

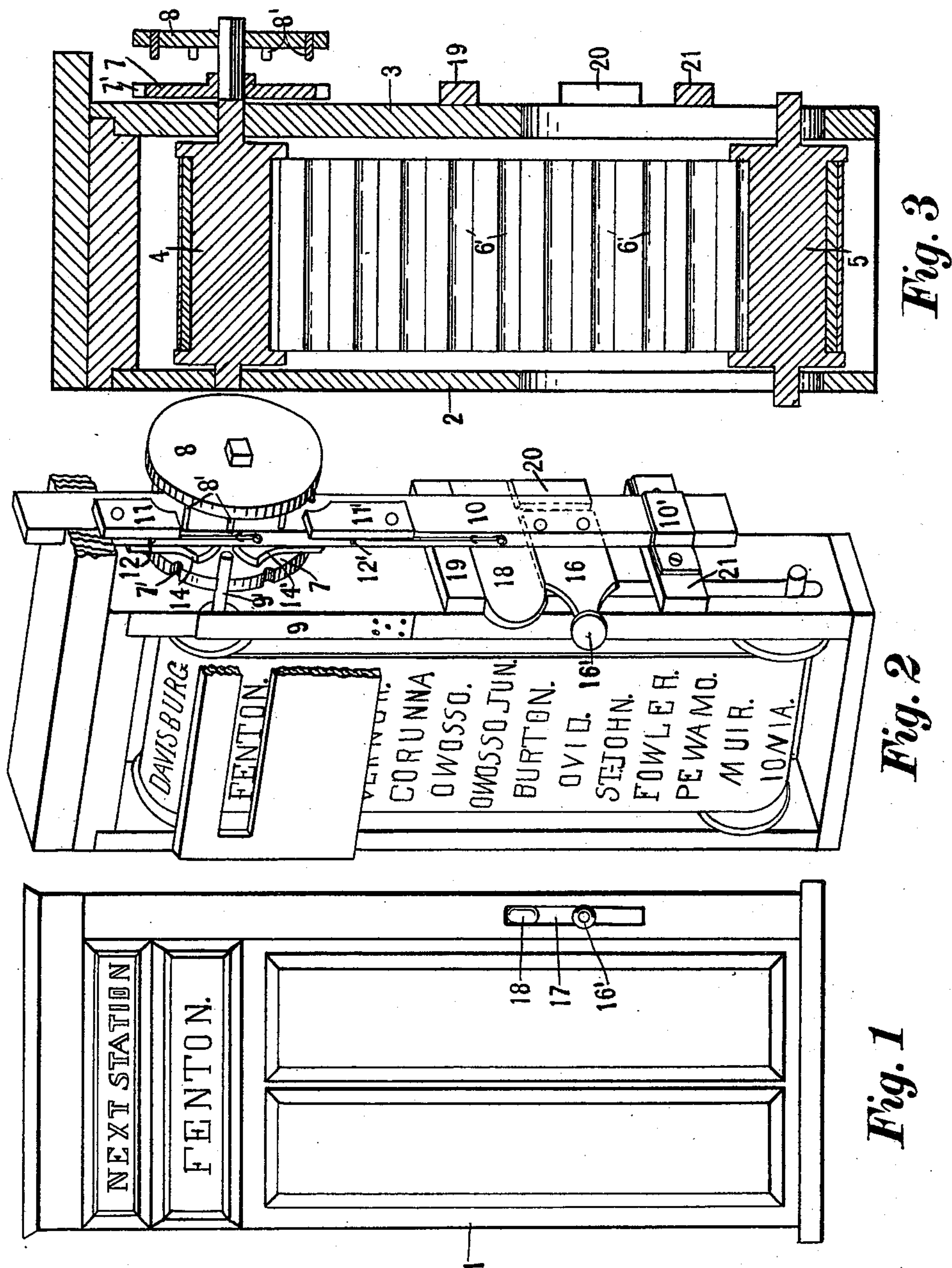
(No Model.)

