Jan. 6. 1925. 1,522,388

D. QUINTAL

DIRECTION INDICATOR FOR AUTOMOBILES

Filed Dec. 17, 1923

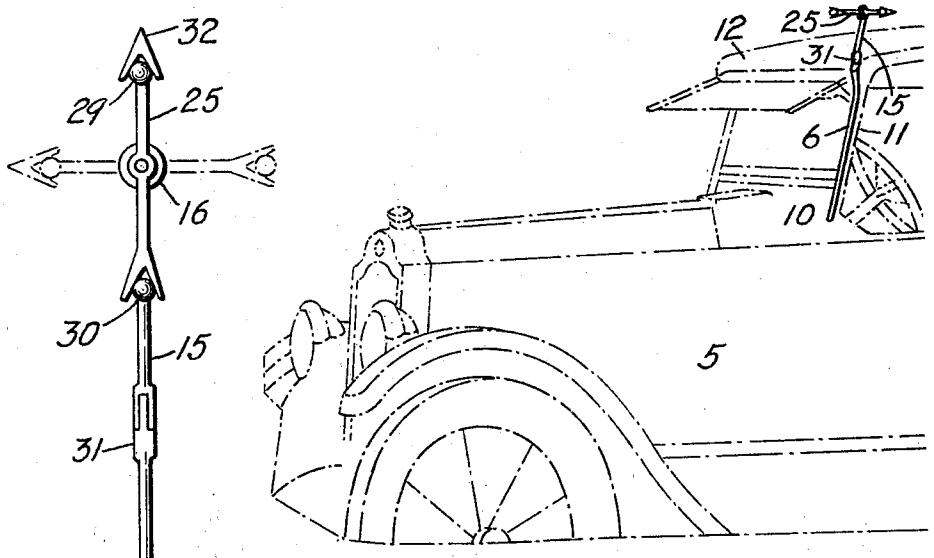


FIG.1

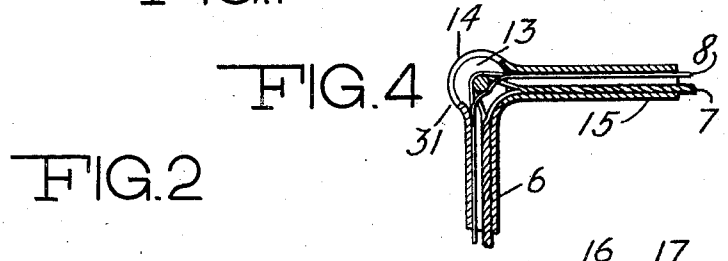


FIG.4

FIG.2

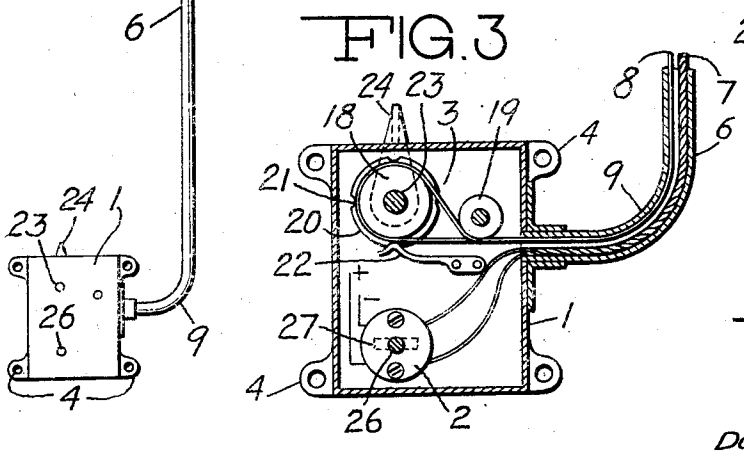


FIG.3

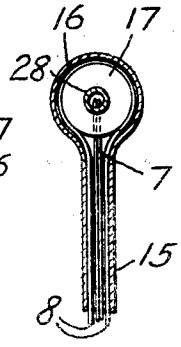


FIG.5

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UNITED STATES PATENT OFFICE.

DOMINA QUINTAL, OF MONTREAL, QUEBEC, CANADA.

DIRECTION INDICATOR FOR AUTOMOBILES.

Application filed December 17, 1923. Serial No. 681,194.

To all whom it may concern:

Be it known that I, DOMINA QUINTAL, a British subject, residing at No. 3287 Lajeunesse Street, in the city of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Direction Indicators for Automobiles; and I do hereby declare that the following is a true, clear, and exact description of the same.

This invention relates to direction indicators for automobiles, of the type which projects above or on the side of the vehicle, and which is mechanically operated and signals by means of a moving arrow.

The principal object of this invention is to provide a combined mechanical and electrical means of signalling, in the form of a moving arrow, which will be readily perceived during daylight, the arrow bearing conventional lights which enable it to be perceived with equal readiness during darkness. Another object is to provide a device, of this character, of economical installation and maintenance, to which is adapted the well known principle of semaphore.

Referring to the accompanying drawings:

Figure 1 is a diagrammatical view of an automobile showing the invention applied thereto.

Figure 2 is a general front view of the invention, in elevation, showing one position of its direction signal in dot and dash lines.

Figure 3 is a central sectional view showing the detail construction of the dash-board controlling means.

