

[54] **SCORING SYSTEM FOR ATHLETIC EVENTS**

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[51] Int. Cl. **G08b 23/00**

[58] Field of Search **340/323; 273/1 E; 235/92 GA**

[56] **References Cited**

UNITED STATES PATENTS

3,202,803 8/1965 Markstrom 235/92 GA

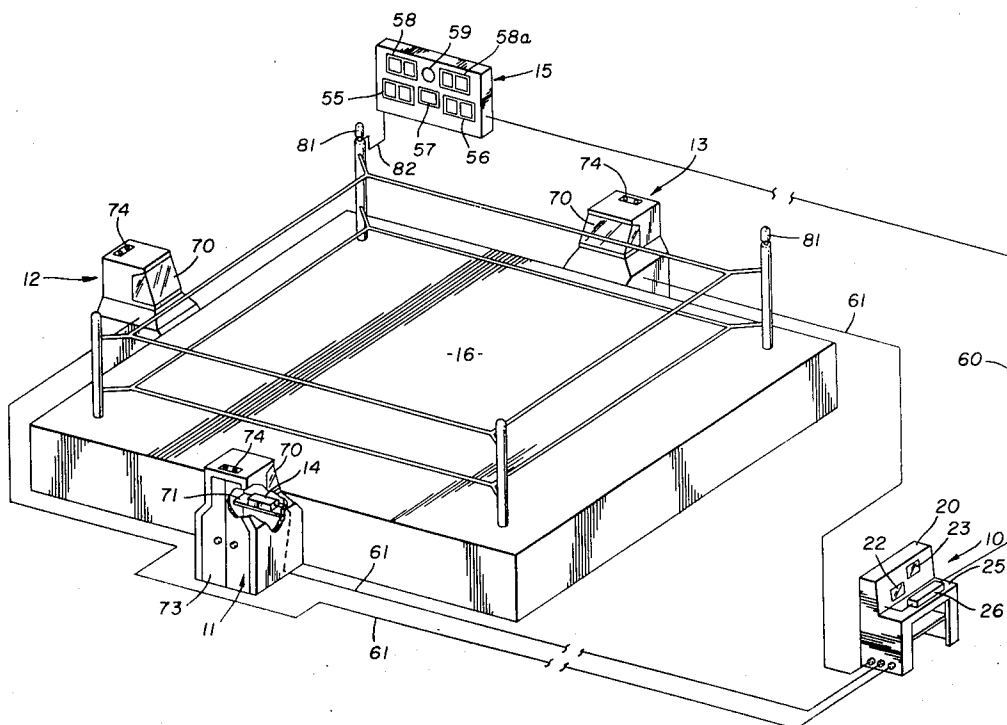
2,669,389 2/1954 Mesi et al. 340/323 X

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[57] **ABSTRACT**

A method and apparatus for scoring athletic events such as a boxing contest. Each official is provided with an individual panel upon which performance points are recordable. The points scored by each individual judge or official are transmitted into a master console for cumulative progressive scoring of the event as it progresses, with the collected points being flashed on a scoreboard that is visible to the audience so that they may be progressively aware of the standing of the contest as it progresses.

