No. 887,807. PATENTED MAY 19, 1908.

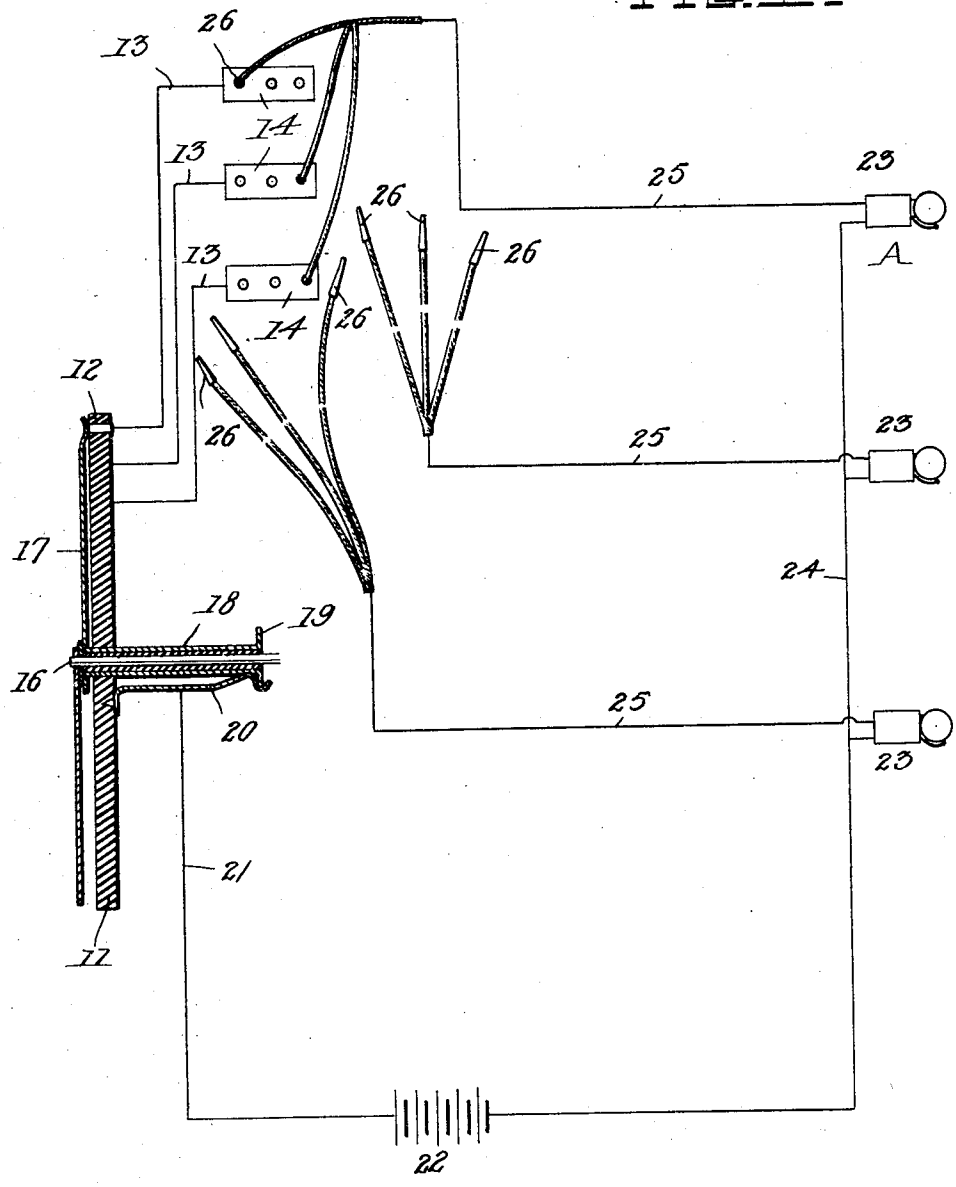
J. E. HUGHES.

AUTOMATIC CLASS CALL.

