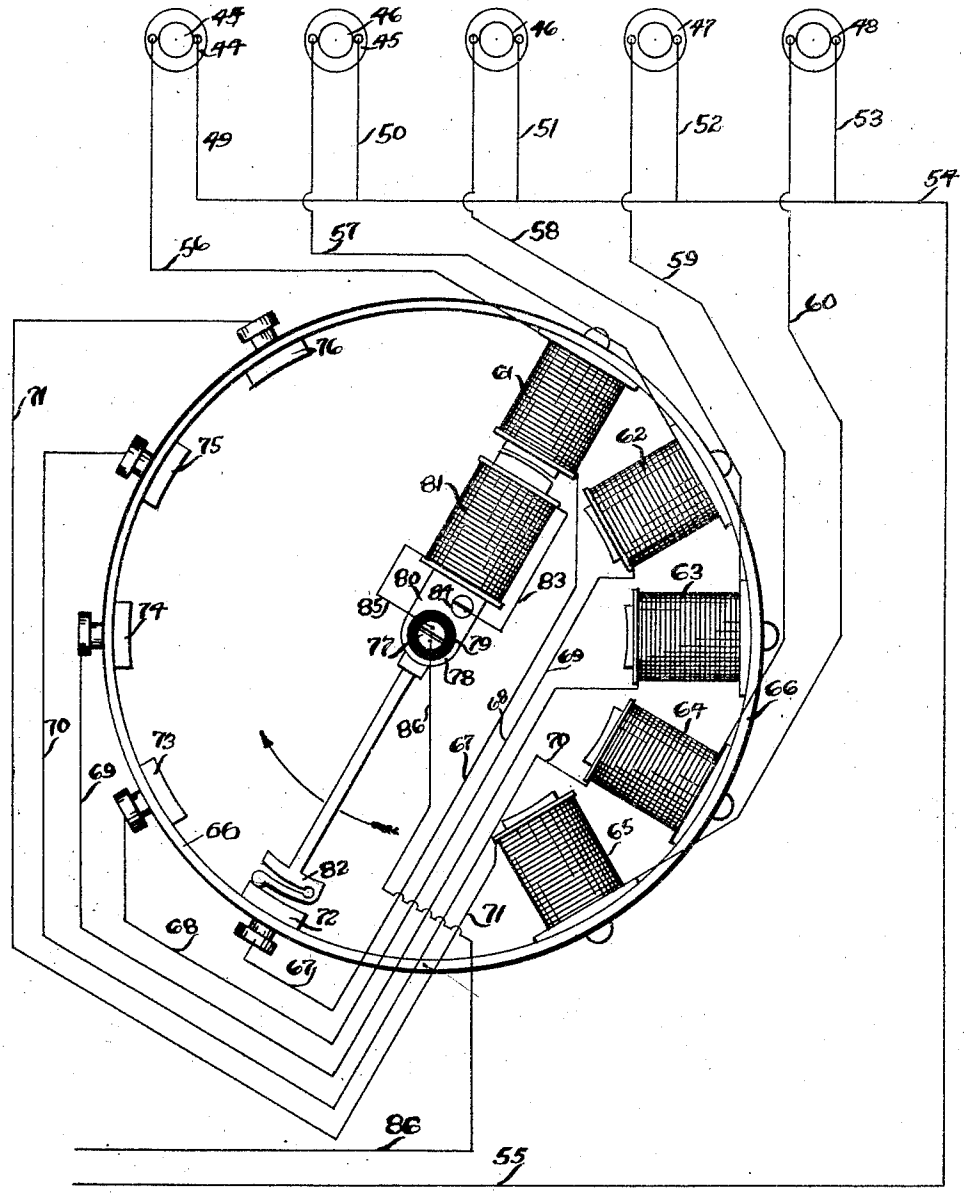
C. BENTON.

AUTOMATIC ELECTROMAGNETIC SWITCH.

