May 31, 1932. H. B. McCAINE 1,861,126

AUTOMOBILE DIRECTION INDICATOR

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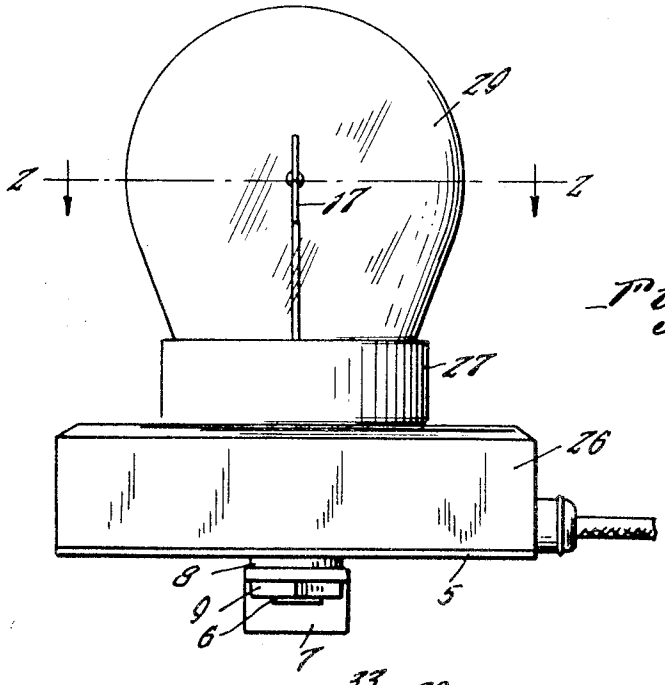


Fig. 1.

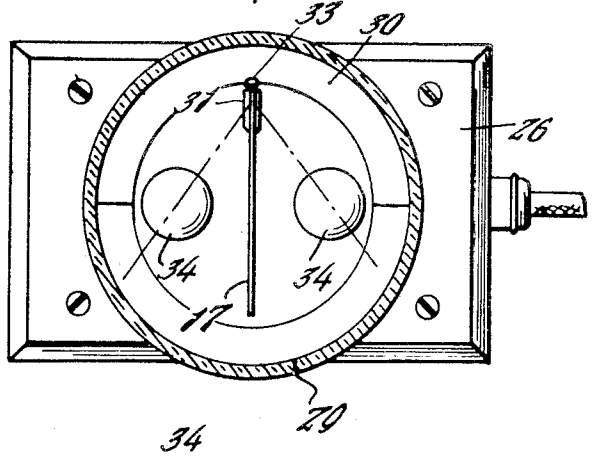


Fig. 2.

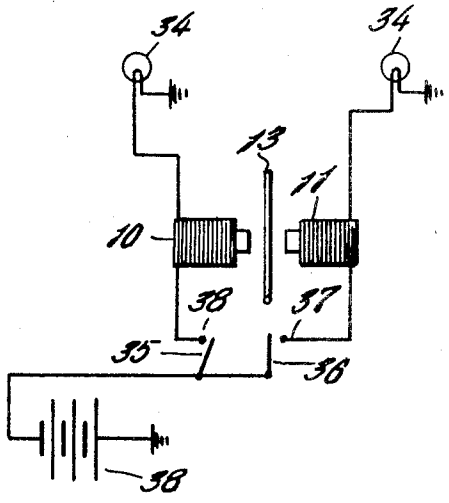


Fig. 6.

