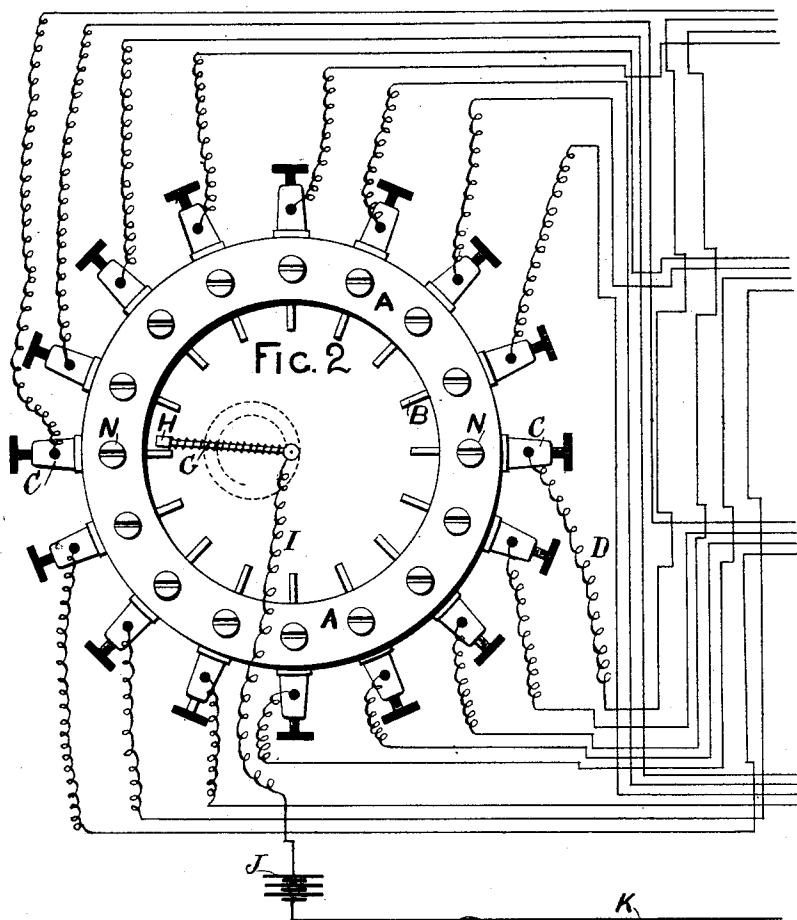
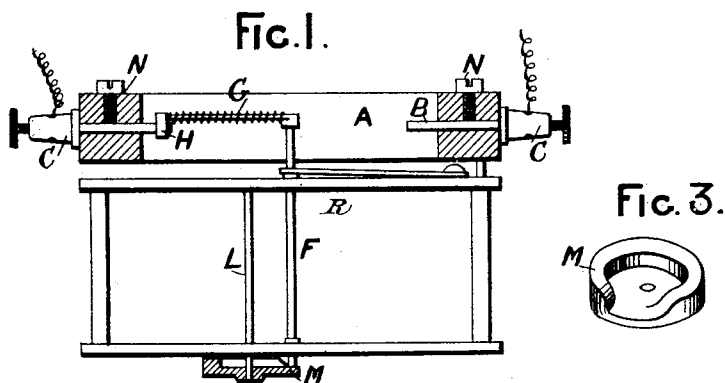


A. DOUGLASS.
ELECTRIC LIGHTING AND ADVERTISING SYSTEM.
No. 425,125. Patented Apr. 8, 1890.



Witnesses:
J. A. Rutherford
Robert Smith

Inventor:
Arthur Douglas
By James L. Torris, Atty

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FIG. 4.

