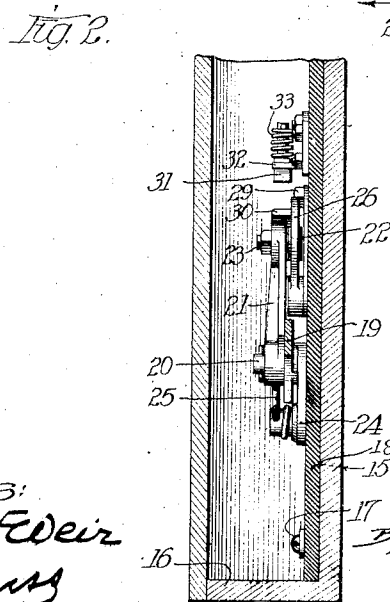
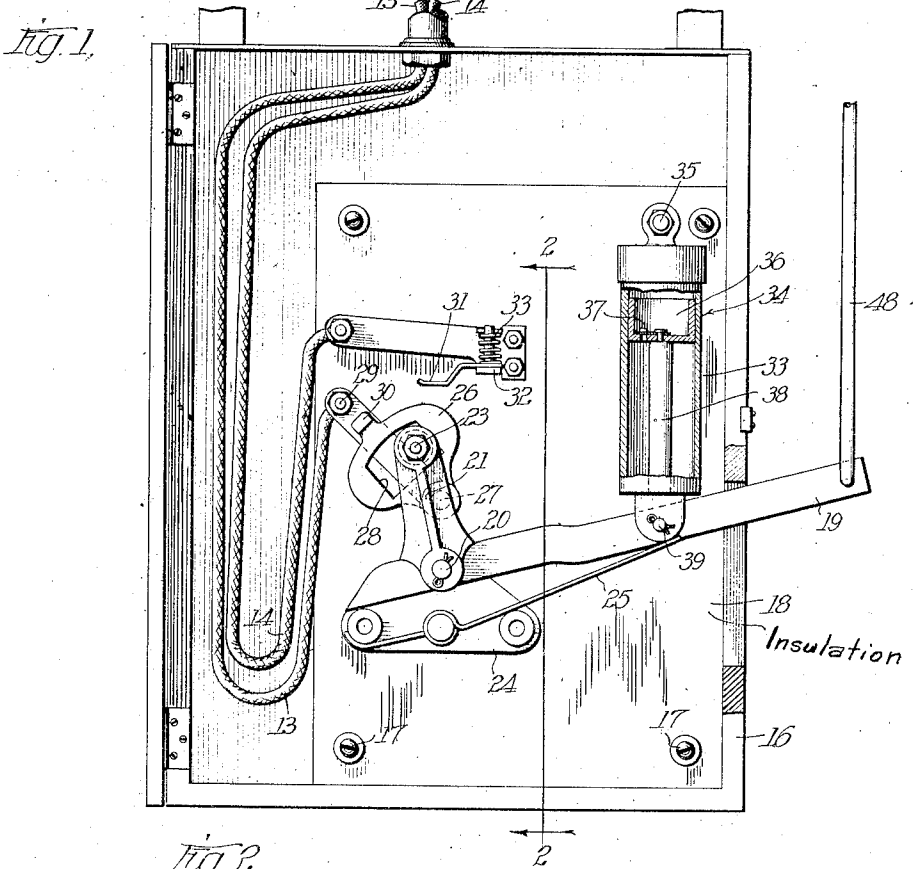


J. J. NIELSEN.
 SIGNALING MEANS.
 APPLICATION FILED MAR. 16, 1912.

1,064,926

Patented June 17, 1913.

2 SHEETS-SHEET 1.



Witnesses:
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Inventor:
 Julian J. Nielsen
 By Joneé Bain May
 Atty:

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2 SHEETS—SHEET 2.

Fig. 3.

