Oct. 12, 1937. M. VERREAULT 2,095,352

DIRECTION INDICATOR FOR VEHICLES

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Fig. 1

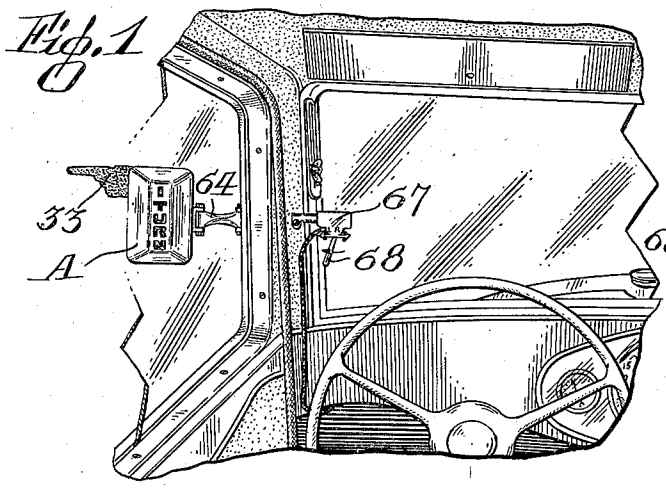


Fig. 2

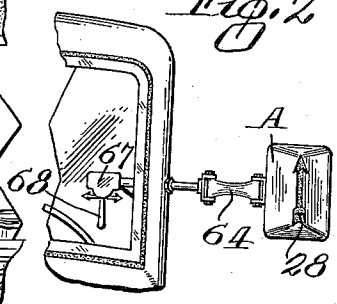


Fig. 3

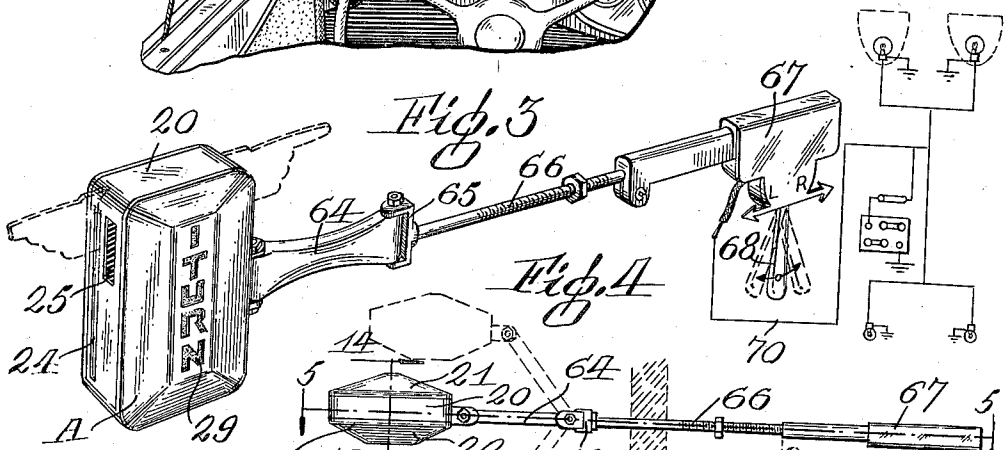


Fig. 4

Fig. 5

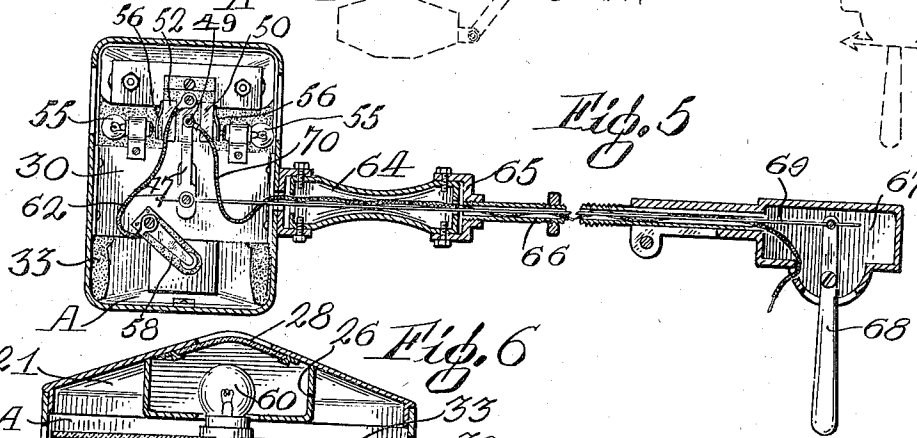
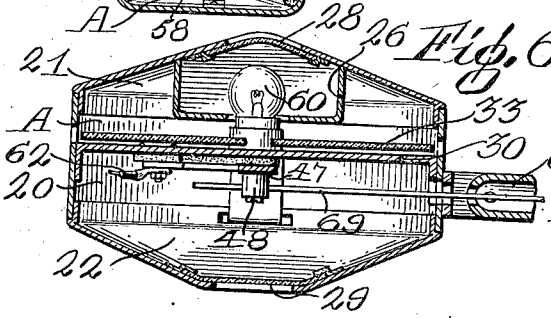


Fig. 6



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DIRECTION INDICATOR FOR VEHICLES

