

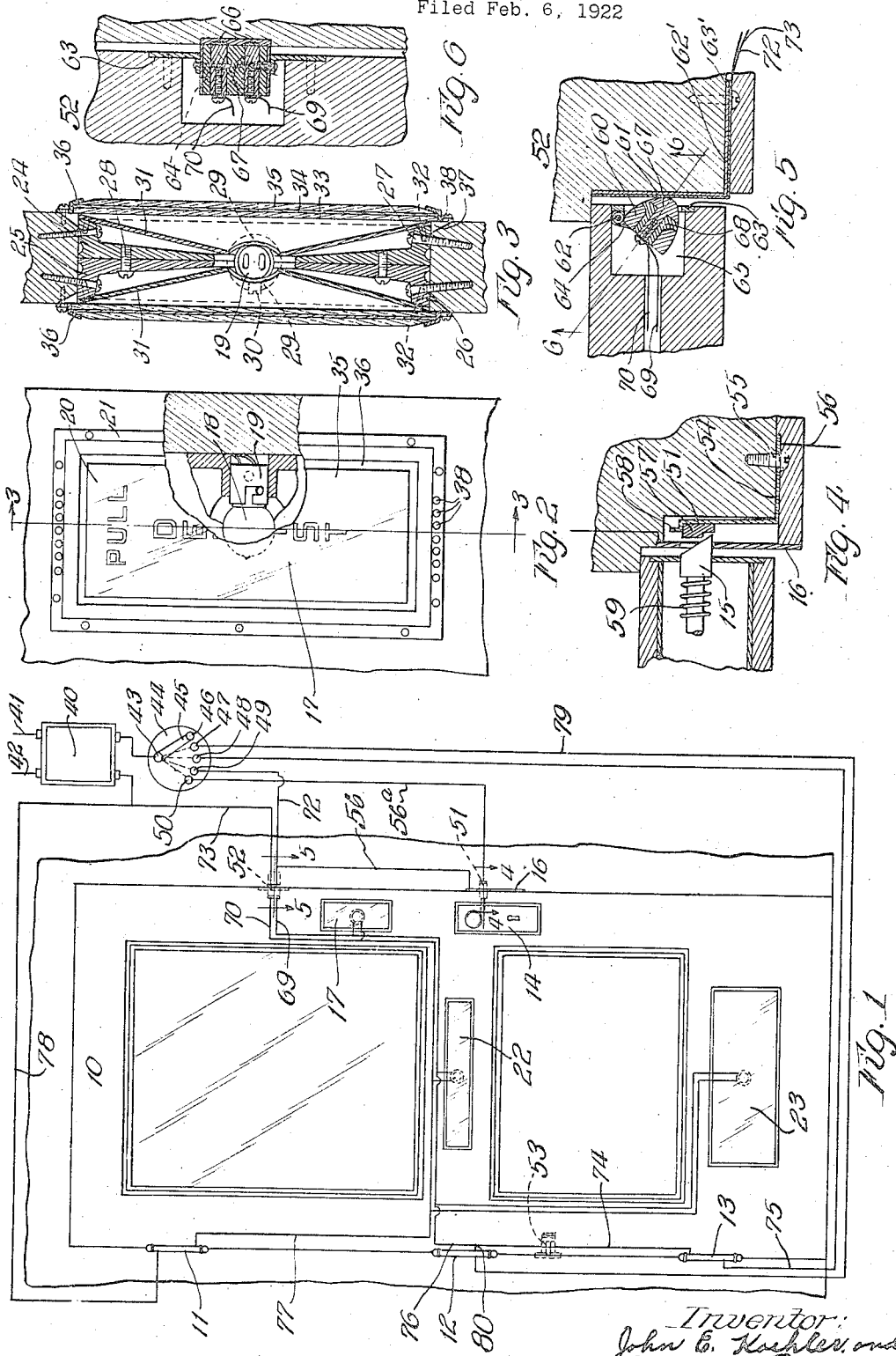
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J. E. KOEHLER ET AL

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ADVERTISING DEVICE

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UNITED STATES PATENT OFFICE.

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ADVERTISING DEVICE.

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To all whom it may concern:

Be it known that we, JOHN E. KOEHLER and RAYMOND PAUL, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Advertising Devices, of which the following is a specification.