APPLICATION FILED APR. 5, 1907.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

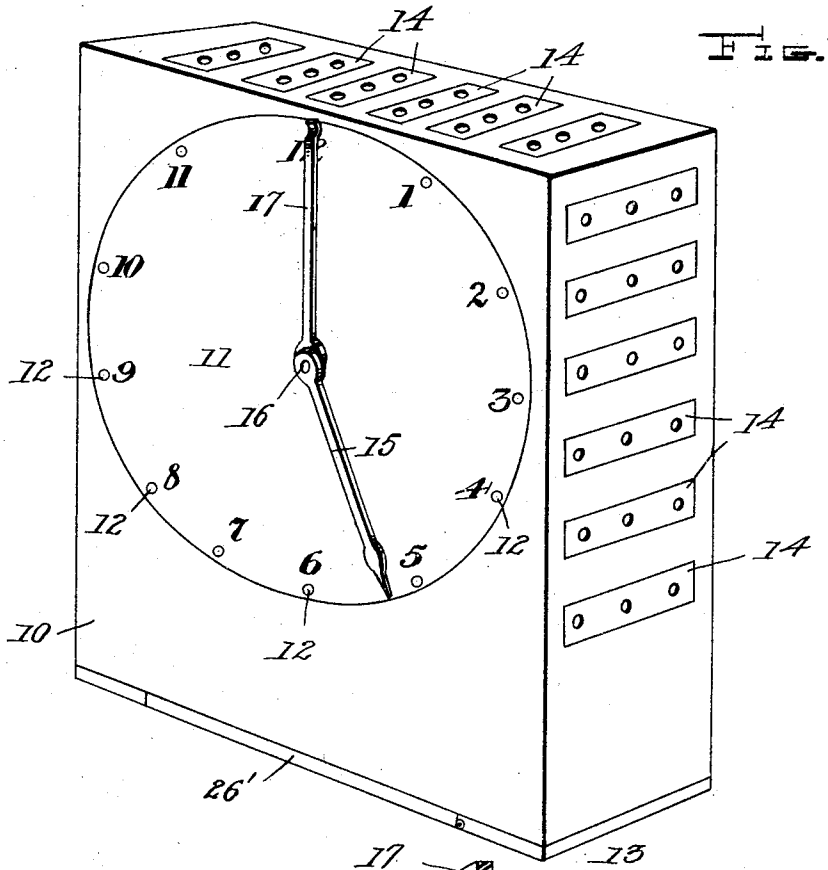
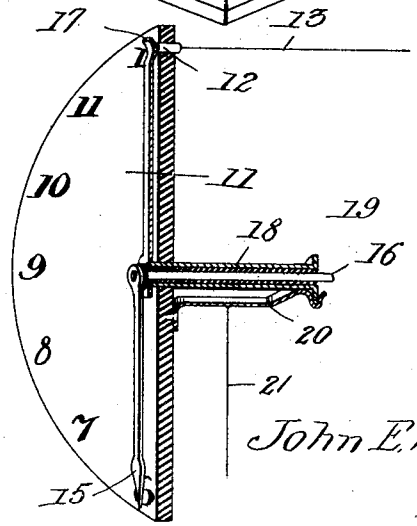


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN E. HUGHES, OF MINNEAPOLIS, KANSAS.

AUTOMATIC CLASS-CALL.

No. 887,807. Specification of Letters Patent. Patented May 19, 1908.

Application filed April 5, 1907. Serial No. 366,574.

To all whom it may concern:

Be it known that I, JOHN E. HUGHES, a citizen of the United States, residing at Minneapolis, in the county of Ottawa and State of Kansas, have invented certain new and useful Improvements in Automatic Class-Calls, of which the following is a specification.

This invention relates to new and useful improvements in indicators, and has relation more particularly to that class of indicators operated electrically and controlled by a clock mechanism.

It is the primary object of this invention to provide a novel device of this character for use in schools, whereby the various periods of study may be announced in the different class rooms.

It is also an object of the invention to provide a novel device of this kind wherein the signals may be given in all of the class rooms simultaneously; or in a certain number of the rooms independent of the other; or whereby signals may be given in the various class rooms at different times.

Furthermore, it is an object of the present invention to provide a novel device of this description which will be simple in construction, efficient and advantageous in practice, and economical to manufacture.