7 Claims, 9 Drawing Figures



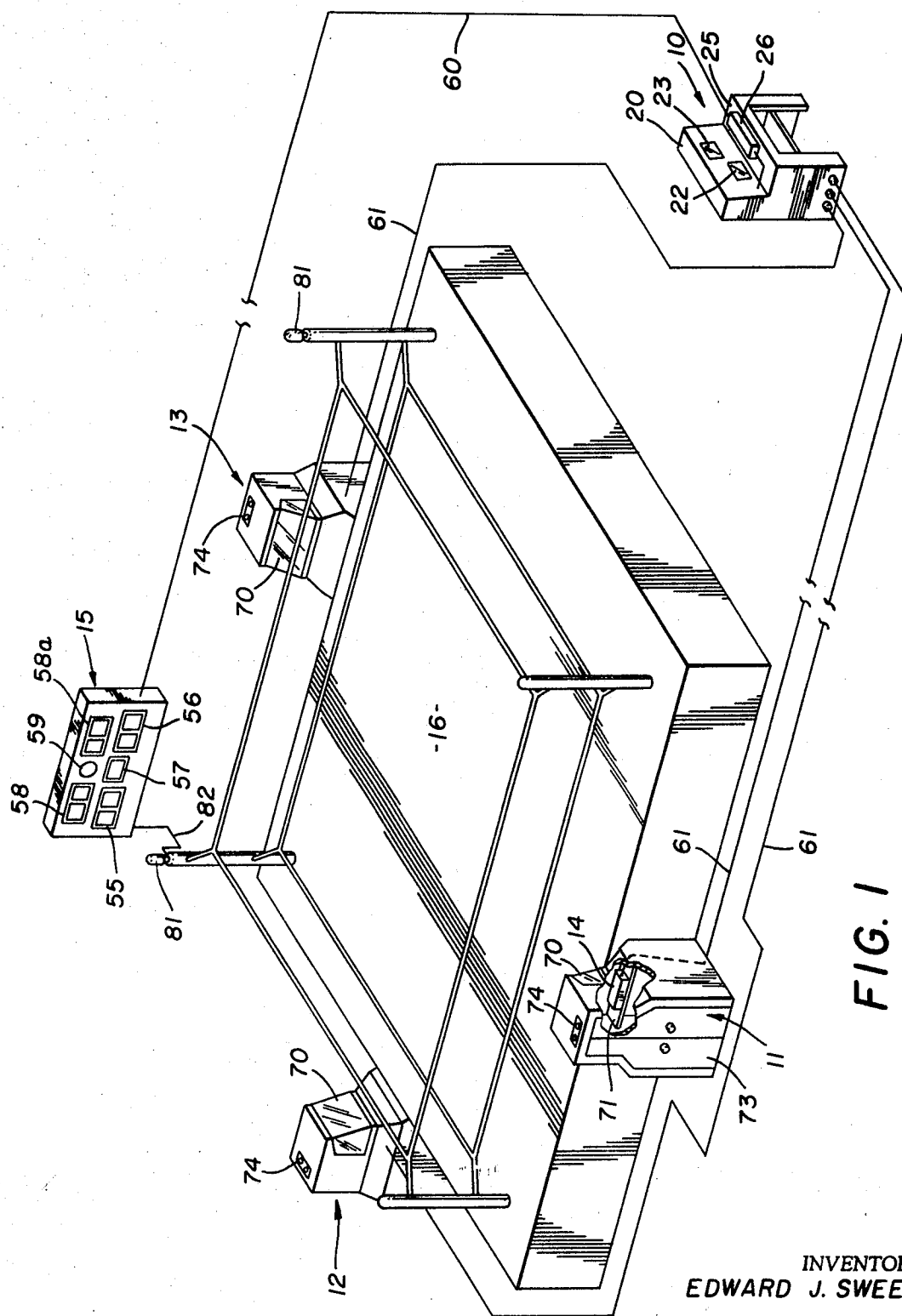


FIG. 1

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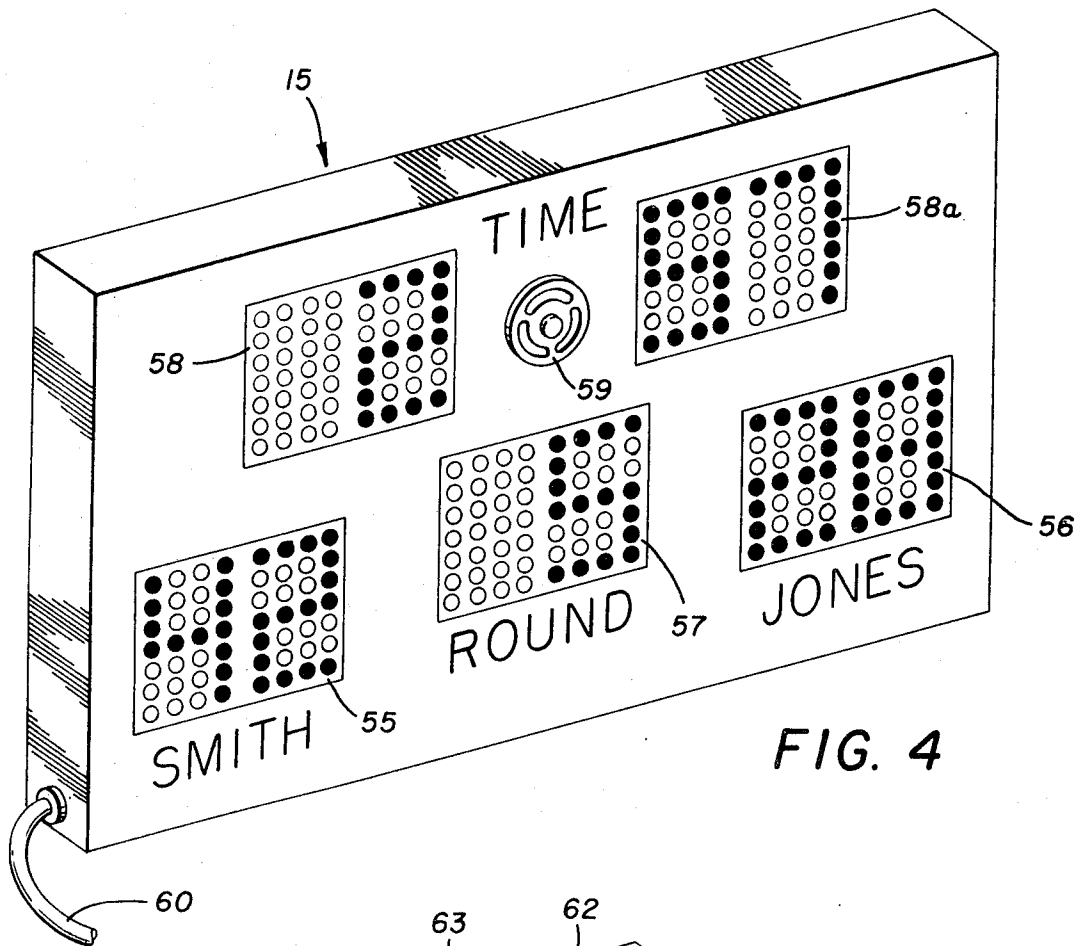


