April 25, 1933. G. R. ERICSON 1,905,931

HEADLIGHT FOR TOY VEHICLES

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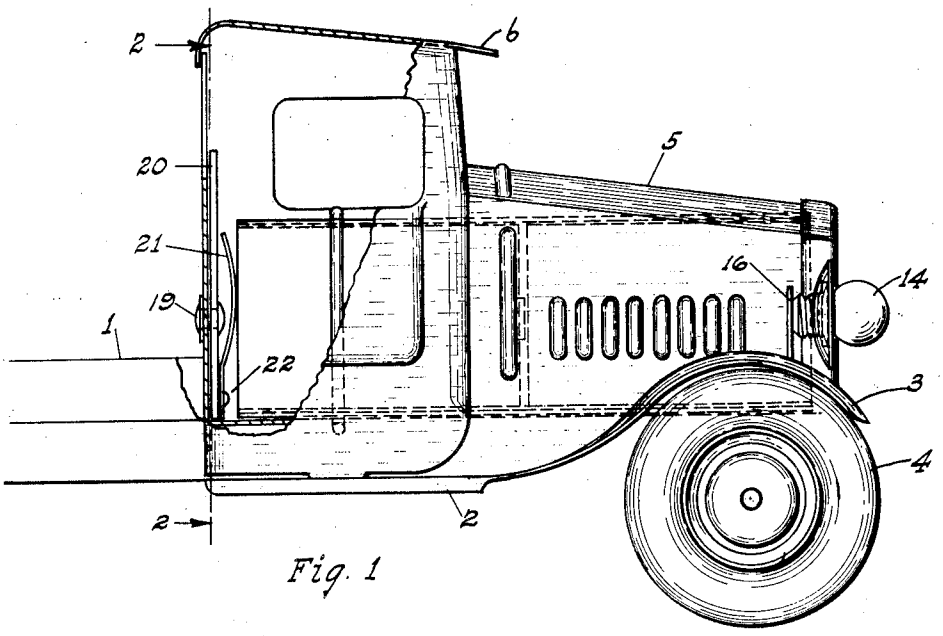


Fig. 1

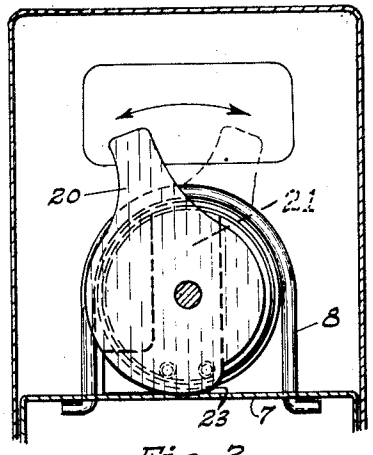


Fig. 2.

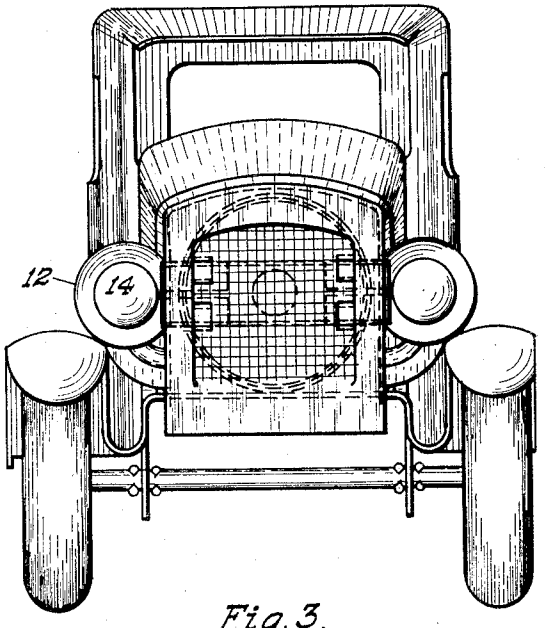


Fig. 3.

