

(No Model.)

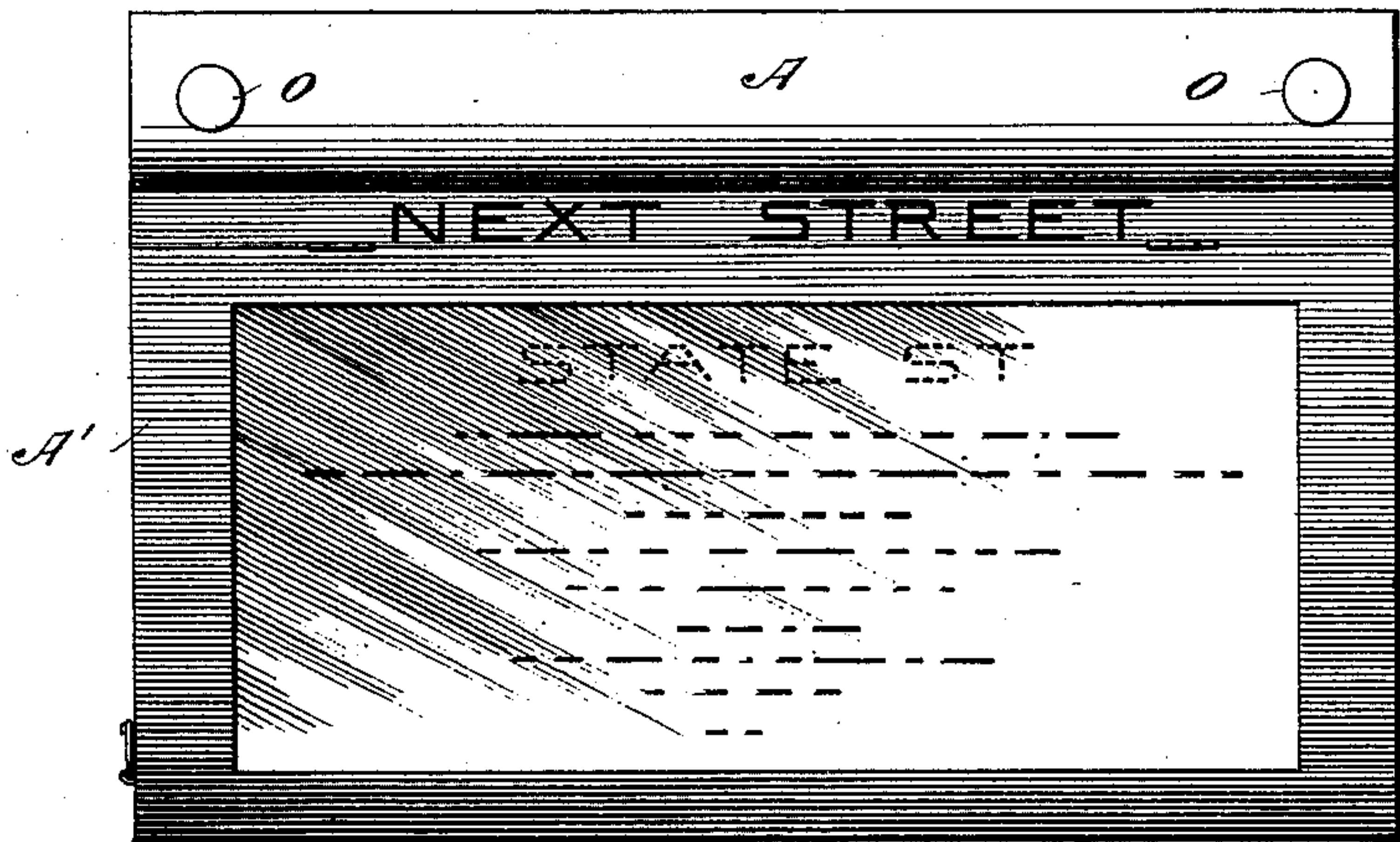
3 Sheets—Sheet 1.