FIG. 4

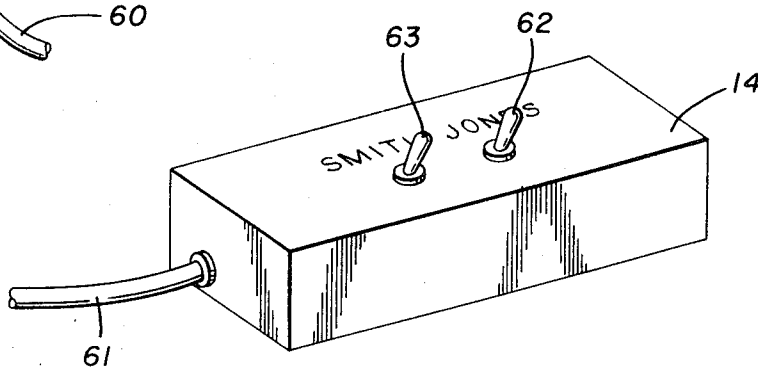


FIG. 5

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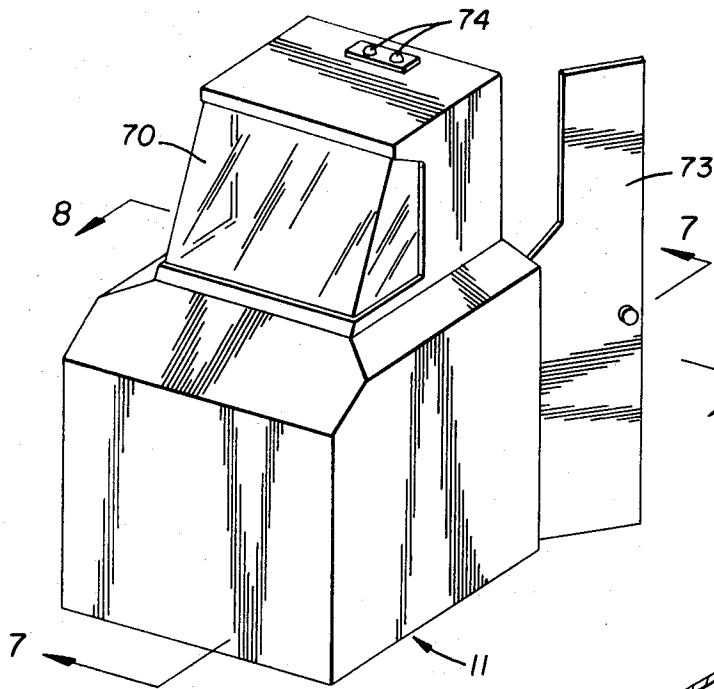


