

(No Model.)

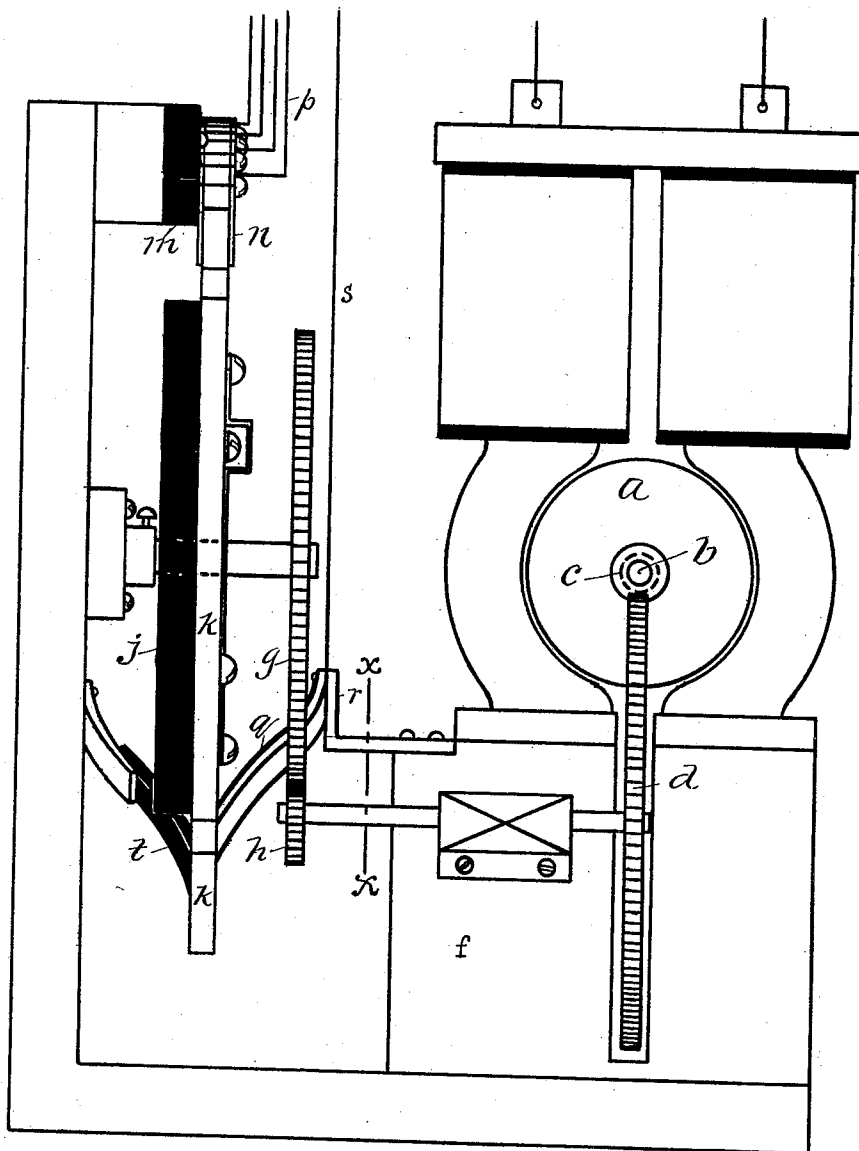
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L. J. WEBSTER.
ILLUMINATING SIGNS.

No. 468,185.

Patented Feb. 2, 1892.

Fig. 1.



WITNESSES:

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INVENTOR:

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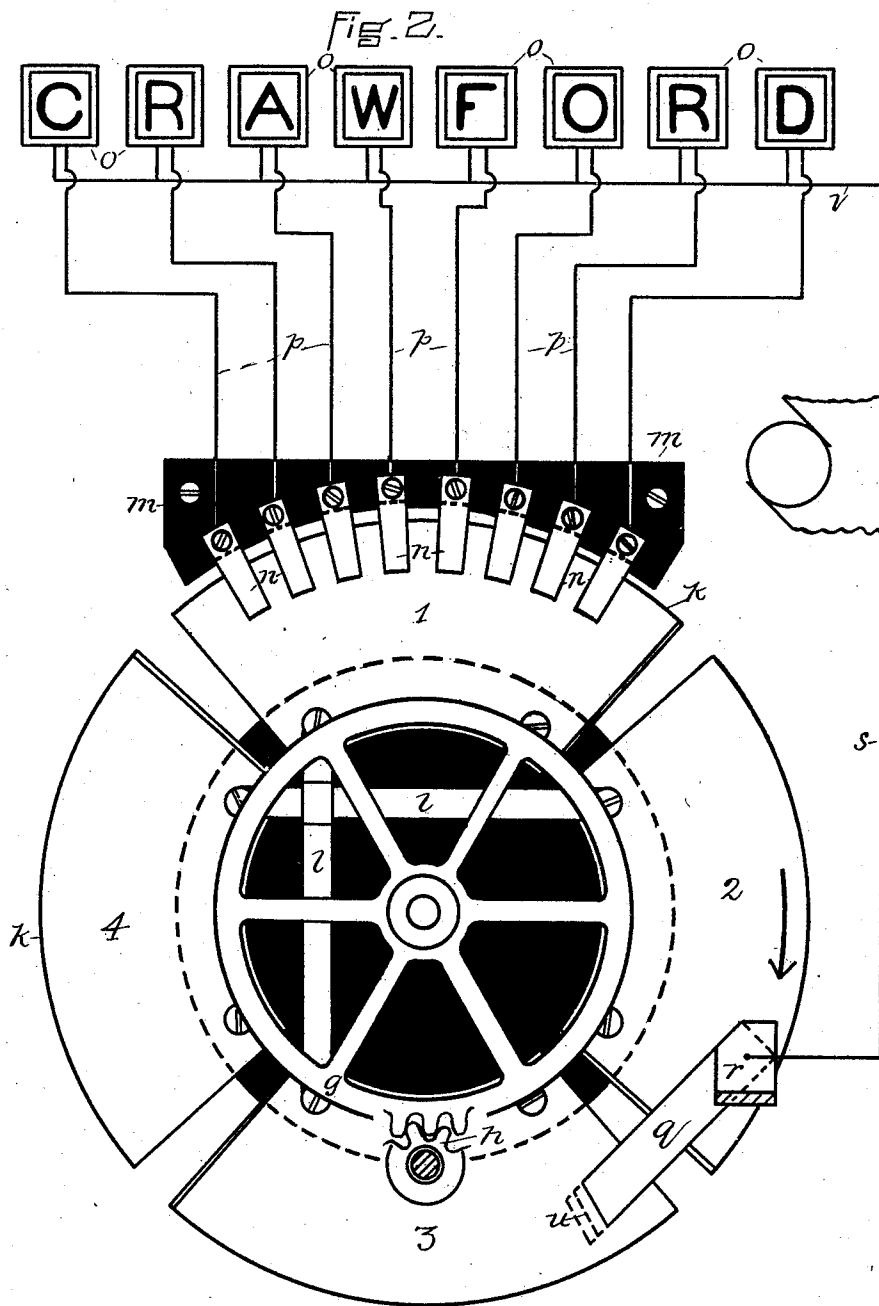
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2 Sheets—Sheet 2.

L. J. WEBSTER.
ILLUMINATING SIGNS.

No. 468,185.

Patented Feb. 2, 1892.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

LAWRENCE J. WEBSTER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO
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ILLUMINATING-SIGN.

SPECIFICATION forming part of Letters Patent No. 468,185, dated February 2, 1892.

Application filed August 5, 1891. Serial No. 401,781. (No model.)

To all whom it may concern:

Be it known that I, LAWRENCE J. WEBSTER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Illuminating-Signs, of which the following is a specification.

The invention relates, broadly, to means for successively lighting a series of electric lamps and extinguishing the same at intervals, and in its more restricted application or use the invention has reference to illuminated signs for advertising and other purposes.

It is the object of the invention in its more confined sense to provide a contrivance whereby a plurality of electric lamps or lights in sections of an illuminating-sign or similar device may be successively lighted and then extinguished and again lighted and extinguished, and so on, for the purpose of attracting attention to the sign or signs.

The invention consists of a movable segment or plate in communication with a source of electrical energy, combined with a plurality of signs or sections of a sign, an electric lamp or light in each of the said signs or sections of a sign, brushes or contact-pieces arranged so that the movable segment or plate may be brought into electrical connection therewith, and wires affording electrical communication between the lights in the signs or sections of signs and the contact-pieces or brushes.

The invention also consists of parts and combinations of parts incidental to the foregoing, all as is hereinafter described in detail, and pointed out in the appended claims.

Reference is to be had to the annexed drawings and to the letters and figures of reference marked thereon, forming a part of this specification, similar letters and figures designating similar parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is an end view of the invention, the signs and their connection being removed. Fig. 2 is a vertical sectional view taken on the line xx of Fig. 1, showing the segmental disk and its connection with the series of signs.

In the drawings, a designates an electric motor, on the shaft b of which is a worm c , which actuates a disk j of any suitable insulating material through the medium of a train

of gears $d h g$ or other suitable gearing. Upon the disk j are secured segmental or other form of plates k , of metal, so that, so far as this description has gone, each segment shall be insulated from the others.

l designates strips of copper, brass, or other electrically-conductive material extending between opposite segments, so as to electrically connect the same, but so that adjacent segments may remain insulated from each other.

m is a plate of insulating material, upon which are secured brushes or contact-pieces n of electrically-conductive material, the projecting ends of the brushes being so arranged that when the disk j is revolved the segmental plates k will be brought into contact therewith.

o designates a plurality of signs or sections of a sign, in or back of which is arranged one or more electric lamps or lights, (not shown,) which are in electrical communication with the brushes n through the medium of the wires p .