R. P. ALLEY.  
STREET INDICATOR.

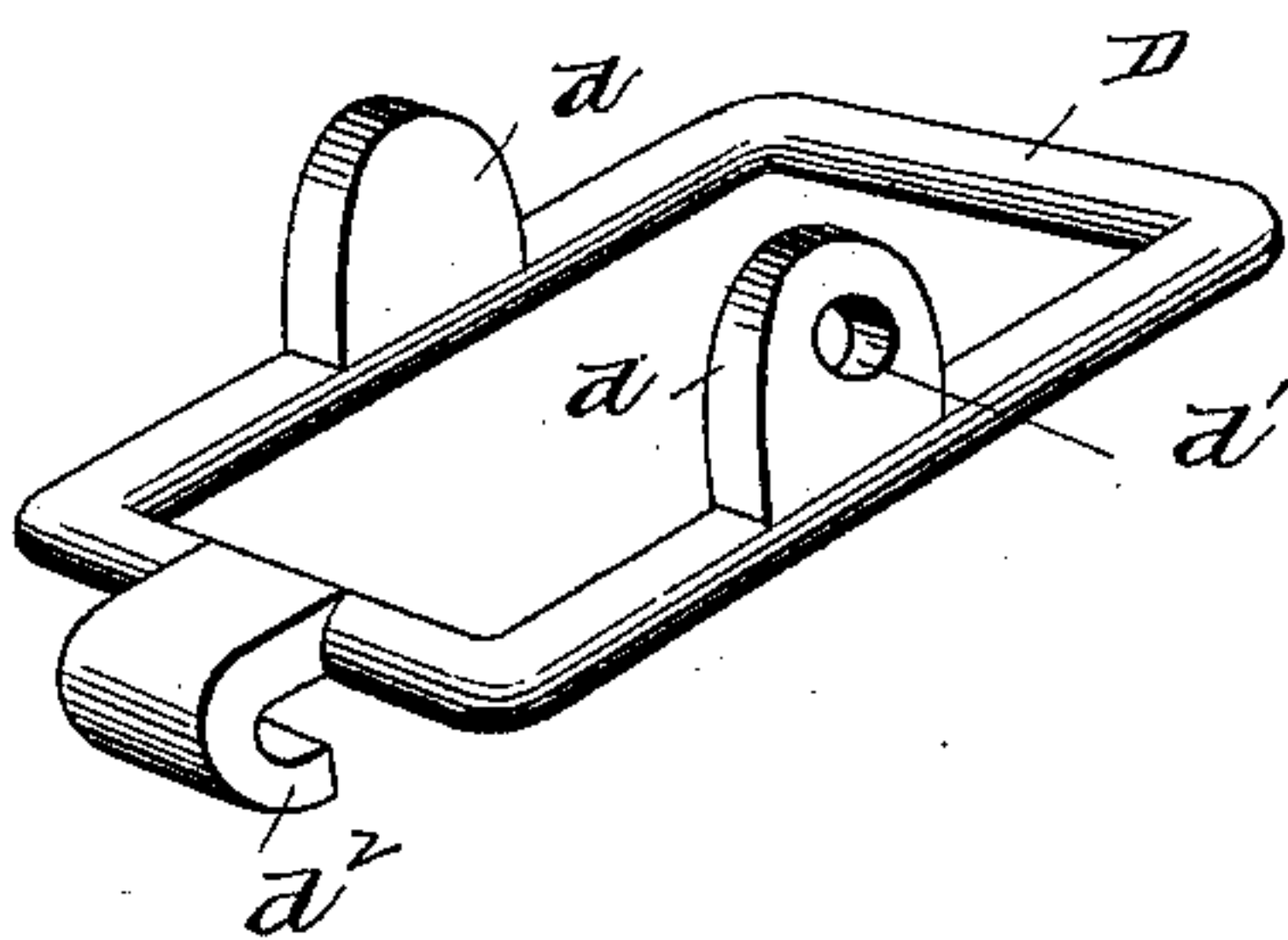
No. 428,582.

Patented May 20, 1890.

