No. 771,962. PATENTED OCT. 11, 1904.

E. J. ATTERBURY.

SIGNAL DEVICE.

APPLICATION FILED NOV. 18, 1903.

NO MODEL.

Fig. 1

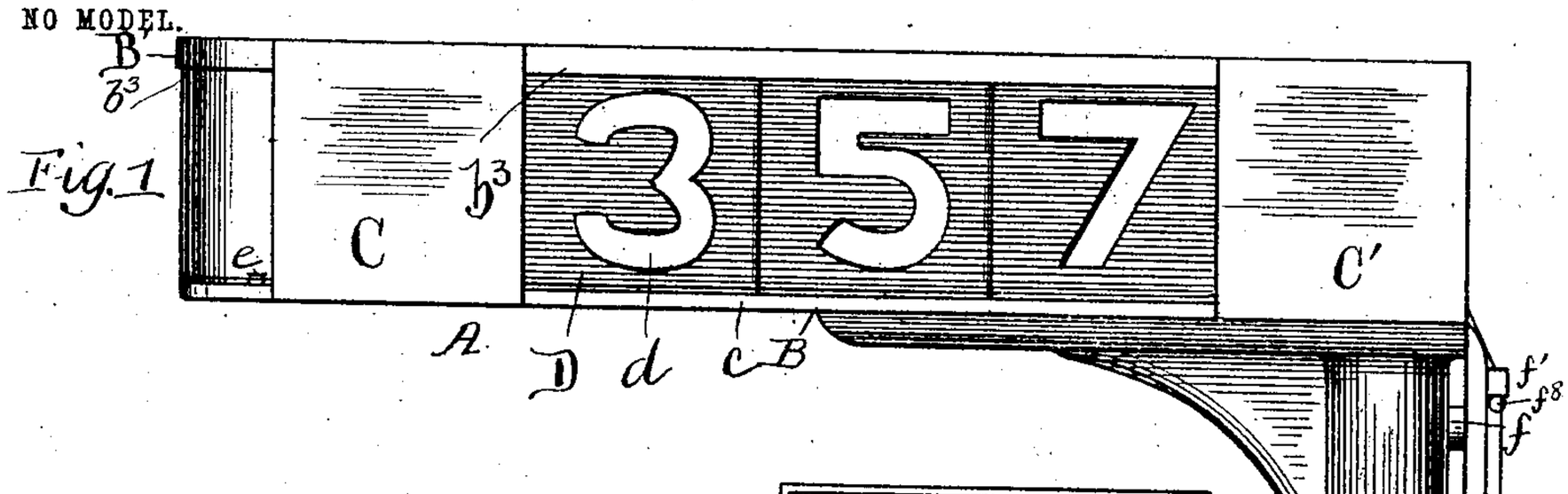


Fig. 2.