FIG. 6

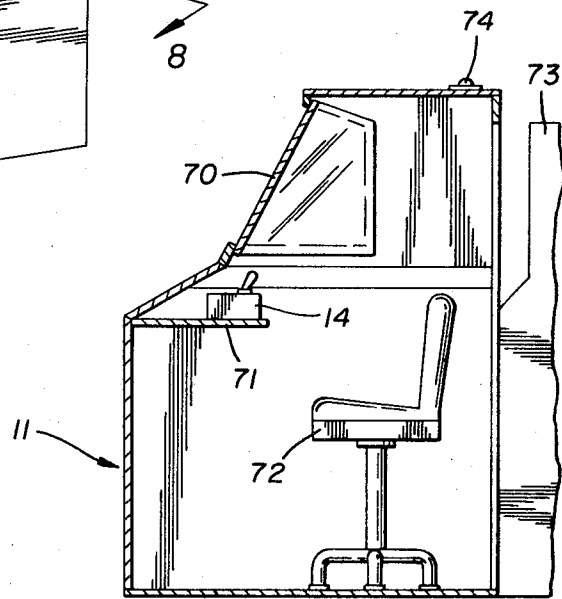


FIG. 7

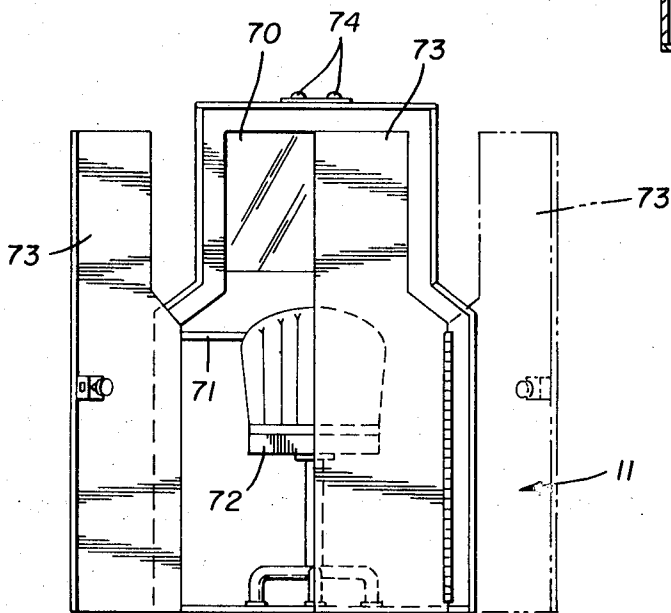


FIG. 8

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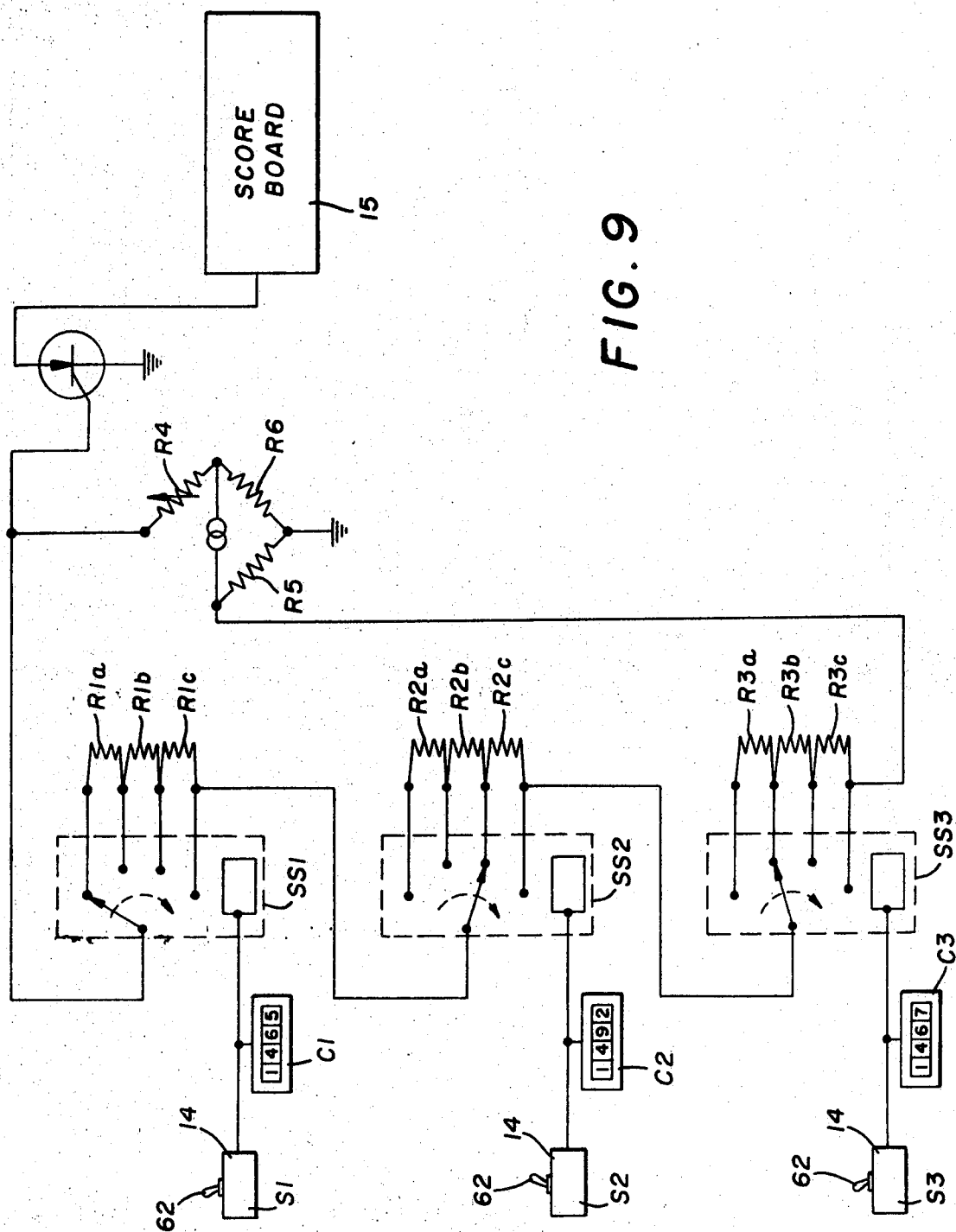


FIG. 9

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SCORING SYSTEM FOR ATHLETIC EVENTS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a method of improving the efficiency and accuracy with which an athletic contest is judged. While the application is illustrated in connection with a boxing environment, it is not to be limited to this field exclusively, since the invention has equal applicability to any athletic contest such as wrestling, diving, precision figure skating, where judges make point awards at the conclusion of the event.

In the instance of boxing, for example, each of the three officials normally assigned to the contest privately records his decision at the end of each round, and at the end of the event the officials' cards are given to the referee who announces the winner.

Under this arrangement the audience has no real knowledge of who is winning the contest as it progresses. Also, it is a rare instance when the audience ever learns the round-by-round score given by an official.

In addition to being disadvantageous from the standpoint of not permitting the audience to be aware of the score as the event progresses, present day judging methods leave something to be desired in that the judges are oftentimes influenced, although perhaps unintentionally, by crowd reaction and crowd noise.

In this regard, an official sometimes unintentionally will judge the effect of a punch by the crowd noise rather than by the severity of the blow as should be the case.

A still further disadvantage of present day methods of scoring contests of the type herein being discussed exists with respect to the fact that once the contest is judged, by the official's present methods, there is no valuable residual scoring information that could be issued to establish a more accurate rating of fighters, for example.

2. Description of the Prior Art

Two attempts of solving the above difficulties have been made to the best of Applicant's knowledge.

