

No. 737,980.

PATENTED SEPT. 1, 1903.

E. L. WALKER.
INDICATOR.

APPLICATION FILED JUNE 6, 1903.

NO MODEL.

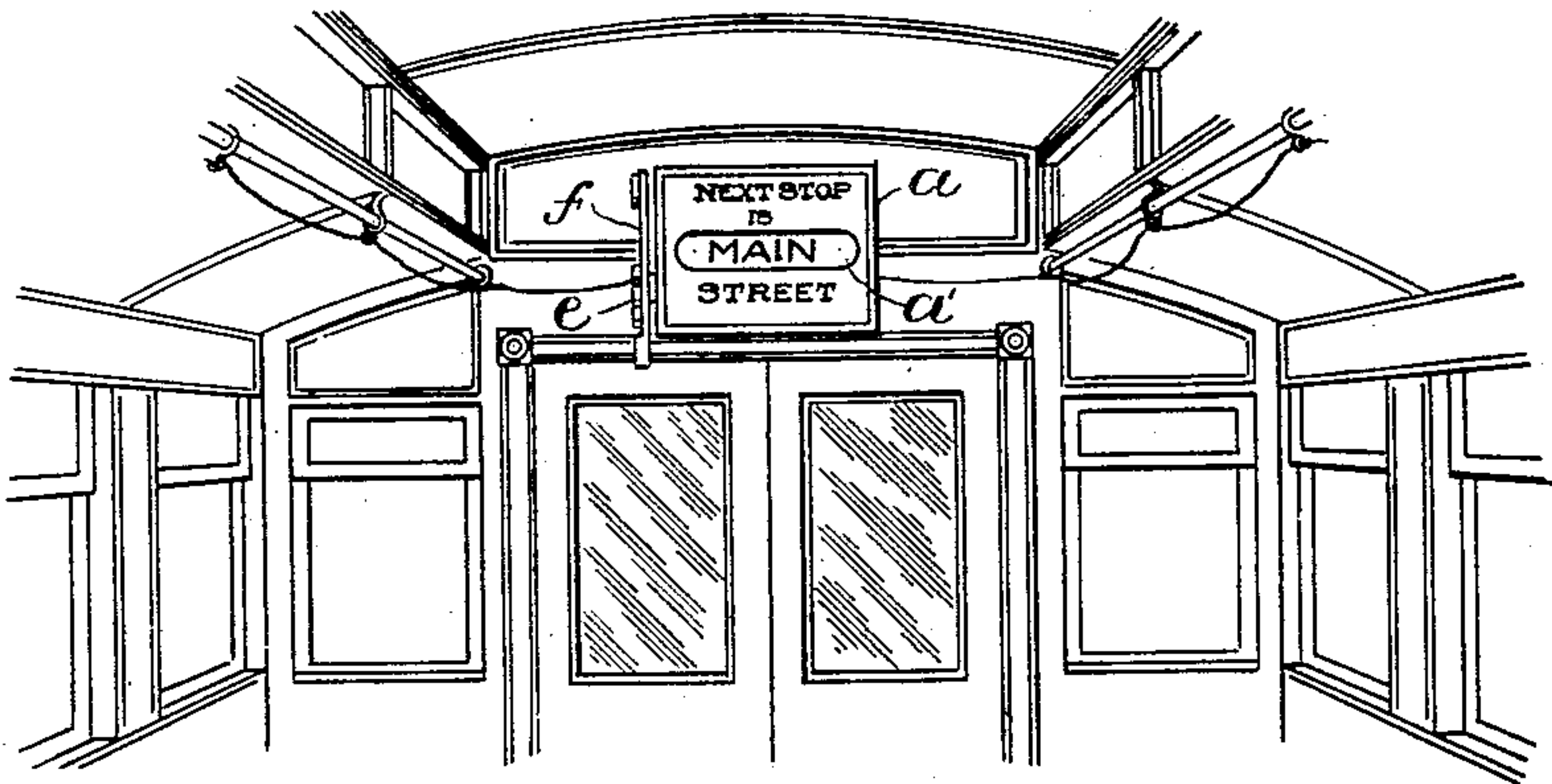


Fig. 1.