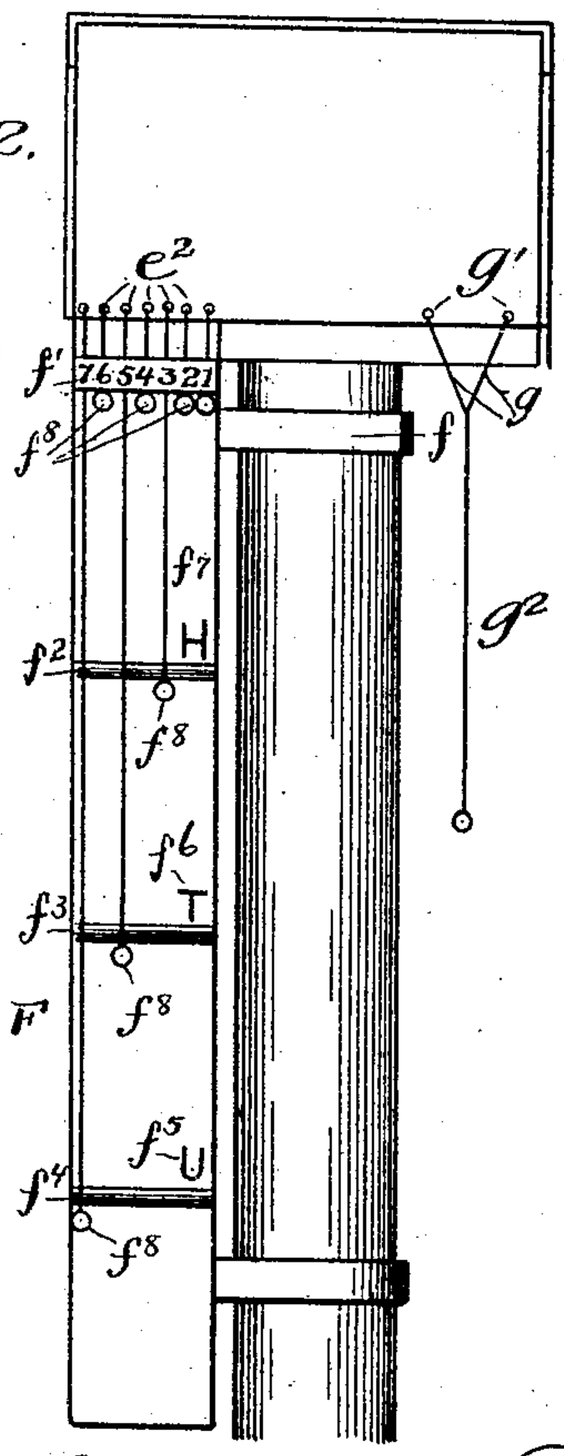


Fig. 3.

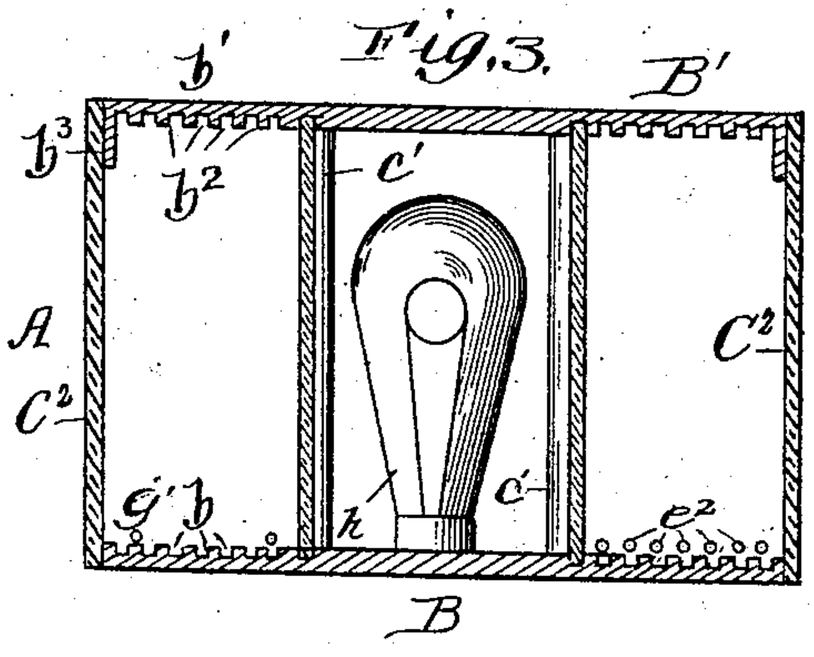
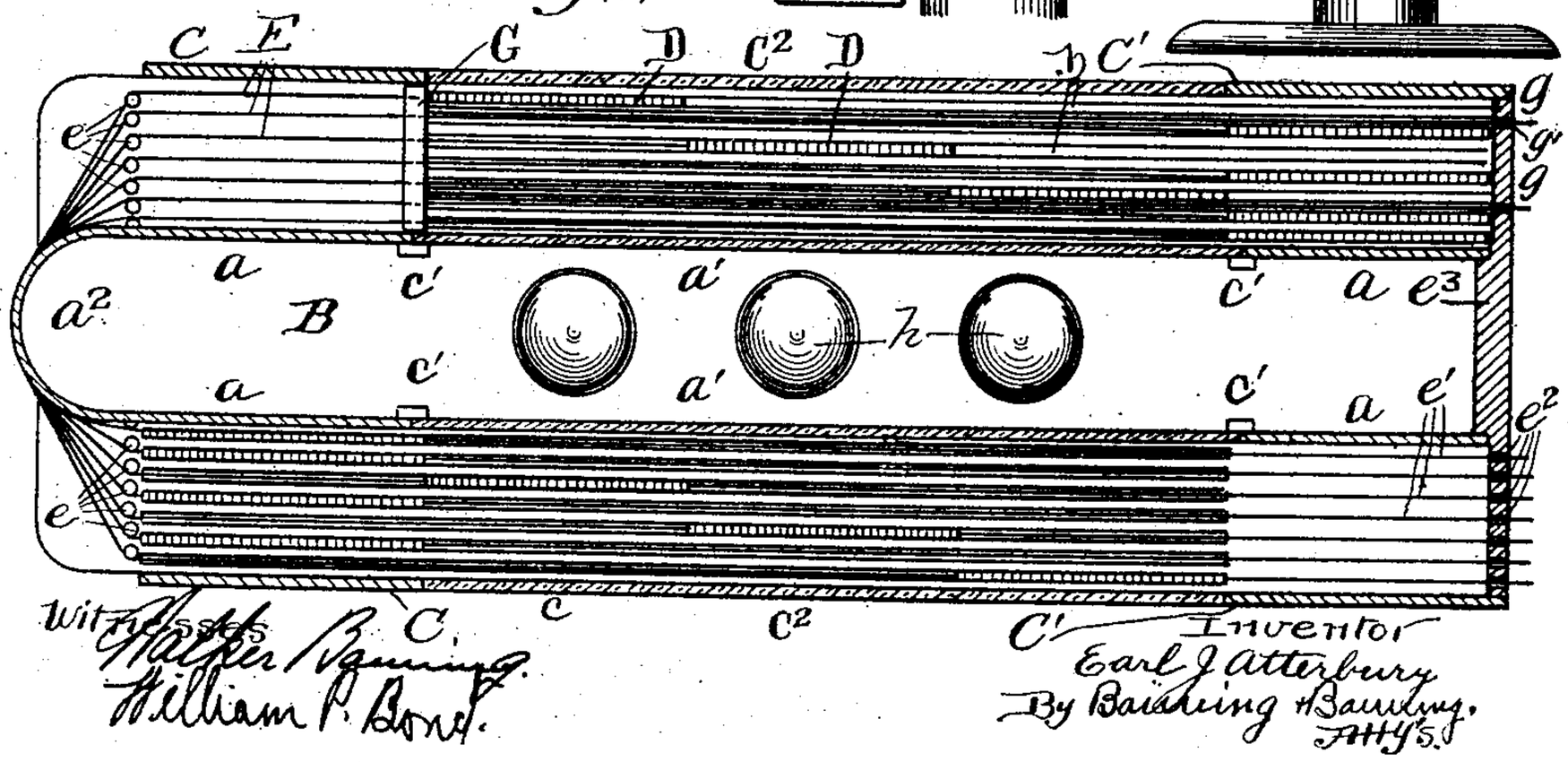


