

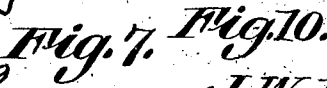
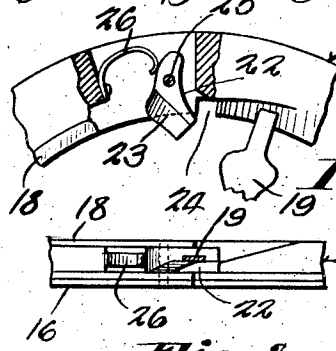
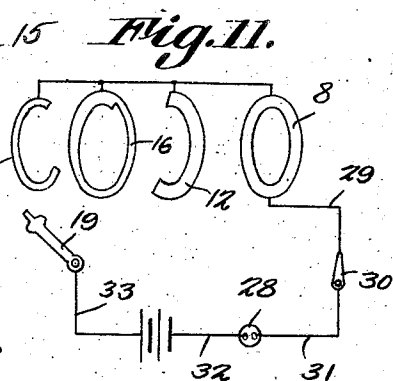
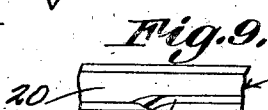
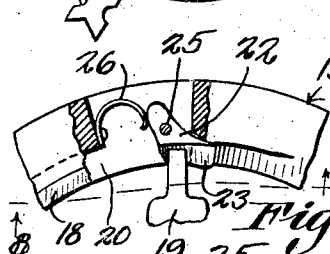
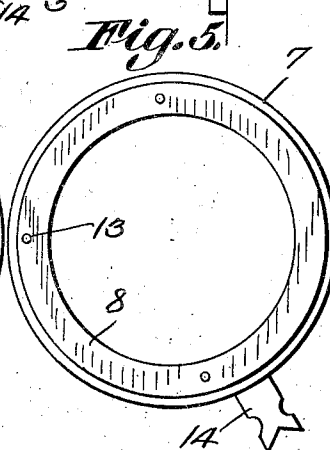
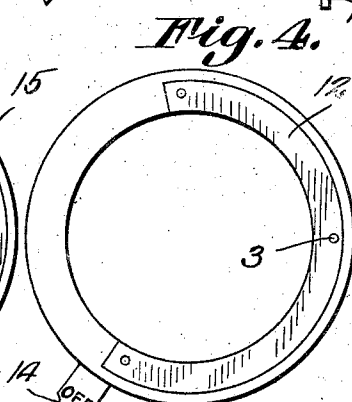
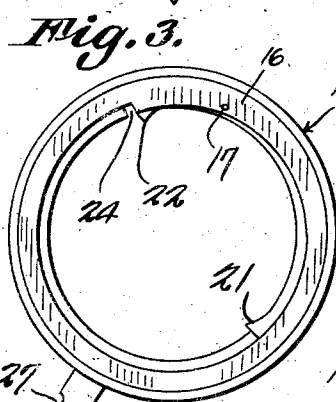
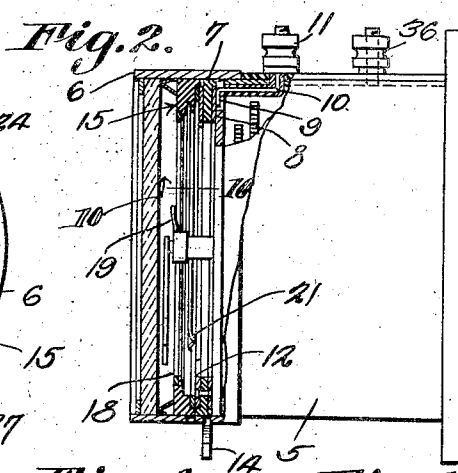
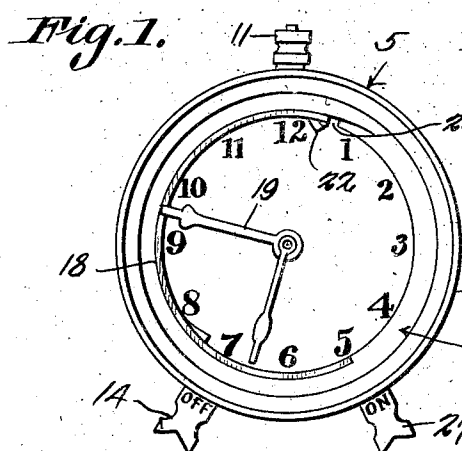
Aug. 7, 1928.