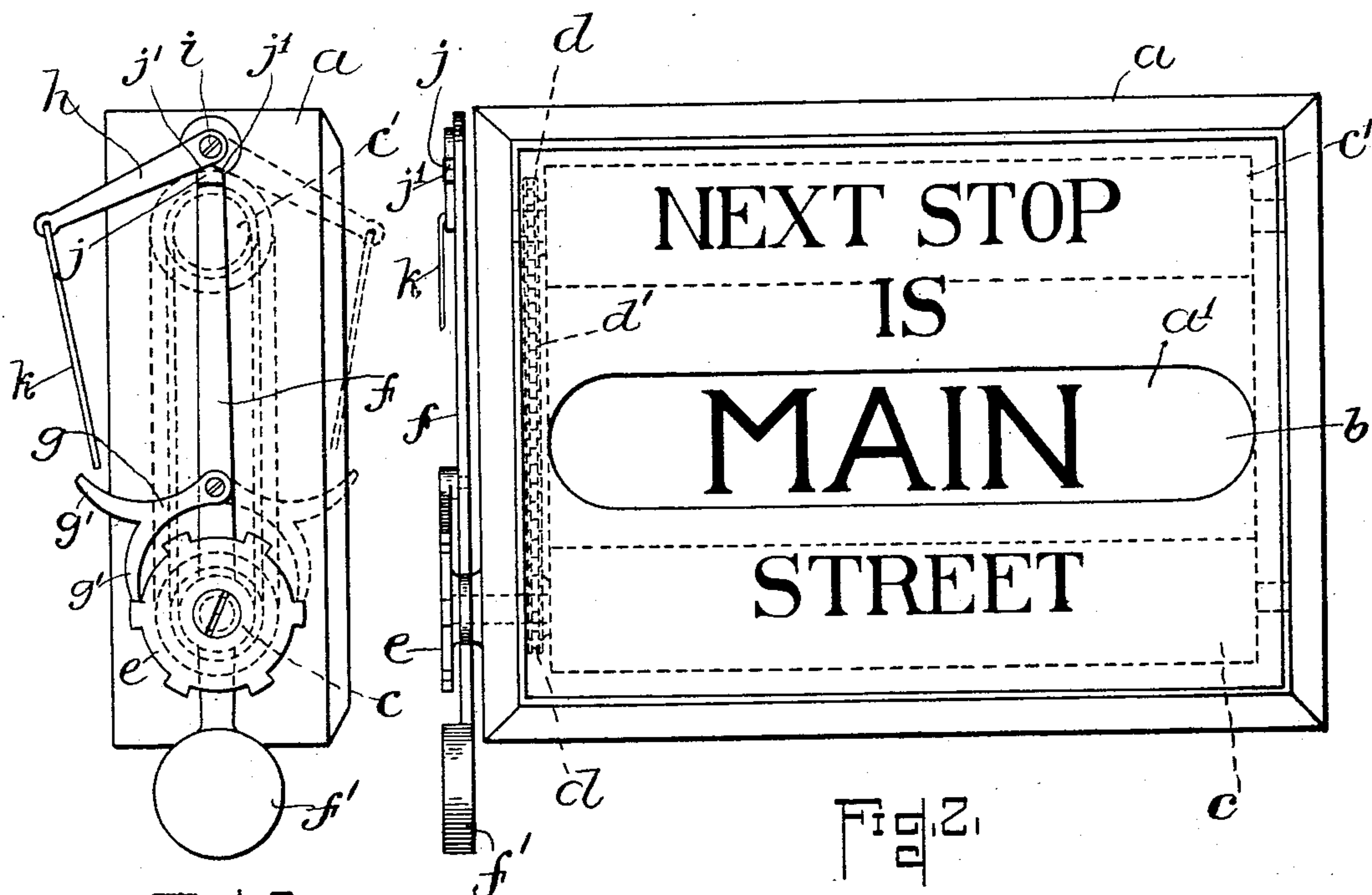


Fig. 2.

Fig. 3.