Fig. 4

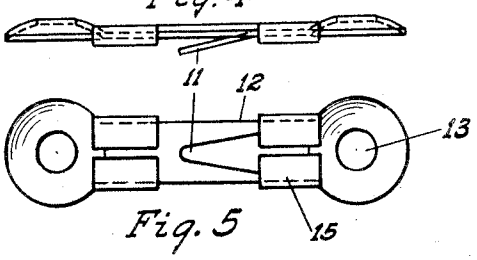


Fig. 5

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HEADLIGHT FOR TOY VEHICLES

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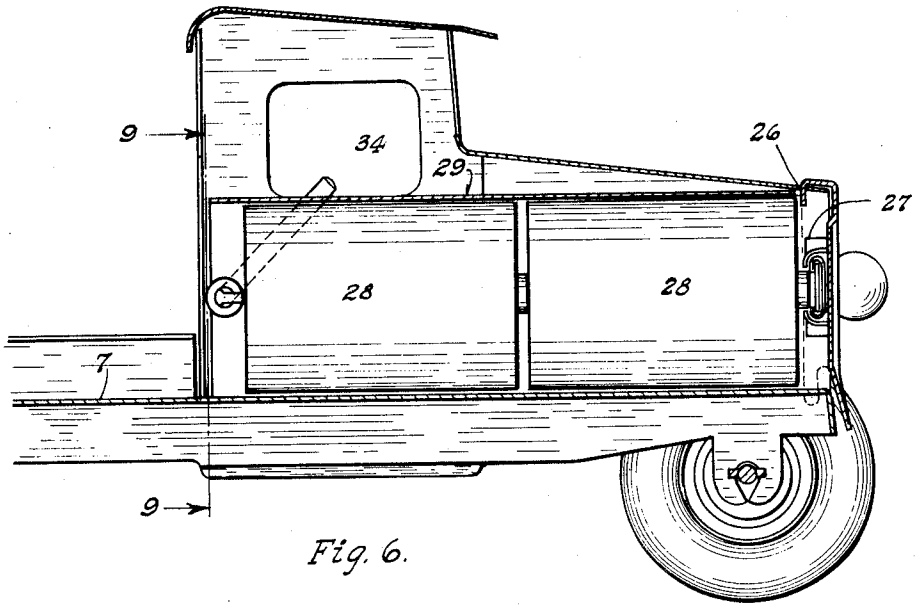


Fig. 6.

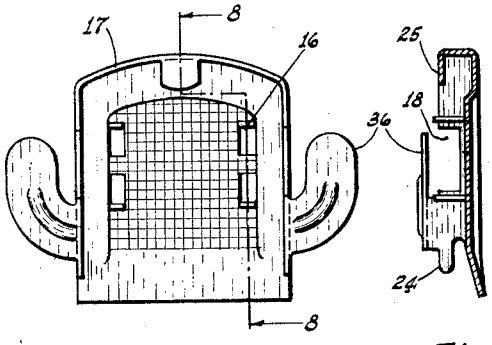


Fig. 7.

Fig. 8.

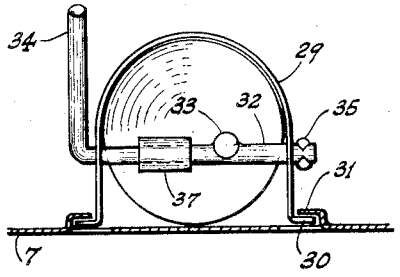


Fig. 9

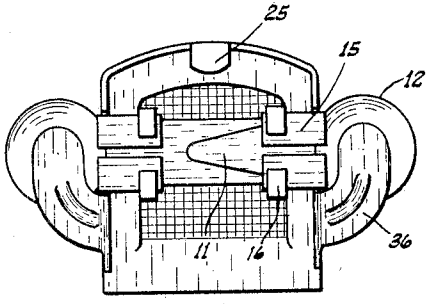


Fig. 10.

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Patented Apr. 25, 1933

1,905,931

UNITED STATES PATENT OFFICE

GEORGE R. ERICSON, OF ST. LOUIS, MISSOURI, ASSIGNOR TO METALCRAFT CORPORATION, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI

HEADLIGHT FOR TOY VEHICLES

Application filed January 16, 1933. Serial No. 651,879.

This invention relates to lighting systems for toy vehicles such as sheet metal trucks, automobiles, and the like.

It is an object of the invention to provide a simple and inexpensive arrangement of generally new and improved construction for lighting vehicles of the above described character. Further objects of the invention will appear from the following description and accompanying drawings, referring to which:

Figure 1 shows the front end of a toy truck with headlights according to my invention applied thereto, parts being broken away and others shown in section.

Figure 2 is a sectional view taken approximately along the line 2—2 of Figure 1, looking in the direction of the arrows.

Figure 3 is a front elevation of the truck as shown in Figures 1 and 2.

Figure 4 is a plan view of the headlight supporting bar and insulator therefor.

Figure 5 is a rear elevation of the headlight supporting bar and insulation as shown in Figure 4.

Figure 6 is a longitudinal sectional view of the front end of the truck having a slightly modified form of my invention applied thereto.