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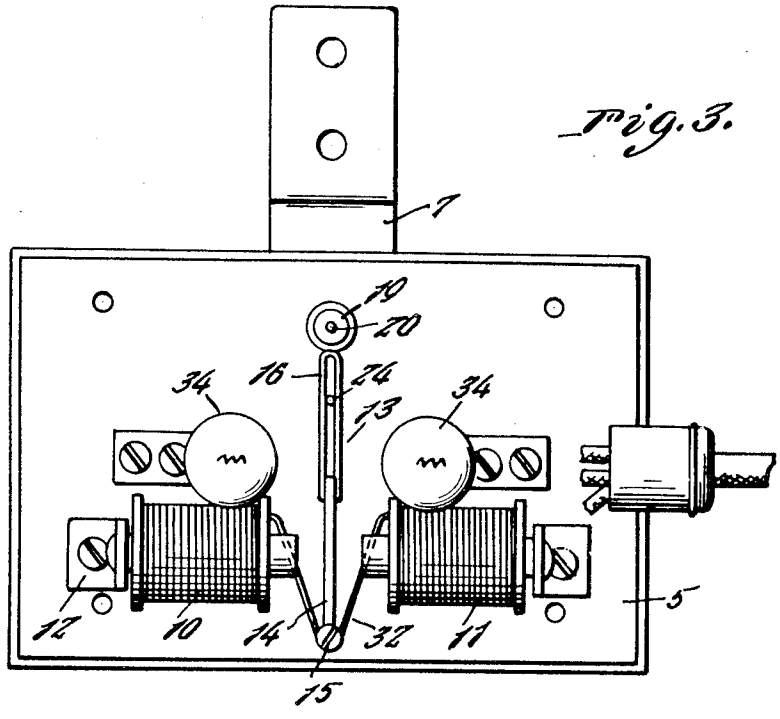
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AUTOMOBILE DIRECTION INDICATOR

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Fig. 3.



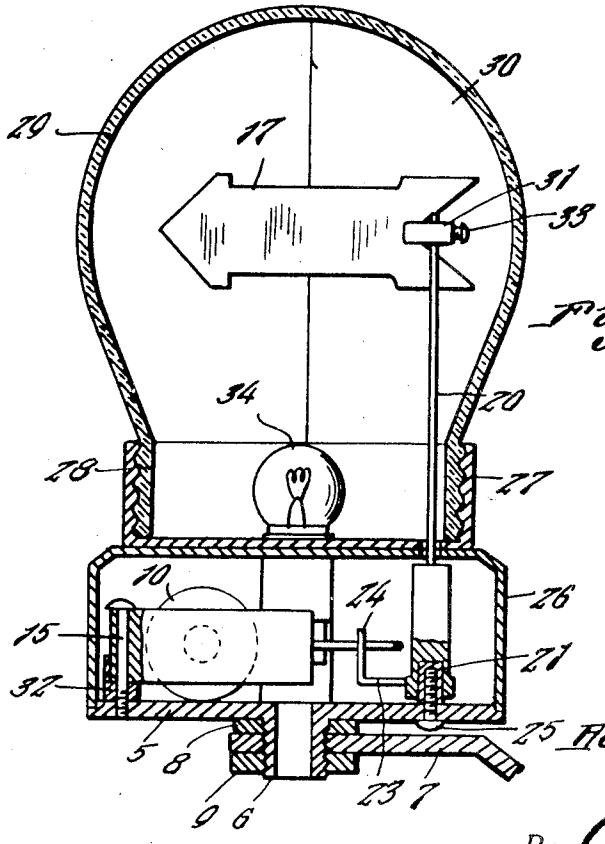


Fig. 4.

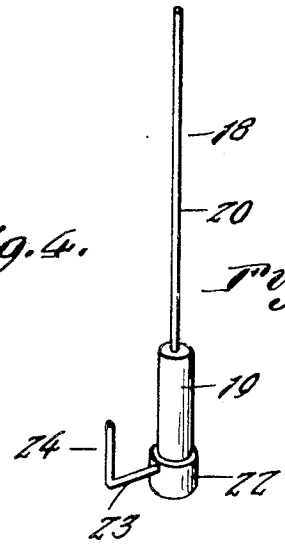


Fig. 5.

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UNITED STATES PATENT OFFICE

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AUTOMOBILE DIRECTION INDICATOR

Application filed October 1, 1929. Serial No. 396,490.

This invention appertains to new and useful improvements in the art generally known as electrical signalling and more particularly to a novel direction signal for automobiles for indicating to pedestrians and adjacent traffic the driver's intention to make a turn and in which direction.

An important object of the invention is to provide a direction indicator for automobiles which is of simple construction, and not susceptible to the development of ready defects.

Another important object of the invention is to provide a signal of the character described which will positively indicate the direction in which the driver intends to proceed.

Still another important object of the invention is to provide a signal which can be easily manipulated by the driver of a vehicle.

The reader will become aware of numerous other important objects and advantages of the invention as this specification proceeds.

In the drawings:

Figure 1 represents a front elevation of the novel signal.

Figure 2 represents a top plan view of the signal.