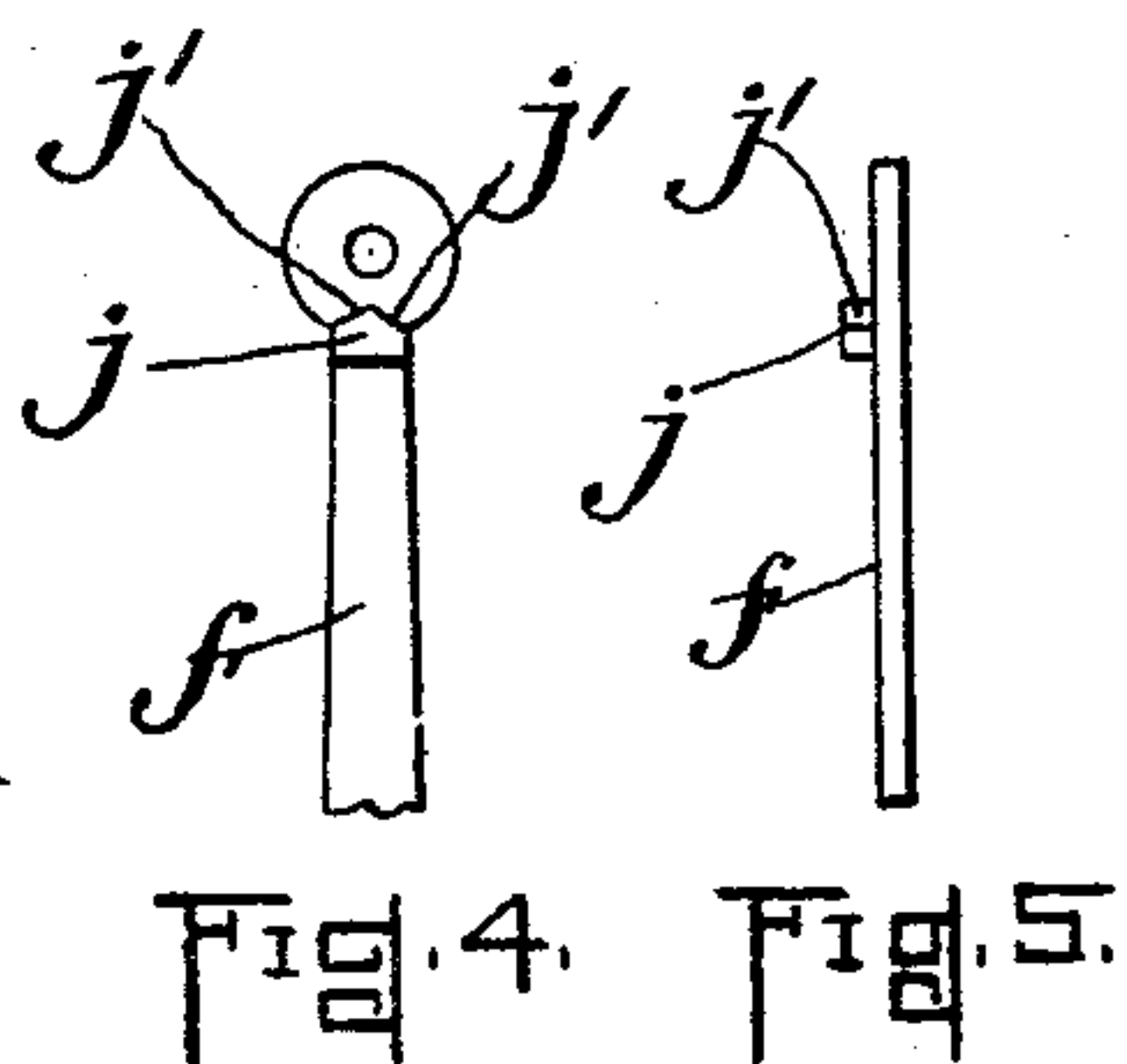


Fig. 4.

Fig. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

ELMER L. WALKER, OF WESTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO H. N. WILSON, OF LYNN, MASSACHUSETTS.

INDICATOR.

SPECIFICATION forming part of Letters Patent No. 737,980, dated September 1, 1903.

Application filed June 6, 1903. Serial No. 160,359. (No model.)

To all whom it may concern:

Be it known that I, ELMER L. WALKER, of Weston, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Indicators, of which the following is a specification.

This invention relates to indicators adapted particularly for street or steam railway-cars to indicate the successive streets or stations along the road over which the car travels; and it has for its object to provide a simple indicator adapted to expose the names of a number of streets or stations successively and then to be readily reversed to display the same names in reverse order. The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents an elevation of an indicator embodying my invention applied to the interior of a street-car. Fig. 2 represents an elevation of the indicator on a larger scale. Fig. 3 represents an end elevation of the same. Figs. 4 and 5 represent fragmentary views.