Figure 7 is a rear elevation of the radiator simulation constructed according to my invention.

Figure 8 is a sectional view of the radiator simulation shown in Figure 7, the section being taken along the line 8—8 looking in the direction of the arrows.

Figure 9 is a fragmentary view taken along line 9—9 of Figure 6, showing a modified switch mechanism.

Figure 10 is a detail view showing the radiator simulation with the headlight supporting cross bar applied thereto.

The reference numeral 1 indicates the chassis of a toy sheet metal truck, which is provided with the conventional running board 2, fenders 3 and wheels 4. A sheet metal hood 5 is attached to the chassis by any suitable means and a cab 6 is mounted on the chassis at the rear of the hood.

With reference to the embodiments shown in Figures 1 and 2, the automobile chassis is provided with a floor 7, perforated to receive the outwardly turned ends of a wire 8 which is bent into an inverted U formation to receive the batteries 28. The batteries are insertable by removing the radiator simulation and headlights assembly shown in Figure 10.

It will be understood that a plurality of the wire retaining loops 8 may be provided so that the batteries will be retained in proper alignment. The central terminal of the batteries is turned forwardly and contacts with the resilient tongue 11 which is made integral with the headlight supporting cross bar 12. The headlight supporting bar is provided with two non-circular openings 13 to receive the screw threaded base of the headlight bulb 14 as indicated in Figure 1.

The cross bar 12 is insulated by a piece of heavy paper or other suitable insulating material indicated at 15, which is wrapped around the bars indicated in Figures 4, 5 and 10, suitable lugs 16 are struck up from the radiator simulation as indicated in Figures 7 and 10 and these are bent over to the position shown in Figure 10 to retain the cross bar and the headlights firmly in place.

The headlight bulbs are held in position by being screwed into the irregular shaped openings 13 until the tips of the bulbs contact with the bracket 36 which are formed integral with the radiator simulation 17. The ends of the cross-bar 12 surrounding the openings 13 are of circular formation and are concave on the forward side thereby forming a reflector as indicated in Figures 1 and 4. The cross-bar 12 fits in a notch 18 formed in the radiator simulation and a corresponding notch 27 at each side of the hood 5 is provided. The edges of the metal surrounding the notch 18, and the lugs 16 on the radiator simulation contact with the insulating paper 15 and hold the cross bar firmly in place in such a manner as to completely insulate it from everything except the central terminal of the battery.

The switch mechanism shown in Figures 1 and 2 is mounted by a rivet 19 on the back side of the cab 6. The switch comprises an operating member 20 formed of fibre or other

suitable insulating material, pivotally mounted on the rivet 19, and the sheet metal contact member 21 which is attached to the forward face of the operating member 20 by any suitable means such as insulated rivets 22. The particular manner in which the rivets 22 are insulated from the cab 6 is unimportant. The member 21 is non-circular in formation, having a cam surface 23 which contacts with the floor of the chassis as indicated in Figure 2 whenever the operating member 20 is turned in the anti-clockwise direction as indicated in Figure 2.

It will be obvious that when the operating member 20 is turned in a clockwise direction the contact between the member 21 and the floor 7 of the chassis will be broken, and it will also be understood that the resilient member 21 contacts with the metal base of the rear battery for the purpose of grounding the same to the member 7.

The radiator simulation 17 carries a pair of downwardly extending lugs 24, one on each side of the lower end thereof, which are adapted to pass thru corresponding openings in the floor 7 of the chassis. A third lug 25 is mounted at the upper end of the radiator simulation and is adapted to extend downwardly thru a corresponding opening 26 in the upper part of the hood. It may be noted that the notches 27 in the forward end of the hood are long enough vertically so that the radiator simulation may be detached from the chassis and hood by a vertical and forward movement, after which the battery or batteries may be removed.

The batteries are of the conventional flashlight type and are generally indicated by the reference numeral 28. It will be understood that any desired number of the batteries may be used. In the above described construction the outer screw-threaded surface of the base of the bulb serves as an insulated terminal and is connected by means of the insulated cross bar 12 to the central terminals of the batteries 28. The central terminals of the headlight bulbs are grounded to the chassis thru the bracket 36 and the radiator simulation 17, whereas the zinc or outer terminal of the batteries is grounded to the chassis by means of the contact member 21.

