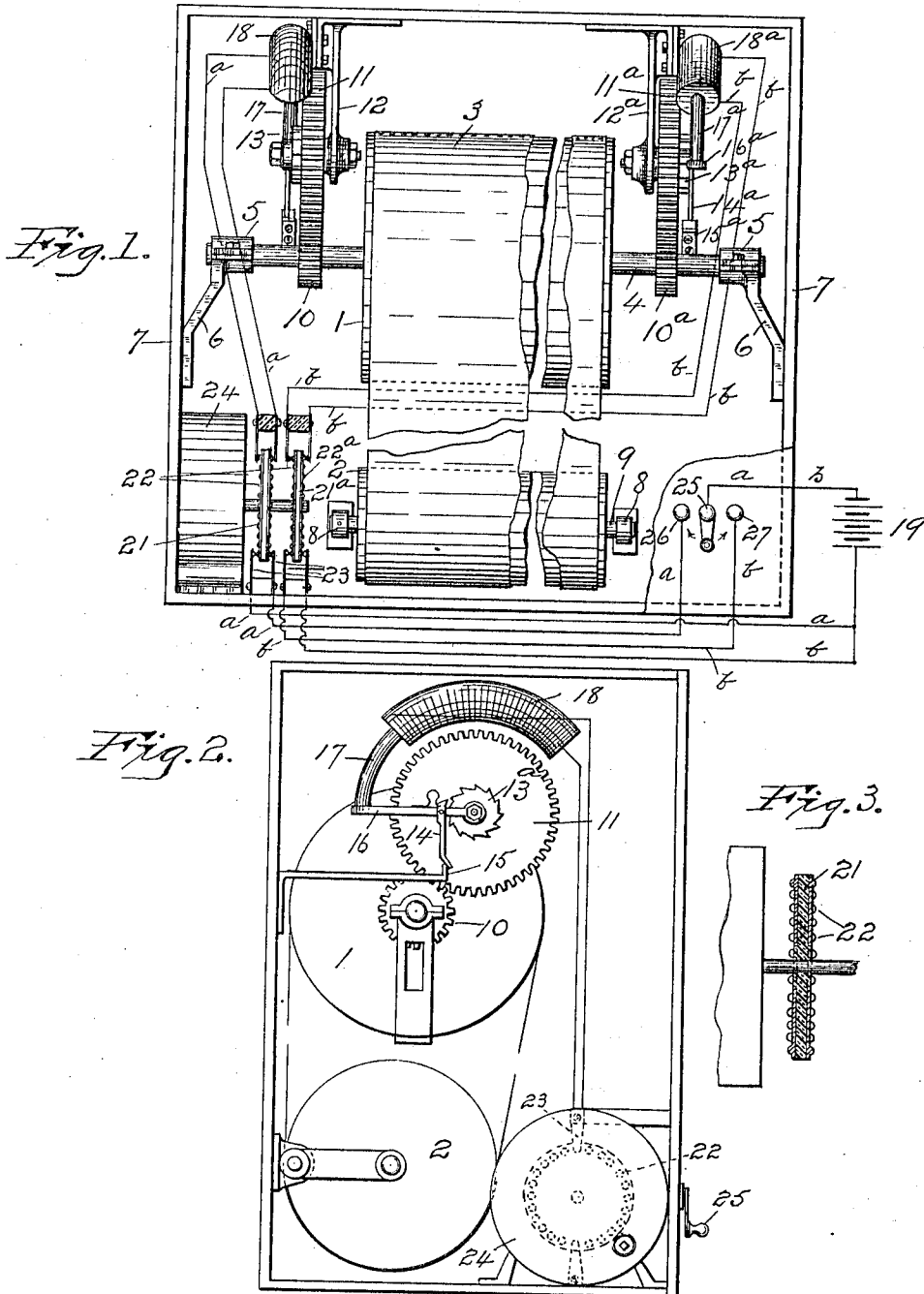


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INDICATOR,
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1,048,445.

Patented Dec. 24, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

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INDICATOR.

1,048,445.

Specification of Letters Patent.

Patented Dec. 24, 1912.

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To all whom it may concern:

Be it known that I, LUCY MAUDE COVENTRY, subject of the King of England, residing at The Delamere, Highbury street, Prospect, Adelaide, South Australia, Australia, have invented a new and useful Indicator; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to indicators, but it may be used for displaying any information, such as, for instance, advertising display.

It relates particularly to a device that may be used on railways, or street cars, for indicating the next station, street, &c.

