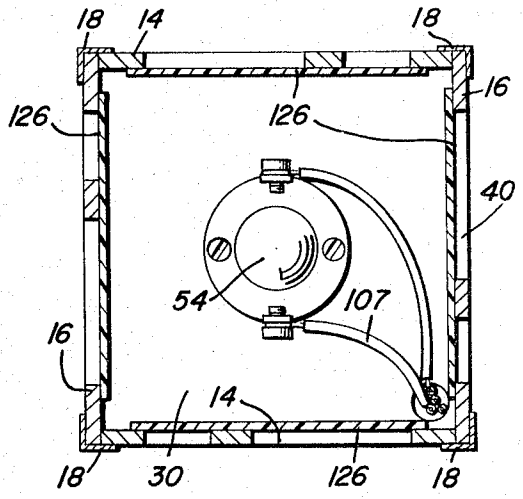

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Fig. 4

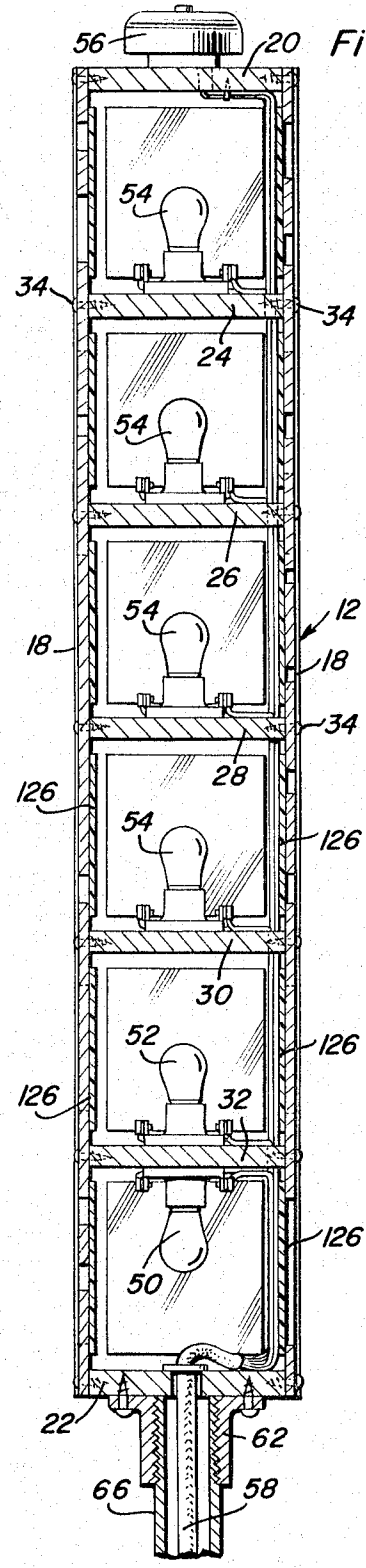


Fig. 5

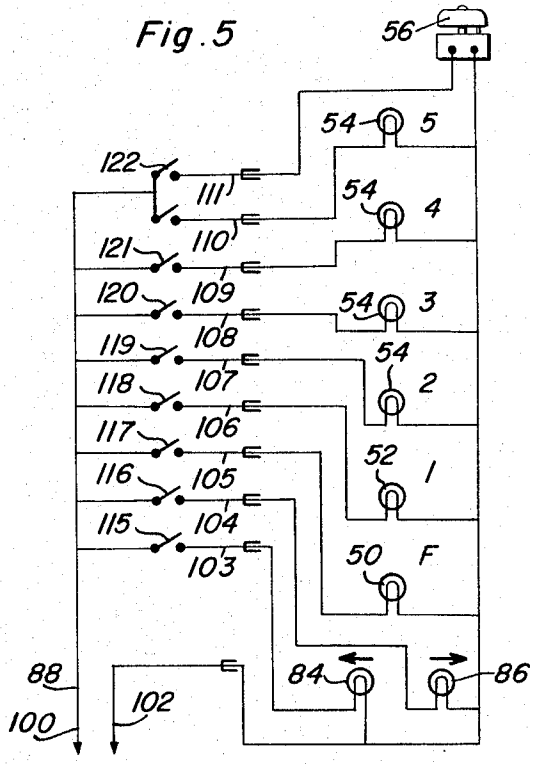
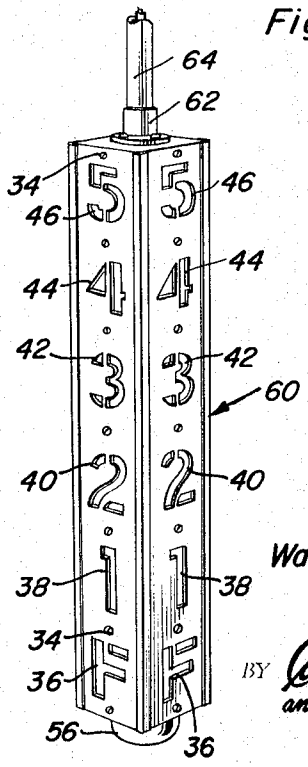