2 Sheets—Sheet 1.

W. B. GODFREY.
STATION INDICATOR.

No. 582,526.

Patented May 11, 1897.



WITNESSES.

Frank S. Wheeler.
C. P. Lusk

INVENTOR.

William B. Godfrey,

By H. Roscoe Wheeler
Attorney

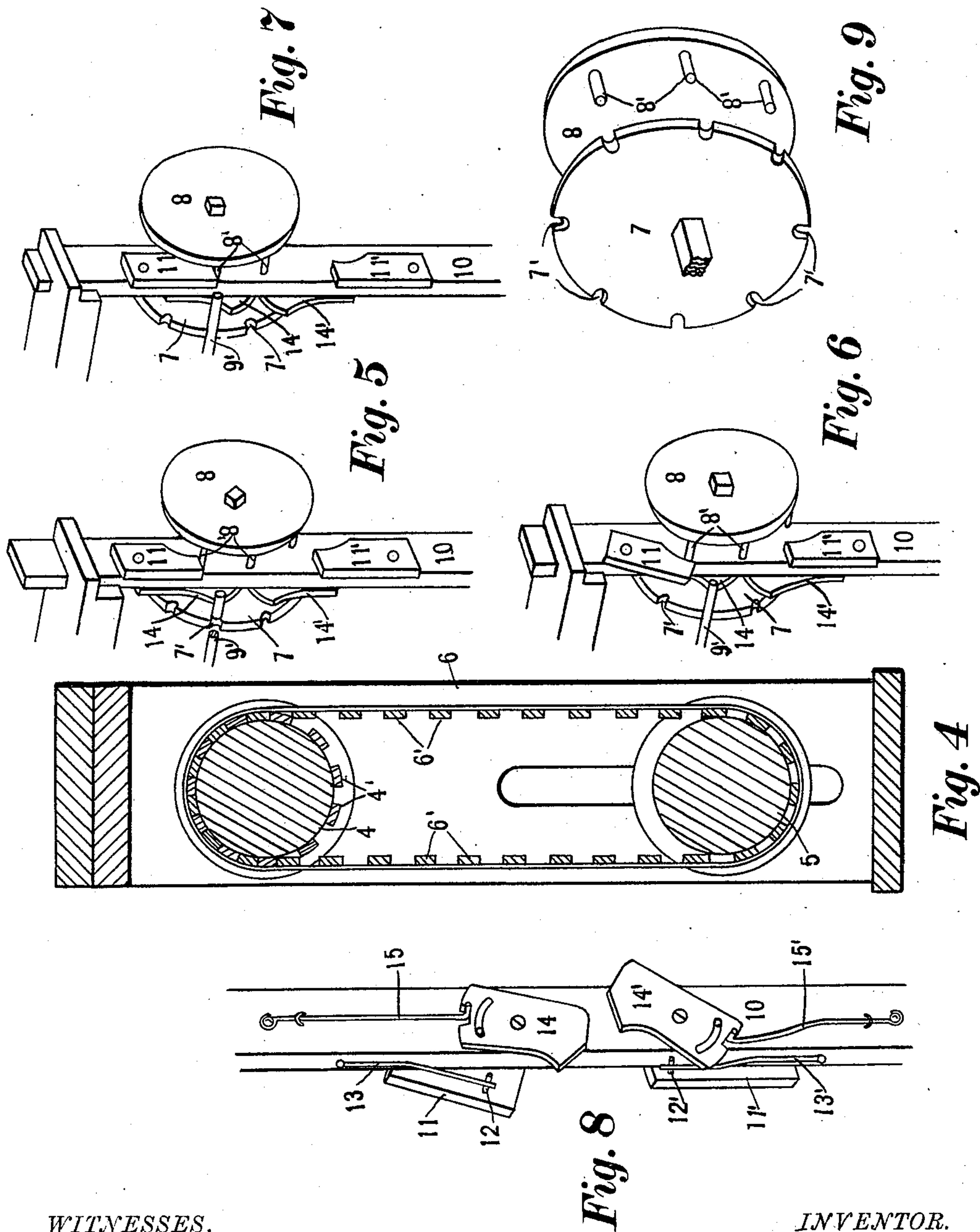
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UNITED STATES PATENT OFFICE.