The general object of this invention is to provide a door, a gate, or the like with a sign, legend or advertisement and means for illuminating or otherwise attracting attention thereto and adapted to be operated as an incident to the opening or closing of the door.

And more particularly, the invention has for its object to provide a door, gate or the like with a sign, legend or advertisement, a light for illuminating the same, and a plurality of selective circuits controlling the light in a variety of ways to enhance the novelty and efficiency and attractiveness of the device.

Further objects of the invention will become apparent as the description is read in connection with the accompanying drawing showing a selected embodiment of the invention, and in which—

Fig. 1 is a front elevation of a door equipped according to the invention;

Fig. 2 is an enlarged view partly in section illustrating a small sign made according to the invention;

Fig. 3 is a transverse section illustrating a means for making the advertising panels burglar-proof;

Fig. 4 is a sectional detail of a switch operated by the latch;

Fig. 5 is a similar sectional view of a switch operated by the movement of the door; and

Fig. 6 is a detailed sectional view on the line 6—6 of Fig. 5.

Referring to the drawing, 10 indicates a door of any suitable form here shown as mounted on hinges 11, 12 and 13, which support it in a suitable door frame. 14, Figs. 1 and 4, indicates a conventional lock including a latch bolt 15 adapted to co-operate with the face plate 16 on the door frame to secure the door in closed position.

17 indicates a small advertising device that may be used to indicate in which direction the door is to be swung as well as to convey certain information to persons passing by. As shown in the enlarged view of

Fig. 2, the advertising device includes the word "Pull" in large letters and below it the word "Dentist." The wording of the advertisement or other means of communicating the information desired is arranged so as to be illuminated by an electric lamp 18 carried by socket 19 suitably supported within the advertising device. By preference, the socket and bulb are connected by a bayonet joint and a spring, as is customary in lamps used on vehicles, so as to take care of the jars in service. As shown, the front of the advertising device includes a piece of plate glass 20 secured to the door by the frame 21.

The door may be equipped with any desired number of advertising devices, and we have here illustrated three to show how they may be disposed about the area covered by the door. In the illustration, the advertising devices are located in spaces between the lights or panels of the ordinary door construction, but they may be made to replace the panels or in fact, to cover the entire area of the door. When the advertising devices are of any considerable size, it is preferable to equip them with means to prevent thieves or the like from breaking through the glass of the advertising device and gaining entrance to the building. The advertising device shown at 17 in Fig. 1 is too small to involve any danger of this sort, but the devices at 22 and 23 are of sufficient size to require some protection. As illustrated in Fig. 3, we prefer to make an opening entirely through the door and fit therein a pair of strong plates 24 and 25 having suitable flanges 26 equipped with passages for large screws 27 by which they are secured to the door. These plates are fastened together by the transverse screws 28 which should have their heads toward the inside of the building so as to prevent removal after breaking away the glass and other parts of the advertising device. The plates are preferably tapered, as shown, towards the middle and are there provided with an opening for a lamp. Adjacent to this opening the plates have semi-circular bosses 29 between which a lamp socket is secured by a screw 30. Each plate 24 is equipped with a reflector 31 which may be of any suitable shape and secured in place by any desired means. As here shown, the reflectors are secured to the flanges 26 by screws 32. Outside of each reflector and resting against the

door adjacent to the edges of the opening is a plate of glass 33 upon which is laid a sheet of celluloid 34 against which the plate glass closures 35 are clamped by frames 36. The advertising material is carried by the celluloid and the two pieces of glass hold the sheets of celluloid in the proper position. In order to provide ventilation, the bottom and top of the openings in the door have their edges beveled as indicated at 37 and the frames 36 are provided with openings 38 communicating with the interior of the advertising devices.

The construction just described is intended for use when advertising matter is to be placed on both sides of the door. When only one side is to display an advertisement, the plate 24 may be omitted and the corresponding reflector and glass pieces may be replaced by any suitable closure. The burglar-proof plate 25 is sufficient to protect the opening, and the screws 27 and 28 having their heads towards the inside of the plate, cannot be removed from the outside. We prefer to use electric lights in these advertising devices and to use a transformer to make the available current suitable for the small lamps required. As a general thing, 6 or 8 volts will be sufficient to operate the lamps required.