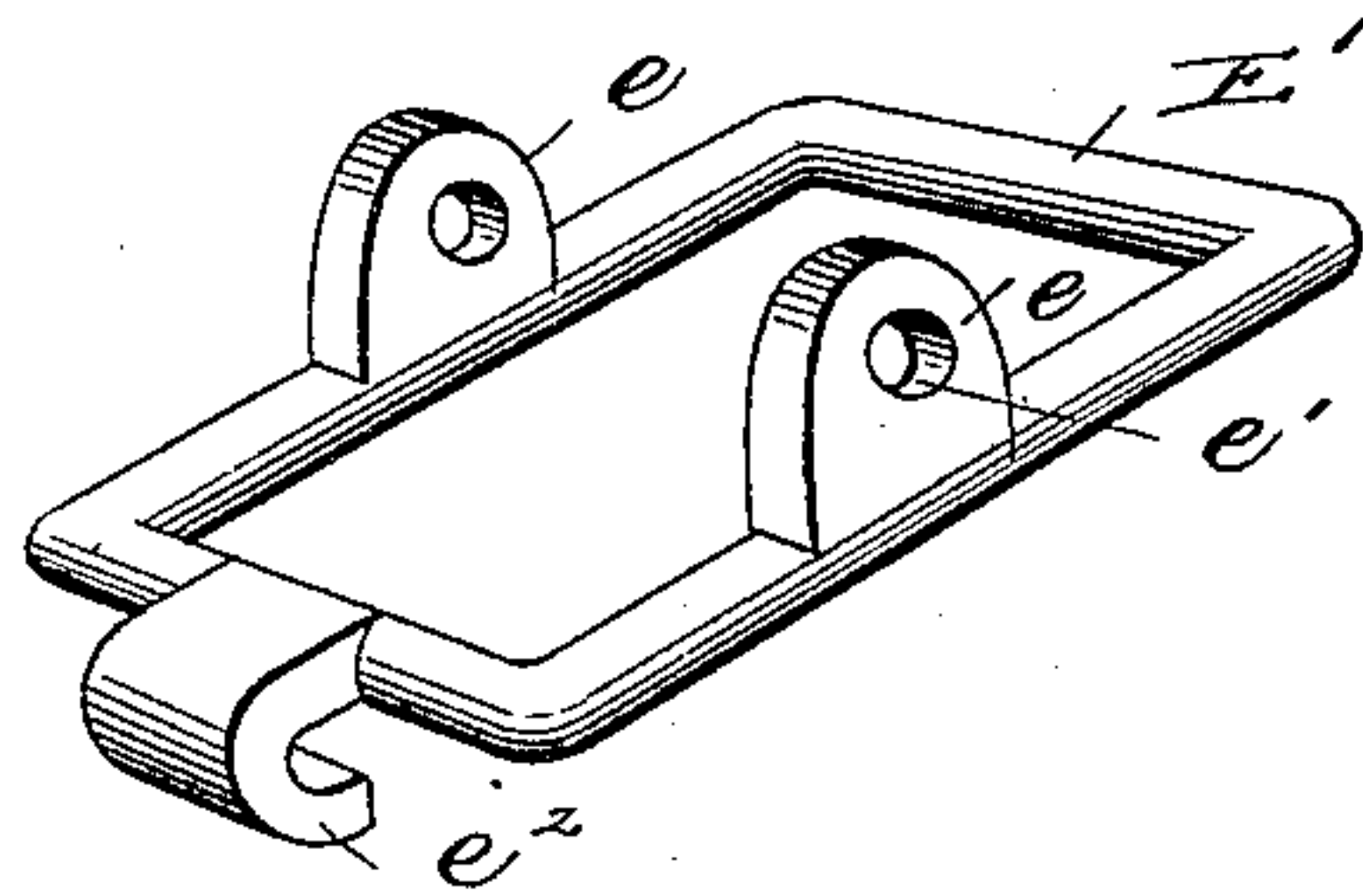
*Fig. 1.*



*Fig. 6.*



*Fig. 7.*



Witnesses  
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C. C. Lenthicum.