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Fig. 7

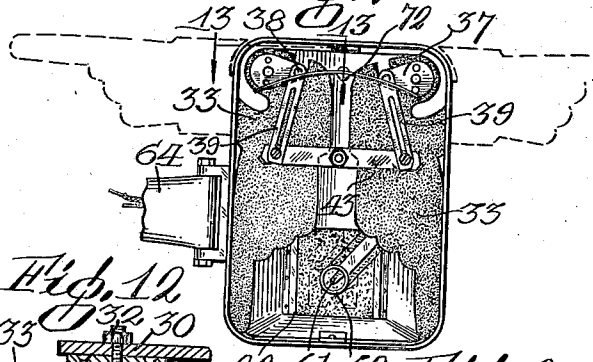


Fig. 10

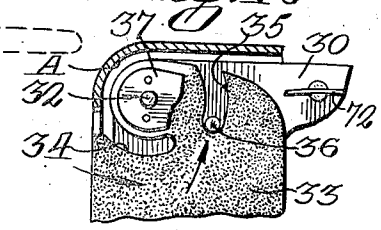


Fig. 12

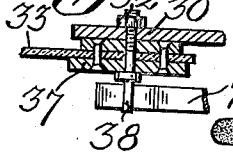


Fig. 8

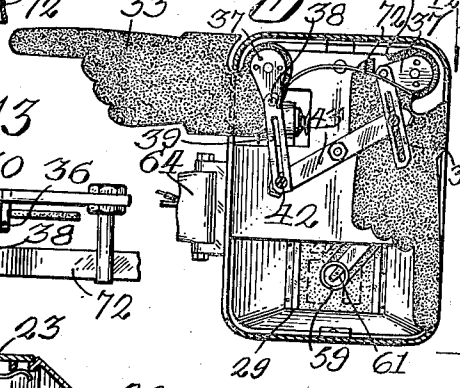


Fig. 11

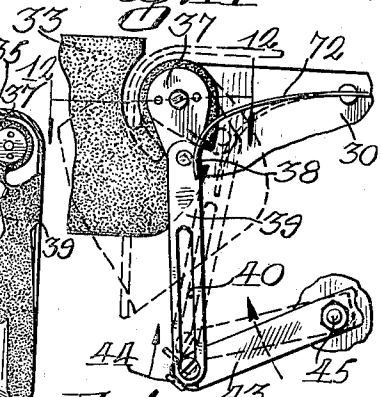


Fig. 13

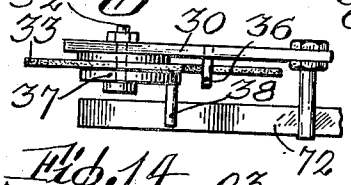


Fig. 14

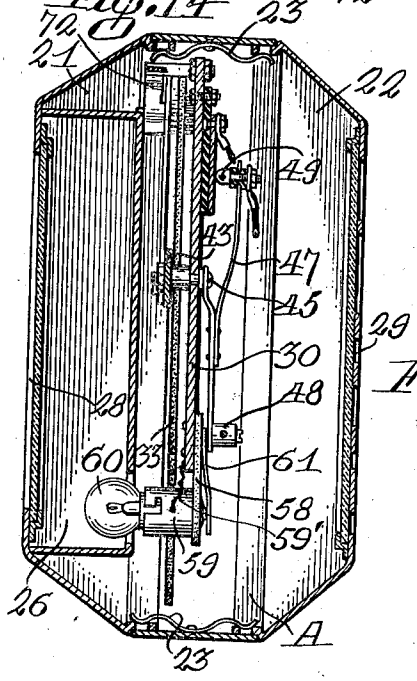


Fig. 9

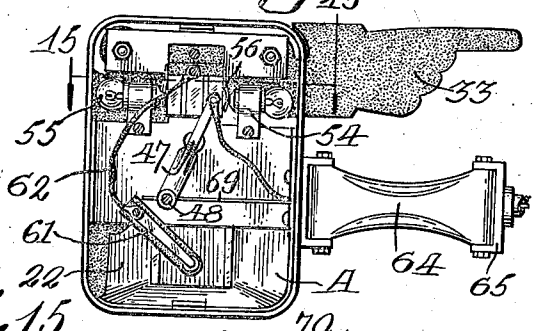
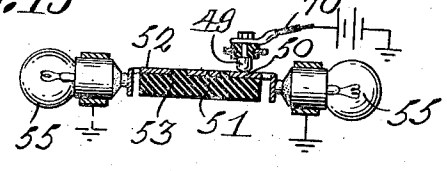


Fig. 15



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Patented Oct. 12, 1937

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UNITED STATES PATENT OFFICE

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DIRECTION INDICATOR FOR VEHICLES

Méridée Verreault, Quebec, Province of Quebec, Canada

Application April 8, 1935, Serial No. 15,147

2 Claims. (Cl. 116—53)

The present invention relates to improvements in direction indicating devices for vehicles.

An object of the invention is the provision of an improved device for signalling the intended direction of travel.

A further object of the invention is the provision of a direction signalling device which may be readily attached to automobiles and other vehicles.

Another object of the invention is the provision of a direction indicating device of the above character constructed so that the operative signal will be illuminated to distinctly display the same.

A still further object of the invention is the provision of a signalling device of the above type which is relatively simple and compact in construction.