Fig. 4.



Witnesses:
Walter B. Cumings.
William P. Bond.

Inventor
Earl J. Atterbury
By Baldwin & Bawling.
Attys.

No. 771,962. Patented October 11, 1904.

UNITED STATES PATENT OFFICE.

EARL J. ATTERBURY, OF CHICAGO, ILLINOIS.

SIGNAL DEVICE.

SPECIFICATION forming part of Letters Patent No. 771,962, dated October 11, 1904.

Application filed November 18, 1903. Serial No. 181,704. (No model.)

To all whom it may concern:

Be it known that I, EARL J. ATTERBURY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Signal Devices, of which the following is a specification.

This invention is primarily intended for use as a carriage-call or to summon carriages by number at the close of a reception, entertainment, or other function at which a large number of carriages are in attendance.

It is well known that where the number of carriages is great confusion and disorder often result in the attempt to call the carriages by number and that such calling is often practically impossible on account of the noise and distance at which some of the carriages are stationed, and the present invention is intended to overcome this difficulty by providing an apparatus by which the numbers of the carriages will be displayed, so that the drivers of carriages stationed at a distance may be readily informed when their carriages are wanted.

The invention is adapted for use either by day or by night and may be constructed of any size which will be convenient for the use intended, although preferably the device is constructed of a size which will enable the numbers displayed to be seen at a considerable distance.

The invention consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings illustrating the invention, Figure 1 is a side elevation of the entire device, showing a number displayed; Fig. 2, a rear end elevation of the device, showing the support-upright broken off; Fig. 3, a cross-sectional view of the illuminating-box, and Fig. 4 a sectional plan view of the illuminating-box.