Inventor,  
Rufus P. Alley  
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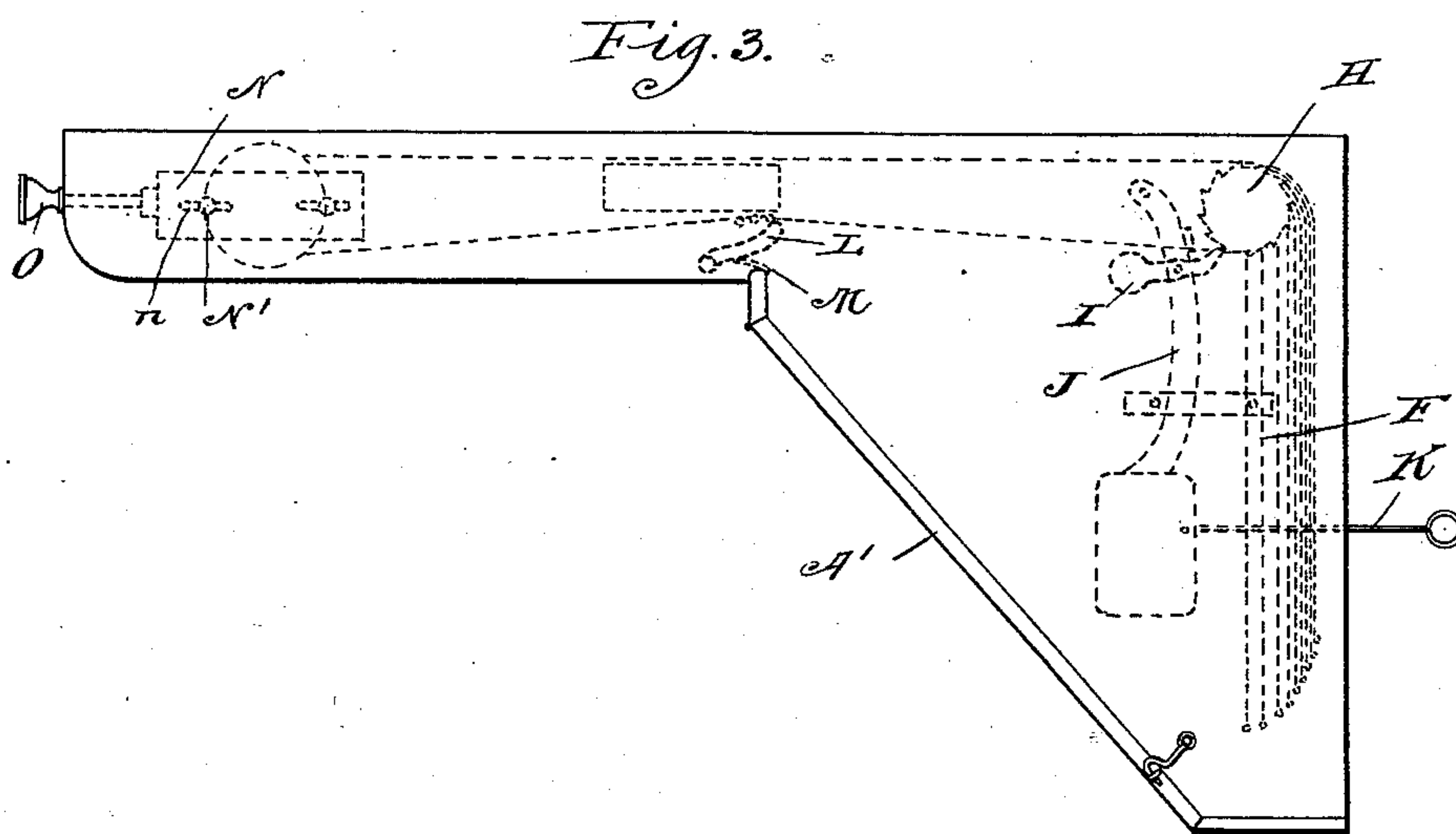
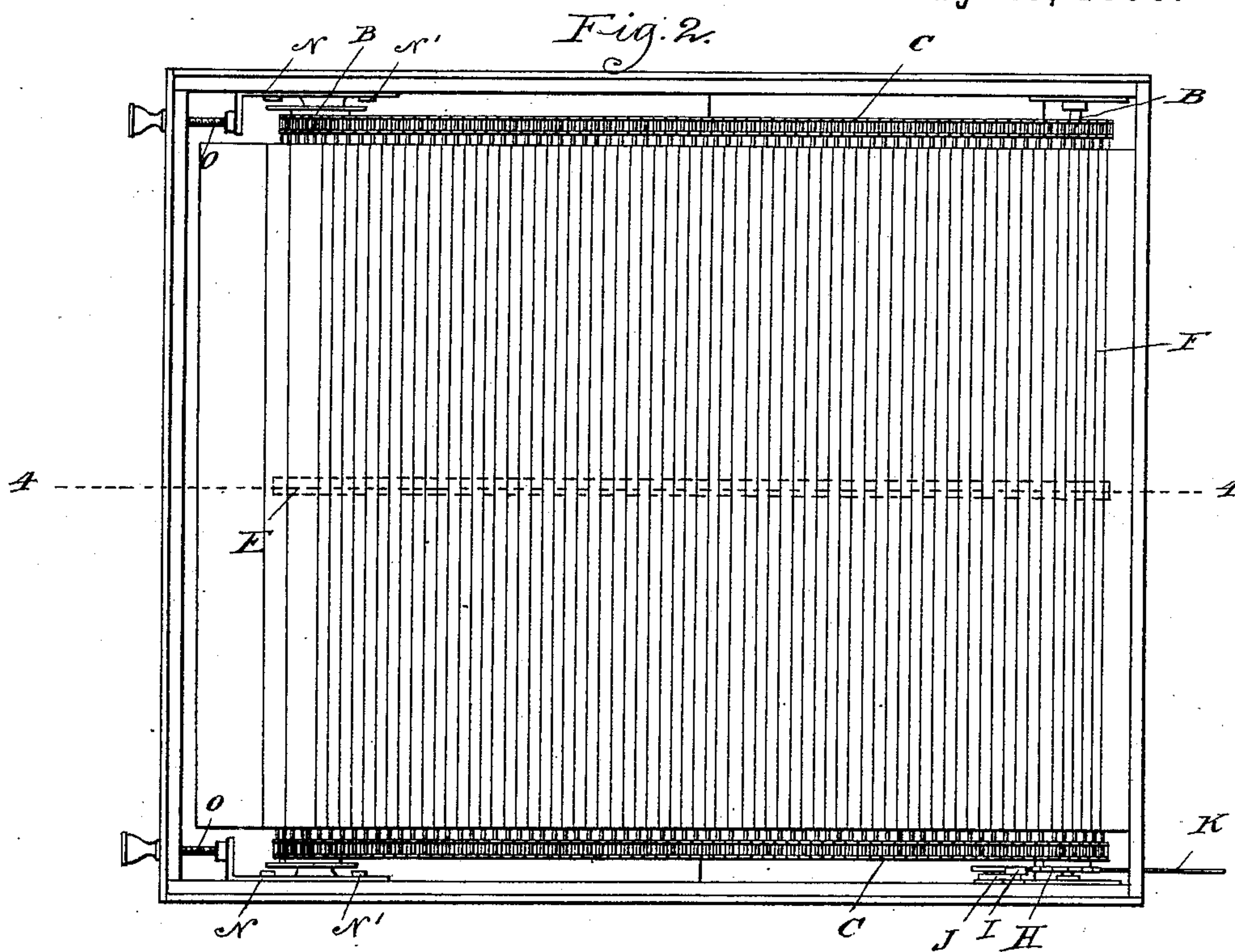
(No Model.)

