L. L. BORIES.

DOOR SIGNAL.

APPLICATION FILED NOV. 7, 1910.

1,003,867. Patented Sept. 19, 1911.

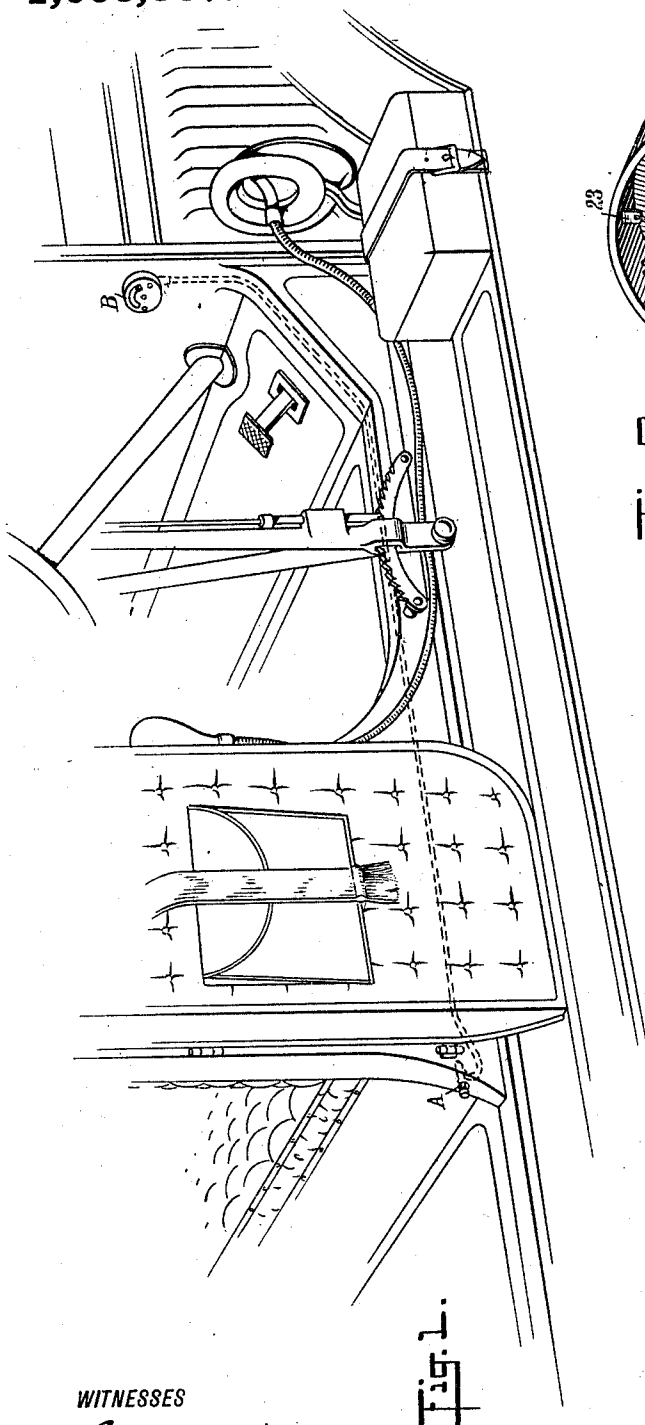

Fig. 1.

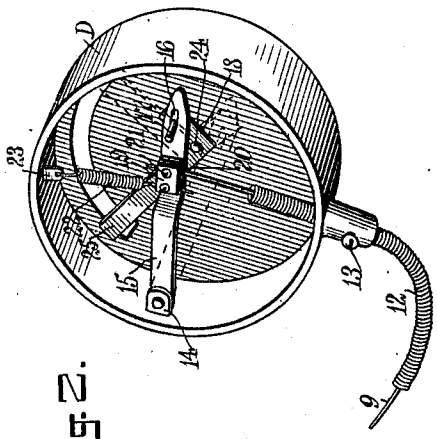

Fig. 2.

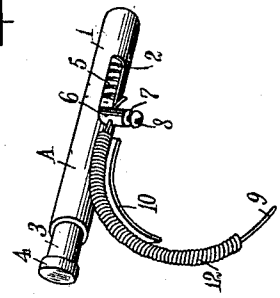

Fig. 3.

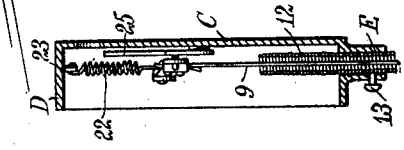

Fig. 4.

WITNESSES

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DOOR-SIGNAL.

1,003,867. Specification of Letters Patent. Patented Sept. 19, 1911.

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To all whom it may concern:

Be it known that I, LEON L. BORIES, a citizen of the United States, and a resident of San Francisco, in the county of San Francisco and State of California, have invented a new and Improved Door-Signal, of which the following is a full, clear, and exact description.

This invention relates to a new and improved device for use on doors or other like articles, to indicate, at some remote place, whether the door is opened or closed; and the object of the present invention is mainly to provide an automatically-acting indicator device actuated by the closing of the door.

This device is particularly adapted for use on automobiles and other vehicles, and may be so arranged as to enable the driver at all times to see that the door is opened or closed without turning his head.

