J. W. ROBERTS.

TIME SWITCH.

APPLICATION FILED FEB. 17, 1919.

1,317,893. Patented Oct. 7, 1919.

Fig-1

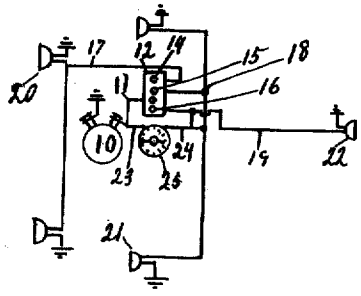


Fig-2

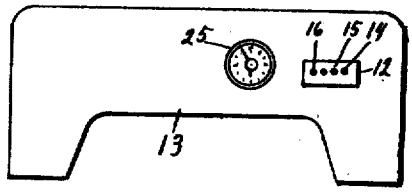


Fig-3

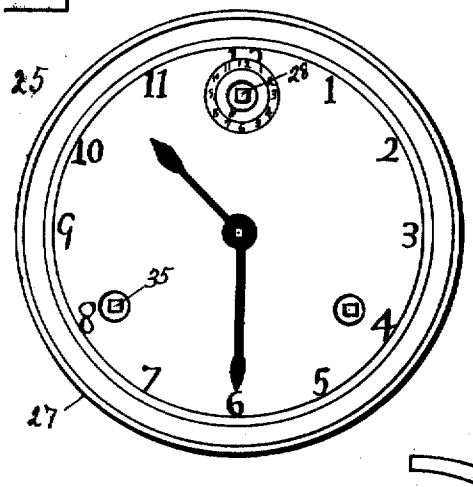


Fig-4

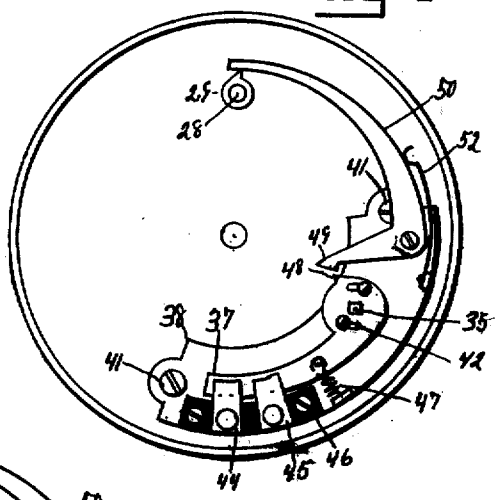


Fig-5

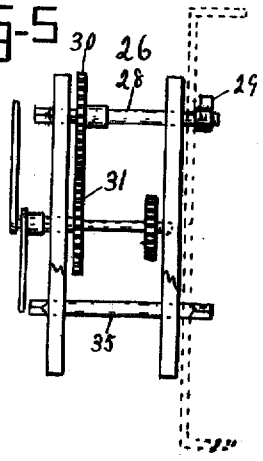


Fig-6

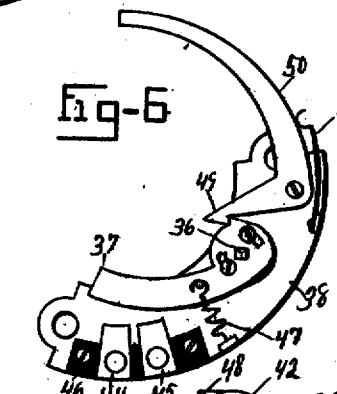


Fig 7

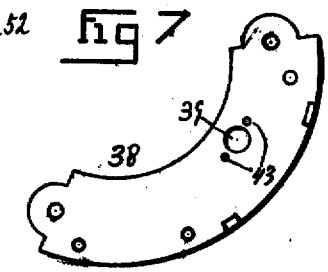
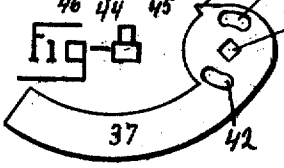


Fig-8



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TIME-SWITCH.

1,317,893. Specification of Letters Patent. Patented Oct. 7, 1919.

Application filed February 17, 1919. Serial No. 277,562.

To all whom it may concern:

Be it known that I, JOSEPH W. ROBERTS, a citizen of the United States, residing at Louisville, county of Jefferson, and State of Kentucky, have invented a new and useful Time-Switch, of which the following is a specification.

This invention relates to a time switch adapted to be used in connection with the electric lighting system of a motor vehicle for the purpose of closing the circuit and lighting certain of the lights such as the tail and side lights, at a predetermined hour.

Many municipalities require that motor vehicles which may be on the streets at night, shall, between certain hours, display a light or lights, whether in motion or standing still.