3 Sheets—Sheet 2.

R. P. ALLEY.  
STREET INDICATOR.

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(No Model.)

3 Sheets—Sheet 3.

R. P. ALLEY.  
STREET INDICATOR.

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Fig. 4.

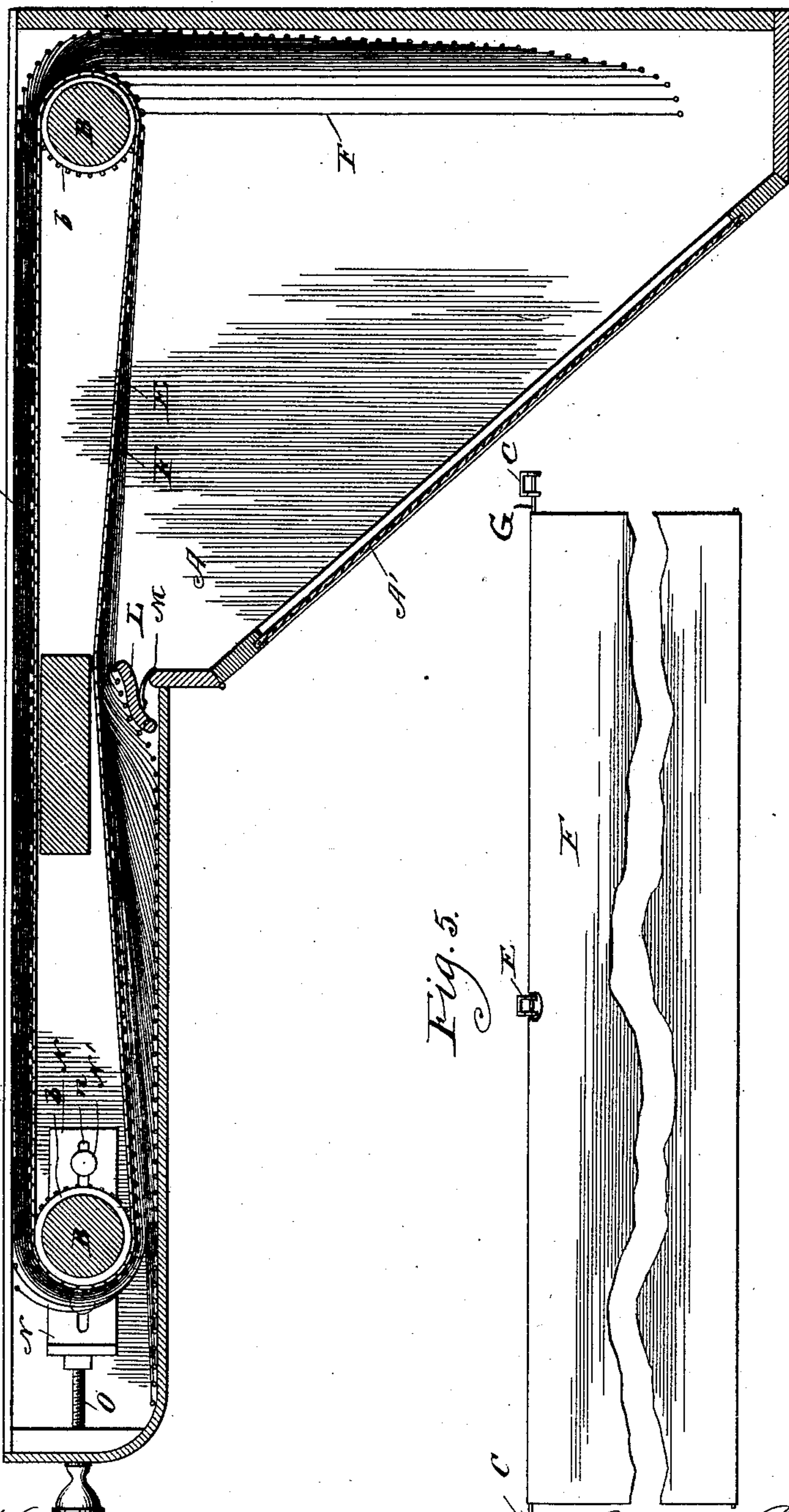
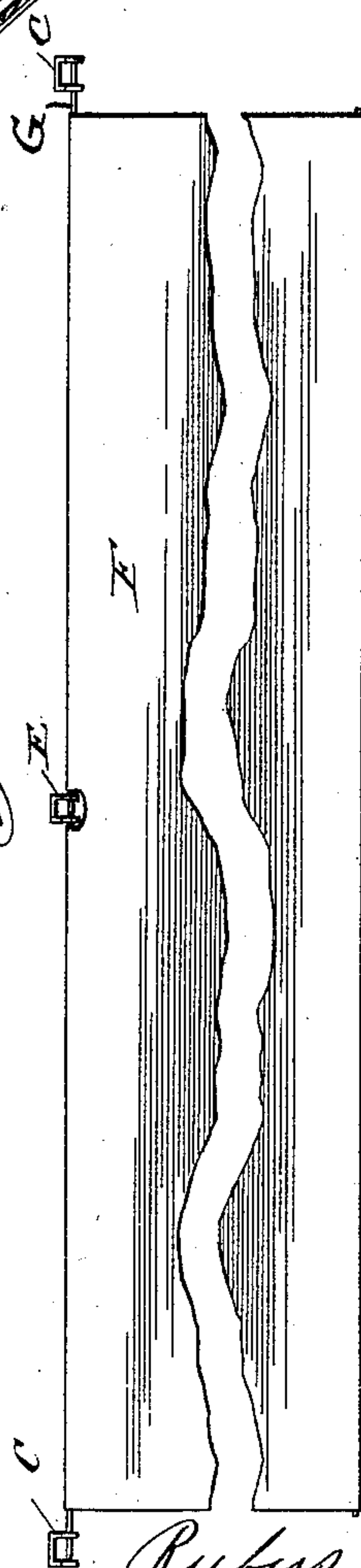


