N. C. ANDERSON & F. C. HUTCHINGS.

ELECTRICAL ADVERTISING DEVICE.

APPLICATION FILED DEC. 7, 1911.

1,036,411.

Patented Aug. 20, 1912.

2 SHEETS—SHEET 1.

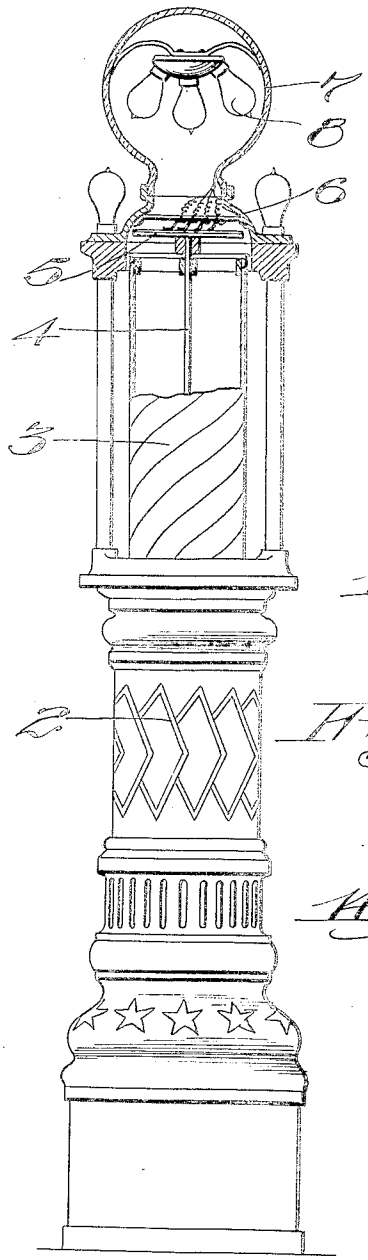

Fig. 1.

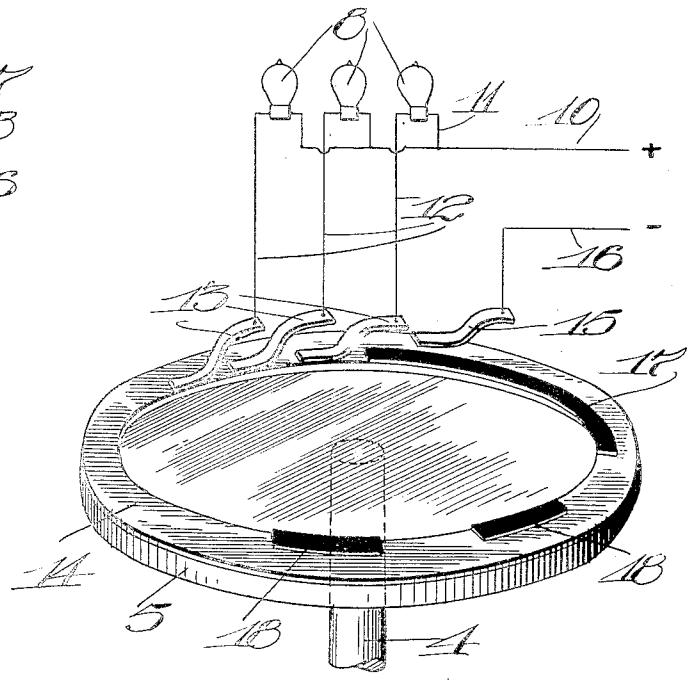

Fig. 2.

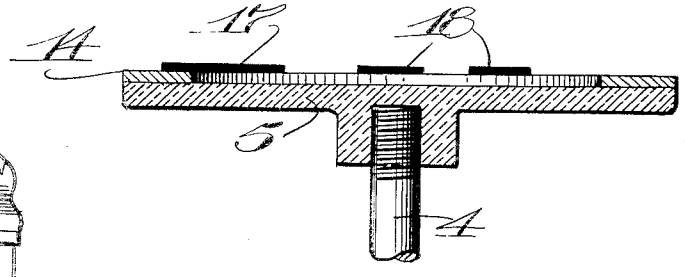

Fig. 3.

Witnesses.
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Their Atty.