The same reference characters indicate the same parts in all the figures.

In the drawings, *a* represents a casing, which may be of any suitable form. One side of the casing is here shown as provided with an opening *a'*, exposing a portion of a flexible strip or curtain *b*, upon which are inscribed a series of names, which may be names of streets or railway-stations. Above the opening *a* may be inscribed the words "The next stop is," and below said opening the word "Street," as shown in Figs. 1 and 2. Instead of these permanently-inscribed names any other names or characters may be employed. The curtain *b* is engaged at its ends with rollers *c c'*, located within the casing. Connections are provided between said rollers whereby the rotation of one imparts rotary motion to the other, said connections being preferably sprocket-wheels *d d'*, affixed to the shafts of the rollers, and a sprocket-chain *d'*, engaged with and connecting said wheels. The shaft of the roller *c* is extended through one end of the casing, and outside the said end is located the improved reversible actuating mechanism for

the rollers and curtain constituting my improvement.

The said actuating mechanism is organized as follows: *e* represents a double-acting ratchet-wheel affixed to the shaft of the roller *c*, said ratchet-wheel being double-acting in the sense that its teeth are formed alike at both ends, so that the wheel may be rotated in either direction by a reciprocating pawl, as indicated in Fig. 3. *f* represents a lever which is hung to oscillate loosely upon the shaft of the roller *c* beside the ratchet *e*. Said lever is yieldingly held in a central or normal position, so that it may be swung in either direction from said position, the means for yieldingly maintaining the lever in its normal position being preferably a weight *f'*, affixed to a downwardly-projecting extension of the lever *f*.

g represents a pawl which is pivoted to the lever *f* and is formed and arranged so that it may be engaged with the ratchet *e* in the two positions indicated by full and dotted lines in Fig. 3, the pawl having two acting ends *g' g'*, one of which engages the ratchet when the pawl is in one position and the other when the pawl is in the other position. *h* represents an arm which is pivoted at *i* to the outer end portion of the lever *f* and is adapted to project from either side of the lever, as indicated by full and dotted lines in Fig. 3. The lever is provided with a projection *j*, the upper side of which presents two inclined faces or abutments *j' j'*, Fig. 4, adapted to support the arm in the two positions indicated in Fig. 3. To the outer end of the arm *h* is secured a pull device, which may be a cord or chain *k*, extending to any point where it may be conveniently reached.

The operation is as follows: The pawl *g* and arm *h* being adjusted, as shown in full lines in Fig. 3, a downward pull exerted on the cord *k* will swing the lever *f* to the left as viewed in Fig. 3, thus causing the pawl *g* to impart a partial rotation to the ratchet *e* and to the rollers, the curtain being moved correspondingly. Each movement of the curtain displays a different name at the opening *a'*. When the end of the route has been reached, the pawl *g* and arm *h* are swung over, as in-

licated in dotted lines, so that the depression of the cord *k* will cause the lever *f* to swing to the right, thus causing a step-by-step movement of the curtain in the opposite direction.

5 It will be seen that the described reversing mechanism is of extremely simple and durable construction, so that its operation is positive and effective, the entire apparatus being so constructed that it is not likely to get out
10 of order. The weight *f'* returns the lever *f* to its starting position after each pull and release of the cord *k*.

I claim—

15 An indicator of the character specified, comprising a casing, rollers journaled therein, a flexible strip or curtain engaged at its ends with said rollers, connections between said rollers whereby motion is imparted from one roller to the other, and reversible actuat-
20 ing mechanism for said rollers and curtain,

said mechanism including a double-acting ratchet affixed to the shaft of one of the rollers, a lever hung loosely on said shaft and yieldingly held in a central position from which it is movable in either direction, a 25 double-acting reversible pawl pivoted to the inner portion of said lever and adapted to be engaged in different positions with the ratchet, and an operating-arm pivoted to the outer portion of the lever and adapted to ex- 30 tend in either direction therefrom, the lever having stops or abutments arranged to support the arm at either side of the lever, and a pulling device engaged with the arm.

In testimony whereof I have affixed my sig- 35 nature in presence of two witnesses.

ELMER L. WALKER.

Witnesses:

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E. BATCHELDER.