Fig. 5.



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# UNITED STATES PATENT OFFICE.

RUFUS P. ALLEY, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE UNITED STATES INDICATOR COMPANY, OF SAME PLACE.

## STREET-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 428,582, dated May 20, 1890.

Application filed May 23, 1889. Serial No. 311,780. (No model.)

*To all whom it may concern:*

Be it known that I, RUFUS P. ALLEY, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Street-Indicators, of which the following is a specification.

My invention relates to certain improvements in indicators to be used in street-railway cars, in which flexible sheets having the names of the street placed thereon are successively exposed to indicate to the passengers the street next in order of travel, and upon which sheets is also displayed matter of advertisement.

A street-indicator of this general class is described in Letters Patent granted to William P. Williams, June 12, 1888, No. 384,488.

This invention relates to certain improvements in the construction of street-indicators of the class mentioned, as hereinafter particularly described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of the indicator in the position it occupies when in use. Fig. 2 is a plan view with the top wall of the casing removed. Fig. 3 is a side elevation showing in dotted lines the means for operating the shafts to cause the sheets to drop in front of the sight-opening. Fig. 4 is a longitudinal central sectional view on line 4 4 of Fig. 2. Fig. 5 is a plan view of one of the flexible sheets with its attaching-rod and accompanying links, a section of the sheet removed; and Figs. 6 and 7 are perspective views of separate links, which I employ in forming the cables to which the sheets are attached.

In said drawings, A indicates the casing of the device, the general form of which is shown in Figs. 3 and 4, and said figures represent the device in the position it occupies in street-cars. One end of the casing adjoining the wall of the car to which it is attached is triangular in outline, and is provided on the sloping front thereof with a transparent section A', which is preferably hinged, as shown. The front end of the casing is extended, preferably, along the roof of the car and in the form of a parallelogram, as clearly shown in Figs. 3 and 4.

B B are revoluble shafts or drums jour-

naled in the side walls of the casing toward the top of the device and near the respective ends thereof. Upon the outer ends of said shafts are secured sprockets *b b*, and over said sprockets are passed link-belts C C, separate links whereof (marked D) are of the form shown in Fig. 6 of the drawings. These links have upwardly-projecting lugs *d*, one of which will have the transverse aperture *d'* and one of the end bars will have the integral hook *d*<sup>2</sup>.

A series of links E', of the same general form as links D, but with both of the upwardly-projecting lugs perforated, as shown in Fig. 6, are articulated to form the central belt E.