1,679,781

J. W. PEYTON ET AL.

ROTARY TIME SWITCH

Filed July 20, 1927



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Patented Aug. 7, 1928.

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UNITED STATES PATENT OFFICE.

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ROTARY TIME SWITCH.

Application filed July 20, 1927. Serial No. 207,143.

This invention relates to time controlled mechanisms, and aims to provide novel means whereby the circuit to a parking light will be completed to light the parking light at the proper time in the evening and to break the circuit to cut off the light at the proper time in the morning.

An object of the invention is to provide a device of this character which may be adjusted to the end that the time at which the light is turned on or off, may be varied to meet various requirements.

A still further object of the invention is to provide an attachment that may be readily and easily applied to the usual motor vehicle clock construction eliminating the necessity of making extensive alterations in the clock to install the device.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawing:

Figure 1 is an elevational view of a clock equipped with a device constructed in accordance with the invention.

Figure 2 is a side elevational view partly in section.

Figure 3 is a rear elevational view of the outermost ring member.

Figure 4 is a view illustrating the outer surface of the innermost ring member.

Figure 5 is a rear elevational view of the innermost ring member.

Figure 6 is an enlarged fragmental sectional view through a portion of the outer ring member.

Figure 7 is a fragmental sectional view illustrating the movable member of the ring member, as in its inactive position.

Figure 8 is a sectional view taken on line 8—8 of Figure 6.

Figure 9 is a fragmental detail view illustrating the hand guide.

Figure 10 is a sectional view taken on line 10—10 of Figure 2.

Figure 11 is a diagrammatic view illus-

trating the contact ring members in circuit with a source of electric supply.

Referring to the drawing in detail, the reference character 5 designates a clock of a construction especially designed for use on motor vehicles and the type usually supported in the instrument board of the motor vehicle.

The attachment forming the essence of the invention includes a supporting band 6 which is constructed to be slid over the body portion of the clock casing adjacent to the face of the clock as clearly shown by Figure 2 of the drawing.

Mounted within the supporting band is a ring member 7 of a diameter to closely fit within the band 6, the ring member 7 being supplied with a contact ring 8 secured to its under surface, the contact ring 8 engaging the right angled end 9 of the contact arm 10 which forms a part of the terminal 11, to which one wire, leading from the battery of the motor vehicle, is connected.

On the upper surface of the ring member 7 is a contact ring segment 12 which is in circuit with the contact ring 8 through the pins 13 which also act to secure the contact ring and ring segment together, it being understood that the ring member 7 is constructed of fibrous or other insulating material, to the end that the circuit will not be grounded.

Forming a part of the member 7 is a finger piece 14 that extends through a slot formed in the supporting band 6 so that a person may operate the ring member 7 to adjust the same, in a manner to be hereinafter more fully described.

The reference character 15 indicates the outer ring member which is also constructed of insulating material, the same being supplied with a contact ring 16 secured to the under surface thereof, the contact member 16 resting on the contact ring segment 12 to receive current therefrom. Pins 17 pass through the contact ring member 15 and contact ring 16, where they connect with the contact segment 18 providing a circuit therebetween.

As clearly shown by Figure 2, the under portion of the ring member 15 is cut away throughout a portion of its diameter so that the hour hand 19 of the clock may rest on the contact segment 12.

The ring member 15 is also provided with a groove 20 formed intermediate its thickness, there being provided a guiding finger 21 at the entrance of the groove for guiding the hour hand into the groove, as the hour hand moves in the usual manner.

At the opposite end of the groove 20 is a pivoted member 22, which is formed with a groove 23 forming a continuation of the groove 20 so that as the hand passes through the groove 20 and onto the member 22, the member 22 will swing from a position as shown by Figure 7 to a position as shown by Figure 6 spanning the space 24 to guide the hour hand 19 onto the upper surface of the ring member 15 where the circuit is broken.

As clearly shown by Figures 6 and 7 of the drawing, the member 22 is pivotally supported at 25 and is normally held in a position as shown by Figure 7, or in a position to be engaged by the hour hand, by means of the spring member 26, which bears thereagainst.