The device is constructed to have an inclosed box A, supported upon an upright A′ of any suitable formation, and the box is constructed to have side walls *a*, having therein sections of glass or other translucent material *a′*, and the outer end of the box is constructed to have a curved end wall a^2. The bottom of the box B is constructed to project laterally a considerable distance beyond the side walls and, as shown, is provided with a series of grooves or channels *b* on each side exterior of the side walls, and within said grooves or channels the signal numbers or letters are adapted to slide. The box is provided with a top B′ of substantially the same width as the bottom, and, like the bottom, it has laterally-projecting portions *b′*, also provided with grooves or channels b^2, parallel and in vertical alinement with the channels in the bottom, and the two sets of channels form guides or runways for the number-plates hereinafter described. The top, as shown, is provided around its edge with depending flanges b^3, which better serve to protect the guideways thereunder, although the top may be constructed in any other suitable manner. Near the ends of the box are side portions or plates C and C′, which extend from top to bottom of the box and form housings for the number-plates when the same are not in use, and between the housings is left an open space *c*, protected by glass sides C^2, and said space is of sufficient extent, as shown, for the display of three adjoining number-plates, although a greater or less number can be displayed, if so desired. As shown, the top and bottom of the box are held together by means of uprights *c′*, spaced at suitable intervals, although the box may be held together in any other suitable and well-known manner.

Within the grooves or channels are located the number-plates D, which, as shown, are seven in number, having thereon numerals from "1" to "7," although the number of plates may be increased to display all the numerals from "0" to "9" without in any way changing the character of the apparatus. Each of the number-plates is constructed of opaque material, such as sheet-iron, having cut therein a numeral *d*, through which the light from the interior of the box is enabled to penetrate. The device is provided with two sets of corresponding numerals, one on each side of the inclosed box, and said sets of numerals are adapted to operate in unison,

so that the same number will be simultaneously displayed on both sides of the box to enable the numeral to be seen from either direction. The two sets of slots are provided corresponding in number to the number of the plates, and, as shown, in each instance the highest number-plate is located in the outer groove and the lowest number-plate is located in the inner groove.

The corresponding number-plates in the two sets are connected together by wires or cords E, seven in number, as shown, and said cords are adapted to simultaneously move the corresponding number-plates in the oppositely-disposed grooves or channels. Said cords are carried around two sets of pulleys on rollers e on opposite sides of the inclosed box, and the cords or wires have their free ends e' carried through holes e^2 in the inner end section e^3 of the box, so that the end of each of the cords may be pulled to simultaneously operate the two number-plates carried by said cord. As shown, the numerals are normally held retracted within the housings on opposite sides of the box, and the numerals on one side are normally held within the outer housing, while those on the opposite side are normally held within the inner housing, so that as one of the cords—as, for instance, the cord controlling the number-plates 3—is pulled one of said plates will be advanced toward the outer end of the box and into the open space on one side thereof, while the corresponding number-plate will be likewise retracted toward the inner end of the box, which arrangement is necessary in order that the number displayed on opposite sides of the box may be properly read and not stand in inverse position, since in each case the first numeral of the number to be displayed must appear on the left-hand side in order to read correctly.

The device is provided with an upright indicator-board F, which is secured to the upright by means of strap-irons f or in any other suitable manner, and said indicator-board is provided near its top with an indicator-block f', through which the several controlling cords or wires pass, and said indicator-block is provided with numerals corresponding to the numerals on the plates, being provided with numerals from "1" to "7," as shown, so that the operator will be enabled to tell which of the cords to pull in order to display the intended numeral. The indicator-board is likewise provided with marks or ridges f^2, f^3, and f^4, suitably spaced to indicate the distance which the several cords must be pulled in order to assume the position intended for units tens hundreds, and said marks or ridges are provided with indicating-letters f^5, f^6, and f^7 to indicate units, tens, and hundreds. In order to prevent the displacement of the cords, each one is provided on its end with a ball or handle f^8, which balls or handles prevent the cords from being drawn through the indicator-block and at the same time enable the cords to be more readily grasped.

On the side of the box opposite to that from which the operating-cords hang down is a retracting-block G, which is adapted to travel in the grooves on that side of the box, and said block is provided with retracting-cords g, which pass through holes g' in the rear of the box, and said cords are united into a single cord g^2 to enable their more easy operation. Within the box, as shown, are a series of electric lights h, which serve to illuminate the box and shine through the openings in the letters when the same are in position, although it is obvious that gas or other source of illumination may be employed in cases where it is impracticable to use electricity.