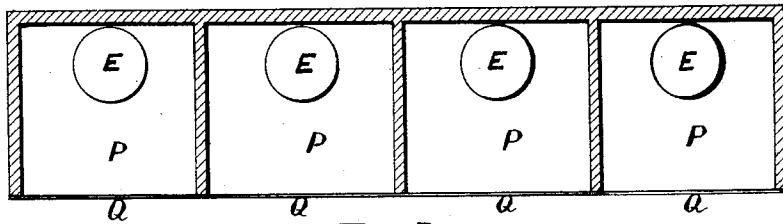
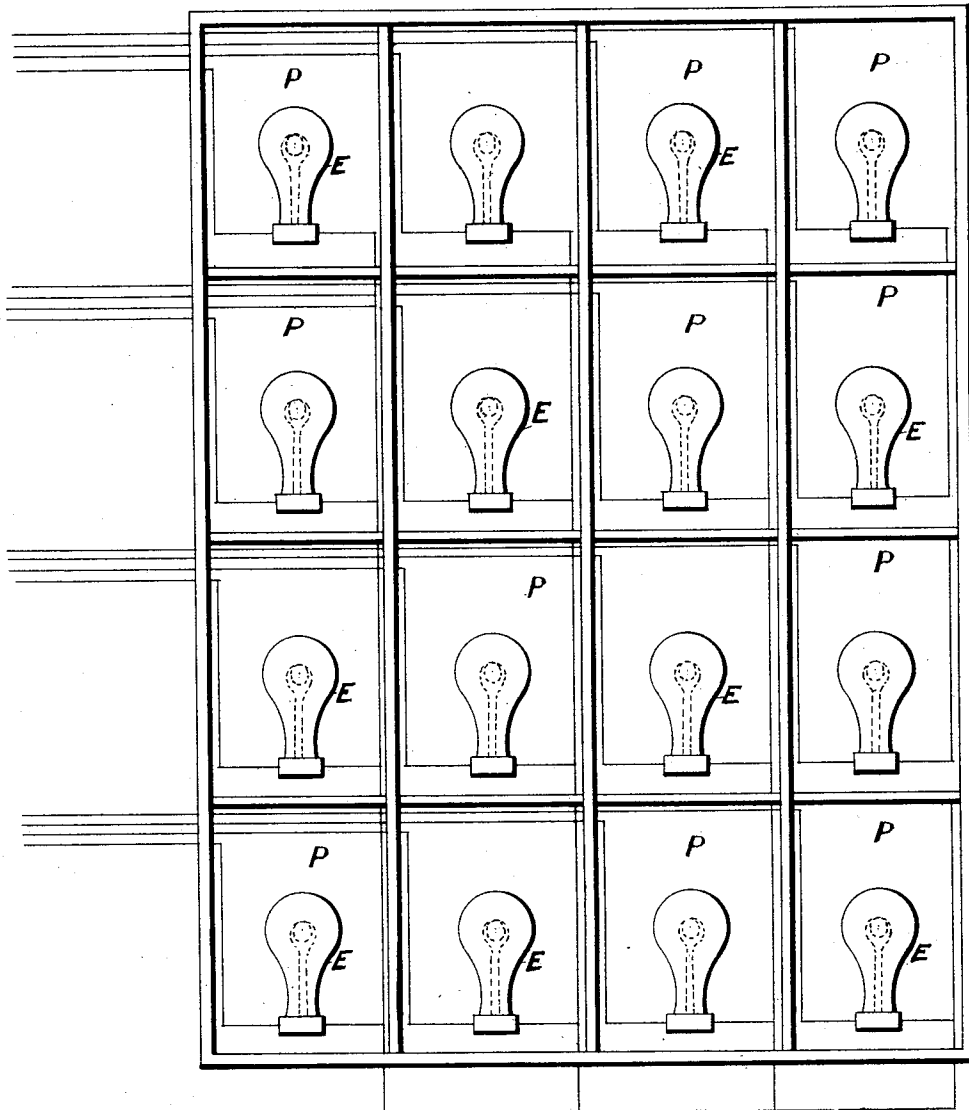


FIG. 5.



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ARTHUR DOUGLASS, OF DANES INN, STRAND, COUNTY OF MIDDLESEX,
ENGLAND.

ELECTRIC LIGHTING AND ADVERTISING SYSTEM.

SPECIFICATION forming part of Letters Patent No. 425,125, dated April 8, 1890.

Application filed December 26, 1889. Serial No. 334,962. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR DOUGLASS, a subject of the Queen of Great Britain, residing at 4 Danes Inn, Strand, county of Middlesex, England, have invented new and useful Improved Means and Appliances for Automatically and Periodically Effecting Changes of Advertisements and the Like, of which the following is a specification.

My invention relates to improvements in devices by which a current of electricity can be directed automatically and periodically through different circuits singly or in groups.

For the purpose of my invention I employ a ring of ebonite or other suitable insulating material. This ring is bored horizontally with as many holes of a determined diameter as shall correspond with the maximum number of circuits which the apparatus is required to change direction. Into these holes I fit any good conducting-metal rods of a diameter to nicely fit the holes. Each rod projects beyond the inner edge of the ring as far as required, but do not touch each other, being thus separately insulated. On the outer end of each rod is a terminal for clamping or fixing the circuit-wires to be acted upon. On the top surface of the insulating-ring and over each horizontal hole is another hole, which is tapped and fitted with a set-screw for the purpose of clamping each metal rod firmly when once fixed into position or for temporarily removing a circuit out of action. This ring or distributor is fixed in any convenient manner to a casing containing clock-work having a center spindle, which is continued up through the center hole of the distributor or ring, and on the top of this spindle I arrange horizontally a spiral spring and arm carrying at its end a loosely-pivoted trailer or plate of such a length or depth that when the clock-work movement is in motion and the center spindle revolves the trailer shall successively and intermittently bear on one of the metal rods or bars of the distributor. The spindle carrying the horizontal spiral spring or arm with trailer can at fixed periods raise up a cam plate, so that the metal flag while still revolving shall not be able to touch any of the metal rods or bars on the distributor, and also at predetermined periods shall be forced back

into its original position and again causing the trailer to touch and make metallic connection with the rods or bars on the distributing portion of the apparatus.