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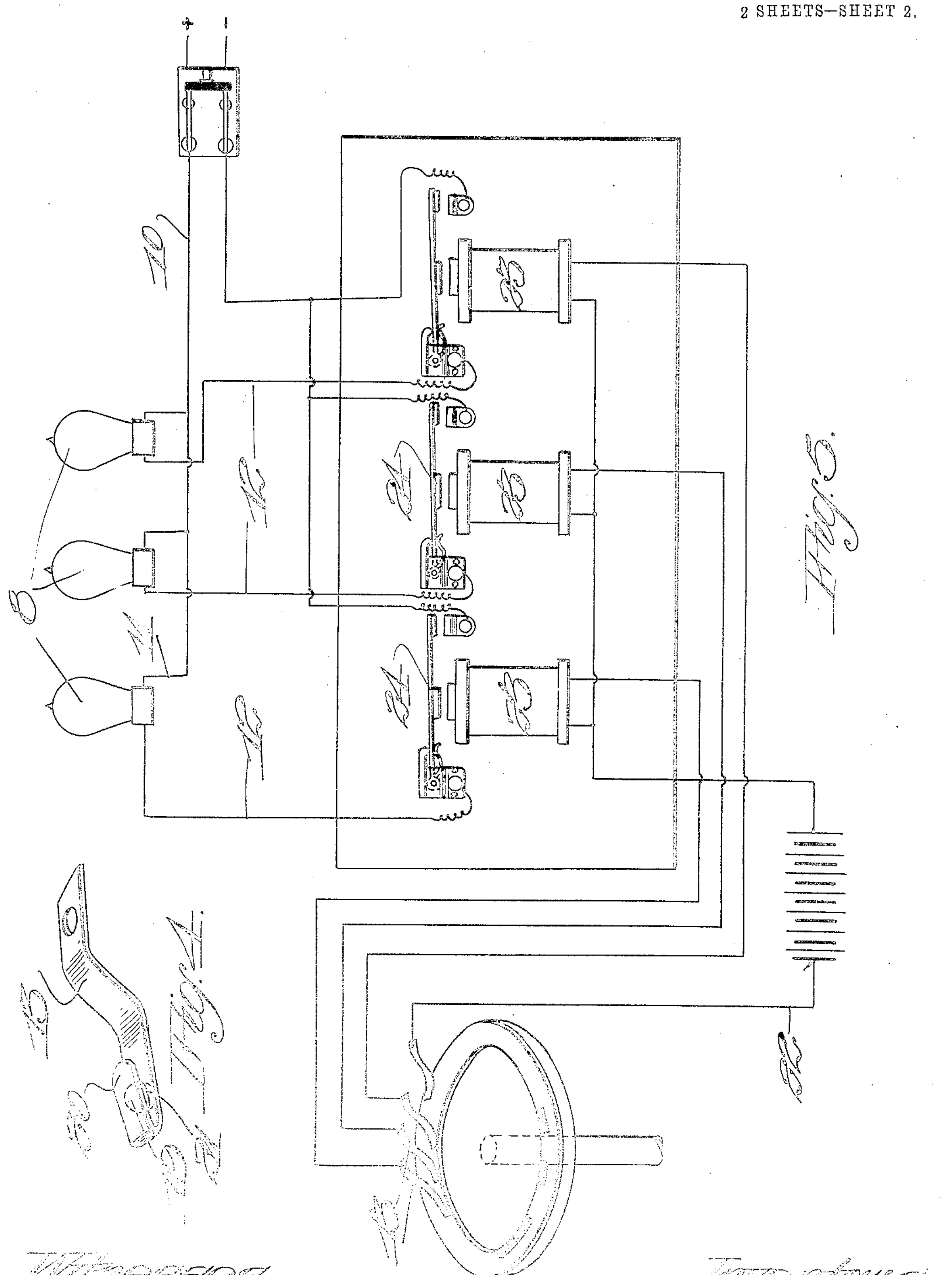

Witnesses:

Inventors:

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UNITED STATES PATENT OFFICE.

NELS O. ANDERSON AND FLOYD O. HUTCHINGS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNORS TO EXCELSIOR ADVERTISING DEVICE CO., A CORPORATION OF CALIFORNIA.

ELECTRICAL ADVERTISING DEVICE.

1,036,411. Specification of Letters Patent. Patented Aug. 20, 1912.

Application filed December 7, 1911. Serial No. 664,406.

To all whom it may concern:

Be it known that we, NELS O. ANDERSON, a subject of the King of Sweden, and FLOYD O. HUTCHINGS, a citizen of the United States, both residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Electrical Advertising Devices, of which the following is a specification.

This invention relates to advertising apparatus.

The object of this invention is to provide a simple, attractive, easily operated, efficient advertising novelty, and particularly to provide such a novelty including a sign structure adapted to be illuminated at successive intervals by vari-colored lights; the circuit through the lights being controlled by a moving part of the decorated sign structure.

An important object is to provide a means for controlling the illumination, which means will utilize as small amount of power as possible.

The invention consists of the parts and the construction and combination of parts, as hereinafter more fully described and claimed, having reference to the accompanying drawing, in which—

Figure 1 is a side elevation of a decorated sign, having a movable, visible part controlling the lighting effect. Fig. 2 is a perspective view of the switch. Fig. 3 is a transverse section through the switch structure. Fig. 4 is a perspective view of a brush. Fig. 5 is a modification showing a battery circuit.

