

(No Model.)

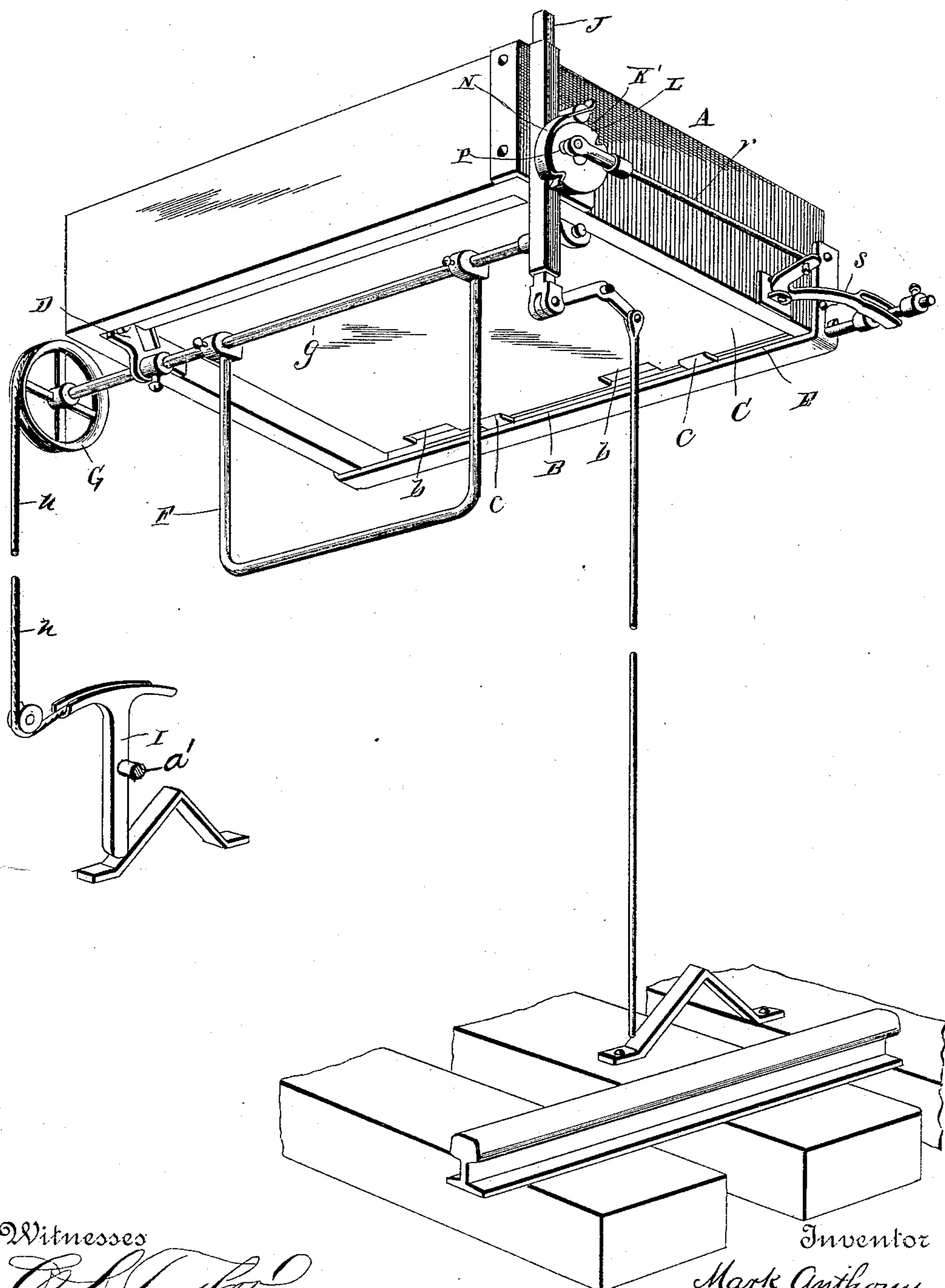
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M. ANTHONY.
STREET OR STATION INDICATOR.

No. 418,347.

Patented Dec. 31, 1889.

Fig. 1.



Witnesses

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(No Model.)