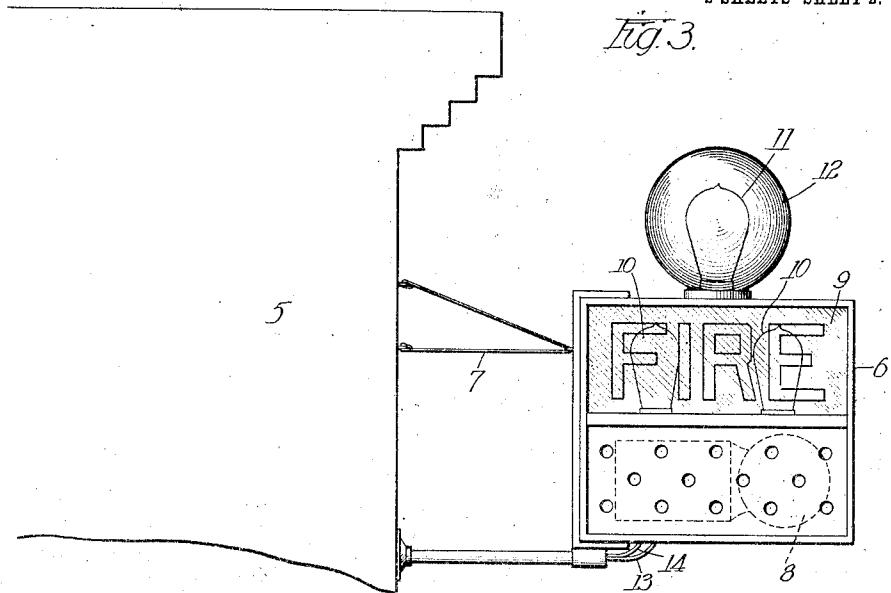
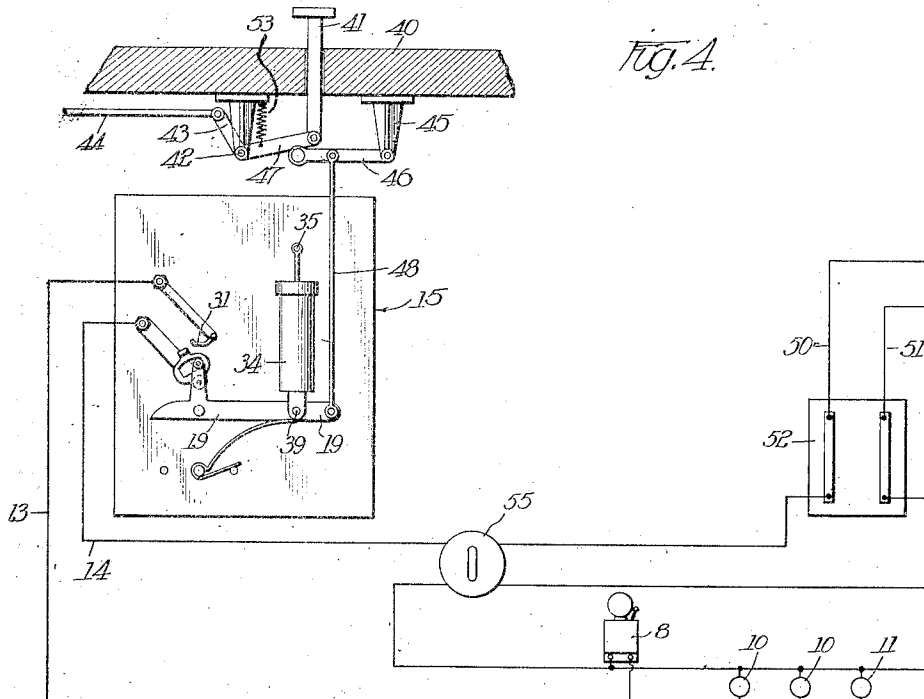


Fig. 4.



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UNITED STATES PATENT OFFICE.

JULIAN J. NIELSEN, OF CHICAGO, ILLINOIS.

SIGNALING MEANS.

1,064,926.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed March 16, 1912. Serial No. 684,099.

To all whom it may concern:

Be it known that I, JULIAN J. NIELSEN, 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 Signaling Means, of which the following is a specification.

My invention relates to improvements in signaling means.