Fig. 6



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FOUL INDICATOR FOR BASKETBALL GAMES

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7 Claims. (Cl. 340—323)

This invention relates to a novel and useful foul indicator and more specifically to a foul indicator designed to assist the officials and spectators as well as the team players during a basketball game. The foul indicator includes means for rendering a visual indication whenever a foul is committed, means for indicating the total number of fouls which have been committed by the players in a basketball game each time a player commits a foul and means for indicating to which team a player belongs when a foul is committed.

In a basketball game the two team benches are usually disposed along one side line of the basketball court with the officials and time keepers' desk or area disposed between the two team benches. The foul indicator of the instant invention includes a pylon type unit having a first illuminated portion for indicating when a foul is committed and five additional illuminated portions for indicating total number of fouls committed by each player that commits a foul after the foul has been committed.

Still further, the foul indicator of the instant invention includes two additional indicators which may be illuminated and which are adapted to be centrally located at the time keeper or score keeper's desk and to indicate such information as to which team has called time out or which team is awarded the bonus free-throw or one plus one situation. In this manner, any official on the playing court may readily ascertain which team is entitled to a bonus or "one plus one" free-throw without going to the official timer and scorer bench for such information. This also aids the official in keeping account of each team's time out. In addition, the spectators at a basketball game may also be visually informed of the foregoing information. This feature is optional.

The main object of this invention is to provide electrically actuatable illumination means for indicating when a foul is committed during a basketball game, the total number of fouls which have been committed by the player who has just committed a foul, and the identity of the team to which the player belongs.

Another object of this invention, in accordance with the immediately preceding object, is to provide a foul indicator including control means for electrically actuating the illumination means of the foul indicator from a remote position.

Still another object of this invention is to provide a foul indicator including extension cord means for readily and removably electrically connecting the foul indicator with a suitable source of electrical potential such as a conventional utility outlet.

A final object of this invention to be specifically enumerated herein is to provide a foul indicator in accordance with the ureceding objections which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will economically feasible, long lasting and relatively trouble free in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the foul indicator of the instant invention shown with a portion of the support

standard for one set of the electrically actuatable illumination means broken away;

FIGURE 2 is a fragmentary exploded perspective view of readily engageable and disengageable connector plug assemblies of the conductor means by which the illumination means and control means may be electrically connected with a suitable source of electrical potential;

FIGURE 3 is an enlarged horizontal sectional view taken substantially upon the plane indicated by section line 3—3 of FIGURE 1;

FIGURE 4 is an enlarged vertical sectional view taken substantially upon the plane indicated by section line 4—4 of FIGURE 1;

FIGURE 5 is a diagrammatical view of the electrical circuit of the foul indicator of the instant invention; and

FIGURE 6 is a fragmentary perspective view of a slightly modified form of one portion of the foul indicator.

Referring now more specifically to the drawings, the foul indicator of the instant invention is generally designated by the reference numeral **10** and includes a foul indicating unit generally referred to by reference numeral **12** which defines a housing including two pairs of opposite upstanding side walls **14** and **16**. The unit **10** also includes four angle corner braces **18** and top and bottom walls **20** and **22** in addition to five intermediate horizontally disposed partitions or walls **24**, **26**, **28**, **30** and **32**. The top and bottom walls **20** and **22** as well as the intermediate baffles **24**, **26**, **28**, **30** and **32** are disposed in vertically spaced relation and the pairs of opposite side walls **14** and **16** are secured to the walls **20** and **22** and the partitions **24**, **26**, **28**, **30** and **32** by means of suitable fasteners **34**.