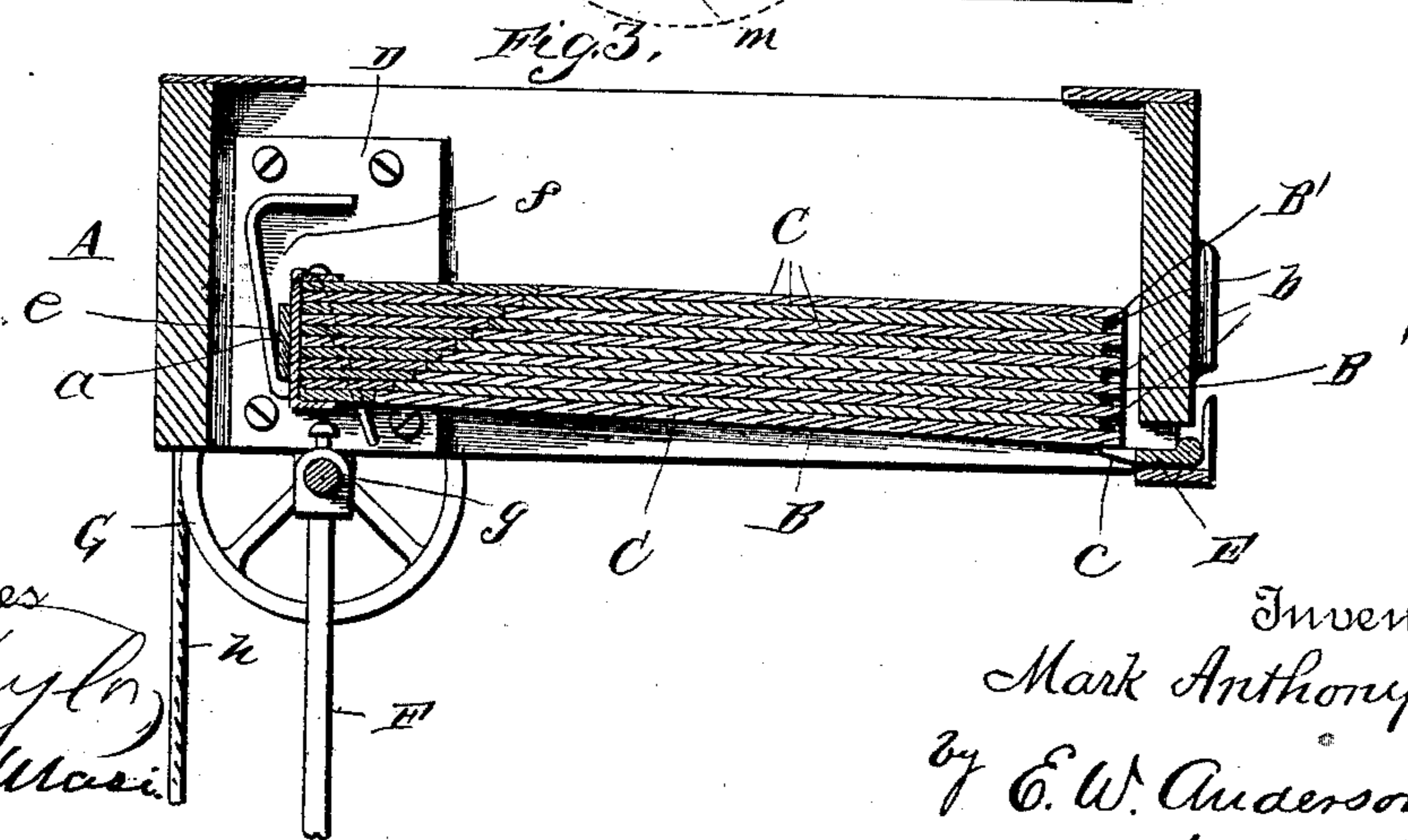
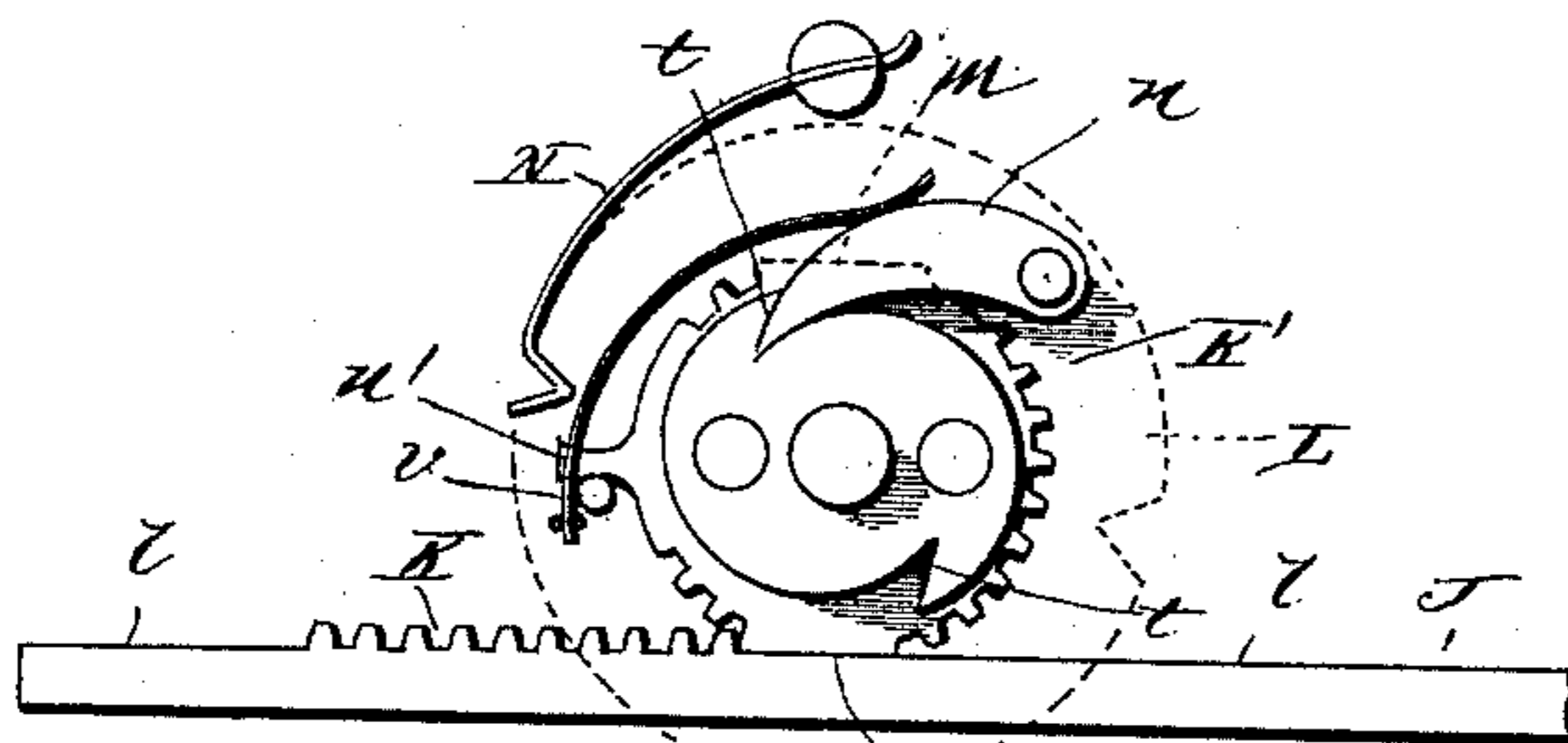