One of the objects of my invention is to provide means whereby to produce signals that will remain visible, audible, or otherwise endure, after they have been initiated, for a predetermined period of time, and then to automatically cease or become extinguished.

Another object of my invention is to provide a signaling means, of this class, adapted to be set into operation by the usual means that are employed in fire engine houses for opening doors, releasing horses, lighting gas, and performing such other functions that are instigated immediately upon notice of a fire.

Other and further objects of my invention will become readily apparent to persons skilled in the art from a consideration of the following description taken in conjunction with the drawings, wherein,

Figure 1 is a side elevation of my switch employed for operating the signals; Fig. 2 is a section taken on lines 2-2 of Fig. 1; Fig. 3 is a side elevation of a building or fire engine house showing the visible and audible signal case secured in front thereof; and Fig. 4 is a diagrammatic arrangement of circuits and signal initiating means shown in connection with the door operating means.

In all of the views the same reference characters are used to indicate similar parts.

Secured to the building or to the fire engine house 5, is a casing 6, containing signal responsive devices. It is supported on the front wall of the house and immediately above the front door by bracket 7. The casing contains an alarm bell 8 that is electrically responsive and the walls of the casing inclosing the bell are perforated so that the sound made by the bell may be heard some distance from the point of its source. The upper part of the casing is covered by overlying plates of red glass, 9, inside of which are contained incandescent lamps, 10, so that when the lamps are energized the

lights will shine through the plates 9 and indicate the fact that the engine within the fire house is about to emerge therefrom, thereby notifying pedestrians and drivers of vehicles that are about to pass the engine house, that the engine is about to make its appearance. The alarm bell is an audible means for attracting the attention of the passers by of this fact and as an additional visual means an incandescent lamp 11 is located within the red globe 12 which is located immediately on top of the casing. These devices constitute the signaling means that are located in front of the fire house and they are immediately energized as soon as information is received, within the fire house, of the presence of fire. 13 and 14 are wires that lead to these various devices and are connected to the signal initiating means 15, which device is located within the fire house.

16 is the casing. Secured to the proper supports therein by the means of screws 17, is a plate of insulating material such as marble or slate 18. Mounted thereon is a lever 19 which is pivoted at 20, and is provided with a projecting arm 21 that extends practically at right angles from the lever 19 and is provided, on its ends, with a stud 22 which is secured to the arm 21 by the nut 23. The lever 19 is pivoted on the casting 24 and a spring 25 is secured to the casting to yieldingly retain the lever 19 in its upward position and to return the lever 19 to uppermost position after it has been depressed in a manner and for the purpose to be hereafter described. A switch arm 26 is pivoted, as at 27, and is provided with an elongated slot 28, into which projects the stud 22 of the arm 21 permitting considerable free movement of the stud 22 from one side to the other of the slot. A terminal 29, for wire 13 is connected to the switch lever 26 at the point where it is pivoted, so as to complete the electrical connection through the switch lever 26. A projection 30, on the switch lever 26, is adapted to make contact with the yielding switch member 31 so as to close the circuit between the wires 13 and 14. The switch member 31 is held in yielding contact with the projection 30, on the support 32, by means of the spring 33 so that when the member 30 is brought into contact with the member 31 the latter may be lifted slightly, in order to insure more perfect contact, by producing yielding fric-

tional movement between the two members. A dash pot 33 is pivoted as at 35 to the plate 18.

A hollow piston 36 is adapted for free movement within the cylinder 34 thereby providing an air dash pot to retard the return movement of the lever 19. In the bottom wall of the hollow piston 36 an air valve 37 is adapted to open when the lever 19 is depressed and to be automatically closed when the movement of the lever 19 is in the opposite direction. Connected to the piston 36, is a rod 38 which is pivotally connected to the lever 19, as at 39, so that when the lever 19 is moved in either direction the piston 36 is moved therewith.