It is a desideratum to provide my device in combination with certain advertising signs, having a movable decorated part, such, for instance, as is shown in Fig. 1, in which is represented a barber's pole 2 having a decorated cylinder 3 rotatably mounted upon the pole, which is secured upon a shaft 4, to which power may be applied from any suitable source, not here shown. This style of advertising structure is rendered attractive by daylight on account of its coloring and the rotation of the decorated or striped cylinder 3, but at night, should the pole be erected at any distance from a good light, the pole structure becomes almost or entirely invisible, and in order to render the device more effective to serve its purpose, it is our intention to erect in combination with the moving member a system of lights controlled by the movement of the member, whereby the rays of lights, themselves being invisible, will be cast upon the moving cylinder 3 and render the same visible.

In practising our invention we attach at the upper end of the cylinder shaft 4 a suitable, transparent, non-electric conducting disk or switch plate 5, which is disposed horizontally in a cap 6 of the sign. The upper portion of the cap 6 has a globe 7, which may be transparent or opaque, as desired, and in this is erected a cluster of vari-colored lights 8, which, for instance, may be red, white and blue in harmony of coloring with the sign. The sockets of the several lights are connected, as shown in Fig. 2, to a main electric conductor 10 by branch wires 11, and the sockets attached by brush wires 12 to respective brushes 13. The brushes are adapted to rest upon an annulus or flat ring 14 of conducting material, which is electrically energized by a main brush 15, to which is connected the return main wire 16. Thus, current enters the ring 14 which is secured upon the upper surface of the turnable switch 5 and flows through the several brushes 13 to the lights, thence out on the main lead 10. Preferably the brush 15 bears on the outermost portion of the conductor 14, while the several light brushes 13 bear upon the surface thereof nearer the center of the disk switch 5, and for the purpose of intermittently flashing and cutting off the illumination by the lamps 7, there may be provided a plurality of insulating segments, as 17 and 18, the former of which is comparatively long, so that all of the brushes 13 may simultaneously rest thereon and thus break the circuit of the several lights at one time. During the rotation of the disk switch 5, the insulator segment 17 moves beneath the brushes, these being lifted from contact ring 14, thus breaking the lamp circuit. As the segmental insulator 17 passes from beneath each brush, the brush will be permitted again to contact with the ring 14, thus closing its respective lamp circuit, each lamp being energized successively, as its brush passes off the end of the conductor segment 17. By placing a plurality of the short segments 18 at any desired dis-

tances circumferentially upon the ring 14, the desired timing of the closing of the circuits of the lamps 7 may be accomplished and each of the lamps may be successively lighted, or all may be simultaneously lighted, when all rest upon the contact ring 14.

By forming the switch disk 5 of a transparent, non-conducting material, danger of leaking of the current to the other portion of the apparatus is avoided, and a minimum obstruction of the rays of light passing downward through the cap 6 is obtained. The rays, continuing through the transparent disk 5, reach the cylinder 3, which may be made of suitable material, transparent, if desired; thus, the latter will be illuminated at desired periods with various colors or with a mixture of the several colors when all of the lights are illuminated simultaneously.

Inasmuch as it is desired to conserve power to the greatest possible extent, we have shown in Fig. 4 a very efficient and yet easy running form of brush, in which there is provided a ball 19, which rests between the upwardly folded leaf 20 of the brush 13, which presses the ball 19 so as to rest upon a seat 21, preferably of less diameter than the ball 19, so that when the brush 13 is entirely lifted from the support upon which the ball 19 travels, the pressure of the spring fold or leaf 20 will not push the ball through the seat 21. When the brushes are assembled in place, the balls 19 rest upon the upper surface of the contact ring 14 and constantly bear on the lower surface of the spring or fold 20, thus at all times making a positive contact. By this form of rolling antifriction device, the brushes, while making good contact, will not bear with sufficient pressure to materially retard the movement or rotation of the revolving disk switch 5.

If the brushes are in the main circuit, it is necessary that they bear sufficiently to insure a perfect contact, thus effecting a material resistance to the moving part, therefore, in Fig. 5, the switch brushes are shown as connected in a battery circuit 22, of which there is a branch for each brush, each branch including a magnet 23, which, when energized, will attract its armature 24, thus in turn closing a circuit through its wire 12 to a lamp in the main circuit. By this latter arrangement a very delicate brush structure and weak current will be sufficient to control the lamps.

Having thus described our invention, what we claim and desire to secure by Letters Patent is—

1. The combination of a transparent, revoluble non-electric table, an annulus mounted upon the upper surface of said table, an electric conductor constantly contacting with said annulus and energizing the same, a plurality of non-conducting segments arranged on the annulus, and a series of lamp circuit controlling brushes adapted to contact the annulus and be insulated therefrom during the movement of the table by said segments.

2. The combination of a series of multicolored lights, a rotatable transparent switch table, an annulus mounted upon the upper surface of said table, an electric conductor constantly contacting with said annulus and energizing the same, a series of brushes connected in the lamp circuits bearing upon said annulus, a plurality of insulating segments of various lengths arranged on the annulus and adapted to interrupt the lamp circuits by breaking the contact of said brushes with the annulus.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

NELS O. ANDERSON.
FLOYD O. HUTCHINGS.

Witnesses:
ZELA HASTINGS,
CHARLES EDELMAN.