

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements in or relating to Model Vehicles

5 We, MECCANO LIMITED, of Binns Road, Liverpool, 13, a British Company do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

10 The present invention relates to model vehicles and is more particularly concerned with an improvement or modification of the invention claimed in United Kingdom Patent No. 984,782.

15 The invention disclosed in United Kingdom Patent No. 984,782 concerns the provision of direction indicating lights on a model vehicle and describes and claims on a model vehicle having a direction indicating light bulb on each side of the vehicle body, a battery, means responsive to a steering movement applied to the vehicle for selectively connecting one or other of said bulbs to said battery in accordance with the direction of the steering movement and means for intermittently interrupting the connection between the selected bulb and the battery to cause the lighting of the bulb to be intermittently interrupted.

25 The object of the present invention is to provide direction indicating lights on a model vehicle in a simpler manner than that described in the main patent.

30 According to the present invention each light bulb is secured within a light guide, the two light guides being interposed between a lower and an upper body portion of the vehicle and conforming to the shape of the upper and lower body portions the visible edges of the light guides being opaque except at the two corners of each guide whereby the intermittent interruption of the lighting of a bulb causes a flashing light to be visible at the corners of the associated light guide.

[Price 4s. 6d.]

The invention will be better understood from the following description of a preferred embodiment taken in conjunction with the accompanying drawings comprising Figs. 1 and 2. 45

In the drawings:

Fig. 1 shows a longitudinal section of a model vehicle incorporating the present invention, while 50

Fig. 2 shows a sectional plan along the line XY of Figure 1.

Referring now to the drawings the model vehicle consists of three main parts comprising a lower body portion 11 and upper body portion 12 and a seat unit 13, which is secured to the upper body portion 12. Interposed between upper and lower body portions 12 and 11 are two light guides 14 and 15, separated by a small space indicated at 16 and 17 along the longitudinal centre line of the vehicle. The light guides are formed of a suitable plastics material such as that known under the Registered Trade Mark Diakon and the visible edges of the guides between the upper and lower body portions are vacuum plated with aluminium leaving clear portions 18 at each corner of the vehicle. Each light guide has an enlarged section 19 and 20 at different positions along the length of the vehicle and the enlarged sections are provided with recesses for the reception of light bulbs 21 and 22 with a press fit. 65 70

The wheels of the vehicle 23 and 24 (of which only two are shown in Fig. 1) are mounted on spindles 25 and 26, the spindle 26 for the rear wheels being mounted in vertically extending slots in brackets (not shown) integral with the lower body portion 11. Spindle 26 carries a cam 27, the purpose of which will be described later. The spindle 25 carrying the front wheels rests in a transverse depression 28 in the lower body 80

portion and passes through upwardly and backwardly extending slots such as 29 in a bracket such as 30 integral with the lower body portion. Two vertical pins 31 and 32 are provided for securing the spindle 25 against longitudinal movement. A spring 33 is secured to the lower body portion and is provided with forked ends, one pair of forked ends engaging with the spindle 25 while the other engages with the spindle 26. This arrangement provides the springing effect for the front and rear wheels. In addition the slots 29 in the brackets 30 associated with the spindle 25 enable a steering movement to be obtained by pressing downwardly on the side of the vehicle corresponding to the turning direction. The end of the spindle 25 on the turning side thereupon rises relative to the lower body portion in the slot 29 and the spindle 25 makes a turning movement about the pins 31 and 33 so that the vehicle moves in a curve.