Still another object of the invention is the provision of a device of the aforesaid character which is efficient and reliable in operation.

Other objects and advantages of the invention will become apparent as the description progresses.

In the accompanying drawings forming a part of this specification and in which like reference characters are employed to designate corresponding parts throughout the same:—

Figure 1 is a fragmentary interior view of the vehicle showing the device operatively connected therewith,

Figure 2 is a fragmentary front view of the vehicle and the signalling device mounted thereon,

Figure 3 is a perspective view of the signalling device showing movable signal elements in dotted lines and the electric circuit,

Figure 4 is a top plan view of the device,

Figure 5 is a longitudinal section taken on the line 5—5 of Figure 4,

Figure 6 is an enlarged transverse section taken through the lower portion of the device,

Figure 7 is a vertical section through the device looking rearwardly,

Figure 8 is a similar view showing one of the movable signalling elements in operative position,

Figure 9 is a similar view looking forwardly,

Figure 10 is a fragmentary vertical section showing the upper portion of one of the movable signalling elements,

Figure 11 is a similar view showing the element operating mechanism,

Figure 12 is a section on the line 12—12 of Figure 11,

Figure 13 is an enlarged section taken on the line 13—13 of Figure 7,

Figure 14 is an enlarged vertical section taken on the line 14—14 of Figure 4, and

Figure 15 is an enlarged section taken on the line 15—15 of Figure 9.