In many instances, the driver of a motor, having left his car parked on the street, before dark, having been detained until after the hour that the lamps should be lighted, has been called upon to pay a fine.

An object of this invention is to provide a device, which may be placed in the light circuit of an automobile, and which may be set so that at a predetermined time, it will close the circuit and light the lamps.

With the foregoing and other objects in view the invention consists of the novel construction and arrangement of parts illustrated in the accompanying drawing, which forms a part of this specification, wherein is set forth an embodiment of the invention, but it is to be understood that such changes and modifications may be resorted to as come within the scope of the appended claim.

In the drawing, wherein similar reference numerals designate corresponding parts in the several views, Figure 1, is a diagrammatic plan of the lighting circuit of a motor vehicle: Fig. 2, a plan view of the dash board showing the position of the device thereon: Fig. 3, a front elevation of a time piece embodying the invention: Fig. 4, a rear elevation of Fig. 3, showing the switch closed: Fig. 5, a side elevation of a portion of the time train of the time piece, removed from the case, a part of the frame being broken away: Fig. 6, a plan view of the switch showing it open: Fig. 7, a plan view of the switch base, or plate: Fig. 8, a plan view of the switch blade, on an enlarged scale.

Referring now to the diagrammatic plan, the reference numeral —10— designates a source of electric current, such as a generator. One pole of the generator is grounded on the frame of the machine, a conductor —11— leads from the other pole to a switch box —12— which is positioned in an accessible position, usually on the dash board —13— of the vehicle. Within the switch-box are a plurality of switches as —14, 15, and 16—, to one pole of each of which the conductor 11 is connected, from the other poles, conductors —17, 18, and 19— lead respectively to the headlights —20—, side lights —21— and tail light —22— the conductors leading from these lights being grounded. The switch box, with contained switches, which may be of any suitable construction, are well known in the art, being commercial articles. By manipulating the switches, which are usually of the "push button" type, the lights may be turned on or off separately. My improved device, indicated as an entirety by the reference character —25— is positioned, preferably on the dash board, in proximity to the switch box, and is connected in parallel with the switch box, in the circuits from the source of current to the tail and side lights, so that by its operation these lights may be lighted independent of the switch box. A conductor —23— leading from the conductor 11, to a connection with the time switch and a conductor —24— from the time switch to a junction with the conductors 18 and 19, leads to the tail and side lights. My device comprises a time train —26— contained within a casing —27—. Time trains are well known so no description thereof is necessary, suffice to say that a setting shaft —28— journaled in the frame and projected from both sides thereof is provided on its rear end with a removable trip cam —29—, and its front end is squared for the reception of a key. A pinion —30— frictionally sleeved on the setting shaft, meshes with the pinion 31 of the time train which carries the hour hand whereby the setting shaft rotates in unison with the hour hand. By applying a key to the squared end of the setting shaft, it may be turned so that its relationship to the driving pinion is such that the cam will point upward at the hour indicated on the small dial in the face. A shaft —35— journaled in the frame is squared on the forward end for the reception of a key and likewise on its rear end to adapt it to

enter a squared aperture —36— in a switch blade —37—. An arcuate base plate —38— is provided with an aperture —39— to fit over the shaft 35 and is attached to the back of the casing 27 by means of screws —41—. The switch blade is provided with a pair of arcuate slots —42— through which screws extend and are engaged in threaded holes —43—, in the plate, on either side of the aperture 39. The switch blade is adapted to close on contact springs —44—, —45— which are mounted on a block of rubber —46—. A spring —47— serves to pull the blade into contact with the springs thereby closing the circuit. The switch is opened by applying a key to the outer end of the shaft 35 and giving it a slight turn, as the blade is turned the detent —48— thereon is engaged by the short arm —49— of an angular trip lever —50—, the long arm —51— of which extends upward into position to be actuated by the trip cam 29. A spring —52— urges the lever into engagement with the switch blade. One key serves for the purpose of winding the spring of the time train, setting the trip cam and opening the switch.

When leaving his car parked, near night, the chauffeur opens the switch and sets the trip cam at the time the lights should "go on" and leaves the car with the assurance that the lights will be lighted at the proper time.

Having thus described my invention so that any one skilled in the art, pertaining thereto can make and use the same,

I claim:

An arcuate plate provided with an aperture a switch blade having an angular aperture at its pivotal point—said blade positioned on the plate with said apertures in alinement, the blade having an arcuate slot on each side of its pivotal point and being secured to the plate by means of screws passing through said slots, switch points adapted to be closed by the blade and a lever adapted to be engaged with the blade to hold it out of contact with said points.

JOSEPH W. ROBERTS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."