Under certain conditions it is desirable to have these advertising devices illuminated as the door is opened and closed so as to attract the attention of persons passing there-through, and give them certain information. In other cases it is desirable to have the illumination when the door is closed, in others when the door is open and in still others it is desirable to have illumination at all times. To meet these requirements we have shown switches and a wiring diagram that have proved very satisfactory in service. 40, Fig. 1, indicates a transformer between the line wires 41 and 42. The wire 41 is connected to the binding post 43 of a multiple switch 44 which has a blade or leaf 45 pivoted so as to make selective contact with the buttons 46, 47, 48, 49 and 50. When the leaf is in contact with the button 50 the circuit is closed through a switch 51 operated by the latch bolt 15 and a switch 52 operated by the movement of the door. When the leaf is in contact with the button 49 the circuit is closed through the switch 52 alone. When the leaf is in contact with the button 48 the circuit is closed through the hinges 11 and 13 and the switch 53. When the leaf is in contact with the button 47 the circuit is closed through the hinge 12 and the illumination is continuous. And when the leaf is in contact with the button 46 as shown in Fig. 1, the lights are all off.

The switch 51 Figs. 1 and 4 comprises an angular leaf spring 54 secured to the door frame by a screw 55 connected to a wire 56.

The free end of the switch is equipped with an insulating block 57 adapted to contact with the latch 15, and a contact piece 58 for co-operation with the face plate 16, the contact piece 58 being connected to the button 50 by a wire 56^a. When the door is closed the spring 59 of the latch 15 normally holds the switch 51 open but when the knob is turned to withdraw the latch, this switch closes the circuit and if the leaf 45 of the multiple switch 44 is resting on the button 50, the light or lights in the circuit will be lit.

The switch 52 Figs. 5 and 6 is here illustrated as including a pivot member 60 carried by the door, and a fixed member 61 carried by the door frame. The member 60 is pivoted by a pin 62 to the face plate 63 and a spring 64 normally tends to hold it in position to project from the edge of the door. Back of the face plate 63 is a socket 65 into which the member 60 swings when the door is closed. The switch member 61 includes an angular plate 62' secured to the door frame by the screws 63' which also bind the wires 72, 73 thereto. This plate has a plurality of contacts 66 on the face adjacent to the door which co-operate with the contacts 67 seated in the hard rubber body 68 of the member 60. The contacts 67 are connected with wires 69 and 70 leading to the lamps in the advertising devices.

It will be clear from this construction that when the door 10 is closed, the switch 52 will be closed, and if the switch 51 is closed by withdrawing the latch 15, the light or lights in the advertising devices will be lit until the door is swung sufficiently to open the switch 52 and will be again lit when the door returns to the position in which the switch 52 is closed. This flash of light in the advertising device or devices as the door is opened and closed will serve to attract attention of persons passing and is most suited to give directions for pushing or pulling the door and directions for turning after passing through the door together with an indication as to the occupant of the room or building.

In order to have the advertising devices illuminated while the door is closed, and dark when the door is open, the switch leaf 45 is placed on the button 49 when the circuit is closed through the wire 72 to the wire 69 through the lower contacts 66 and 67 through the line and back through the wire 70, the upper contacts 66 and 67 and the wire 73.

In order to have the lights on when the door is opened and off when the door is closed, we provide the switch 53 which may be of any suitable form that will close when the door is opened and open when the door is closed. This switch is connected by the wire 74 with

the hinge 13 which in turn is connected by the wire 75 with the button 48 of the switch 44. The opposite side of switch 53 is connected by the wire 76 with the lamp or

lamps in the door, from which the circuit proceeds through wire 77 to hinge 11 and from hinge 11 by wire 78 back to the line 42. An additional circuit is also provided in order to make it possible to continuously illuminate the signs or other devices on the door. This is accomplished by providing a third hinge 12 and connecting it with the button 47 by the wire 79 and with the wire 76 by the wire 80. By this means a circuit is formed from the button 47 through the hinge 12 to the lamps and from the lamps back to the line 42 through the wires 77 and 78 and the hinge 11.

From the foregoing it will be clear that a door, gate or the like may be equipped with one or more illuminated signs bearing advertising matter, directions or the like and that the lamp or lamps providing illumination may be controlled by shifting a switch, blade or leaf so as to have illumination continuously or only when the door is open, or only when the door is shut, or only when the door is shut and unlatched as may be desired. The wiring here illustrated is very satisfactory in service, but those skilled in the art may make suitable variations to take care of conditions different from those specified. However, the examples here given will suffice to disclose the invention so that it may be made use of in varying conditions to be met in practice. We have shown the invention as applied to a hinged door of conventional type but it will be obvious that the principles are applicable to revolving doors, sliding doors and the like.