In Amory U.S. Pat. No. 1,922,517 there was provided an apparatus for scoring bouts that consisted essentially of a reduced summary of the judge's decision round by round. However, in the Amory Patent, there was no mechanism to indicate the progress of the score during the round, with the decision being posted, in effect, after the fact when the round had been completed.

Similarly, in Mesi et al U.S. Pat. No. 2,669,389 there was provided in addition to the judge's individual scores, cumulative point totals that were summarized on the scoreboard visible to the audience. Here again, however, there is no provision made for informing the audience of the score progressively during each round, for example.

Additionally, neither of these patents disclose any apparatus or method for insulating the official from the influence of crowd noise and reaction.

SUMMARY OF THE INVENTION

Applicant has provided, as will hereinafter be described, a method and apparatus for informing the audience of the actual score of the bout or event at any point in time during the same. He has also, as will hereinafter be described, provided an apparatus for insulat-

ing the judging official from the influence of crowd noise and reaction.

Finally, he has, by providing this progressively scoring arrangement, established a method by which the efficiency of not only the participants but also the officials may be evaluated following the contest.

These and other objects of the invention will become more apparent upon a reading of the following brief specification, considered and interpreted in view of the accompanying drawings.

OF THE DRAWINGS

FIG. 1 is a perspective view schematically illustrating the invention in a boxing environment.

FIG. 2 is a schematic view partially broken away and in section of the master console.

FIG. 3 is a plan view showing the control unit for the master console.

FIG. 4 is a schematic view of the scoreboard.

FIG. 5 is a schematic view of the scoring mechanism used by each of the three officials.

FIG. 6 is a perspective view of the scoring booth.

FIG. 7 is a vertical section taken on the lines 7-7 of FIG. 6.

FIG. 8 is a vertical view looking at the rear of the scoring unit with one door thereof being in the open position.

FIG. 9 is a schematic view of a wiring diagram.

Referring now to the drawings and in particular to FIG. 1, the improved scoring mechanism includes a master console 10, a series of identical scoring booths 11, 12 and 13 that each have identical operating panels 14, 14 therein so that upon operation of the panel by the official, the points scored will be totaled by the master console 10 for ultimate display on a scoreboard 15, with the scoreboard 15 being located over the boxing ring 16, as shown in FIG. 1.

Referring now to FIG. 2 of the drawings for a more detailed description of the master console 10, it will be first noted that the same includes an upper cabinet portion 20 within which certain electrical components may be found, with the panel 20 being covered by a door unit 21 having openings 22, 23 (see FIG. 1) therein so that the operator seated in the unit may record the point totals visible through each opening 22, 23.

A table portion 25 is provided so as to receive a master control unit 26 that is used by the control operator for other purposes as will hereinafter be described.

With reference to the electrical components employed, it has been found preferable to provide some form of mechanism that will record a single point on the scoreboard only upon receiving a multiple number of pulses from the individual scoring units 14, 14. In practice, a three to one ratio has been employed so that, in effect, three points or pulses are required to be accumulated from one or more units 14, 14 before a single score or point is recorded on the scoreboard 15.

In practice, this could either be eliminated, or the number of pulses required to change the point total could be increased or decreased.

The electrical operation of the control unit 26 is schematically described in FIG. 9 of the drawings wherein S1, S2, and S3 schematically represent the official's switch for one particular fighter, with this switch corresponding to the switch 62 or 63 of FIG. 5 of the drawings. C1, C2, and C3 represent either the three officials' counters 31, 32, and 33 (FIG. 2) that are pro-

vided for one fighter or the counter-units 31a, 32a, and 33a that are provided for the other fighter.

In FIG. 2 and also in FIG. 9, SS1, SS2, and SS3 represent either the stepping switches 34, 35, and 36 provided for one fighter, or the stepping switches 34a, 35a, and 36a that are provided for the other fighter. A relay 37 and transformer 38 (FIG. 2) complete the physical hardware.

Each stepping switch is substantially identical to the remaining stepping switch, and the electrical operation of the unit, with reference to FIG. 9, is as follows.

Activating switch S1, S2, or S3 causes its counter C1, C2, or C3 to add one digit. Simultaneously the corresponding stepping switch coil is energized, causing that stepping switch SS1, SS2, or SS3 to advance one position.

