Oct. 15, 1929. H. N. WAGNER 1,731,513

ELECTRIC SIGN FLASHER

Filed June 2, 1926

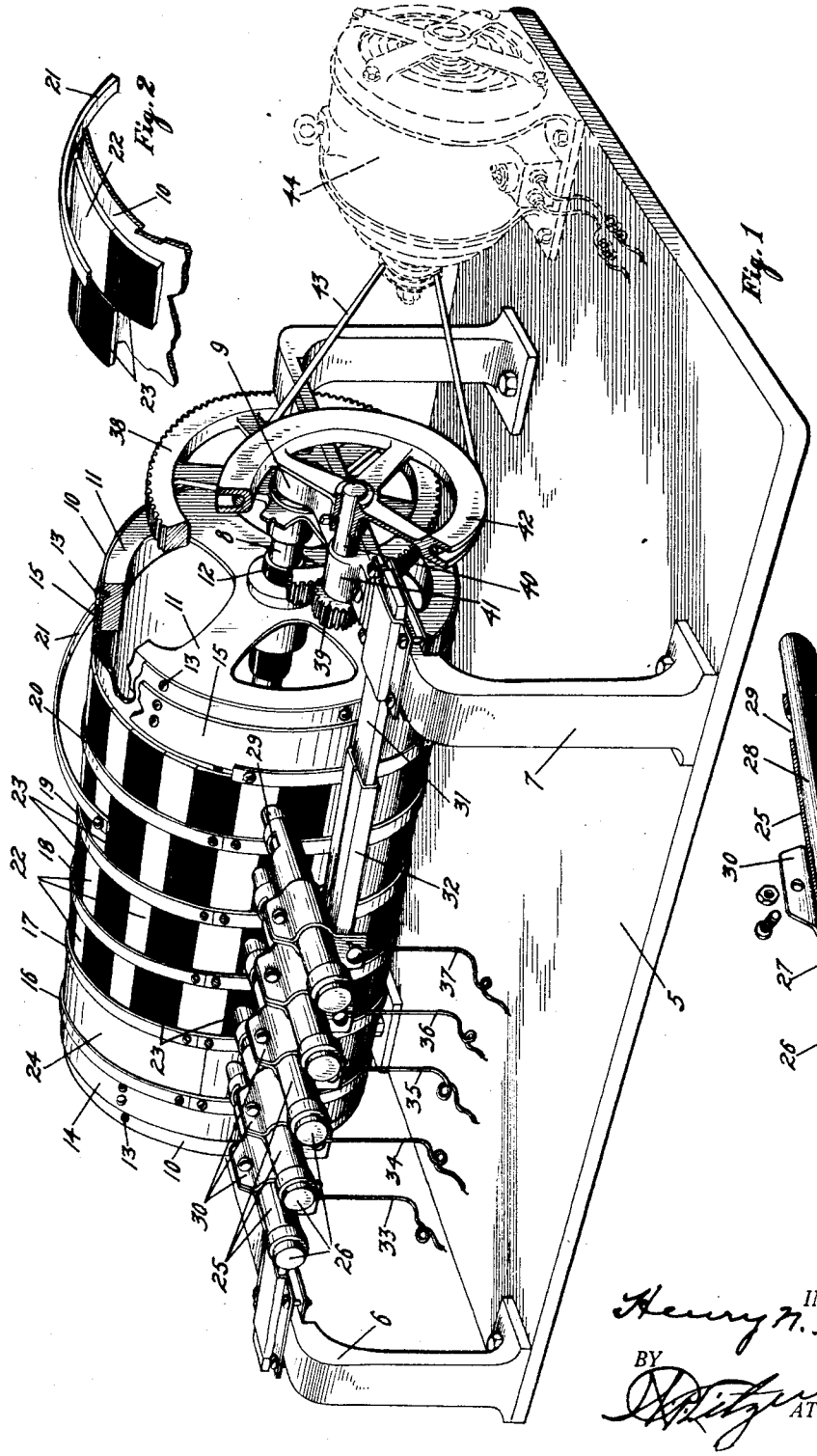

Fig. 1

Fig. 2

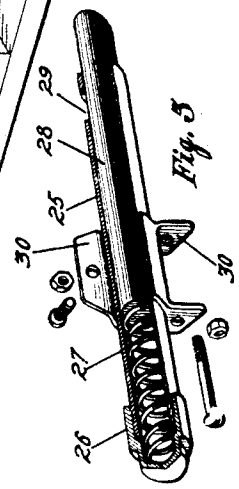

Fig. 3

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UNITED STATES PATENT OFFICE

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ELECTRIC SIGN FLASHER

Application filed June 2, 1926. Serial No. 113,185.

My invention relates to electric sign flashers, and more particularly to a device for use in connection with electric circuits for intermittently interrupting the flow of current through said circuits, whereby to give the flashing action in connection with the lights.

