Jan. 2, 1934. L. DEKANY 1,941,828

TIME CONTROLLED SWITCH

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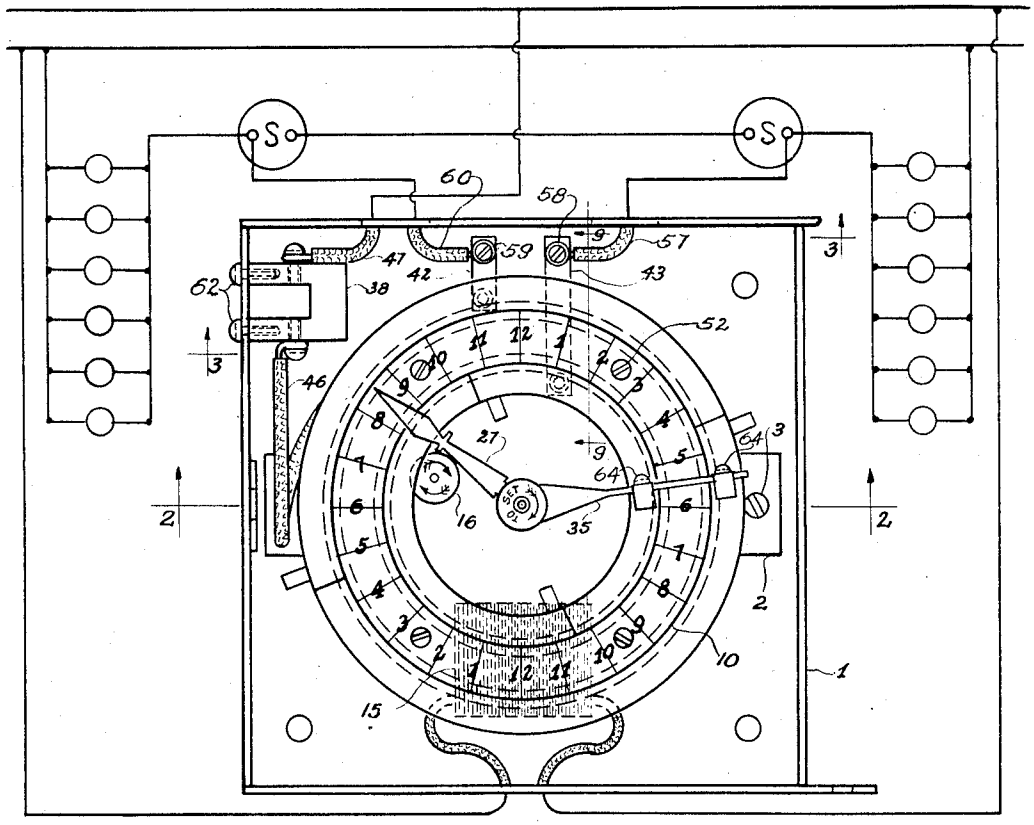


Fig. 1.

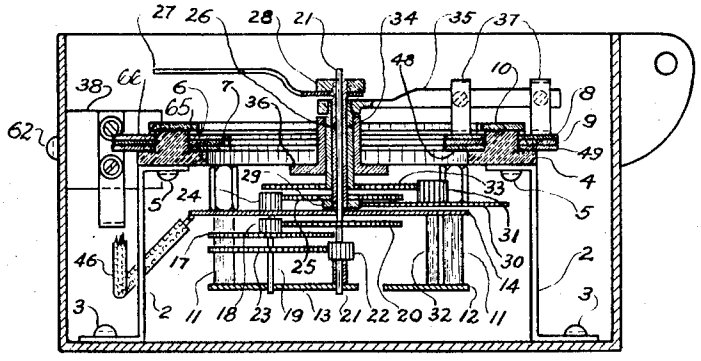


Fig. 2.