Resistors R1a, R1b, R1c are wired in series on stepping switch SS1, as are R2a, R2b, and R2c on SS2, and R3a, R3b, and R3c on SS3. These three resistance circuits are wired in series. Since R1a through R3c are of equal value, the initial total resistance of this branch circuit is nine times R1a. Every time switch S1, S2, or S3 is activated, the advance of its stepping switch reduces the branch resistance by a value equal to one times R1a.

This circuit is electrically connected as one arm of a bridge with R4, R5, and R6. R5 and R6 are equal to each other in resistance. R4 is greater than six times R1a but less than seven times R1a. The bridge is normally unbalanced with R4 smaller than the switched arm. After any two resistors, R1a through R3c, are switched out of the arm, this is still true. Upon a third resistor being switched out, the resistance of the arm equals six times R1a which is less than R4. The bridge is out of balance the opposite way.

The silicon controlled rectifier is used as the bridge detector. When the resistance of the switched arm becomes less than R4, the bridge is unbalanced in a direction such that a trigger current is applied to the silicon controlled rectifier which energizes the scoreboard for one point and resets stepping switches SS1, SS2, and SS3. The circuit is now ready to count again.

One such circuit is required for each fighter.

The control unit 26 is not per se associated with the individual scoring units 14, 14 utilized by the officials, but rather serves to operate the scoreboard clock 15 in known fashion, with the toggle switches 50, 50, for example, activating that portion of the panel for the fighter whose name the same are associated with.

Round timer, horn, and clock control mechanisms are similarly provided in known fashion to control the scoreboard. The scoreboard per se is shown best in FIG. 4 wherein fighter panel units 55, 56 are provided with a series of bulbs that can be arranged in known manner to light up and give the score of the contestant at any particular point in time. Panels 55 and 56 thus represent cumulative point total display areas for each fighter.

Likewise, the panel 57 indicates the round, while the panels 58 and 58a are utilized for the purpose of showing the time remaining.

Horn 59 completes the components shown on the scoreboard, with the control cable 60 connecting the scoreboard with the master console 10 and the control unit 26, as shown schematically in FIG. 1 of the drawings.

In FIG. 5, the simple box-like control 14 is illustrated schematically as including a control cable 61 and a pair of toggle switches 62 and 63, with the cable 61 being fed into the console and with the switches 62 and 63 being used by the scorer to indicate a point for the respective contestant.

FIGS. 6 through 8 inclusive are directed to the enclosed scoring booths utilized by each official, and as shown in FIG. 7 this box-like configuration includes a viewing area 70, a platform 71 upon which the unit 14 may be received, a chair 72 and swinging doors 73, 73. Lights 74 merely indicate that the booth is in use, and the entire booth is sound-proof so as to insulate the scorer from the crowd reaction.

It has also been contemplated that to provide further insulation, the individual officials can be provided with headsets through which classical or other type of music can be played to serve as background music, thus completely freeing the official for concentration on the bout being judged.

Although not essential to the requirement of the basic unit just described, it has been discovered that audience participation can be enhanced if the audience is given some visible signal as to the progress of any given round in the bout.

In this regard, it is contemplated that the preferred form of the invention will include one or more light bulbs 81, 81 that are associated, for example, with the corner ring, as indicated in FIG. 1. By the use of appropriate electrical controls and connections indicated schematically by the line 72 in FIG. 1, these lights can be electrically associated with the scoreboard timing mechanism so that as a predetermined amount of time remains in the round, the lights will be activated.

Further and by use of known electrical connections, it is possible to signify a period of time even closer to the end of the round by causing the light to blink on and off as this time period approaches.

In use or operation of the improved scoring system, it will first be assumed that the scoring system is intended to be used in a boxing environment, and to this end the various components thereof are positioned around the boxing ring 16 as best shown in FIG. 1. Although only one face of the scoreboard 15 is shown in FIG. 1, it is obvious that it may be provided with four or more sides to inform all of the audience as to the status of the bout as it progresses.

Assuming that a boxing match is taking place within the confines of the boxing ring 16, the scorers will be confined in their respective booths 11, 12 and 13, with a ringside view of the participants' activities being viewed through the glass or transparent panel 70.