Advantage is taken of the upward movement of the axle 25 in a turning movement to cause the lighting of the bulb on the appropriate side of the vehicle to give the effect of a direction indicator. For this purpose a clip 34 is secured to the underside of the seat unit 13 and serves to receive $1\frac{1}{2}$ volt battery 35. The clip is provided with three depending portions 36, 37 and 38. The depending portion 36 is arranged to make contact with one pole of the battery whereas the depending portions 37 and 38 engage with one terminal of the lamps 21 and 22 respectively. Also secured to the underside of the seat unit are two electrically conducting springs 39 and 40, one end of each of the springs being arranged above and close to the limbs 41 and 42 of the forked end of the spring 31. The other ends of the spring 39 and 40 engage with the body portion of the two lamps 21 and 22 respectively. Also secured to the seat unit by means of a rivet 43 is a further electrically conducting spring 44, one end 45 of which engages with the other pole of the battery while the other end 46 is engaged by the cam 27 during its rotation. In operation, and assuming that downward pressure is exerted on the side of the vehicle shown uppermost in Fig. 2, this downward pressure will cause the spindle 25 to rise in the slot 29 thereby lifting the limb 41 of the spring 33 to engage with the electrically conducting spring 39. When the cam 27 next engages with the end 46 of the spring 44, a circuit will be completed from one pole of the battery via the depending portion 36 of the clip 34, the clip 34, depending portion 37 through the lamp 21, spring 39, engaged with the limb 41 of spring 33, spindle 26,

cam 27, spring 44 to the other pole of the battery. The lamp 20 is therefore lighted but owing to the provision of cam 27, the lighting is intermittent to give the well known flashing effect.

It will thus be seen that a very effective, simple and cheap arrangement has been achieved for providing flashing direction indicators on a model vehicle. It will however, be understood that the invention is not limited to the precise embodiment described. For instance, while the description refers to forked wheel springs, separate and spaced wheel springs could also be used. Further the spring blades could be arranged to engage with the wheel spring or springs of the rear axle and the cam could be on the front axle. In a further alternative, the spring member controlled in the embodiment described by the cam on the rear axle, is instead connected to the lower body member and the intermittent flashing of the light bulb is connected by two cams mounted on the front axle, preferably with the peaks opposed. The two cams engage respectively with the two spring blades which are adjacent to the forked ends of the front wheel spring.

WHAT WE CLAIM IS:—

1. A model vehicle as claimed in any of the claims of Patent No. 984,782 wherein each light bulb is secured within a light guide, the two light guides being interposed between a lower and an upper body portion of the vehicle and conforming to the shape of the upper and lower body portions, the visible edges of the light guides being opaque except at the two corners of each guide whereby the intermittent interruption of the lighting of a bulb causes a flashing light to be visible at the corners of the associated light guide.

2. A model vehicle as claimed in claim 1, wherein the opacity is obtained by vacuum plating with aluminium.

3. A model vehicle as claimed in claim 2, wherein a seat unit is secured to the underside of the upper body portion and a current-conducting clip member for the reception of the battery is secured to the underside of the seat unit.

4. A model vehicle as claimed in claim 3, wherein the clip member is so shaped as to engage the pole of the battery and to provide contact surfaces for the two light bulbs.

5. A model vehicle as claimed in claim 4, wherein a current conducting spring member is secured to the underside of the seat unit and engages with the other pole of the battery, the spring member being intermittently engaged by a cam on one of the wheel axles.

6. A model vehicle substantially as described with reference to the accompanying drawing.

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Fig.1.

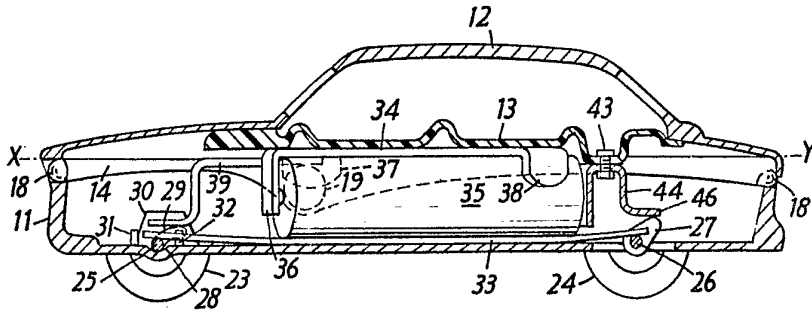


Fig.2.