Referring to the drawings, wherein for the purpose of illustration is shown a preferred embodiment of the invention, A generally designates a signal casing of elongated, approximately rectangular, form embodying a central section 20, a front section 21 and a rear section 22. These sections are releasably fastened in assembly by means of spring clips 23 attached to the central section and engaging indented elements on the front and rear sections. In each side of the casing A is formed a relatively long vertically disposed slot 24. Parallel with the slot 24 at the upper portion is formed an elongated somewhat wider slot 25. Within the front section of the casing is provided a chamber 26.

In the central portion of the front section forming wall is formed an arrow-shaped aperture 28 disposed so that the arrow points upwardly. In the centre of the rear wall are formed vertically arranged letter apertures 29 forming the words "I turn". Within the centre of the casing A is rigidly secured a vertical panel 30 terminating short of the top and bottom of the casing.

Pivotally connected to the panel by pivot pins 32 are a pair of complementary signal indicating members 33 embodying flat elongated hand-shaped pointers preferably formed of transparent or translucent material. At the pivoted corner portion each of the pointers 33 is provided with a pair of arcuate slots 34 and 35, the latter being disposed so that the pointer may turn with respect to a stop pin 36 which operates to arrest inward movement thereof. To the upper forward side of each pointer signal 33 is connected a metallic crank 37 having formed at the outer end a laterally projecting crank pin 38. To each crank pin 38 is pivotally connected the upper end of a depending link 39 provided with an elongated slot 40 in the lower portion.

The bottom slotted portion of each link 39 engages a pin 42 secured at each end of a vertically movable rocker bar 43. At each extremity the rocker bar 43 is formed with a trip finger 44, the purpose of which will be later described. The centre of the bar 43 is rigidly secured on one end of a horizontal rock shaft 45 journalled on the panel 30.

On the opposite or rear end portion of the rock shaft 45 is secured an actuating lever 47 having the intermediate portion rigidly secured to the rock shaft and having a rotatable knob 48 mounted on one extremity. On the opposed or upper end of the lever 47 is mounted an electrical contact point 49 engageable with either of three contact bars 50, 51 and 52 secured on an insulating backing plate 53 mounted on the upper portion of the panel. To opposite side portions of the panel are secured a pair of socket forming

brackets 54 adapted to support lamps 55 disposed in registration with the slots 25 in the side wall of the casing and with openings in the panel. A pair of spring contacts 56 form connections between the contact bars 50 and 52 and the lamps 55.

A strip 58, of insulating material, is secured to the lower portion of the panel 30 and extends therebelow supporting, at its lower end, a lamp socket 59. In the socket 59 is fitted a lamp 60 which projects into the chamber 26 in the forward part of the casing through an opening in the rear chamber wall. A strip 61, of conducting material, is secured on the support 58, one end of the conducting strip being arranged to contact with the contact point on the lamp. To the other end of the conducting strip 61 is connected a conducting wire 62 connecting the strip with the central conducting bar 51 on the upper part of the panel. The shell of socket 59 is grounded by means of conductor 59' soldered to said shell and to the metallic panel 30. (See Fig. 14.)

One side of the casing is pivotally connected with a hollow laterally disposed arm 64 the inner end of which is pivotally connected to and supported by a bracket 65 secured on the outer end portion of a tube 66. The inner end of the tube is connected with a box 67 provided with a slot in the bottom and having a vertically disposed hand lever 68 pivotally connected therewith. The lower handle portion of the lever 68 projects below the box while an upper portion extends above the pivot within the box. To the upper extremity of the lever 68 is fastened a flexible operating member 69, as for instance a wire, which extends through the tube and hollow arm and into the casing A. The inner end of the wire is attached to the knob 48 on the lower end of the lever 47. An electric conductor 70 has one end connected with the upper end portion of the lever 47 and with the contact point 49 carried thereby. The conductor is extended through the hollow arm and tube and is connected with the electric wiring light circuit of the vehicle, as shown at Figure 3.