Among the salient objects of my invention are: to provide a device with a series of contact elements, spaced apart with insulating elements therebetween, all of said elements forming a drum revolubly mounted, whereby a contact brush will engage first a contact element and next an insulating element; to provide in a device of the character referred to a drum with holding bands, with segmental elements, some of conducting material and others of non-conducting material, adapted to be placed around said drum to form a flush surface, whereby a contact brush will move over said elements from one to the other as if it were a continuous surface; to provide a device of the character referred to with spring-pressed contact brushes or elements projecting in substantially radial positions toward and in contact with the surface of said drum; and, in general, to provide a revolving drum with interchangeable surface elements of different materials and with holding bands adapted to detachably hold them in place.

In order to fully explain my invention, I have shown one practical embodiment of the same on the accompanying sheet of drawings, in which,—

Figure 1 is a perspective view, with parts in section, showing a flasher embodying my invention; and

Figure 2 is a fragmentary view showing a part of a drum, with surface elements and band for holding the same; and

Figure 3 is a perspective view of a brush, in section to show the means for yieldingly holding the same.

Referring now in detail to the drawings, my invention as here illustrated for descriptive purposes, includes a base, 5, with two spaced bearing brackets, 6 and 7, mounted thereon, with a main shaft, 8, having bearings, as at 9, and on which said shaft, 8, is mounted a drum, 10, having end members, as 11, mounted on said shaft with insulating sleeves, as 12. The drum is made of rolled sheet material secured to the end members 11, as by means of small screws, 13.

Two bands, as 14 and 15, are secured in place around said drum, said bands being of a thickness corresponding to the thickness of the elements to be used therewith and hereinafter referred to. A series of holding bands, 16, 17, 18, 19, 20 and 21 are placed around said drum, said bands being narrow, but sufficiently wide to overlap the two meeting edges of surface elements, 22, 22, and 23, 23, the elements 22, 22, being of conducting material, while the elements, 23, 23, are of non-conducting or insulating material, said elements being of the same thickness and adapted to be laid upon the drum, 10, edge to edge and interspaced as may be desired, with the holding bands overlapping the meeting edges thereof, as clearly indicated. This makes it possible to place any length of element desired, whether of insulating material or of conducting material, depending upon the desired length of time for a closed circuit, or for an open circuit, as will be clear to those versed in the art. These elements can be distributed as may be desired, those between two bands being independent of those in the next adjacent portion of the drum. When said elements are all clamped in place, the surface is smooth and the brushes can retain contact as the drum is revolved.

A feed band, 24, is shown held around said drum by the bands, 16 and 17, whereby the circuit connection at this place is continuous as the drum revolves.

The brushes each comprise a tubular member, as 25, with an end cap, 26, a spring 27 therein, and a carbon stick, 28, held yieldingly by the spring and projecting from the tubular member, 25, and into contact with the surface elements of the drum, as shown. Said tubular members are each provided with an opening through its side, near the front end, designated, 29, whereby the carbon can be seen and if getting short it will be disclosed. A holding bracket, 30, is provided for each tubular member, by means of which it is secured to a supporting bar, 31, with an insu-

lating sleeve, 32, to insulate the brushes from the supporting bar, 31.

The brush at the left hand end of the drawings, designated, 25ª, it will be seen, is in contact with the feed band, 24, while the other brushes are spaced to contact with the surface elements between the respective holding bands, 17 and 18, 18 and 19, 19 and 20, and 20 and 21, as will be understood from the showing. The circuit wires for the respective brushes are shown and designated, 33, for the feed circuit, and 34, 35, 36 and 37 for the other circuits, leading to the respective lights to be illuminated, or other instrumentalities to be energized.

A drive gear, 38, is mounted on the main shaft, 8, and meshes with a pinion, 39, on a stub shaft, 40, in the bearing, 41, and provided with a drive pulley, 42, driven by a belt, 43, from a motor, 44, shown mounted on the base, 5, although it will be understood that any driving connections can be provided as conditions justify.

I am aware that changes in details of construction and arrangement can be made without departing from the spirit of my invention and I do not, therefore, limit the invention to the showing made for illustrative purposes, except as I may be limited by the hereto appended claims.

I claim:

1. An electric flasher including a drum with means for revolving it, series of surface elements secured around said drum, means for detachably and interchangeably holding said elements in place with their meeting edges flush with each other, a contact brush for each series adapted to contact each element of its series as said drum is revolved, said elements being of conducting and non-conducting materials, and electric circuits connected to be opened and closed as said brushes wipe over said elements.

2. An electric sign flasher including a drum, means for revolving the same, a plurality of series of surface elements arranged around said drum, holding bands around said drum and overlapping the meeting edges of said elements, the elements of each series being of different materials, some being conducting material and others being non-conducting material, a plurality of contact brushes with means yieldingly holding them against said elements in substantially radial positions, and circuit connections for said brushes.

Signed at Los Angleses, Los Angeles County, California, this 28th day of May, 1926.

HENRY N. WAGNER.