Figure 4 is a central sectional view showing the detail of an intermediate joint that permits the arrow-head to be moved out of the way of low bridges, and

Figure 5 is a central sectional view showing the detail of the arrow actuating means of the invention.

Similar reference characters represent similar parts in all the views.

A suitable casing 1 encloses an electrical lamp-switch 2 and the mechanical signalling mechanism 3. The casing 1 has projecting lugs 4 to be fastened upon the dash-board, (not shown) of the vehicle 5. A main supporting element comprising a tubular member or section 6, enclosing the lamp electrical conductors 7 and the mechanical connecting wires 8, is fixed to one side of the casing 1. Said tubular member 6 is suitably curved at 9, to pass through the dash-board covering 10 and is vertically directed along the windshield-post 11, extending beyond the body-top 12. Immediately above the top 12, the tubular member 6 terminates in a circular plate 13, on each side of which is mounted a similarly shaped plate 14 formed integral with an auxiliary movable tubular member or section 15 at the inner end thereof. The plate 13 is hollowed to permit the electrical conductors 7 and the wires 8 to pass through and run inside the auxiliary tubular member 15, which latter terminates at its outer end in a circular casing 16 bearing a pivoted pulley 17, around which pass the connecting wires 8. These connecting wires 8 may be mounted separately, but are here shown as an endless belt. The mechanical signalling mechanism 3, inside the casing 1, comprises a pulley 18 around which the operating wires 8 pass, and associated therewith, a guiding idler 19 which directs the wires 8 inside the tubular member 6. Integral with the pulley 18 is a circular disc 20 having four equally spaced notches 21 disposed around its periphery. Engaging with one of the notches 21 is a spring-catch 22 holding same firmly in position. Fixed to the shaft 23, to which the pulley 18 is keyed and which extends outside of casing 1 and inside the vehicle 5, is a hand operated lever 24 positioned relatively to the arrow member 25 of the device. The electrical lamp switch 2 also has a projecting shaft 26, bearing a corresponding handle 27 exposed inside the vehicle 5, and takes its electrical source conveniently from the vehicle's storage battery (not shown). The arrow member 25 is fixed to a hollowed shaft 28 keyed to the pulley 17. Through the shaft 28 pass the electrical conductors 7 leading to small lights 29 and 30 placed at both ends of the arrow member 25. These lights 29 and 30 may be of any desired colors, to answer best for the purpose in view.

The plates 13 and 14, forming the break joint 31, are suitably made to firmly hold the device in upright position by friction, or any other suitable means may be employed for the purpose of bending the device, when passing under a low bridge of any sort, and the device may also be suitably made to automatically bend and return into upright position if desired.

Figure 2 clearly illustrates the relative positions of the lever 24 and the arrow member 25 and, in Figure 3, the relation of the

notches 21 to the lever 24. Therefore, the notches 21, corresponding with lever 24, will place the arrow member 25 in the same position as the said lever 24 and that will indicate, by the arrow-point 32, the direction to be taken by the vehicle.

What I claim as my invention is:

1. A direction-indicating mechanism for motor cars and the like, comprising a supporting member embodying a main vertical section adapted to be connected at its lower end to the car body and extending at its upper end above the top of the car, and an auxiliary section having its inner end jointed to the upper end of the main section for free swinging movement in a vertical plane while the car is in motion, so as to avoid obstacles; a movable signal attached to the outer end of said auxiliary member; and means associated with said supporting member for actuating the signal.

2. A direction-indicating mechanism for motor cars and the like, comprising a supporting member embodying a main tubular section adapted to be disposed in substantially vertical position with its lower end secured to the car body and its upper end extending above the top of the car, and an auxiliary tubular section having its inner end jointed to the upper end of the main section for free swinging movement in a vertical plane so as to avoid obstacles while the car is in motion; a direction signal movably mounted on the auxiliary section; flexible operating means extending through the main and auxiliary sections and connected to the signal; and a device at the lower end of the main section connected to actuate said operating means.

3. A direction-indicating mechanism, comprising a supporting member embodying main and auxiliary tubular sections having a pivot-joint connection at their confronting inner ends to enable a free, swinging movement of the auxiliary section relative to the main section; such joint consisting of a hollow terminal disk on the main section, and a pair of spaced terminal disks on the auxiliary section between which the first-named disk is interposed, and axial connecting means for said disks; a direction signal on the outer end of the auxiliary section; flexible connecting means leading successively through the main section, the hollow terminal disk thereon and the auxiliary section to the signal; and a device at the foot of the main section for manipulating said operating means.

4. A direction-indicating mechanism, comprising a casing; a tubular supporting member attached thereto at one end; a direction signal rotatably mounted on the other end of the supporting member; an endless flexible element disposed within said supporting member and operatively engaged with the signal; a driving pulley in said casing around which said endless element passes; a device mounted exteriorly of said casing and connected to said pulley to rotate the same; a disk in said casing secured coaxially to said pulley to rotate therewith and having a plurality of peripheral notches corresponding to different definite positions of the signal; and a spring detent interchangeably engageable in said notches to hold the signal in adjusted position.

Signed at Montreal, Quebec, Canada, this 3rd day of November, 1923.

DOMINA QUINTAL.

Witnesses:

MARY C. DWYER,

J. A. CHOQUETTE.