It relates, moreover, to the class of devices set forth in the U. S. Patent, No. 941,354, granted Nov. 4, 1909, to A. J. Border, and is designed to be an improvement in some particulars on the device forming the subject-matter of said patent.

For carrying out my invention, I make use of a pair of display cylinders over which an apron may be caused to pass, the movement of the said cylinders being effected by mechanism to be hereinafter described.

In the drawings attached to and forming part of this application, Figure 1 is a front elevation; Fig. 2, a side view looking from the left of Fig. 1, and Fig. 3, is a detail view of the contact disk.

Referring to the drawings: 1 and 2 are cylinders over which passes the apron 3, which may bear any desired inscriptions, or figures; 4 is the shaft of cylinder 1, journaled at 5 in the supporting brackets 6 attached to the side walls 7; 8 are the journals in which is seated the shaft 9 of the cylinder 2; 10 and 10^a are pinions mounted on shaft 4 and meshing with gear-wheels 11 and 11^a which are rotatably mounted on stub-shafts supported on brackets 12 and 12^a respectively. Fixed to the outside of these gear-wheels 11 and 11^a, and loosely receiving said stub-shafts, are ratchet wheels 13 and 13^a engaged by pawls 14 and 14^a, normally resting at their outer ends against the supports 15, 15^a and pivotally mounted on arms 16 and 16^a loosely mounted at their inner ends on said stub-shafts and carrying at their outer ends the cores 17 and 17^a of the solenoids 18 and 18^a. These solenoids are energized by the source of electricity 19 flowing through conductors *a*, *b* and contact disks 21, 21^a carrying on their two surfaces contact knobs

22, against which press at intervals contact springs 23.

24 is a clockwork or similar mechanism for turning the contact disks 21, 21^a.

25 is a switch for controlling the current of the electric source 19.

The operation is as follows: The switch 25 having been thrown over on to the point 26, the clock-work 24 is started, thereby setting the contact disk, 21 in rotation. As the disk, in its rotation, brings the upper and lower contact springs 23 against the contact knobs 21, the current flows from the source of electricity 19 through conductors *a* to the coil of the solenoid 18 and back to the electric source. The current flowing in the solenoid, causes it to act like a magnet and draw into itself the core 17. The effect of this is to cause the pawl 14 to slip off its support 15, and engage a tooth on the ratchet wheel 13, thereby, through the gears 11 and 10, advancing the cylinder 1 one step. The motion of the cylinder 1 is transmitted by the apron 3 to the cylinder 2. The real object of cylinder 2 is to serve as a guide for the apron, and it can, of course, be omitted without affecting the principle of action of the device. The apron, moreover, is only a means for receiving the inscriptions and illustrations desired to be shown, and these could be, of course, printed or stuck onto the cylinder 1. In order to reverse the motion of the cylinder 1, it is only necessary to throw the switch 25 over onto the contact point 27, when the circuit will be from the positive pole of the battery 19, the conductors *b*, *b* through the contact springs 23, contact knobs 22^a, solenoid 18^a and back to battery. The operation is entirely the same as when the mechanism moves forward.

Having thus fully described and illustrated my invention, what I claim, is:—

1. In a displaying device, a source of electric energy; a display-means; a pair of electrical operating means to operate the display means in opposite directions; an intermittent circuit closer for each operating means; a source of current; conductors between each circuit closer and said source of current; a selection switch adapted to close or open the conductors between either circuit closer and the source of current; conductors connecting each circuit closer with the corresponding operating means; and an operating means for the circuit closers.

2. In a displaying device, a source of electric energy; a display means; a pair of electrical operating means to operate the display means in opposite directions; circuits
5 connecting the operating means with the electric source; a switch for passing the current to either operating means as desired; a pair of disks having contact knobs on each side of each disk, a shaft supporting said
10 disks, said disks being inserted in the conductors between the switch and operating means for interrupting the current at intervals.

3. In a device for displaying letters, figures and the like, the combination of a rotatable display means, a pair of electrical
15 operating means for rotating the display means in opposite directions, a contact disk

for each operating means and having on opposite faces an annular series of contact
20 knobs; a shaft supporting said disks; a clock work for rotating the shaft; a source of current; conductors between said source of current and said disks; a selection switch adapted
25 to close or open the conductors between either disk and the source of current; and conductors connecting the disks with the corresponding operating means.

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

LUCY MAUDE COVENTRY.

Witnesses:

ALBERT STETSON,
JOHN H. HOVING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."