APPLICATION FILED JUNE 12, 1912.

1,092,969. Patented Apr. 14, 1914.



WITNESSES:

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AUTOMATIC ELECTROMAGNETIC SWITCH.

1,092,969. Specification of Letters Patent. Patented Apr. 14, 1914.

Application filed June 12, 1912. Serial No. 703,294.

To all whom it may concern:

Be it known that I, CURTIS BENTON, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Automatic Electromagnetic Switches, whereof the following is a specification.

My present invention relates to automatic switches in combination with lights where it is necessary that a light should be burning at all times.

The object, therefore, of my invention is to provide a system of signal lights operative by an automatic switch or combination of switches, for the purpose of keeping one or more of the said signal lights burning at all times, and should these lights for any of the obvious reasons, such as for instance, break or burn out, or fail as an illuminant the switch will operate to light other lights in the place thereof.

While I have illustrated my invention as adaptable to the operation of five lights it is my object to provide the same with as many lights as may be desired and to adapt them for the purposes of signaling for railroads or on board ships, and also for the purpose of fire escape and other lights in buildings and such other purposes for which such a system may be adapted.

I have illustrated my invention in the accompanying drawing.

In the drawing, 44, 45, 46 and 47 and 48 are lights, one side of which are connected by wires 49, 50, 51, 52 and 53 to a bus bar 54 which in turn is connected to a main wire 55. The other side of the lights are connected by wires 56, 57, 58, 59 and 60 to electro magnet windings 61, 62, 63, 64 and 65 located about the cores and mounted in a circular frame 66. These windings are in turn connected by wires 67, 68, 69, 70 and 71 to contacts 72, 73, 74, 75 and 76.

Mounted in the center of the casing 66 and on a central screw 77 is shown a revoluble arm 78, the screw 77 being insulated from the same by an insulating washer 79. Mounted on one end of the arm is an iron core 80 having a winding 81 thereon. On the other end of the arm is a contact piece 82 arranged to contact with the contacts 72, 73, 74, 75 and 76. The winding 81 is connected on one side by wire 83 to a screw 84 and on the other side by wire 85 to the central pivot 77, pivot 77 also being connected by wire 86, which serves as the main connecting wire.

Having thus described my invention in detail the mode of operation of same is as follows: The arm 78 in the position shown in the drawing and the contact 82 thereon in electric connection with the contact 72 the light 44 is in circuit and burning. Also the windings 61 and 81 being energized the attraction between the electro magnetic induction of the two windings in the cores thereof tend to hold the arm in rigid position, thus keeping contact between the contacts 72 and 82. Should for any cause the light 44 become extinguished the arm 78 will tend to fall in the direction shown by the arrow since the induction of the windings 61 and 81 will cease and contact 82 leave contact with the contact 72 and the light 45 being in good order when the contact 82 reaches the contact 73 a circuit will be formed through the light 45 and thus again through the winding 81 and the winding 62 holding the same in alinement, since the lead of the contact 82 in making contact with the contact 73 is sufficient to close the circuits through the coils before they reach mechanical alinement. When the light 45 has burnt its life or for any other cause is extinguished, as in the case of light 44, the same operation will be performed by the arm 78 for the number of lights as shown in the figure.

What I claim is:

An automatic switch for opening and closing electric circuits alternately, in combination with electric lights, comprising a plurality of magnet windings radially mounted along the inner side of a circular frame, a corresponding number of contacts secured also within said circular frame and at positions diametrically opposite said magnetic windings, a revoluble arm centrally mounted within the frame, said arm being provided at one end with a magnet

winding and at the other with a contact, a plurality of lights each electrically connected with said magnets and contacts, and a main source of current connected to said revoluble arm and said lights, substantially as described.

In testimony that I claim the foregoing I have hereto set my hand in the presence of witnesses, this 26th day of April, 1912.

CURTIS BENTON.

Witnesses:
T. D. HAWKINS,
A. F. WELLS.