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Fig. 3

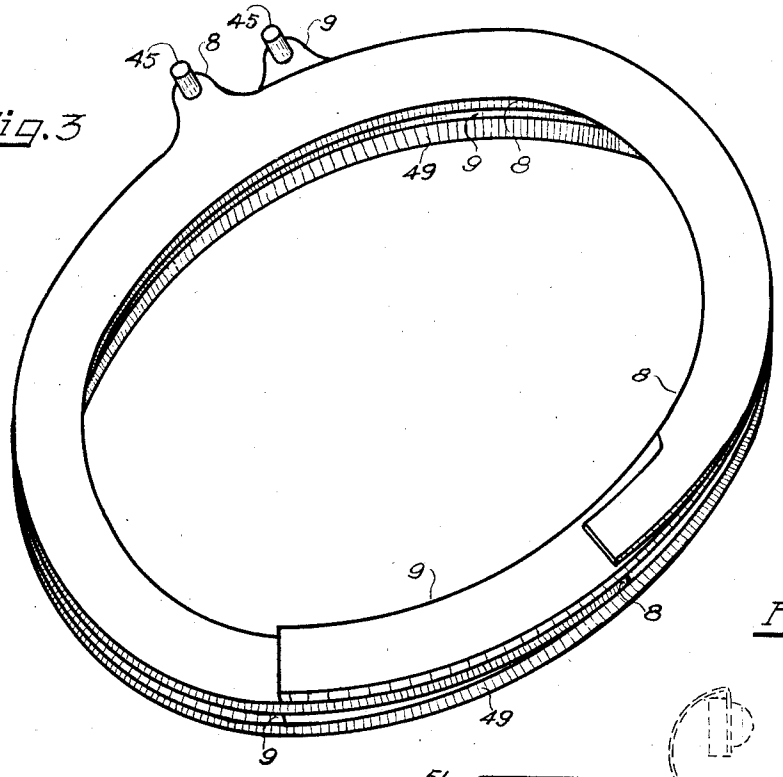


Fig. 5

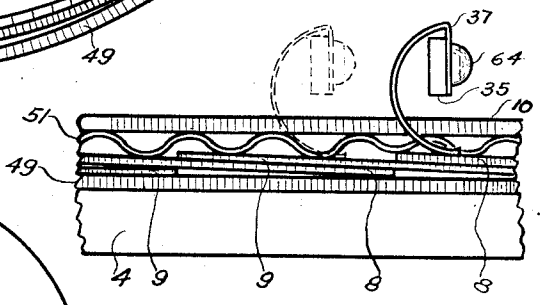
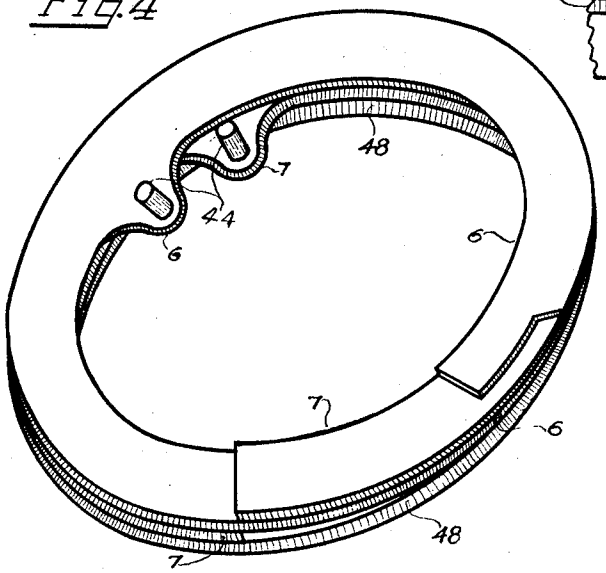


Fig. 4



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1,941,828

TIME CONTROLLED SWITCH

Louis Dekany, Chicago, Ill.

Application March 4, 1932. Serial No. 596,741

2 Claims. (Cl. 200—36)

The invention relates to improvements in time controlled switches, in association with a clock mechanism.

The main object of the invention is to provide a novel switch construction in association with a clock mechanism whereby an electrical circuit may be made or broken for a predetermined period by the prior setting of the switch elements.

Another object of the invention is to provide novel means to represent the a. m. and p. m. period of a complete day, which will facilitate the proper setting of the device.

A further object of the invention is to provide a device, which will eliminate the disadvantage to switch off the lights at a certain hour and which will automatically perform this operation.

A still further object of the invention is to provide a novel and positive switch construction for making or breaking the circuits to inside and outside lights of dwellings, display windows, etc.

A still further object of the invention is to provide a device of the character described which will be compact, simple in construction, easily assembled and taken apart for inspection and efficient in carrying out the purpose for which it is designed.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention consists in certain novel features of construction, arrangement, and combination of parts, hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

It is to be understood that various changes in the form, proportion, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

For the purpose of facilitating an understanding of my invention I have illustrated in the accompanying drawings preferred embodiments thereof, from an inspection of which, when considered in connection with the following description, my invention, its mode of operation, assembly, and many of its advantages should be readily understood and appreciated.