Using the scoring unit 14 and operating one toggle switch with each hand, the scorer, upon moving the selected switch, will indicate a point for the fighter to whom he is awarding the same. A cumulative total of the points that are recorded upon each switching of the toggle by an official are collected in the console 20 and stepped down as previously stated, so that upon reception, in this form of the invention, of three pulse rates, a point will be awarded to the fighter, with this point visibly appearing on either panel 55 or 56 of FIG. 4 as the case may be.

At the end of each round, the person handling the master console 20 will view through windows 22 and 23 the board totals awarded to each fighter by each judge, with this information preferably being recorded for

post-fight analysis of not only the participants but the officials.

It will be seen from the foregoing how there has been provided a new and improved type of scoring apparatus for athletic or other contests involving an arbitrary award of points scored by an official upon the accomplishment of an achievement.

It has been shown how this apparatus in the field of boxing, for instance, materially enhances the spectator participation because of the fact that each spectator at each instance in the fight knows exactly what the score is.

It has been further shown how the collecting of this information at the end of the round can serve as a basis for post-fight analysis both as to contestant and official.

Finally, it has been shown how the use of insulated booths provides the official with an immunity from influence by crowd noise and the like so that a judgment can be rendered without regard to crowd noise or reaction.

While a full and complete description of the invention has been set forth in accordance with the dictates of the Patent Statutes, it is to be understood that the invention is not intended to be limited to the specific form herein shown. In this regard and as has been indicated, the number of point pulses required to effectuate a point change on the scoreboard may be raised or lowered without effecting the operation of the system.

Accordingly, modifications of the invention may be resorted to without departing from the spirit hereof or the scope of the appended claims.

What is claimed is:

1. A scoring system for judging contests of the character described, wherein two or more contestants are involved, comprising;

A. a plurality of judging stations, each of which

1. is located in close proximity to the contest;

2. has a number of identical, non-variable, single point awarding mechanisms therein, with the number of said point awarding mechanisms corresponding to the number of contestants whereby the judging official at each judging station can progressively award single points to any contestant in accordance with their performance;

B. a scoreboard having cumulative point total display areas for each contestant;

C. a master console remote from and electrically interposed between said judging stations and said scoreboard; said master console including means for continuously and progressively tabulating the sum point total of all judging officials for each contestant and reflecting it as a single point total for each contestant whereby the audience is progressively always aware of the sum total of points any given contentant has accumulated at any given point in the contest; and

D. the sum point totals of each official being progressively observable on said master console by the op-

erator thereof.

2. The scoring system of claim 1 characterized by the fact that said scoring system is used for judging a boxing contest, with three judging stations being located in close proximity to a boxing ring and with two non-variable, single point awarding mechanisms being provided in each said judging station.

3. The device of claim 2 further characterized by the fact that said judging stations are insulated against crowd noise so that the judge therein is contained in an isolation booth.

4. The boxing system of claim 3 further characterized by the fact that music is introduced within the confines of the isolation booth during the progress of the bout whereas the judge therein is insulated from crowd noise.

5. The boxing system of claim 3 further characterized by the fact that said scoreboard has timing means thereon, with audience-viewable indicating means being controlled by the timing means; said indicating means changing in appearance to give a pre-selected time-remaining signal.

6. A scoring system for judging contests of the character described, wherein two or more contestants are involved, comprising;

A. at least one judging station that

1. is located in close proximity to the contest;

2. has a number of identical, point awarding mechanisms therein, with the number of said point awarding mechanisms corresponding to the number of contestants whereby the judging official at each judging station can progressively award points to any contestant in accordance with their performance;

B. a scoreboard having cumulative point total display areas for each contestant; and

C. means for accumulating a pre-selected total of individual point awards from said judging stations before reflecting a point total change on said scoreboard.

7. A scoring system for boxing bouts, comprising;

A. a boxing ring;

B. a plurality of judging stations, each disposed adjacent the periphery of the boxing ring;

C. identical, point awarding mechanisms located within in such judging station;

D. a master console;

E. means for transmitting the points awarded by each point awarding mechanism to a separate locale on said master console where the same may be separately recorded;

F. a scoreboard having a cumulative point display area for each boxer;

G. means for accumulating a pre-selected total of individual point awards from said judging stations and reflecting a point total change on the scoreboard upon accumulation of a pre-selected total of said point awards.

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