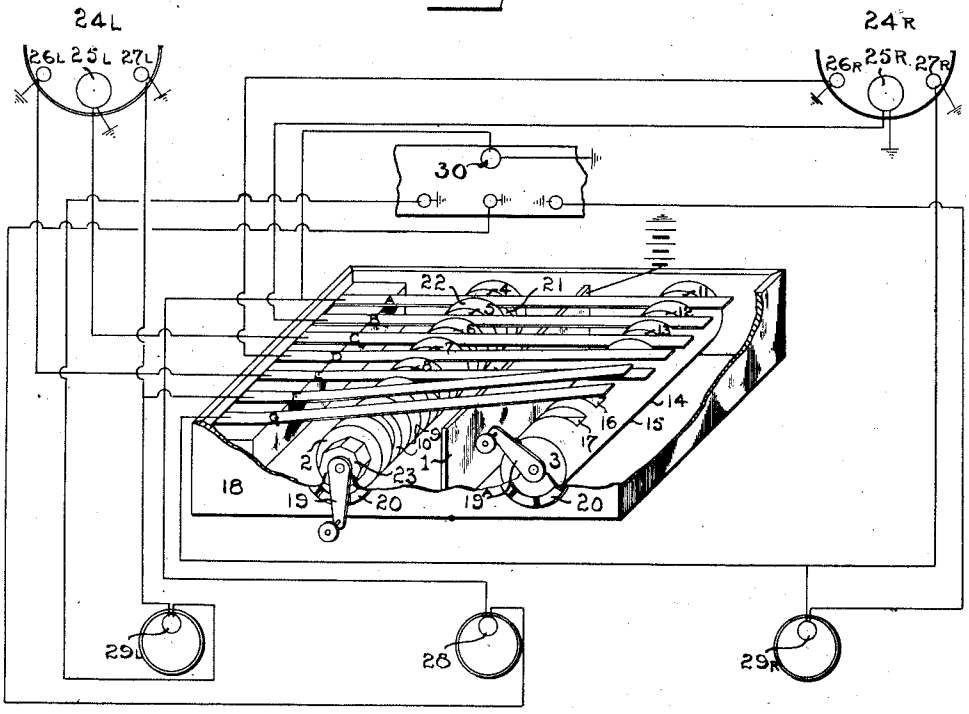
A. D. BROWN.

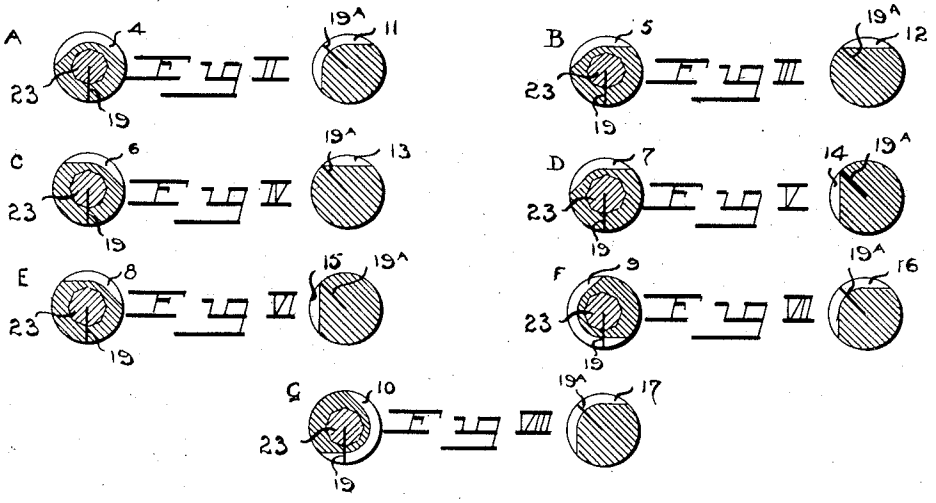
CIRCUIT CONTROLLER.

APPLICATION FILED MAY 5, 1920.

1,361,006. **Patented Dec. 7, 1920.**

FIG I





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UNITED STATES PATENT OFFICE.

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CIRCUIT-CONTROLLER.

1,361,006. Specification of Letters Patent. Patented Dec. 7, 1920.

Application filed May 5, 1920. Serial No. 379,173.

To all whom it may concern:

Be it known that I, ATHOL DUDGEON BROWN, a British subject, residing at Glen Avon, Somerset East, Cape Province of the Union of South Africa, have invented certain new and useful Improvements in Circuit-Controllers, of which the following is a specification.

The present invention has reference to the distribution of electric current to a number of different circuits and consists principally in a switch arrangement whereby different predetermined combinations of circuits can be effected by simple controlling movements.

