April 26, 1927. 1,625,832

M. A. STEIN

CIRCUIT CONTROLLING APPARATUS

Filed Feb. 15, 1921

Fig. 1.

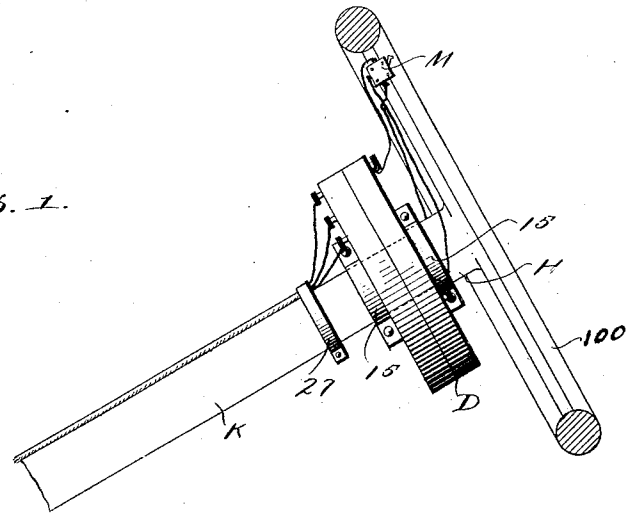
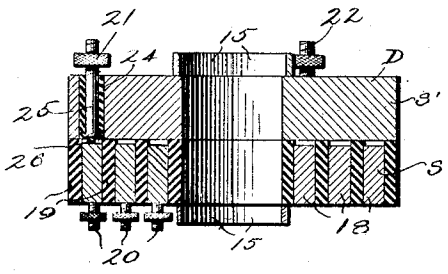


Fig. 2.



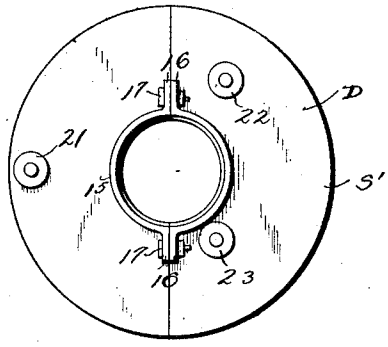


Fig. 3.

Fig. 4.

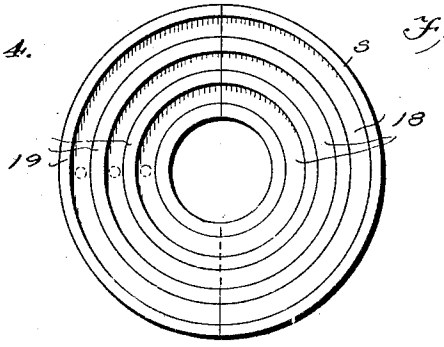
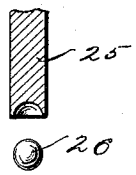


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

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CIRCUIT-CONTROLLING APPARATUS.

Application filed February 15, 1921. Serial No. 445,227.

My invention relates generally to an electrical distributor as well as circuit controlling apparatus and more particularly to a circuit controlling apparatus adapted for use in connection with the headlights of automobiles, the purpose of my invention being the provision of an apparatus of that character in which the bright and dim lamps can be arbitrarily illuminated without the necessity of actuating the dash board switch so that the operator of the automobile can maintain complete control of the steering wheel during such operation, thereby eliminating the danger attendant present apparatus.

The following description is concerned chiefly with the electrical distributing feature of the invention.

In the accompanying drawing:

Figure 1 is a view showing in side elevation a conventional form of steering wheel and column having the improved electrical distributor applied thereto.

Figure 2 is a vertical sectional view of the distributor comprised in the apparatus shown in Figure 1.

Figure 3 is a top plan view of the distributor shown in Figure 2.

Figure 4 is a top plan view of the stationary section shown in Figure 2.

Figure 5 is an enlarged detail sectional view of one of the binding posts shown in Figures 2 and 3.

Similar reference characters refer to similar parts in each of the several views.

Referring specifically to the drawings and particularly to Figure 1, the circuit controlling apparatus as herein embodied consists in the main of a distributor D mounted on the steering column and shaft, and a manually operable switch M sustained on the steering wheel as shown in Fig. 1, said switch being for the purpose of effecting a certain desired control of headlights not shown herein. The distributor D comprises a stationary section *s* and a movable section *s'*, both of which are split to permit of their ready application to the steering shaft and column. Both sections are provided with split clamping collars 15 having radially extending lips 16, which as shown in Figure 3 are adapted to receive bolts 17 for securing the collars in clamping relation with respect to the column and post. The stationary section *s* is made up of a plurality of split conducting rings 18 and split insulating rings 19 arranged concentrically of the conducting rings and in alternate relation with respect thereto. As shown in Figure 2, the upper edge of the insulating rings 19 project above the conducting rings 18 and thus serve to insulate the movable section *s'* therefrom when the two sections are in applied position. Each of the conducting rings 18 is provided with a binding post 20 to which wires are adapted to be connected for supplying current to each of the rings. The movable section *s'* is provided with three binding posts 21, 22 and 23 which are suitably fitted within insulating sleeves 24 mounted as shown in the section in Figure 2. Each binding post 21, 22 and 23 is formed at its lower end with a socket 25 in which is rotatably mounted a ball 26 as shown in Figure 5. The ball 26 is adapted to have a rolling contact with the corresponding conducting ring 18 so that irrespective of the position of the movable section *s'* with respect to the stationary section *s*, a good electrical contact will be maintained between the binding posts and the corresponding ring. As shown in Figure 3, the several binding posts 21, 22 and 23 are arranged at different points upon the section *s'* so that their balls 26 will contact with the three conducting rings 18, whereby current supplied to any one of the conducting rings from the binding posts 20 will be conveyed to the corresponding post 21, 22 or 23.

In Figure 1, K designates the steering column, and 100 the steering wheel which is provided with a hub H fixed to the steering shaft (not shown). In the applied position of the distributor D, the stationary section *s* is secured to the column K by means of its clamping collar 15, while the movable section *s'* is fixed to the hub H through the medium of its clamping collar 15, so that rotation of the steering wheel causes rotation of the movable section, the binding posts 21, 22 and 23 maintaining contact with the conducting ring 18 during such movement. Conducting wires are connected to the binding posts 20 in the manner shown in Figure 1, the three wires being in the form of a cable which extends up the steering column and is held contiguous to such column by one or more clamping rings 27.

What I claim is:

An electrical distributer comprising an element composed of a pair of sections to fit around a relatively movable portion of a

steering mechanism, clamping means carried by said sections to fix the element upon said portion, a plurality of contactors carried by said element, being insulated therefrom and being situated in different radial and circumferential positions in respect to said movable steering mechanism portion, said contactors having means for the attachment of wires, a complementary element composed of sections to fit around a relatively stationary portion of said steering mechanism, clamping means carried by said complementary element for securing it upon said relatively stationary portion in confronting position to the relatively movable element, said complementary element being composed of concentric conducting rings having intermediate and separating insulating rings which extend above the surfaces of the conducting rings providing concentric journals in which the ends of the contactors run, said relatively movable elements bearing and riding upon the upstanding portions of the insulating rings, and means carried by the conducting rings for the attachment of wires.

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