M. D. COMPTON.

ELECTRIC STOCK QUOTATION BOARD.

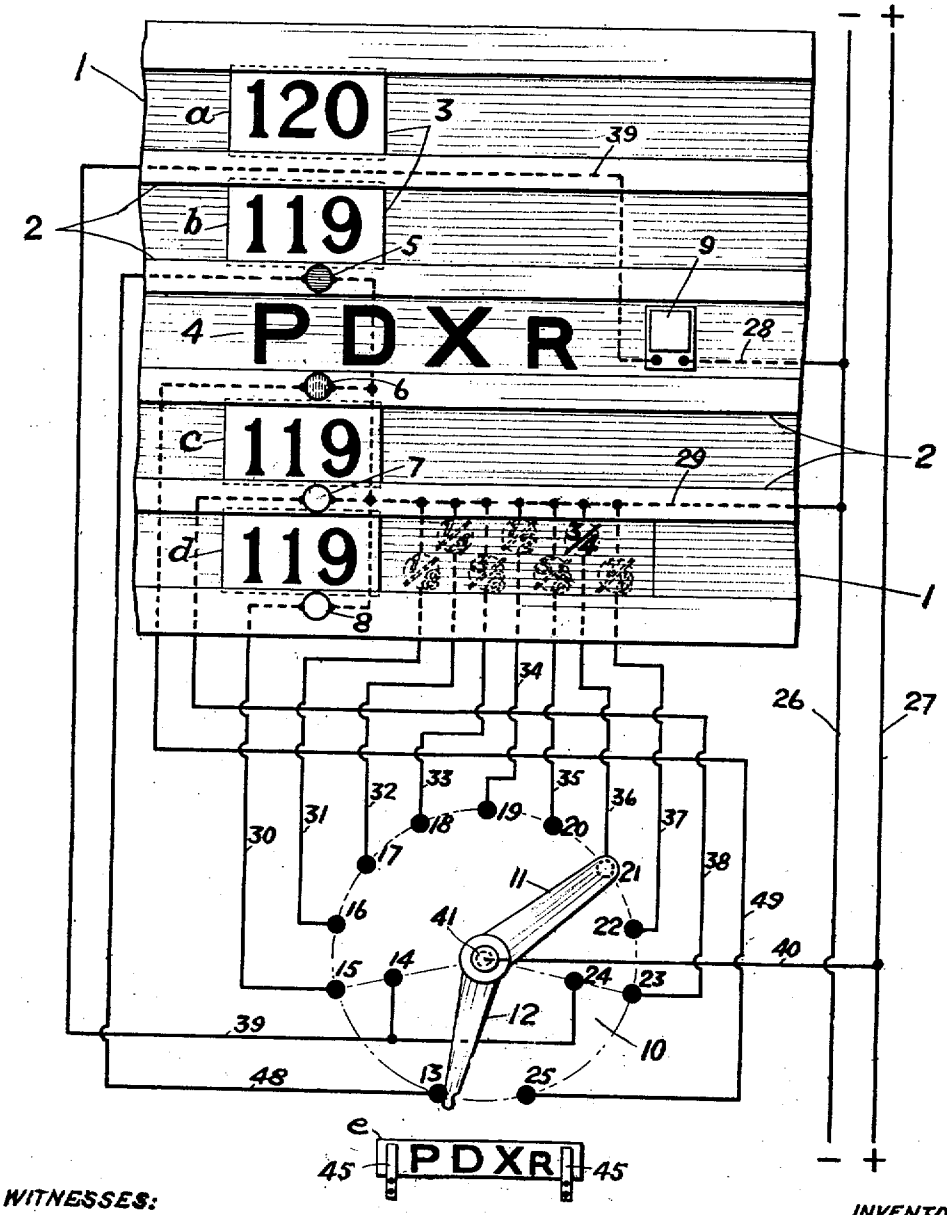
APPLICATION FILED MAR. 19, 1910.

1,017,740.

Patented Feb. 20, 1912.

2 SHEETS—SHEET 1.

FIG. 1.



WITNESSES:

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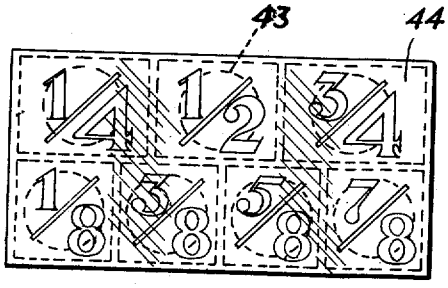

FIG. 2.

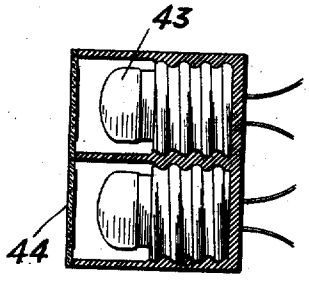

FIG. 3.