A finger piece indicated at 27 forms a part of the ring member 15 and also passes through a slot in the supporting band 6 so that this ring member may be adjusted with respect to the ring member 7, to vary the time at which the circuit is made or broken.

The space 24 which is formed at one end of the contact segment 18, is formed by cutting a notch through the ring member 15 and provides means whereby the hour hand may spring back onto the contact segment 12 of the ring member 7 after it has passed from the contact segment 18.

Thus it will be seen that due to this construction, an adjustment of the lowermost ring member may be made so that a greater or less portion of the segmental contact 12 may be provided at the end of the segmental contact 18 to cause the circuit to be closed a greater or shorter length of time.

The lamp is indicated by the reference character 28 and is in circuit with the ring members through the wire 29, switch member 30, wire 31 and wires 32 and 33, which connect with the battery of the vehicle.

From the foregoing it will be seen that due to this construction, the hour hand passing over the segmental contact member 18 will cause a circuit to be completed to the lamp 28, and as the hand is rotated, it is obvious that the hand will drop through the space 24 and onto the segmental contact member 12 from where the hand moves onto the main portion of the ring member 7, breaking the circuit to the lamp 28.

It is obvious that by moving the finger piece 14, the ring member 8 may be adjusted to cause the circuit to be broken at, for example five o'clock in the morning, and that by moving the outer ring member 15, the ring member may be adjusted so that

the hour hand will contact with the segmental contact 18 at, for example, seven o'clock at night.

The wire 33 which connects with the terminal 36, is in circuit with the hour hand 19, as clearly shown by Figure 11 so that the circuit may be completed as the hour hand moves over the segmental contacts.

Assuming that the clock has been set as shown by Figure 1, the hour hand moves over the segmental contact 18 completing the circuit to the lamp as long as the hour hand engages the segmental contact 18. As the hour hand moves to the upper end of the segmental contact 18 and passes into the space 24, the hour hand will move through the space 24 contacting with the segmental contact 12 which is disposed directly thereunder, where the circuit is again completed to the lamp, the circuit remaining completed until the hour hand moves off of the contact segment 12 at the lower end thereof.

As the hour hand continues to rotate, it will be seen that the hour hand passes up over the member 21 contacting with one wall of the groove of the ring member 15. whereupon the circuit remains broken. The hour hand continuing to rotate in a clockwise direction, moves over the member 22 causing the member 22 to swing to a position as shown by Figure 6 whereupon the hour hand moves onto the upper surface of the ring member 15 until it contacts with the segmental contact member 18, whereupon the circuit is again completed to light the light.

From the foregoing it will be obvious that the operation is automatic and will continue to light and cut off the light at predetermined intervals, to the end that the parking lamp of a motor vehicle may be automatically lighted in the evening, and automatically cut off in the morning.

We claim:

1. In combination with the hour hand of a clock, a switch including upper and lower ring members mounted for rotary movement over the face of the clock, said ring members being constructed of fibrous material, a segmental contact member carried by each ring member, one of said ring members having a groove, means for guiding the hour hand from one of the contact segments into the groove, and means for directing the hour hand from the groove to the upper surface of the ring member supplied with the groove.

2. In combination with the hour hand of a clock, a switch including ring members formed of insulating material supported adjacent to the face of the clock, a segmental contact member carried on the upper surface of each ring member, a circular contact member on the under surface of each ring member, means for completing a circuit to the

5 circular contact member of one of the ring members, the circular contact member of the opposite ring member resting on the segmental contact of the first mentioned ring member to complete the circuit to the segmental contact member of the second mentioned ring member, and means for directing the hour hand from one segmental contact member to the adjacent segmental contact member to complete a circuit.

10 3. In combination with the hour hand of a clock, a switch including outer and inner circular contact supporting members mounted adjacent to the face of the clock and over
15 which the hour hand moves, said contact supporting members having contact members

formed thereon, the outer circular contact supporting member having a notch to permit the hour hand to pass from the contact member of the outer contact supporting member to the contact member of the inner contact supporting member, said hour contact supporting member having a groove, a pivoted member at one end of the groove and adapted to swing over the notch to permit the hour hand to pass over the notch and onto the contact supporting member.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures.

JERRY W. PEYTON.
JOHN E. LIPSCHUTZ.