Figures 6 and 9 show a modification of the switch mechanism. In this embodiment, the batteries are housed in an inverted U-shaped sheet metal housing 29, which is provided with outwardly turned flanges 30 at its lower end as indicated in Figure 9 and held in place by suitable inturned lugs 31 formed in the floor 7 of the chassis. It may be noted that this sheet metal housing may be used in connection with the switch mechanism shown in Figures 1 and 2 if desired.

In the construction shown in Figures 6 and 9, the switch comprises a rod 32 having an eccentric lug 33 formed thereon by striking or bending, and an operating handle 34, passed thru perforations in the housing 29 and held in place either by the side of the cab 6 or by lugs 35 which are struck up from the rod as indicated in Figure 9, a rubber collar 37 is mounted on the rod 32 to prevent contact between the rod and the zinc base of the battery except when the lug 33 is turned to form such contact.

I claim:

1. In a headlight device for toy vehicles, a radiator simulation, a cross bar mounted on the radiator simulation, means for insulating said cross bar from said radiator simulation and openings in each end of said cross bar to receive the screw threaded base of an incandescent bulb.

2. In a headlight device for toy vehicles, a radiator simulation, a cross bar mounted on said radiator simulation and extending at each side thereof, means for insulating said cross bar from said radiator simulation, openings in each end of said cross bar for receiving the screw threaded base of a headlight bulb, a pair of brackets in electrical contact with said radiator simulation, said brackets extending upwardly to the rear of the openings in the cross bar and being adapted to contact with the central terminal of the headlight bulb.

3. In a headlight device for toy vehicles, a sheet metal radiator simulation, a headlight support mounted at the rear of said radiator simulation and firmly secured thereto, said headlight suport extending at each side of the radiator simulation and having openings therein to receive the base of a headlight bulb, and bracket members at the rear of said openings serving to contact with the central terminal of said headlight bulbs.

4. In a headlight device for toy vehicles, a sheet metal radiator simulation member, a headlight supporting member firmly secured to the rear of said radiator simulation member and insulated therefrom, reflector portions at each end of said headlight supporting members, openings in said reflector members to receive the bases of headlight bulbs, a pair of outwardly and upwardly extending brackets, one at each side of the radiator simulation and at the rear of the reflector portions, said bracket being adapted to contact with the central terminal of the headlight bulb.

5. In a headlight device for toy vehicles, a sheet metal radiator simulation member, a headlight supporting member firmly secured to the rear of said radiator simulation member and insulated therefrom, reflector portions at each end of said headlight supporting members, openings in said reflector members to receive the bases of headlight bulbs, a pair of outwardly and upwardly extending brackets, one at each side of the ra-

diator simulation and at the rear of said headlight support member, each of said brackets being adapted to contact with the central terminal of one of the headlight bulbs, said headlight support member having a resilient contact member formed integral therewith and extending backwardly to contact with a current source.

6. A detachable radiator simulation and headlight assembly for toy vehicles comprising a sheet metal radiator simulation, a plurality of downwardly extending spaced lugs on said radiator simulation shell, said lugs being adapted to serve as detachable means for holding the radiator simulation in place on the toy vehicle, a cross bar mounted on said radiator simulation and insulated therefrom, said cross bar extending from the opposite sides of said radiator simulation and being provided with reflector portions at each end, and openings in the reflector portions to receive the base of a headlight bulb.

7. A detachable radiator simulation and headlight assembly for toy vehicles comprising a sheet metal radiator simulation, a plurality of downwardly extending spaced lugs on said radiator simulation shell, said lugs being adapted to serve as detachable means for holding the radiator simulation in place on the toy vehicle, a cross bar firmly secured to said radiator simulation and insulated therefrom, said cross bar extending from the opposite sides of said radiator simulation and being provided with reflector portions at each end, openings in each of the reflector portions to receive the base of a headlight bulb, and brackets formed integral with said radiator simulation for contacting with the central terminals of the headlight bulbs.

8. In a toy vehicle, a chassis having a substantially horizontal floor member, an inverted U-shaped member mounted on said floor member, a battery confined between said inverted U-shaped member and the floor member, a detachable radiator simulation for said toy vehicle mounted forwardly of said battery, said battery being made accessible for replacing by detachment of said radiator simulation member.

9. In a headlight device for toy vehicles, a chassis, an inverted U-shaped member mounted on said chassis and adapted to hold the battery in position with respect thereto, a switch member comprising a rod passing thru said inverted U-shaped member and having an eccentric portion thereon, an insulating sleeve carried by said rod, the radius of the insulating sleeve being less than the radius of the eccentric portion with respect to the center of the rod.

In testimony whereof I affix my signature this 13th day of January 1933.

GEORGE R. ERICSON.