With the above and other objects in view, the invention consists in the novel arrangement and conbination of parts, a detailed description of which being hereto attached.

In describing this invention in detail, reference will be had to the accompanying drawings, forming part of this specification, wherein like characters of reference denote corresponding parts in the several views, and in which:

Figure 1 is a diagrammatic view illustrating the system of the present invention; Fig. 2 is a view in perspective of the controlling clock of the invention, the wiring being shown in dotted lines; Fig. 3 is a view partly in perspective and partly in section of the clock dial and the contacting hand thereof, showing in detail the manner in which the electrical circuit is completed.

For the convenience of description, the invention is shown as applied to three class rooms, although it is to be understood that that number in practice may be multiplied to suit the requirements of practice. It is also to be stated that the drawings illustrate, and the description shows the invention as being operative hourly. It is also to be stated here that this time of operation may be changed to suit the necessary requirements. This arrangement is also made to simplify the description.

In the drawings, 10 denotes a casing of any ordinary or preferred structure in which is mounted the clock dial 11, and the suitable mechanism for operating the hands thereof. The dial 11 is made preferably of a non-conductive material, and is provided adjacent its periphery at the hour indications with perforations 12, through which pass the ends of the wires 13. These wires lead to the switch boards 14, of ordinary construction, a detail thereof being, it is thought, unnecessary, as their specific arrangement forms no essential feature of this invention. The switch boards equal in number the number of contacting points on the clock dial. In the present instance there are twelve of these switch boards, as there are twelve points of contact on the dial, namely, at the hour indications. Each of the switch boards is provided with sockets equal in number to the class rooms (in the present instance, three). Each contact point has its individual switch board, as, it is believed, is clearly apparent on the drawings.

The minute hand 15 of the clock is mounted in the ordinary manner on the spindle 16. In lieu of the ordinary hour hand, a hand 17 is employed, said hand being of a conductive material and is secured to the sleeve 18 which surrounds the spindle 16, as is in ordinary clock mechanism. It is to be stated that this hand 17 is suitably insulated from the sleeve 18. Bearing on the flange 19 at the central end of the hand 17, is a spring 20, suitably secured to dial 11. Connected to the spring through the dial, from the back, is a wire 21 which leads to the electrical source 22. In each of the various class rooms is located a bell 23 or other annunciator. This bell is in communication with the electrical source 22, through the medium of the wire 24, and is also in communication with a wire 25, having on one of its ends a plurality of plugs 26. These plugs are adapted to engage sockets in the various switch boards. These plugs 26 are in number equal to the periods of study desired in the class room. Thus it can be seen that should the bell in room A have to be rung at one, three and four o'clock, a plug

of the wire 25, is inserted in the switch board in communication with the contact point at the one o'clock indication on the dial, a second plug at the three o'clock indication and a third plug at the four o'clock indication. It is thought that it will be readily understood how the program of the various class rooms can be set for the day, and how said program may be readily changed.

While in the aforesaid description the term "contact" has been employed, it is to be stated that the expression "terminal" is also appropriate. The switch boards may be positioned at any desired location, but it has been found in practice that they should be positioned on the casing 10 of the clock.

It is to be observed that the electrical source 22 is located within the casing 10. The casing is provided with a door 26', in its lower portion, in order that access can be had to the interior of the casing for the purpose of inspection, and permit of such repairs as may be necessary.

What I claim is:

In combination, a casing, a clock mechanism carried thereby, a dial therefor, hands acting in conjunction with the dial, contacts carried by the dial and arranged in the path of movement of the hands, said contacts being arranged adjacent the peripheral edge of the dial, individual switch-boards for each of said contacts, said switch-boards having sockets, the switch-boards being arranged in communication with each of the contacts, an electrical source, connections between the source and the switch-boards, said connections having plugs and arranged for insertion in said sockets, a spring carried by the dial and arranged to hold the hands yieldably in engagement with the dial and connections between the source and the spring.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN E. HUGHES.

Witnesses:

S. C. PERRY,

S. P. HUGHES.