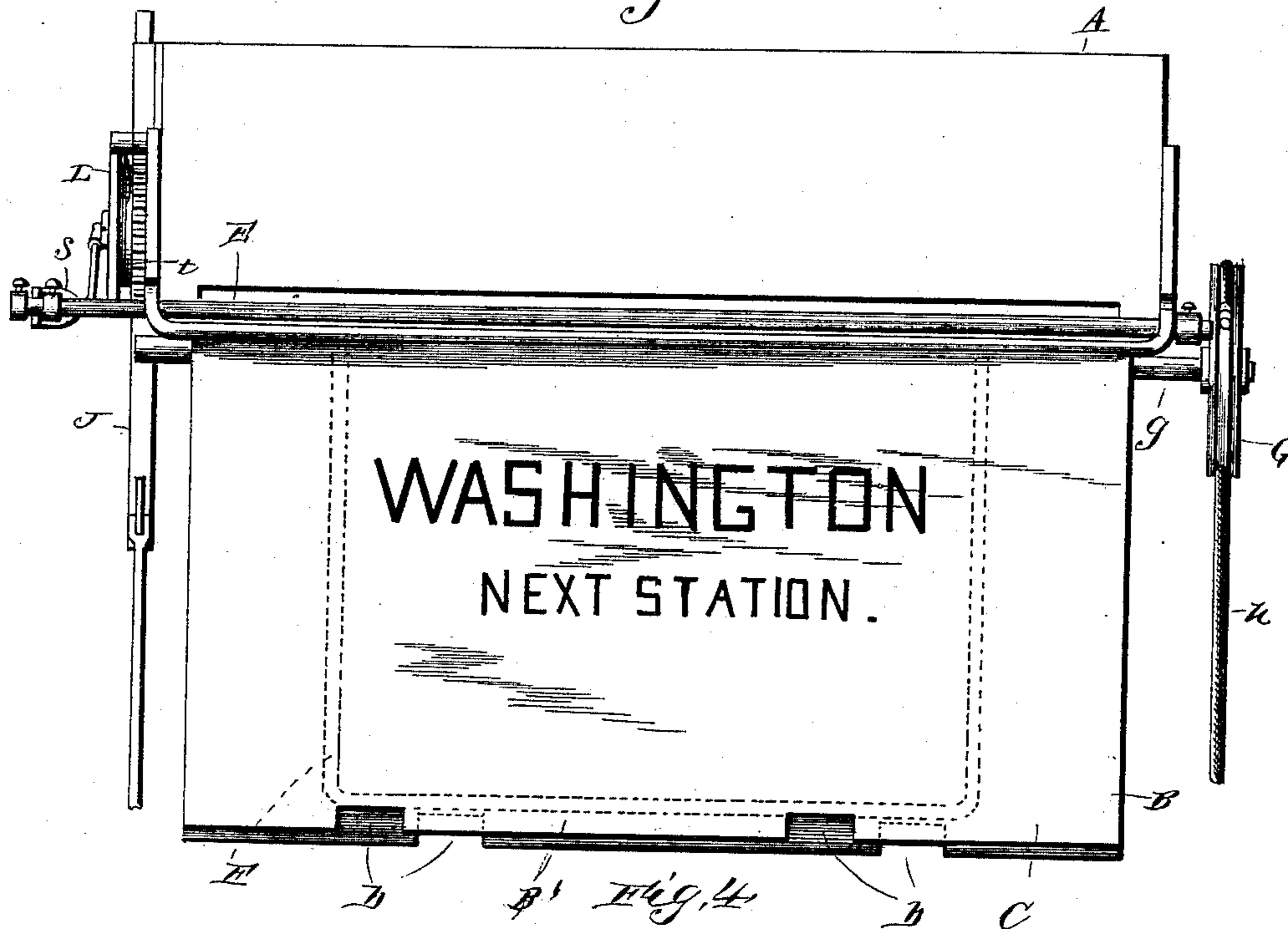
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Fig. 2.



