B. LEDERMANN.

STREET OR STATION INDICATOR.

APPLICATION FILED SEPT. 16, 1914.

1,160,913. Patented Nov. 16, 1915.

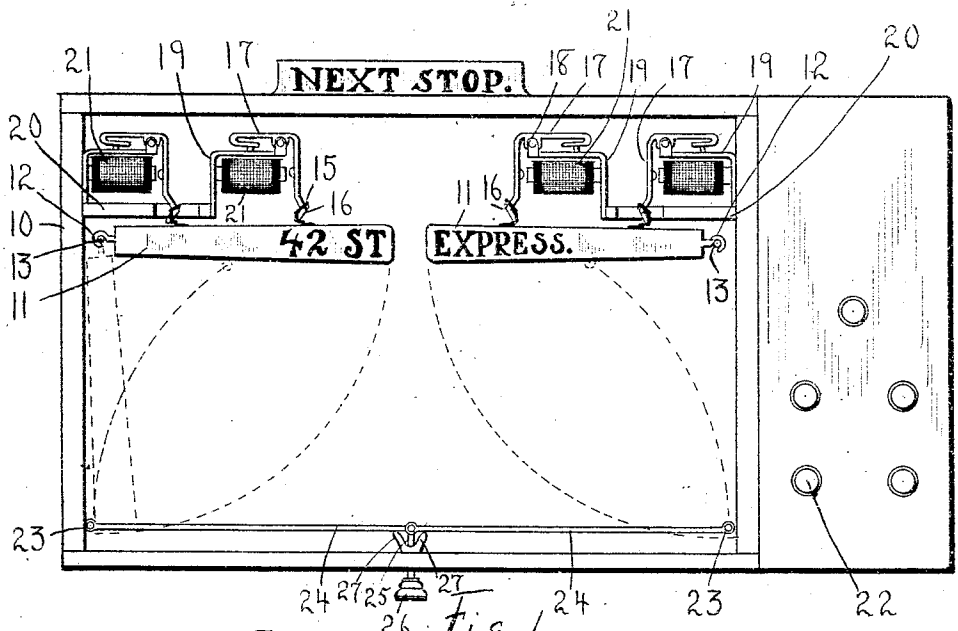


Fig. 1.

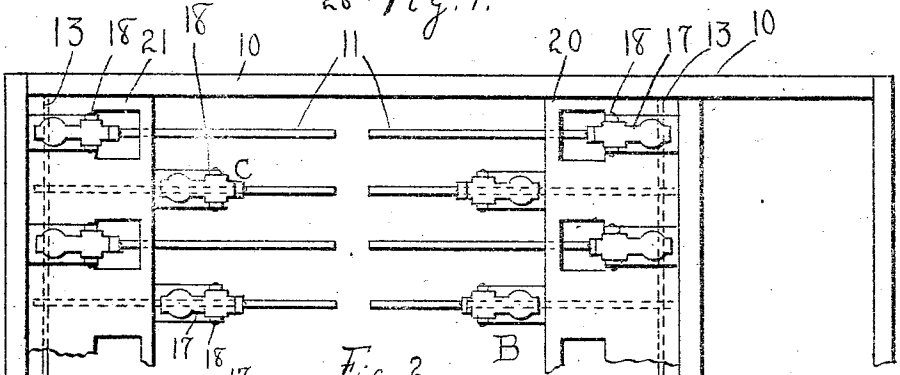


Fig. 2

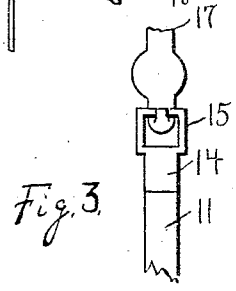


Fig. 3.

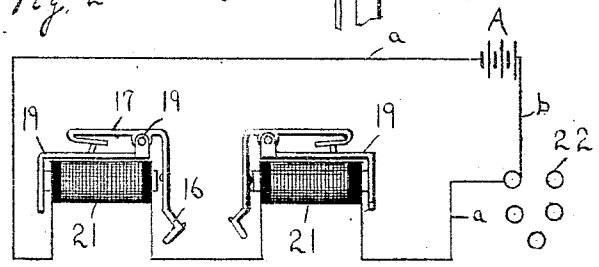


Fig. 4.

Witnesses:

M. G. O'Donnell.

Esther S. Dawson.

Inventor

Bernhard Ledermann.

By his Attorney

W. B. Hutchinson.

UNITED STATES PATENT OFFICE.

BERNHARD LEDERMANN, OF NEW YORK, N. Y.

STREET OR STATION INDICATOR.

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To all whom it may concern:

Be it known that I, BERNHARD LEDERMANN, a citizen of the United States, and a resident of the city of New York, county of Queens, and State of New York, have invented a new and useful Improvement in Street or Station Indicators, of which the following is a full, clear, and exact description.

My invention relates to improvements in that class of devices which is used in cars to indicate a street or station which is being approached.

A good deal of difficulty is experienced in large cities on trolley cars and in subways about knowing the exact locality in which one is riding, and in also knowing the name of the street or station at which the next stop is to be made. Devices intended to indicate the name of the next stop are often complicated and unreliable, so that such devices are not in general use.

The object of my invention is to produce an apparatus of this kind which is extremely simple, which can be arranged either in the end or center of the car, but preferably across the center near the roof so that it can be seen from either end portion of the car, to provide means for clearly displaying the name of the next stop, and also to produce a simple means of operation which can be controlled by one of the trainmen, and which by the simple pressing of a button will cause the name of the next station or street to be displayed. In carrying out this invention I have a series of signs arranged one behind the other, and preferably in opposed pairs, which can be hooked to a supporting rod so that they can be easily placed or removed, and which are supported in horizontal position by a magnet controlled catch so that when the magnet is energized and the catch released, the corresponding sign will drop by gravity to a vertical position and display the sign behind it.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar reference characters indicate corresponding parts in all the views.