The corner angles **18** are secured in overlying relation to the adjacent upstanding edge portions of the upstanding side walls **14** and **16** in any convenient manner and it may be seen that each of the side walls or panels **14** and **16** includes a lowermost cut-out portion **36** which is in registry with the area disposed between bottom wall **22** and the partition **32**. Further, the panels **14** and **16** each also include cut-out portions **38**, **40**, **42**, **44** and **46** which are aligned with the areas disposed between the partitions **30** and **32**, the partitions **28** and **30**, the partitions **26** and **28**, the partitions **24** and **26**, and the top wall **20** and the partition **24**, respectively. Illuminating means in the form of an electric bulb **50** is supported in registry with the cut-out portions **36** while an electric bulb **52** is supported from the partition **32** in registry with the cut-out portions **38**. Still further, a plurality of electric bulbs **54** are supported from the partitions **30**, **28**, **26** and **24** in registry with the cut-out portions **40**, **42**, **44** and **46**, respectively. Finally, an electric bell assembly **56** is supported from the top of the top wall **20** and it may be seen that conductor means in the form of a trunk line **58** is provided in the housing or unit **12** for electrically connecting the bulbs **50**, **52** and **54** as well as the bell **56** with a suitable source of electrical potential in a manner to be hereinafter more specifically set forth.

In FIGURE 6 of the drawings there may be seen a modified form of housing corresponding to the housing **12** and generally designated by the reference numeral **60**. The housing **60** is substantially identical to the housing **12** with the exception that the electrical bell assembly **56** is supported from the bottom wall **22** thereof and that the top wall of the housing **60** has an anchor fitting **62** secured thereto adapting the housing **60** to be supported from the lower end of a depending tube **64**. The housings **12**, on the other hand, has the fitting **62** supported from its bottom wall **22** and is therefore adapted to be supported from the upper end of an upstanding tube **66** corresponding to the tube **64** through which the trunk

line 58 extends. It is to be noted that the trunk line for the housing 60 corresponds to the trunk line 58 of the housing 12 passing through the tube 64.

With attention now invited more specifically to FIGURE 1 and 2 of the drawings, it may be seen that the trunk line 58 is flexible and that it extends to one connector plug assembly 70. Coresponding ends of a pair of extension cords 72 and 74 also extend to the connector plug assembly 70 while the other pair of ends of the extension cords 72 and 74 extend to small housings 76 and 78 having cut-out portions 80 and 82, respectively, formed therein. The extension cords 70 and 72 are electrically connected to suitable illumination means 84 and 86, respectively, disposed within the housings 76 and 78 and in registry with the cut-out portions 80 and 82, respectively.

A third flexible extension cord 88 is provided with a male plug member 90 on one end which is releasably engageable with a conventional form of a source of electrical potential such as the wall outlet 92, and the end of the flexible extension cord 88 remote from the plug 90 extends to the connector plug assembly 94. Still further, a second trunk line 96 has one end which extends to a control housing 98 and the other end thereof also extends to the connector plug assembly 94. It is to be noted that the connector plug assemblies 70 and 94, when operatively engaged with each other in the usual manner, will electrically connect the control assembly housing 98 with the source of electrical potential 92 and the illuminating means disposed within the housings 12, 76 and 78.

With attention now directed more specifically to FIGURE 5 of the drawings it may be seen that the extension cord 88 comprises a pair of electrical conductors 100 and 102. The conductors 100 and 102 comprise main conductors between which conductors 103–111 are electrically connected, the lamps 84, 86, 50, 52, 54 and the bell assembly 56 being serially connected in the conductors 103–111, respectively. In addition, the switches 115–121 being also serially connected in the conductors 103–109 and the double-pole switch 122 being serially connected in the conductors 100 and 111. In this manner, the switches 115–121 and the double-pole switch 122 may be utilized to selectively electrically actuate the bulbs 84, 86, 50, 52, 54 and the bell 56.

Although the trunk lines 58 and 96 as well as the extension cords 72, 74 and 88 are all not illustrated in FIGURE 5 of the drawings it is to be understood that the various electrical components of the foul indicator 10 are electrically connected as illustrated in FIGURE 5 of the drawings but that for practical reasons the various trunk lines and extension cords will be utilized.

In operation, after the indicator 10 has been connected to the source of electrical potential 92, the switch 117 is closed each time a foul is committed and the appropriate switch of the switches 118–122 is closed to indicate the total number of fouls committed by the player who committed the last foul. At the same time, the appropriate one of the switches 115 and 116 may be actuated to illuminate the desired one of the bulbs 84 and 86. Inasmuch as the control assembly 98 is electrically connected to the remainder of the foul indicator by means of the flexible trunk line 96, the control assembly 98 may be positioned on the desk of the official scorer. Further, the housings 76 and 78 may also be positioned where desired.

Each of the cut-out portions 36, 38, 40, 42, 44 and 46 has a different colored translucent panel 126 disposed therebehind and the bulbs 50, 52 and 54 may be of different wattage such as 7½-watts, 40-watts and 25-watts, respectively, so as to render a clearer indication of the foul committed, the 7½-watt bulb 50 being utilized to merely dimly illuminate the cut-out portions 36 so as thereby eliminate excessive glare.