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UNITED STATES PATENT OFFICE.

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STREET OR STATION INDICATOR.

SPECIFICATION forming part of Letters Patent No. 418,347, dated December 31, 1889.

Application filed April 3, 1889. Serial No. 305,829. (No model.)

To all whom it may concern:

Be it known that I, MARK ANTHONY, a citizen of the United States, and a resident of San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Street and Station Indicators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of the invention in perspective. Fig. 2 is a front view. Fig. 3 is a vertical transverse section, and Fig. 4 is a detail view.

This invention has relation to street and station indicators; and it consists in the construction and novel combination of devices, all as hereinafter set forth, and pointed out in the appended claims.

The object of the invention is to provide an indicator for streets and stations which will also serve for advertising purposes, and which, while easily constructed, will be durable and easy of operation.

In the accompanying drawings, the letter A designates the box or casing, having an opening in front through which the indicator-leaves fall during the operation of the device in hanging position.

B designates a book of indicator-leaves C, which are hinged to the back portion, which is provided with an extension or lug *a* at each end to engage the holding attachments D of the casing. The free edges of the indicator-leaves are notched, as indicated at *b*, to correspond with the position of the lugs *c* of the reciprocating dropper-slide E, so that when said lugs are opposite the notches of a leaf it, being unsupported, will fall; but when the lugs are in position away from said notches their engagement with the edge portion of the leaf will serve to hold it up or in the box. The reciprocating slide is located near the edges of the leaves, so that it will hold them up except when its lugs on its lower edge are opposite the notches of the

leaves; and the notches of alternate leaves are differently located to correspond with the different positions of the slide-lugs at the end of the movements of the slide, so that when the movement of the slide in one direction is terminated its lugs will be opposite the notches of a leaf, allowing the latter to fall, but holding up the next leaf until the end of its reverse movement, when its lugs, being opposite notches of this leaf, allow it to fall, while holding up the succeeding leaf, and so on throughout the series of leaves in the book. This book is so constructed that each leaf from its hinged portion to its notched edge is shorter than the preceding leaf, the stubs B' of the back portion being correspondingly longer each than the preceding stub by the thickness of a leaf, the object being to extend the hinge of each leaf a little beyond that of the preceding leaf, so that when it falls it will lie flat against the leaf which has fallen before. The hook is removable from the casing, and it may be easily appreciated that instead of using notched leaves to operate with a slide having lugs a notched slide may be employed, the leaves of the book having corresponding lugs.

The holding attachments D have bearings *e*, with which the extension-lugs *a* of the back or binding of the book engage. These bearings have openings at *f*, so that the lugs *a* can pass out freely when the book is being removed from the casing. The dropper-slide E, although having reciprocating motion, is also pivoted, so that it can be swung backward a little, while it cannot swing forward from the vertical plane. The object of this is to allow the indicator-leaves of the book after they have fallen to hanging position to be readily raised up into the case again, this being usually accomplished by the replacer F, which consists of a bail device on a shaft *g*, having a pulley G at its end, provided with a cord *h*, which extends down below the bottom of the car, guided by suitable sheaves, and is connected to a lever I, having its pivot *a'* supported in any suitable way upon and under the car-body. When said lever is moved by coming in contact with an inclined way or guide on the track, the cord is pulled

and the wheel, with its shaft and bail device, turned back, carrying with it the leaves into the case. The leaves readily pass the lugs of the swinging dropper-slide, which, however, when said leaves have passed back into the case, swings forward, holding them in raised position. After the replacer-lever I leaves the inclined track-guide it assumes its normal hanging position and the bail device of the replacer falls. The dropper-slide is reciprocated by means of an automatic device at each street or station. This may consist of an inclined guide or projection on the track way adapted to move a rod or slide passing down through the bottom of the car and connected by means of a bell-crank to a reciprocating thrust-bar *J, having a short rack K thereon, said rack being of just sufficient length to turn the rocking gear K' a half-revolution and having at each end of the rack a smooth portion *l*, adapted to engage the locking-planes *m* on the gear between its arcs of teeth, as shown. When the smooth portion *l* is in engagement with the locking-plane of the gear-wheel, the latter cannot turn, so that after each movement of the rack the gear is held in fixed position until the rack comes into engagement again. It is apparent, therefore, that the extent of movement of the thrust-bar may be raised without interfering with the exact operation of the rack and gear.