40 is the bottom floor of the engine house through which projects a pedal or push 41. A shaft 42 extends across the room under the floor and is provided with a series of arms 43 secured thereto to which are connected a corresponding plurality of rods 44, that are adapted to perform various functions, such as releasing the doors or opening the stalls in which the horses are contained, opening the front doors to permit the engine to leave the building and for other purposes such as lighting the gas and the performance of other functions that are necessary to be automatically and quickly effected after an alarm of fire has been received and before the engine leaves the building. Secured to a suspender, 45, is an arm, 46, and this arm rests under the arm 47, that is depressed by means of the push 41. When the pedal or push 41 is depressed the arm 46 is likewise depressed and the rod 48 that connects the arm 46, and the lever 19, is the means by which the lever 19 is depressed. When the lever 19 is in its most downward position the arm 21 moves the switch arm 26 so that the switch member 30 makes contact with the switch member 31 and thereby closes the electric circuit and energizes the signals. The electric mains 50 and 51 are connected to a fuse block 52 and to the wires 13 and 14 so that when the switch 15 is closed the bell is caused to ring and the lamps are lighted and by this means signals are exhibited on the exterior of the building to advise persons that an alarm of fire has been received at the engine house and that the engine is about to leave the building and the public are thereby warned so as to avoid collision with the engine. After the pedal or push 41 has been depressed for performing the functions heretofore described, the spring 53 immediately returns the push or pedal 41 to its normal position, after the pressure has been removed therefrom, and therefore the lever 46 will be returned to its normal position quite independently of the arm 47.

It is quite desirable that the signals that have been produced in a manner heretofore

described, shall endure for a certain predetermined length of time after they have been once initiated or until the engine has left the building and gotten fairly under way and then it is desirable that the signals shall be automatically extinguished and to this end I provide a switch-operating retarding device, consisting of the dash pot 33, that permits the lever 19 to rise slowly until the stud 22 moving through the slot 28 makes contact with the back wall of the slot and the spring 25, having sufficient energy stored in it by the downward movement of the lever 19, causes the stud 22 to move the switch lever 26 forcibly until the member 30 no longer makes contact with the switch member 31, and thereby the circuit is opened. The lever 19 is returned against the retarding effect of the dash pot. The speed with which the lever 19 is returned determines the length of time that the signal shall be energized and this effect may be varied by changing the fit of the piston within the cylinder or by any other well known and effective means.

The switch 55 may be employed for opening the circuit so that the switch initiating means will not have the effect of energizing the signals, if desired.

My apparatus may be used during the daytime as well as at night, as the gong 8 will sound the alarm so that persons may be advised during the daytime, the energized lamps adding considerable to the effectiveness of the device during the night.

While I have herein described a specific embodiment of my invention for the purpose of clear disclosure it is evident that some variation may be made therefrom within the scope of the claims without departing from the spirit of the invention.

What I claim is:

1. The combination of a movable member, a single arm connected with said movable member, means to maintain said movable member and arm in one position yieldable to permit movement thereof to another position, and signaling means including a switch and connections between said switch and said arm including a pivoted arm (46) normally spring-pressed into engagement with the first said arm and means to retard the return of said second arm (46) after spring returned of said first mentioned arm subsequent to the movement of said movable member.

2. In a device of the character described, a movable member, a switch device comprising a stationary contact, a movable contact, a pivoted lever having an arm extension associated with said movable contact, and connections between the end of said lever and said movable member of the door-opening mechanism comprising a pivoted arm spring-pressed against said movable

member, a dash pot the piston whereof is connected to the said switch lever, and a spring normally retaining said lever in position with the contacts separated, the piston of the dash-pot unretracted and said pivoted arm in abutment against said movable member of the door-opening mechanism.

3. In a device of the character described, a bell crank lever having a long and a short arm, operating means therefor connected to the end of the long arm thereof, retard means connected thereto between the end of said long arm and the pivot point of said bell crank lever, a stationary contact mounted above the short arm of said bell crank

lever and a movable contact for coaction therewith comprising a switch arm pivoted at a point between said stationary contact and the pivotal point of said bell crank lever, the short arm of said short bell crank lever having at its end a pin engaging said block of the switch lever, and a spring normally holding said bell crank lever in position ready for operation.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

JULIAN J. NIELSEN.

In the presence of—

FORÉE BAIN,

MARY F. ALLEN.