With the above object in view, and other objects that naturally appear from this disclosure, the invention consists in numerous novel details of construction and arrangement of parts hereinafter fully described and illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which the same characters indicate their corresponding parts in all the figures, and in which—

Figure 1 is a perspective view, showing part of an automobile construction embodying my invention; Fig. 2 is a rear perspective view showing some of the details of construction of a preferred form of indicator mechanism; Fig. 3 is a perspective view of the preferred form of actuator; and Fig. 4 is a cross-sectional view of the indicator shown in Fig. 2.

Positioned in the frame of the door of the automobile, or at any other place where the opening of the door will change the relative location of any two members, is disposed an actuator A, consisting of a cylindrical tube 1, having in the side thereof a longitudinal slot 2. Disposed within the bore of this tube, is a rod 3 having upon the outer end a head 4 of sufficient size to abut against the outer end of the cylinder 1. Within the tube and between the end of the rod 3 and the end of the tube 1, is disposed a coil spring 5. Projecting from the inner end of the rod 3 is a projecting pin 6 extending through the slot 2. The end of this pin is threaded at 7, to accommodate a screw 8, which screw bears down upon and holds the operating wire 9. Extending in an arch from the side of the tube 1 and with one end in line with the slot 2, is a projecting flange 10 adapted to carry a flexible casing 12, which casing may be made of a coiled wire, as shown, or may be a tube of leather, rubber or other material. This flexible casing is used to protect the connecting wire 9 which extends from the actuator A to the indicator B. It will be noted that the coil spring 5 bearing against the end of the rod 3, will retain the pin 6, and through the attached wire 9, will retain the indicator arm 25 in its normal position.

The indicator B consists of a casing having a flat face C and a circular rim D, and having an externally-projecting nipple E, through which extends the wire 9 together with its protecting casing 12, which protecting casing is fastened to the indicator B by means of set screws 13. Fastened to the interior of the rim D is a lug 14, to which an arm 15 is pivoted. In the free end of the arm 15 is an elongated slot 16, in which is positioned a pin 17 projecting from the short arm of a bell crank lever 18. This bell crank lever is pivoted at 24 to the center of the face C, and its long arm 25 acts as an indicator pointer and moves over a segment opening E in the face plate C. Positioned on the arm 15, between the lug 14 and the slot 16, is a block 19 having two apertures or openings 20, 20, into one of which is inserted and held by means of a screw 21, the end of the actuating wire 9. Into the other of these openings 20 is inserted one end of a rectractor spring 22, the other end of which spring is attached to the rim of the casing by means of a lug 23. It will be noted that this spring 22 acts upon the arm 15, and through the arm and pin, acts to retain the indicator pointer in its normal position, as shown in Fig. 2.

It will be noted that so long as the door is open, as shown in Fig. 1, the spring 5 will press the rod 3 out into the path of the door, and, at the same time, allow the spring 22 to draw the arm 15 to the position indicated in full lines in Figs. 1 and 2, in which case the indicator will show that the door is open. When the door is closed, the edge of the door frame presses upon the head 4 of the rod 3, whereby the wire 9

will be pulled, moving the arm 15 and the indicator pointer 25 to the position indicated in dotted lines in Fig. 2, and will there be held until the door is opened.

As many changes could be made in the above construction, and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matters contained herein, in the above description, or shown in the accompanying drawings, shall be interpreted as illustrative and not in a limiting sense. It is also to be understood that the language used in the following claims is merely intended to cover all the generic and specific features of the invention herein described, and all statements of the scope of the invention, which, as a matter of language, might be said to fall therebetween, and that materials, sizes and relativities of parts are non-essential, except as called for in the claims.

Having thus described my invention, I claim as new and desired to secure by Letters Patent:

1. In combination with a door, an indicator mechanism, a door-actuated mechanism in the frame of the door, consisting of a tube having a longitudinal slot in the side thereof, a spring-pressed rod within the tube and having a finger projecting through said slot and a projecting end engaged by the door in closing, and an actuating wire leading from said finger to the indicator mechanism, whereby when the door is closed, the indicator mechanism will be actuated.

2. In combination with a door, an indicator mechanism, a door-actuated mechanism in the frame of the door, consisting of a tube having a longitudinal slot in the side thereof, a spring-pressed rod within the tube and having a finger projecting through said slot and a projecting end engaged by the door in closing, an actuating wire leading from said finger to the indicator mechanism, whereby when said door is closed, the indicator mechanism will be actuated, a curved flange on said tube, and a casing protecting said wire and attached to said flange.

3. In combination with a door, an indicator mechanism, a door-actuated mechanism in the frame of the door, consisting of a tube having a longitudinal slot in the side thereof, a spring-pressed rod within the tube and having a finger projecting through said slot and a projecting end engaged by the door in closing, said end having an enlarged head thereon, and an actuating wire leading from said finger to the indicator mechanism, whereby when the door is closed, the indicator mechanism will be actuated, and a curved flange on said tube carrying said actuating wire and adapted to change the direction of the same.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LEON LIPMAN BORIES.

Witnesses:
ALBERT XORN,
G. E. MURPHY.