L indicates an intermittently-rotating disk having notches diametrically opposite to each other on its periphery and adapted to engage a spring-pawl N and hold the disk still after each half-revolution. The disk is provided with a crank-pin *p*, on which is pivoted the pitman-rod *r*, which is connected to an arm of the angle-lever *s*, which engages the dropper-slide. The disk is also provided on its inner face with a pivoted spring-pawl *n*, which engages alternately the diametrically-opposite ratchet-teeth *t* of the gear. A long stop-tooth *n'* is provided on the gear K', adapted to engage a fixed stud *v*. When the thrust-bar is moved upward, its rack, coming into engagement with the gear K', turns it a half-revolution in one direction, and at the same time one of the ratchet-teeth of said gear, engaging the inner pawl *n* of the revolving disk L, causes the latter to turn a half-revolution, and through its crank-pin and pitman to operate the dropper-slide in one direction, bringing its lugs opposite the notches of the teeth of the leaf, so that the latter will fall. On the return or downward movement of the thrust-bar J, however, although the gear K' is turned backward a half-revolution, its ratchet-tooth *t* slides under the pawl *n* of the crank-disk L, so that the latter is held stationary by the spring-pawl N and there is no movement of the dropper-slide. On the next upward movement of the thrust-bar the rack causes the gear K' to turn forward again, and by the engagement of its other ratchet-tooth with the pawl *n* of the disk L to turn the latter an-

other half-revolution, thereby moving the dropper-slide in the reverse direction, bringing its lugs opposite the notches of the next leaf of the indicator-book.

The names of the stations or of the streets are on the front faces of the leaves when in dropped position. Advertising matter can be placed below the station-names, so as to be displayed when the leaves fall.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a street-car or station indicator, the combination, with the reciprocating dropper-slide applied to a box or casing and pivoted to swing backward and provided with lugs on its lower edge, of a projection on the trackway, a rod or slide extending through the car-bottom and engaging said projection or guide, a bell-crank, a rack thrust-bar, a rocking gear, an intermittently-rotating notched disk, a pitman, and an angle-lever, all coacting to actuate the dropper-slide, substantially as set forth.

2. In a street or station indicator for cars, the combination, with a reciprocating dropper-slide, of a reciprocating rack thrust-bar, a rocking gear K', having diametrically-opposite ratchet-teeth, an intermittently-revolving crank-disk having a pawl engaging said teeth, a spring-pawl engaging notches of said crank-disk, and devices connecting the crank-disk to the dropper-slide, and mechanism for operating said dropper-slide, substantially as specified.

3. In a street or station indicator for cars, the combination, with a pivoted reciprocating dropper-slide and mechanism to move the same, of the hinged indicator-leaves engaging said dropper-slide provided with disengaging devices on their edges, substantially as specified.

4. In a street or station indicator for cars, the indicator-book having its leaves notched in their free edges and provided with hinges raised a little in succession from the front to the rear leaf of the book, and mechanism to effect the dropping of said leaves, substantially as specified.

5. In a street or station indicator for cars, the combination, with the open box or case and its holding attachments having openings, of the removable indicator-book having its leaves hinged to a bound back portion and extension-lugs from said back portion to engage said holding attachments, and mechanism to effect the dropping of said leaves, substantially as specified.

6. In a street-car or station indicator, the combination of the pivoted reciprocating dropper-slide and its actuating mechanism, the hinged indicator-leaves, the replacer shaft and bail, the lever pivoted to the under side of the car and engaging an incline or guide on the trackway, and means connecting said lever to and operating said shaft and bail, substantially as set forth.

7. In a street or station indicator for cars, the combination, with hinged indicator-leaves, of a reciprocating pivoted dropper-slide, a replacer-bail, and automatic devices for operating the same and the hinged indicator-leaves, substantially as specified.

8. In a street or station indicator for cars, the combination, with hinged indicator-leaves and a pivoted reciprocating dropper-slide, of a rack thrust-bar, rocking gear, and ratchet, an intermittently-revolving crank-disk and its holding and moving pawls, and mechanism for dropping or operating said leaves, substantially as specified.

9. A street-car and station indicator comprising the pivoted reciprocating dropper-slide and its actuating mechanism, a remov-

able indicator-book having upright hinged leaves, a guide or projection on the trackway, a rod or slide extending through the car-bottom and engaging said projection or guide, a bell-crank, a rack thrust-bar, a rocking gear, an intermittently-rotating notched disk, a pitman, and an angle-lever, all coacting to actuate the dropper-slide to permit said leaves to fall or swing down, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MARK ANTHONY.

Witnesses:

LINCOLN SONNTAG,
FRED W. PITTS.