The sheets F are composed of some flexible material which adapts them to be superposed or compacted into small space in operation, and they are mounted upon flexible rods G, which rods are passed through the apertures of the lugs of the central belt, and their ends also pass through the apertures of the lugs of the belts C, and abut against the imperforate lugs of said belts, which form stops therefor and prevent endwise movement of the rods after they are put in place. The manner of mounting the sheets F is shown in Fig. 5. The number of sheets which may thus be used is limited only by the length of the belts, and the form of casing shown in the drawings permits the use of cables of considerable length without taking up needed room in the car. One of the revoluble shafts B will be provided with means for rotating it—for example, a ratchet-and-pawl mechanism such as shown in Fig. 3.

H represents the ratchet, and I a pawl pivotally mounted upon a swinging lever J, inside the casing. The outer end of the pawl and the lower end of said lever are preferably weighted, and to the lever is connected an operating cord or rod K, which is projected outside the casing and which may be manipulated by the conductor in order to drop the sheets successively. I prefer to place the words "Next street" on the bar just above the transparent section, and the matter of advertisement will be displayed on the sheets below the name of the street.

In order to cause the sheets to drop singly I make use of a brake such as shown in



Fig. 4, which consists of the shoe L, mounted upon the spring M, and whereby the shoe is caused to bear yieldingly upon the sheets or curtains and to release them one at a time.

5 I prefer to mount the revoluble shaft at the front of the case upon a sliding bearing, which may consist of the block N, slotted at n, and having studs N' projected through said slots into the wall of the casing.

10 O is an adjusting-screw, one end of which protrudes outside the casing and the other is threaded into the end of block N. By operating the screw the belts may be slackened to remove them from the sprockets and also  
15 to provide for extending the belts and thereby permit the insertion of additional sheets or curtains.

Modifications may be made of the construction herein described without departing from  
20 the spirit of my invention. For example, the belts may be made of leather or other suitable flexible material, and the rods need not be flexible or removable, except when used with the particular link-belt construction  
25 shown.

I claim—

1. In a street or station indicator, the combination of an inclosing-casing having a sight-opening therein, two revoluble shafts jour-  
30 naled within said casing, belts or cables passed around said shafts, rods secured to said belts, flexible display-sheets mounted on said rods, means for rotating said shafts, and means for superposing said sheets during a  
35 portion of their revolution and for releasing them singly, whereby to present said sheets successively in front of the sight-opening, substantially as described.

2. In a street or station indicator, the com-  
40 bination of an inclosing-casing having a sight-opening therein, two revoluble shafts journaled within said casing, link belts or cables passed around said shafts and composed of links having solid projections on their outer  
45 side bars and apertured projections on their inner side bars, flexible rods having their ends connected to the cables by being passed through the apertured lugs of the links, dis-

play-sheets mounted on said rods, and means for revolving said shafts, whereby to present 50 the sheets successively in front of the sight-opening of the casing, substantially as described.

3. In a street or station indicator, the combination of an inclosing-casing having a sight- 55 opening therein, two revoluble shafts journaled within said casing, link belts passed around said shafts, flexible rods removably attached to said belts, and flexible display-sheets mounted on said rods and adapted to 60 be superposed upon each other in operation, means for revolving said shafts, and a brake adapted to bear yieldingly upon the sheets and to release them singly to permit them to drop in front of the sight-opening, substan- 65 tially as described.

4. In a street or station indicator, the combination of an inclosing-casing having a sight- opening therein, two revoluble shafts jour- 70 naled in said casing and toward opposite ends thereof, one of said shafts having a movable bearing, link belts passed around said shafts and composed of links having solid projec- 75 tions on their outer side bars and apertured projections on their inner side bars, and having flexible rods connected thereto by having their ends passed through the apertured lugs of the links, flexible display-sheets mounted on said rods, and means for revolving said 80 shafts, whereby to present the sheets successively in front of the sight-opening of the casing, substantially as described.

5. In a street or station indicator, the combination of an inclosing-casing having a tri- 85 angular portion with a sight-opening in the sloping wall thereof, an extension adapted to project beneath the roof of the car and to contain therein a shaft, a display-sheet, carrying-belts passed around said shaft and about a similar shaft journaled in the oppo- 90 site end of the casing, and means for rotating said shafts, substantially as described.

RUFUS P. ALLEY.

Witnesses:

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