The signalling device is preferably mounted on a vehicle, as shown at Figure 1, the tube 66 being extended horizontally through an opening in the body in front of the forward left hand door so that the operating lever 68 will be disposed in a position conveniently accessible by the vehicle operator. The signal casing will assume a laterally projected position, as shown at Figures 1 and 2, and may be adjusted forwardly or rearwardly to clear the door by horizontal adjustment of the hollow arm 64, as shown in dotted lines at Figure 4.

When it is intended that the vehicle pursue a straight ahead course, the hand lever 68 is disposed in a vertical intermediate position so that the front lamp 60 will illuminate the interior of the chamber 26 and distinctly display the front arrow 28 indicating straight forward movement of the vehicle. When it is intended to make a right hand turn, the operator swings the lever handle 68 to the right in accordance with the letter R on the box 67 so that the wire 69 swings the lever 47 to the position shown at Figure 9. This movement causes corresponding swinging movement of the rocker bar 43 which pulls one of the links 39 downwardly and causes the right hand pointer signal 33 to swing from a downwardly suspended concealed position to a laterally projected signalling position. At the same time, the contact point 49 carried by the upper end of the lever 47 is moved from its initial contact with the centre contact bar 51 which closed the circuit to illuminate the lamp 60, into contact with the side contact bar 50 which now closes the circuit through the right hand electric lamp 55. The light rays from the lamp 55 are directed through the side slot 25 and through the notch in the panel onto the horizontally disposed signalling indicator so as to render the same distinctly visible to the traffic both in front and in the rear of the signal carrying vehicle. This lamp will also illuminate the rear interior part of the casing so as to distinctly display the words in the rear wall "I turn".

When the turn is completed and it is desired to restore the operative turn signal to its retracted concealed position, the hand lever 68 is moved back to its vertical intermediate position, turning the lever 47 so that the contact point thereon will contact with the central contact bar 51 to again illuminate the front arrow signal. As the rock shaft 45 is rotated to return the turn signal to a non-signalling position the trip finger 44 will engage the lower end portion of the lowered link 39 to force the link upwardly so as to release the crank pin 38 from the outward thrust action of a resilient bar spring 72 secured in the top of the casing. As the crank is swung through its upward arc, an inner portion of the spring 72 engages the same to hold the crank immovably in the casing. Thus, the spring 72 functions to hold the pivoted indicators both in outwardly projected signalling positions and in retracted inoperative positions.

Thus, the signal is conveniently operable by the driver of the vehicle and will function to clearly designate the intended direction of travel.

It is to be understood that the form of my invention herein shown and described is to be taken as a preferred example of the same and that various changes as to the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:—

1. In a direction indicator for vehicles, a casing, a pair of turn indicating signals pivoted at one of their ends within the casing, a crank secured to the pivoted end of each signal, a slotted link pivoted to the end of each crank, a pivoted rocking shaft supported in the casing, a rocking arm secured at one end of the shaft and the ends of which engage the slotted links, a lever attached to the other end of the shaft and adapted to rock the arm as said lever is moved one way or the other, a flat toggle spring secured centrally to the casing and having its ends bearing on the crank ends to urge the same upwardly, and a control wire attached to the free end of the lever for manually actuating the arms.

2. In an indicating signal, a casing, a pair of indicating signals pivoted at one of their ends within the casing, a crank secured to the pivoted end of each signal, a crank pin at the end of said crank, a slotted link freely journalled at one end on each pin, a pivot shaft supported in the casing, a rocking arm secured at its center to the pivot shaft, a pin in each end of said arm engaging a corresponding slot of the links, a lever attached to the pivot shaft for rocking the same, a control wire fixed to the free end of the lever and adapted to move the same back and forth, and manual means for actuating said wire.

MÉRIDÉE VERREAULT.