Referring to the drawings, in which similar characters of reference are employed to indicate corresponding or similar parts throughout the several figures in the drawings:—

Figure 1 is a front view of the device, the cover being removed in order to show the electrical connections.

Figure 2 is a cross sectional view taken approximately on the line 2—2 of Fig. 1.

Figure 3 is an enlarged perspective assembly of the outer time contact rings.

Figure 4 is an enlarged perspective assembly of the inner time contact rings.

Figure 5 is a fragmentary view showing method of making and breaking of circuit.

Referring to the drawings more specifically, casing 1, shown of general rectangular form, has brackets 2 2, attached to its bottom by means of screws 3 3. Brackets 2 2, at their upper portion support insulating ring 4, by means of screws 5 5.

Insulating ring 4, has an inside and an outside rabbet. The inside rabbet 65, receives inner conductor ring 48, split adjustable inner time contact ring 6, and the split adjustable inner insulating ring 7, which is of identical size of ring 6, and slips between its branches. Rings 6 and 7, have lugs 44, to swing them around, when to be set.

The outer rabbet 66, receives outer conductor ring 49, split adjustable outer time contact ring 8, and the split adjustable outer insulating ring 9, which is of identical size of ring 8, and slips between its branches. Rings 8 and 9, have lugs 45, to swing them around, when to be set.

Dial ring 10, is fastened to insulating ring 4, by means of screws 52, and presses on split corrugated compression ring 50, and on split corrugated outer compression ring 51, to keep the described inner and outer contact rings and insulating rings in alignment.

Dial ring 10, has 24 divisions, the upper half representing a. m. and the lower half representing the p. m. hours of a complete day.

Hour hand 35, carries the two contact elements 37 37, fastened by screws 64 64, which slide on the exposed surfaces of the inner time contact ring 6, and outer time contact ring 8, respectively, when mechanism is in operation.

Conductor 42, is in permanent contact with outer conductor ring 49, by means of screw 53, and nut 54. Conductor 42, at its free end is connected to the lighting circuit by terminal screw 59, and wire 60.

Conductor 43, is in permanent contact with inner conductor ring 48, by means of screw 55, and nut 56. Conductor 43, at its free end is connected to the lighting circuit by terminal screw 58, and wire 57.

Figure 3, shows the combination of the outer conductor ring 49, the split adjustable outer insulating ring 9, and the split adjustable outer time ring 8.

From Figure 3 it is evident that through the proper setting of the two rings 8, and 9, variable portions of the conductor ring 49, and the time contact ring 8, form contact, by means of which the line potential connected to conductor ring 49, reaches the outer surface of the split adjustable time contact ring 8. As soon as the contact element 37, carried on the hour hands 35, reaches the exposed portions of the time contact ring 8, the light circuit closes. After the contact element moved across the exposed sur-

faces of the time contact ring and reaches the exposed portion of the insulating ring 9, the circuit is broken.

Figure 4 shows the combination of the inner conductor ring 43, the split adjustable inner insulating ring 7, and the split adjustable inner time ring 6.

From Figure 4 it is evident that through the proper setting of the two rings 6, and 7, variable portions of the conductor ring 43, and the time contact ring 6, form contact by means of which the line potential connected to the conductor ring 43, reaches the inner surface of the split adjustable time contact ring 6. As soon as the contact element 37, carried on the hour hand 35, reaches the exposed portion of the time contact ring 6, the light circuit closes. After the contact element moves across the exposed surfaces of the time contact ring and reaches the exposed portion of the insulating ring 7, the circuit is broken.

Figure 5 shows the method of breaking the circuit after the predetermined period. The full line position of contact element 37, on the exposed surface of the split adjustable outer time contact ring 8, indicates the near ending of the predetermined period. The dotted line position indicates the breaking of the circuit, the contact element 37, jumping over to the exposed surface of outer insulating ring 9.

I claim:

1. In a time controlled switch mechanism, comprising an insulating ring, with inner and outer rabbets arranged for association with conductor rings, split adjustable time contact rings, split adjustable insulating rings adapted to be adjusted in spaced relation to each other, upon the time contact rings, corrugated compression members held in alignment by a dial ring.

2. In a time controlled switch mechanism, comprising an insulating ring, with inner and outer rabbets arranged for association with conductor rings, split adjustable time contact rings, split adjustable insulating rings adapted to be adjusted in spaced relation to each other, upon the time contact rings, and a movable contact member with two contact surfaces adapted to ride upon said insulating rings and to engage the exposed portions of said time contact rings between said spaced insulating rings for closing an electrical circuit.

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