The signs o may be transparent, or so constructed that light may shine therethrough, or they may consist of the electric lamps alone. In the drawings, for the purposes of convenient description, I have represented the signs as composed of transparent material with letters marked thereon, which together form a name.

q designates a spring-brush or contact-piece, the free end of which is arranged to bear upon one face of the segments k , the opposite end being secured to a bracket r , attached to the frame f . The brush q is composed of electrically-conductive material, and communicates with a source of electrical energy through the medium of a wire s .

t is a spring-brush or contact-piece composed of insulating material and arranged to bear upon the segmental plates k on the face opposite to that upon which the brush q is adapted to bear.

The arrangement of the brushes q and t is such that the former will precede the latter to a slight extent, as is indicated by the dotted lines u in Fig. 2.

It is to be noted that the segmental plates k are so arranged that a space exists between the opposing ends of each two plates.

The operation of the invention may be described as follows: With the parts in the po-

sition in which they are represented in the drawings an electric current will be established from the source of electrical energy through the brush *q*, segment 3, strip *l*, segment 1, brushes *n*, wires *p*, communicating with the lamps in the signs, and wires *v*, leading from the lamps back to the source of electrical energy, lighting the lamps and illuminating the signs. By the operation of the motor *a* the disk *j* and segmental plates *k* will be moved in the direction indicated by the arrow without change in the condition of the lights until the free end of the brush or spring contact-piece *q* reaches and snaps off from the edge of the segment 3 into the space existing between its end and the end of the segment 2, which will have the effect of breaking the circuit and extinguishing all of the lamps. Immediately upon the brush *q* snapping off from contact with the segment 3 the brush *t* of insulating material, bearing upon the opposite side or face of the said segment, will also snap off from the edge of the same segment and spring in between the free end of the brush *q* and the said segment, effectively preventing arcing between the brush and segment, and consequent fusing of the parts. This is an important feature of the invention. Upon the further movement of the disk *j* the brush *q* will be brought into contact with the segment 2, and a circuit will be made through the segment 2, the lamps and intermediate devices, and as segment 4 is brought into contact successively with the said brushes it will result in successively lighting the lamps in the several signs or several sections of a sign, which, in the further operation of the device, will be again extinguished, as before described.

By means of the invention it will be seen that a very attractive and inexpensive illuminating sign is provided, and one also that may be readily and conveniently put up and operated at any point where a sign can be displayed, since the motor and its connections need not be arranged in the immediate vicinity of the sign.

My invention comprehends the use of a reciprocating plate in place of a segment or segments or other form of plates adapted to be revolved, so that the lamps might be successively lighted and extinguished and lighted again successively in reverse order; but for most purposes I prefer the form of means shown in the drawings.

It is obvious that changes may be made in the form and arrangement of parts comprising the invention without departing from the nature or spirit thereof.

What I claim as of my invention is—

1. The combination, with a plurality of signs or sign-sections, each provided with an electric lamp, of a base-plate *m* of insulating material, a plurality of contact-pieces attached to the said base and electrically connected with the said lamps, and a movable plate or

segment adapted to be brought into contact successively with the said contact-pieces and to remain in contact therewith until after all of the lamps shall have been lighted, and a brush or contact-piece adapted to bear upon said plate and to snap off therefrom to break the circuit through all of the lamps simultaneously, after all shall have been for a period in electric circuit, as set forth.

2. The combination, with a plurality of signs or sign-sections, each provided with an electric lamp, of a contact-piece for each lamp in electrical connection therewith, a movable plate or segment adapted to be brought into contact successively with the said contact-pieces and for a period to remain in contact therewith and light all of the lamps, a brush in electrical circuit with said lamps, and a plate or segment constructed and arranged to break contact therewith in the movement of the plate or segment and simultaneously cut out all of the lamps after all shall have for a period of time been lighted, as set forth.

3. The combination, with a plurality of signs or sign-sections, each provided with an electric lamp, of a rotary disk of insulating material, segments or plates of electrical conductive material secured to the said disk, opposite segments being electrically connected one with the other, a plate or base of insulating material, a plurality of contact-pieces attached to the said base and electrically connected with the said lamps, a spring-brush *q* or contact-piece adapted to have its free end bear upon one side or face of the said segments, and a motor for actuating the said rotary disk, the said lamps and spring-brush or contact-piece being embraced within an electric circuit, as hereinbefore set forth.

4. The combination, with a plurality of signs or sign-sections, each provided with an electric lamp, of a rotary disk of insulating material, segments or plates of electrically-conducted material secured to the said disk, opposite segments being electrically connected one with the other, a plate or base of insulating material, a plurality of contact-pieces attached to the said base and electrically connected with the said lamps, a spring-brush *q* or contact-piece adapted to have its free end bear upon one side or face of the said segments, a brush *t*, of insulating material, adapted to have its free end bear upon the opposite side, or face of the said segments at a point slightly to the rear of or behind the brush *q*, whereby when the latter brush snaps off from a segment the brush *t* may spring in between it and the segment, preventing arcing.

In testimony whereof I have signed my name to this specification in, the presence of two subscribing witnesses, this 22d day of July, A. D. 1891.

LAWRENCE J. WEBSTER.

Witnesses:

ARTHUR W. CROSSLEY,
A. D. HARRISON.