The clock-work movement portion of the apparatus will be arranged according to the number of circuits to be directed or changed, the time required between the changes of direction of circuits, and the time required for the apparatus to work without winding or attention. The several circuit-wires are arranged in connection with incandescent lamps fitted in close partitioned chambers of a screen on the face of which play-bills or other transparent articles can be placed for exhibition purposes, these being illuminated periodically in any desired order.

The apparatus can be affixed to a wall, or as a hoarding be attached to vehicles or be carried as sandwich-boards.

The apparatus prepared for transparent photographs is specially adapted for a photographer's door, window, and show room, and exhibition of samples or specimens.

The drawings will explain my invention.

Figure 1 is a sectional elevation of the distributor attached to but insulated from the casing, in which the clock-work can be arranged. Fig. 2 is a plan elevation of the ring. Fig. 3 is a perspective detached view of the cam-plate. Fig. 4 is a sectional plan of compartments in which incandescent lamps are arranged somewhat after the arrangement indicated at Fig. 5, by which sixteen different play or other bills can be illuminated, these being pasted or otherwise fastened on the front of each compartment.

According to Figs. 2 and 5, one system of arranging my invention is shown for exhibiting sixteen bills.

A is the distributor-ring of insulate material.

B B are rods of good electrical conducting metal, arranged radially and horizontally through said ring A, with their ends projecting inwardly and with terminals C at their outer ends, to which the several wires D D are connected for connecting them with the lamps E.

F is a spindle operated by clock-work, and the top carries an arm G at right angles encircled by a coiled spring, at the end of which

a small trailer H hangs. This spindle F is in connection by wire I with one pole of the battery J, the other pole of the battery being in connection by the wire K with the lamps for completing circuit.

L is another spindle operated by the clock-work, carrying at its lower end the cam-plate M. (Shown detached at Fig. 3.)

The two spindles L F are rotated at proportionate speeds, and as the lower end of the spindle F, which is kept in contact with the cam M by the spring R, rides in the lower part of the cam, the trailer H wipes itself over and in contact with the inwardly-projecting ends of the rod B in succession, the spring to which the trailer is attached permitting it to yield for that purpose, so that a short duration of darkness ensues between the time of the trailer leaving one of the pins B and touching the next pin in succession, during which time the lamp which is in circuit with the respective pin is lighted and the play or other bill exhibited.

The cam M (shown on the drawings) is timed for, say, eight hours for the spindle F to be in the lower part of the cam, after which it is raised up, the ridge of the cam and the trailer H being also raised above the level of the rods B for, say, sixteen hours, such as when the illumination of the advertisements is not required. Each rod B is fixed in position in the ring A by screw-pin N; but by loosening any of said screw-pins N any of the rods can be withdrawn out of range of the trailer H, so that fewer of the exhibiting-bills would be illuminated. The incandescent lamps E are inclosed in separate compartments P, and the play-bills or other advertisements (indicated at Q) are pasted on the front and capable of being renewed as desired. It will be observed by the arrangement of circuit-wires that the play or other bills are not necessarily exhibited in numerical order. Neither is it necessary that the battery J and insulated ring A be affixed to the exhibiting-frame, as those appliances can be fixed to a house at a distance therefrom, the exhibiting-frame alone being within view of the public. This arrangement would be advantageous with frames exhibited as hoardings affixed to a wall or otherwise; but when attached to vehicles, or when carried by men, the battery and clock-work, with the insulated ring A and its

appurtenances, could be within the framing on which the play-bills are placed. The same may be said with regard to exhibition-screens, such as those used by photographers for exhibiting samples or specimens of their art or skill. It will thus be seen that the arrangement described or any other arrangement in which my make-and-break system of electric currents can be adopted is available in every conceivable situation for the purpose of automatically and periodically effecting changes of advertisements and the like, the duration of time of each exhibit being governed by the length of time that the trailer H is in contact with one of the rods B.

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

1. In an electric-lighting system, the combination, with a series of incandescent lamps and battery-connections, of a non-conducting ring, a series of internal contacts passed radially through the ring, each in circuit with one of the lamps, and a circuit-closer adapted to make contact successively with the said contacts, substantially as described.

2. The combination, with the non-conducting ring A, the rods B, arranged radially and horizontally therethrough, the terminals C on the external ends thereof, and suitable battery-connections, of the rotary rod G, adapted to make contact successively with the several rods B and act as a circuit-closer therefor, substantially as described.

3. The combination, with a number of contacts arranged in an insulating-ring, a rotary circuit-closer adapted to make contact therewith successively, and suitable mechanism for propelling the same, of a rotating cam-plate M, engaged with the lower end of the circuit-closer and adapted to lift said closer out of operation with the contacts during a portion of its revolution, substantially as described.

In witness whereof I have hereunto signed my name, this 12th day of November, 1889, in the presence of two subscribing witnesses.

ARTHUR DOUGLASS.

Witnesses:

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RICHARD CORE GARDNER,
Of same address.