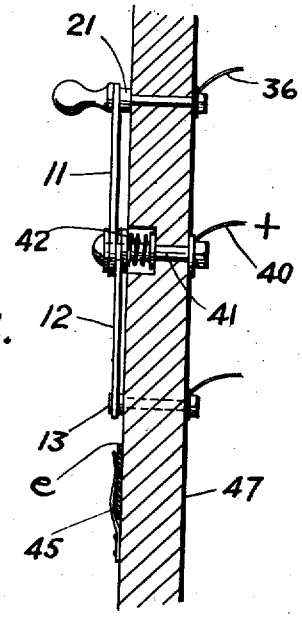

FIG. 4.

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ELECTRIC STOCK-QUOTATION BOARD.

1,017,740. Specification of Letters Patent. Patented Feb. 20, 1912.

Application filed March 19, 1910. Serial No. 550,542.

To all whom it may concern:

Be it known that I, MELVIN D. COMPTON, a citizen of the United States, residing at the city of New York, in the county of New York and State of New York, have invented a certain new and useful Electric Stock-Quotation Board, of which the following is a specification.

Objects of the present invention are to provide a stock quotation display board for the use of stock brokers and others, which will more perfectly and quickly indicate to the eye of the observer the condition of the market; or in other words, the price and fluctuation in price of stocks and bonds.

Another object of the invention is to avoid the noise and disturbance incident to the reading of quotations by one operator to the boy or boys who arrange the numbers on the stock-board.

Another object of the invention is to reduce the number of boys and the amount of labor required for displaying stock quotations on a board.

Another object of the invention is the accuracy of the display of the quotations on the board.

The invention will be claimed at the end hereof, but will first be described in connection with the embodiment chosen from various embodiments for the purpose of description and illustrated in the accompanying drawings, in which—

Figure 1, is a diagrammatic view illustrating an electric stock-board and its connections embodying features of the invention. Fig. 2, is an enlarged view of a detail of construction. Fig. 3, is a sectional view of Fig. 2, and Fig. 4, is a sectional view illustrating other details of construction.

In the drawings there is illustrated, at 1, so much of a stock-board as is frequently used in connection with the quotations of one stock. It will, of course, be understood that the board may be as large as required so as to cover any number of stocks, but there is illustrated in the drawings and I will describe so much of the apparatus as has to do with one stock, and from this description it will be understood that by duplication of the apparatus shown, quotations may be given for any number of stocks.

The board 1 is provided with rails 2, or other means for detachably holding and displaying cards 3, which show a quotation for stock. The board also has displayed upon it, as at 4, the name of the stock to which the quotation applies. The cards, at *a* and *b*, indicate the high and low prices of yesterday and the card at *c*, indicates the opening price of to-day. The card *d* is subject to manual change from time to time as the price fluctuates. On the board there is a lamp 5 and also a lamp 6 which may be different colors and placed above and below the name of the stock. When the lamp 5 is lighted it means that the stock is rising and when the lamp 6 is lighted it means that the stock is falling. By making the lamps of different colors it is possible at a glance to tell the trend of the market. On the board there are also lamps marked 1/8, 1/4, 3/8, 1/2, 5/8, 3/4 and 7/8, which are arranged in proximity with the card *d*, and when lighted they respectively show in connection with the card *d*, the price of the last sale. On the board there are two other lamps 7 and 8 arranged in proximity with the card *d* and they, as well as the buzzer 9 constitute signals to the operator at the board, whose duty it is to change the card *d* as may be required in order to show the price of the last sale, as will be hereinafter described.

There is a switch 10 which may be coupled as in Fig. 4, so as to show to which stock it appertains. The switches for the various stocks can be, as has been said, arranged on a board and the board can be under the control of an operator, who obtains his information from the tape or from any other source of information. Each switch 10 comprises an operating handle 11 and a following member 12. There are switch contacts 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, and 25, arranged so as to contact with the arms 11 and 12, as the latter are moved and in a manner and order that will be presently described. The contacts 13 and 25 serve to limit the range of travel of the arm 12. 26 and 27 indicate a source of current, or circuit from such source.