Figure 3 represents a top plan view of the operating mechanism with the indicator and housing removed.

Figure 4 represents a vertical sectional view through the entire device.

Figure 5 represents a perspective view of the signal element carrier.

Figure 6 is a diagrammatic view disclosing the electrical devices and the connections between the same.

Referring to the drawings, wherein like numerals designate like parts, it will be seen that this novel direction indicator consists in construction of a base 5 from which depends a threaded nipple 6 for disposition through an opening in the end of a suitable supporting bracket 7. A washer 8 is interposed between the bracket 7 and the base 5 and a nut 9 may be engaged on the nipple for securing these parts firmly together.

Mounted upon the base 5 are the electromagnets 10 and 11, supported by the brackets 12 and suitably insulated from the base 5. These magnets are arranged in alinement and at opposite sides of the armature which is generally referred to by numeral 13. This armature is of a suitable metal and includes a plate 14 with a bolt 15 extending through one end for swingably supporting the same in proper relation with respect to the magnets 10 and 11.

The opposite end of the plate 14 has a U-shaped guide 16 extending therefrom, the free ends of its legs being secured to the plate 14 by welding or some other means or method.

In Figure 5, a carrier for the signal element 17 is generally referred to by numeral 18 and includes a cylindrical body 19 from which an elongated stem 20 extends. The lower end of the body 19 is recessed to receive the internally threaded bushing 21. The lower end of the body 19 has a circumferential shoulder 22 thereon from which extends an arm 23 with its outer end portion disposed upwardly at right angles in the manner clearly shown in Figure 5.

A screw 25 is engaged through an opening in the base 5 and threaded into the bushing 21, the body 19 being allowed to swivel or rotate on the bushing 21. When the body 19 has been so mounted, the upwardly disposed portion 24 of the arm 23 will be disposed through the U-shaped extension 16 of the armature in the manner clearly shown in Figures 3 and 4.

A housing for the foregoing mechanism is denoted by numeral 26 the same being open at its bottom and secured over the base 5 by any suitable means. The top of the housing has an opening therein which registers with an opening in the internally threaded socket construction 27. This socket 27 serves to receive the threaded neck portion 28 of the globe 29, which globe has its rear half portion made opaque as at 30 by any suitable means, such as the application of paint or some step in the process of manufacturing the globe.

As is clearly shown in Figure 4, the stem 20 extends upwardly through the registering openings aforementioned and has its upper end disposed through the collar 31 which is

located at the tail portion of the arrow shaped indicator 17. When the armature 14 is in neutral position between the magnets 10 and 11, the indicator 17 will be disposed in substantially the same plane, and by adjusting the set screw 33, the indicator may be adjusted on the stem 20. The armature 14 is held in neutral position by the springs 32.

A pair of bulbs 34—34 are located within the globe 29 and are also shown in the diagram of Figure 6. In this diagrammatic view, a pair of switches 35 and 36 are shown. By engaging the switch 36 with the contact 37, current will flow from the battery 38 to energize the magnet 11, light one of the lamps 34 and attract the armature 14.

This will result in the swinging of the indicator toward the right to indicate that the driver intends to direct his automobile toward the right, or in other words, to make a right turn. When the left switch 35 is closed by engaging the contact 38, the magnet 10 is energized and the corresponding lamp 34 is illuminated. This operation attracts the armature 13 so that the indicator 17 swings to the left. It is preferable that these switches 35 and 36 be located on the steering wheel in easy reach of the driver so that no effort will be required in executing the signal.

Manifestly, the invention possesses numerous advantages over the types of indicators of this character now in use, and during the manufacture of this invention it is to be understood that various changes may be resorted to without exceeding the scope of the appended claim.

Having thus described the invention, what is claimed as new is:

In a directional signal, a base, a pair of opposed electric magnets clamped upon the base, an armature pivotally connected at one end to the base and extending between the magnet, springs connected with the pivoted end of the armature for holding the same in a central position between the magnets, a U-shaped member having the ends of its limbs fastened to the free end of the armature, a vertically arranged stem having its lower end rotatably supported on the base and an arm connected to the lower part of the stem having an upwardly extending portion passing through the U-shaped member whereby the stem will be partly rotated and the armature is moved by either magnet.

In testimony whereof I affix my signature.

HARRY B. McCAINE.