Figure 1 is a front elevation of the apparatus embodying my invention. Fig. 2 is a broken plan view of the apparatus. Fig. 3 is a detail view of one of the catches which support a sign, and Fig. 4 is a diagrammatic view showing the magnet circuits and the means for effecting the release of the sign.

The apparatus is provided with a supporting framework 10 which can be of any approved kind, and which as shown is rectangular, this frame being preferably arranged to extend across the car near the center, and thus leaving both sides open to view. A bank of swinging signs 11 is arranged in the upper part of the framework and preferably in opposed pairs, each sign having at its outer end a hook 12 which can be readily placed over a cross-rod 13, and the latter can be supported in any convenient manner. It will be seen that with this arrangement the signs can be easily placed in position or removed, and that unless supported they will drop by gravity to a vertical position. On the upper edge of each sign is a spring member 14 terminating in a loop 15 which is adapted to engage the bend or knuckle 16 on an elbow lever 17 supported above the sign, and pivoted at its elbow as shown at 18 to the bracket 19 which is in turn secured to a ledge 20 on the frame 10, or which can be supported in any convenient manner. A magnet 21 is supported on the bracket 19 opposite the vertical leg of the lever 17, so that said leg serves as an armature.

It will be seen that when the sign is swung up to a horizontal position as in Fig. 1, the vertical leg of the lever 17 will enter the loop 15, and the knuckle 16 will engage the upper wall of the loop 15 thus supporting the sign; but when the magnet is energized and the vertical leg of the lever 17 pulled toward the magnet, the knuckle will be withdrawn from contact with the wall of the loop 15 and the sign 11 will drop by gravity thus exposing the one next behind it. In the drawing I have shown a few of these swinging signs, but in practice they can be made thin and placed in close relation, and the magnets can be staggered as shown in Fig. 2 to provide for such close relation.

In practice when a sign is to be exposed, the one next in front of it is dropped, and to provide for exposing a correspondingly marked sign on opposite sides of the device I arrange certain of the magnets in pairs and in the same circuit to effect this result. Each pair of magnets is connected to a push button 22, and a bank of push buttons prop-

erly marked can be located at any convenient place, as for instance at the end or side of the car. Obviously a single magnet can be connected with a single push button, but for the reasons stated I prefer to have them arranged in pairs, and they can be connected up with any convenient source of electricity.

In Fig. 4 I have shown a simple circuit which includes a pair of magnets. The current passes from the source of supply A, through a wire *a*, the magnets 21, a push button 22, and the wire *b*, back to the source. In practice we will say that this pair of magnets is located as at B and C in Fig. 2. Obviously they can be arranged opposite any two desired signs, and in the instance cited when the push button 22 corresponding to the signs at B and C is pushed, the corresponding magnets will be energized and these two signs will be dropped, exposing the ones next behind them.

It will be seen, therefore, that the apparatus is exceedingly simple and that an advantage not possessed by many such devices is that any desired sign or pair of signs can be dropped, and the operation is not necessarily sequential. This is important, because some times certain trains pass certain streets or stations, while others will stop at them, and so it is necessary to have the apparatus under control in order that any desired signs can be dropped to expose the signs behind them.

To provide for easily returning all the signs simultaneously to their horizontal position after they have been dropped, a rod 23 is arranged on each side of the frame 10 near the bottom, so that when the signs fall, as indicated by dotted lines, their free ends will lie against the rods 23. These rods are connected to rods 24 arranged at right angles to them, and the latter are pivoted to a vertical slide bar 25 which extends down through the frame and terminates in a handle 26. The slide bar 25 moves between the bosses 27 which are supported on the frame a short distance from the slide bar, and are preferably connected in a single piece, these bosses serving as fulcrums for the rods or levers 24. When the handle 26 is pulled down, the pivoted inner ends of the rods or levers 24 are also pulled down, and as they act on the fulcrums 27, the outer ends are thrown up, thus carrying up the rods 23 and signs 11, and thereby returning the signs to their horizontal position where they are automatically held, because the loops 15 severally engage the corresponding knuckles 16 of the armature levers 17.

I claim:—

1. An apparatus of the kind described comprising supporting rods, signs arranged in banks and having hooks detachably engaging the rods whereby the signs can swing freely on the rods, means for supporting the signs in a horizontal position, and electromagnetic means for selectively releasing the signs.

2. An apparatus of the kind described comprising a series of freely swinging signs arranged in banks with one sign behind the other, each sign having at its hinged end a detachable connection with its support, an independent catch for each sign to hold it in a horizontal position, electromagnetic means for selectively releasing the catches and permitting the signs to drop by gravity to a vertical position, cross rods extending transversely opposite the edges of the signs when the latter are in a vertical position, and means for swinging the cross-rods upward and thereby restoring the signs to a horizontal position.

3. An apparatus of the kind described comprising a series of freely swinging signs arranged in banks with one sign behind the other, each sign having at one end a hook detachably engaging a support, an independent catch for each sign to hold it in a horizontal position, electromagnetic means for selectively releasing the catches and permitting the signs to drop by gravity to a vertical position, and returning means arranged opposite the edges of the signs when the latter are in a vertical position, said returning means swinging in the same direction as the signs and adapted to restore the signs to a horizontal position.

BERNHARD LEDERMANN.

Witnesses:
CLEMENS A. BOHNER,
EDWARD KLOSS.