For the sake of description it may be assumed that 26 is negative. One side of all of the translating devices is connected to the negative conductor and the other sides of all the translating devices are connected to the various contacts of the switch and thence by the arms of the switch to the other side of the circuit, as will be described. The negative side of the buzzer 9 is connected to the conductor 26 by the lead 28. The negative side of each of the lamps is connected to the

conductor 26 by the conductor 29 and its various branches. The conductor 30 connects the contact 15 with the positive side of the lamp 8. The conductor 31 connects the contact 16 with the positive side of the lamp 1/8. The conductor 32 connects the contact 17 with the positive side of the lamp 1/4. The conductor 33 connects the contact 18 with the positive side of the lamp 3/8. The conductor 34 connects the contact 19 with the positive side of the lamp 1/2. The conductor 35 connects the contact 20 with the positive side of the lamp 5/8. The conductor 36 connects the contact 21 with the positive side of the lamp 3/4. The conductor 37 connects the contact 22 with the positive side of the lamp 7/8. The conductor 38 connects the contact 23 with the positive side of the lamp 7. The conductor 39, by two branches, connects the contacts 14 and 24 with the positive side of the buzzer. The arms 11 and 12 are connected with the conductor 27 by means of the conductor 40. At this point it may be said that the arms 11 and 12 are interconnected so that manual movement of the arm 11 causes movement of the arm 12. This is accomplished as shown in Fig. 4 by pivotally mounting both arms on the same stud 41 and providing a spring 42 which holds them in frictional engagement.

43 are lamps mounted in suitable compartments in the stock-board and they may have in front of them transparent or opaque coverings as 44, upon which the required numbers or colors can be applied.

45 are brackets or clips applied to the switchboard 47 and they serve to hold the card *e*.

For the sake of explanation it may be said that the price of the stock is rising above 119. The switch operator is therefore moving the switch arm 11 in a clockwise direction. This movement has brought the arm 12 into contact with the contact 13 and holds it in that position, thus there is a circuit by 40, through 12, through 48 to the positive side of the lamp 5, thence through the conductor 29 to the other side 26 of the circuit. The lamp 5 therefore remains lighted and indicates that the price of the stock has been rising. As the operator at the switchboard moves the arm 11 in the direction indicated over the contacts from 16 to 21, the circuits of the various lamps from 1/8 to 3/4 have been successively closed and the lamps therefore lighted showing the rise of the stock by eighths. Each of these circuits has been indicated but if I trace one of them, the others will perhaps be more easily understood. As shown in the drawing the circuit is from 40 by 11 through 36, through lamp 3/4 by 29 to 26.

Assuming now that the price of the stock advanced 1/8 the operator will move the switch arm 11 onto the contact 22, thus lighting the lamp 7/8 by including it in circuit. We will assume now that the stock advances another eighth, that is to 120. The operator at the switchboard turns the switch arm 11 onto the contacts 23 and 24. In this position there is a circuit by 39 through the buzzer 9 by 28, and also a circuit by 38 through lamp 7. The lighting of the lamp 7 and the sound of the buzzer advises the operator at the board that he must change the card *d* from 119 to 120.

Assuming now that the price falls, the arm 11 is moved in a reverse direction and at the beginning of this movement the arm 12 is moved by frictional engagement with the arm 11 from the contact 13 to the contact 25. In the latter position the circuit is closed by 40, 12, 25, 49, lamp 6 and conductor 29. The lighting of the lamp 6 shows that the price of the stock is falling, just as the lamp 5 when lighted that the price of the stock was rising. Continued movement of the arm 11 in this direction indicates by eighths, that is by lighting the lamps marked eighths, the fall of the stock. In the extreme position of the arm 11 it rests on the contacts 14 and 15 and establishes two circuits, one by 39 through the buzzer 9 to 28, and the other by 15, 30, lamp 8 and 29. Thus the buzzer sounds and the lamp glows, indicating to the operator at the board that he must replace the card *d* by one of lower denomination. In the instance described he must replace the card 120 by one showing 119.

From the foregoing description it is evident that parts of the described apparatus may be used without other parts and that the deposition of the various lights and cards is subject to wide variation.

What I claim is:

1. An electrical stock-board comprising the combination of a board having upon it the name of a stock, quotation cards indicating digits, means for detachably applying the quotation cards to the board, translucent plates having fractional quotations and having lamps for illuminating them and arranged to the right of one of the cards, lamps spaced above and below the name of the stock to indicate whether it is rising or falling, and a switch and electrical connections for successively lighting and extinguishing the first mentioned lights to show fractional changes and for continuing the illumination of one or the other of the last mentioned lamps to show whether the fractional changes are upward or downward.

2. An electrical stock-board comprising the combination of a board having upon it the name of a stock, quotation cards indicating digits, means for detachably applying the quotation cards to the board, trans-

lucent plates having fractional quotations and having lamps for illuminating them and arranged to the right of one of the cards, lamps spaced above and below the name of the stock to indicate whether it is rising or falling, a switch and electrical connections for successively lighting and extinguishing the first mentioned lights to show fractional changes and for continuing the illumination of one or the other of the last mentioned lamps to show whether the fractional changes are upward or downward, and signaling means arranged on the board and having electrical connections to the switch for signaling to the operator upon the completion of a movement in either direction of the switch whereby he may be advised to change a quotation card.

In testimony whereof I have hereunto signed my name.

MELVIN D. COMPTON.

Witnesses:

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