Although the housings 76 and 78 have been illustrated as having only one bulb or illumination means disposed therein, a pair of illuminating means may be disposed in each of the housings 76 and 78 with a separate switch provided for each bulb so as to enable the cut-out portions 80 and 82 to not only indicate the team which has a time-out but also whether or not the penalty will be a "one plus one" foul shot.

Thus, it may be seen that a portable foul indicator has herein been described and that the foul indicator will greatly facilitate both the official and spectators at a basketball game.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A foul indicator for basketball games, said foul indicator comprising a housing enclosing a set of at least five vertically spaced compartments each including a plurality of sides in which light transmitting windows including indicia defining portions are disposed, single electrically actuatable illumination means disposed in each of said compartments, said housing including means adapting said housing to be supported in an elevated position from a support surface, said illumination means and the corresponding windows being adapted to indicate the total number of fouls which have been committed by a player each time a player commits a foul, electrical potential transmitting conductor means operatively connected with said illumination means, adapted for operative connection with a source of electrical potential and including switch means operatively connected thereto operative to individually and selectively electrically actuate said illumination means when said conductor means is operatively connected to a suitable source of electrical potential, said foul indicator also including a pair of separate housings supportable in desired orientated positions remote from the first mentioned housing and including electrically actuatable team indicating illumination means adapted to indicate the direction in which a corresponding team bench is located, said conductor means also including portions electrically connected to said team indicating illumination means and including further switch means operatively connected thereto for individually and selectively electrically actuating said team indicating illumination means.

2. The combination of claim 1 wherein said switch means are supported from a remote control assembly, said conductor means including flexible portions electrically connecting said switch means with said five illumination means and said team indicating illumination means.

3. The combination of claim 2 wherein said conductor means also includes flexible extension cord portions electrically connected to said switch means at one end and having plug means at the other end adapted for removable electrical connection with said source of electrical potential.

4. The combination of claim 1 wherein said housing also includes a sixth multi-sided illumination means spaced vertically relative to said five illumination means and adapted to indicate when a foul has been committed, said conductor means also including portions electrically connected to said sixth illumination means and further switch means operatively connected thereto for selectively electrically actuating said sixth illumination means.

5. A foul indicator for basketball games, said foul indicator comprising a housing enclosing a set of at least five vertically spaced compartments each including a plurality of sides in which light transmitting windows

including indicia defining portions are disposed, single electrically actuatable illumination means disposed in each of said compartments, said housing including means adapting said housing to be supported in an elevated position from a support surface, said illumination means and the corresponding windows being adapted to indicate the total number of fouls which have been committed by a player each time a player commits a foul, electrical potential transmitting conductor means operatively connected with said illumination means, adapted for operative connection with a source of electrical potential and including switch means operatively connected thereto operative to individually and selectively electrically actuate said illumination means when said conductor means is operatively connected to a suitable source of electrical potential, said housing also including a sixth multi-sided illumination means spaced vertically relative to said five illumination means and adapted to indicate when a foul has been committed, said conductor means also including portions electrically connected to said sixth illumination means and further switch means operatively connected thereto for selectively electrically actuating said sixth illumination means, said foul indicator also including a pair of separate housings supportable in desired positions remote from the first mentioned housing and including electrically actuatable team indicating illumination means adapted to indicate the direction in which a corresponding team bench is located, said conductor means also including portions electrically connected to said team indicating illumination means and including further switch means operatively connected thereto for individually and selectively electrically actuating said team indicating illumination means.

6. The combination of claim 1 including electrically actuatable audible signal means serially electrically connected with one of said illumination means for simultaneous electrical actuation therewith.

7. A foul indicator for basketball games, said foul indicator including a vertically elongated multi-sided housing enclosing a set of at least five vertically spaced compartments each having electrically actuatable illumination means disposed therein and including a window opening in each side of said housing in which indicia defining portions are disposed, said housing including means adapting said housing to be hung in an upstanding position, said indicia being adapted to indicate a corresponding number of fouls which have been committed by a player, electrical potential transmitting conductor means operatively connected with said illumination means, adapted for operative connection to a source of electrical potential and including switch means operatively connected thereto operative to individually and selectively actuate the illumination means in said compartments when said conductor means is operatively connected to a suitable source of electrical potential, said foul indicator also including a pair of separate housings supportable in desired orientated positions remote from the first-mentioned housing and including electrically actuatable illumination means adapted to indicate the direction in which a corresponding team bench is located, said conductor means also including portions electrically connected to said team indicating illumination means and including further switch means operatively connected thereto for individually and selectively electrically actuating said team indicating illumination means.

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