The invention is applicable to a night signaling system for automobiles and is so illustrated in the accompanying drawings in which,

Figure I shows a complete distributing system.

Figs. II to VIII are sections through the rollers 2 and 3 in the planes of the tongues hereafter described.

The switch comprises a number of spring tongues A B C D E F G, one for each circuit. Said tongues are set to tend to make contact with a common contact bar 1; and when they so make contact they complete their respective circuits. Arranged transversely beneath the spring tongues are rollers 2, 3, either of which upon making peripheral contact with any one of the spring tongues, lifts the same out of contact with the contact bar 1. Opposite each tongue, or some of the tongues, the roller peripheries are cut away to form slots. The slots in roller 2 are numbered 4 to 10 and correspond to tongues A to G respectively. Similarly corresponding slots in roller 3 are numbered 11 to 17. When such slots on both rollers 2 and 3 corresponding to a particular tongue are both turned up, that particular tongue is permitted to drop and close its circuit. As the slots for any one tongue can occupy different parts of the roller periphery, a large number of different combinations can thus be arranged for. The rollers are mounted to rotate in a switch box 18, and are provided with crank handles 19, 19a. Yielding detent devices indicated by 20 are provided for holding the rollers in their several positions of rotation.

In the construction illustrated the roller 2 is formed of alternate slotted disks 21 and distance pieces 22 threaded on a polygonal spindle 23 as appears from Figs. II to VIII. This arrangement facilitates manufacture, and also enables the distributing combinations to be varied. In the distributing system illustrated 24^R indicates a right hand automobile headlight and 24^L the corresponding left hand head light. In said head lights are fitted, firstly the high power or bright lamps 25^L and 25^R respectively, the uncolored dimmer lamps 26^L and 26^R respectively, and blue or other colored lamps 27^L and 27^R respectively. 28 is the regular red tail light. 29^L and 29^R indicate green or other colored lamps arranged at the rear of the car, usually in horizontal line with the tail lamp 28.

The tongues A to G are wired in circuit with said lamps, as follows:—

Tongue A with the regular tail lamp 28 and the dash lamp 30

Tongue B with the right hand bright head lamp 25^R

Tongue C with the left hand bright head lamp 25^L

Tongue D with the right hand dim head lamp 26^R

Tongue E with the left hand dim head lamp 26^L

Tongue F with the left hand front colored lamp 27^L and the left hand rear colored lamp 29^L

Tongue G with the right hand front colored lamp 27^R and the right rear colored lamp 29^R

The lamps are controlled by the switch in the following manner.

For regular ahead running as shown in the drawings, the handle 19 is straight downward and for bright head lights, the handle 19^a is to the left. Tongues F and G are then lifted by roller 2 while tongues D and E are lifted by roller 3. Tongues A, B, C are down in contact with the bar 1, causing the illumination of both bright head lamps 25^R, 25^L and the red tail lamp 28.

For a right turn, the handle 19 is turned to the right. This raises tongue B while the slot 10 moves up and allows tongue G to drop the other tongues remaining as before The right hand bright head lamp 25^R is thereby extinguished and the right hand forward blue lamp 27^R and the right hand green rear lamp 29^R are illuminated.

A left hand turn is indicated by turning the handle 19 to the left. Tongues C and G are thereby raised, while tongues A, B and F are lowered. The right hand head lamp

25^R is thus re-illuminated, while that on the left is extinguished. The left hand forward blue lamp 27^L and the left hand green lamp 29^L are illuminated.

In the three operations described, the tongues D and E remain lifted by the roller 3. If the dimmer switch handle 19^a is shifted half over to the right, the slots 14 and 15 allow the tongues D and E to make contact with the contact bar whenever they are left free by roller 2; while the bright head light tongues B and C are lifted by the roller 3.

To indicate stop, the handle 19 is turned vertically upward, whereby the roller 2 lifts all the tongues A to E inclusive, leaving down both F and G. All the white lamps 25^R, 25^L, 26^R, 26^L and 30 and the red tail lamp 28 are thereby extinguished and the four colored lamps 27^R, 27^L, 29^R, 29^L are illuminated.

The roller 3 acts as a cut out upon turning the handle 19^a fully to the right, when all the tongues A to G inclusive are raised.

I claim:—

In an electric distributing system comprising a number of circuits, a switch device including a number of tongues separately included in said circuits, a contact bar with which said tongues can make contact, and a plurality of rotatable means arranged transversely of said tongues and arranged upon rotation to bring the tongues selectively into and out of contact with the contact bar.

In testimony whereof I affix my signature.

ATHOL D. BROWN.