The operation of the device is as follows: We will assume that it is necessary to display the number "357." The wire or cord controlling the number "3" will be grasped by the operator and pulled down to the first indicating mark or ridge lettered H, which causes the two number-plates 3 to be drawn out to cover the left-hand third of the illuminated space and assume the position intended for hundreds. The cord controlling the number-plate 5 will next be pulled down to the mark or ridge T, which causes the numeral to occupy the middle space reserved for tens, and the numeral-plates 5 on both sides of the box will assume positions opposite to each other. The cord controlling the numeral-plate 7 will then be pulled down to the farthest position, (indicated by the letter U,) which causes the corresponding numeral-plates to occupy the positions intended for units on opposite sides of the box, being in each case the right-hand position looking toward the box. After the three plates have been drawn out they will entirely fill the open space and the light within the box will be entirely obscured except by the open portions of the numeral-plates, which enables the number "357" to be easily read at a great distance in both directions. When it is desirable to change the number displayed, the retracting-cord will be pulled, which draws back the retracting-block against the number-plates on one side of the box, and since the numbers are connected on opposite sides of the box all of the numeral number-plates will be simultaneously drawn back into their respective housings preparatory to the arranging of a different number.

The device has been described as a carriage-call; but it is plain that it may be used for other purposes in which it is desirable to display a series of letters or numerals and frequently change the same. The device will be found especially suitable for advertising purposes, and in place of the numeral-plates a series of plates having cut therein entire words

or phrases or pictures may be employed and words and sentences spelled out without in any way changing the character of the invention.

The device has hitherto been described as an illuminated box; but it is obvious that when used in day-time the source of illumination may be dispensed with and the box and numeral-plates made of contrasting colors, so that those portions of the box which are displayed through the open numerals may be seen in the same manner as though light were projected therethrough.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the class described, the combination of a box, two series of numeral-plates on opposite sides of the box having corresponding numerals cut therein to display the sides of the box therethrough, guideways within which said numeral-plates are adapted to travel, continuous cords for corresponding numeral-plates adapted to simultaneously draw forward the numeral-plate on one side of the box and draw back the corresponding numeral-plate on the opposite side of the box for simultaneously displaying the same numeral on opposite sides, substantially as described.

2. In a device of the class described, the combination of a box, two series of numeral-plates on opposite sides of the box having corresponding numerals cut therein to display the sides of the box therethrough, guideways within which said numeral-plates are adapted to travel, continuous cords for corresponding numeral-plates adapted to simultaneously draw forward the numeral-plate on one side of the box and draw back the corresponding numeral-plate on the opposite side of the box for simultaneously displaying the same numeral on opposite sides, and an indicator-board having therein marks indicating the position to which the cords should be pulled to cause the numeral-plates to assume a predetermined position, substantially as described.

3. In a device of the class described, the combination of a box, two series of numeral-plates on opposite sides of the box having corresponding numerals cut therein to display the sides of the box therethrough, guideways within which said numeral-plates are adapted to travel, continuous cords for corresponding numeral-plates adapted to simultaneously draw forward the numeral-plate on one side of the box and draw back the corresponding numeral-plate on the opposite side of the box for simultaneously displaying the same numeral on opposite sides, and an indicator-board having therein marks indicating units, tens and hundreds for indicating the position to which the cords controlling the numeral-plates should be drawn to cause the numeral-plates to assume the respective positions to display a number containing three numerals, substantially as described.

4. In a device of the class described, the combination of a box having light-transmitting side walls, a source of illumination within the box, guideways along the sides of the box, two series of numeral-plates having numerals cut therein to transmit light therethrough, on opposite sides of the box containing the same numerals, continuous cords for corresponding numeral-plates, housings on opposite sides of the box into which the numeral-plates are normally drawn, an indicator-board having thereon marks indicating the positions to which the respective cords should be drawn to cause the numeral-plates to assume predetermined positions, and a retracting-block adapted to be drawn back for retracting the numeral-plates into the housings after a number has been displayed, substantially as described.

EARL J. ATTERBURY.

Witnesses:
SAMUEL W. BANNING,
WALKER BANNING.