We are aware that changes may be made in the form, construction and arrangement of the invention, as set forth in the selected embodiment herein, without departing from the scope or sacrificing any of its material advantages, and we therefore reserve the right to make all such changes as fairly fall within the scope of the following claims.

We claim:

1. The combination of a door, a latch for said door, a sign on said door, and means controlled by said latch for illuminating said sign intermittently.

2. The combination of a door, a latch bolt on said door, a sign on said door, a lamp for illuminating said sign, a switch adapted to be operated by said latch bolt, a second switch adapted to be operated by a movement of the door, a source of electric current, an open circuit for connecting the switches and the lamp with the source of current in series, a second open circuit for connecting the second switch and the lamp with the source of electric current in series,

and selective means common to both circuits for selectively closing either circuit.

3. The combination of a door, a latch bolt on said door, a sign on said door, a lamp for illuminating said sign, a switch adapted to be operated by said bolt, a second switch adapted to open when the door is opened, a third switch adapted to close when the door is opened, a source of electric current, an open circuit including the lamp for connecting the first and second switches to the source of electric current in series, a second open circuit including the lamp for connecting the second switch with the source of electric current, a third open circuit including the lamp for connecting the third switch with the source of electric current, and selective means common to the several circuits for closing any one of the circuits.

4. The combination of a door, a latch carried by said door, a sign on said door, a lamp carried by said door to illuminate said sign, and an electric circuit for said lamp including a switch operated by said latch.

5. The combination of a door, a sign on said door, a lamp for said sign, a switch adapted to open when the door is opened, a second switch adapted to close when the door is closed, an open circuit including the lamp for connecting the first switch to a source of electric current, a second open circuit including the lamp for connecting the second switch with the source of electric current, and selective means common to both circuits for closing either circuit.

6. The combination of a door, a latch for said door, an electrically operated device associated with said door, and means controlled by said latch for operating the device intermittently.

7. The combination of a door, a sign, sign illuminating means, a plurality of actuating means for the illuminating means, certain of the actuating means being controlled by a movement of the door, and settable means for selecting the actuating means which is to be active.

8. The combination of a door, a sign, sign illuminating means, means for actuating the illuminating means when the door is closed, means for actuating the illuminating means when the door is open, and settable means for selecting the actuating means which is to be active.

9. The combination of a door, a sign, sign illuminating means, a plurality of actuating means for the illuminating means, certain of the actuating means being controlled by a movement of the door, one of the means for actuating the illuminating means being active when the door is closed, another of the means for actuating the illuminating means being active when the door is open, and settable means for selecting the actuating means which is to be active.

10. The combination of a door, a sign, sign illuminating means, means for flashing the sign illuminating means during the initial opening of the door and during the
5 final closing of the door.
11. The combination of a door having a latch, a sign, sign illuminating means, and means controlled by the door latch for flashing the sign illuminating means during the
10 initial opening of the door and during the final closing of the door.
12. The combination of a door, a sign, sign illuminating means, means for actuating the sign illuminating means when the
15 door is closed, means for actuating the sign illuminating means when the door is open, means for flashing the illuminating means during the initial opening of the door and during the final closing of the door, and settable
20 means for selecting the actuating means which is to be active.
13. The combination of a door, a sign, sign illuminating means, means for actuating the sign illuminating means when the
25 door is closed, means for actuating the sign illuminating means when the door is open, means for actuating the sign illuminating means when the door is open and also when the door is closed, and settable means for selecting the actuating means which is to be active.
14. The combination of a door, a sign, sign illuminating means, means for actuating the sign illuminating means when the door is closed, means for actuating the sign
35 illuminating means when the door is open, means for actuating the sign illuminating means when the door is open and also when the door is closed, means for flashing the illuminating means during the initial opening of the door and during the final closing
40 of the door, and settable means for selecting the actuating means which is to be active.
15. The combination of a door, an electrically operated device, a plurality of circuits including the electrically operated device, certain of the circuits being controlled
45 by a movement of the door, and a settable switch common to the several circuits for selecting the circuit which is to be active.

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