WILLIAM B. GODFREY, OF FENTON, MICHIGAN.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 582,526, dated May 11, 1897.

Application filed February 3, 1897. Serial No. 621,786. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. GODFREY, a citizen of the United States, residing at Fenton, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Station-Indicators; and I do hereby 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, forming a part of this specification.

This invention relates to new and useful improvements in station-indicators; and it consists in the construction and arrangement of parts, as hereinafter fully set forth, and pointed out particularly in the claims.

The object of the invention is to provide a mechanism for use in cars and other vehicles, and by the operation of which the name of the next succeeding station or stopping-place along the line of route may be indicated before arrival at such station, which object is attained by the construction and arrangement of parts illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of my improved station-indicator as it appears in use. Fig. 2 is a perspective view of the mechanism removed from the case. Fig. 3 is a central vertical section through Fig. 2. Fig. 4 is a vertical cross-section through Fig. 2. Figs. 5, 6, and 7 are details of the mechanism employed for unlocking, turning, and locking the roll over which the name-bearing belt travels. Fig. 8 is a perspective view of the opposite side of the operating-bar from that shown in Figs. 2, 5, 6, and 7; and Fig. 9 is an enlarged detail in perspective of the locking and operating disks.

Referring to the numerals of reference, 1 designates the case of the indicator, which may be made of any suitable material and provided with any desirable ornamentation, and having near its upper end the notice or words "Next Station," or words of like import, and having thereunder an opening, through which the name of a single station contained upon the belt within the machine may be seen when brought therebefore by the

operation of the device, as hereinafter described.

2 and 3 represent the side pieces of a framework which is placed within the case 1. 55

4 and 5 represent flanged rolls. The roll 4 is journaled in the upper portion of the sides 2 and 3 by trunnions, which may be formed integral with said roll, or said roll may be rigidly secured upon a suitable shaft. The trunnion at one side of said roll is extended through the side 3 and squared, as clearly shown in Fig. 3. The trunnions of roll 5 are entered into slots which extend longitudinally through the lower portions of sides 2 and 3, and passing around said rolls is an endless belt or band 6, which may be formed of canvas or other flexible fabric or material. 60

Secured to the periphery of roll 4, or formed integral therewith, are strips 4', arranged so as to practically form a corrugated roll of roll 5. 70

Mounted upon the inner face of the belt 6 are strips 6', similar in size and spaced according to the strips upon roll 4, so that the strips on said belt may enter between the strips of the roll, so as to prevent the belt from slipping when said roll 4 is revolved, as will be understood. 75

The roll 5 is not provided with these strips, as its purpose is simply that of an idler to keep the sides of the belt smooth or stretched. 80

Mounted upon the squared portion of the trunnion of roll 4, adjacent to side 3 of the framework, is a disk 7, having notches 7' therein, and secured upon the outer end of said squared portion of the trunnion is a disk 8, similar in size to disk 7. 85

Projecting from the inner face of disk 8 are pins 8', arranged to stand opposite the notches 7' of disk 7, and these relative positions of the notches and pins are rigidly maintained throughout the revolution of their respective disks. 90

9 represents a spring-leaf which is secured to the front edge of the side piece 3 and which has mounted thereon near its upper end the stop-pin 9'. The edge of the side piece 3 adjacent to said stop-pin is cut away, so as to allow said spring to lie flat upon the edge thereof. It will be seen by reference to Figs. 2, 5, 6, and 7 that said pin 9' extends in such 95 100

a direction that it may bear upon the face of disk 7, the tendency of its spring 9 being to force it into the notches 7' whenever one shall be carried theretofore.

5 10 indicates a bar which extends parallel with the side piece 3 of the frame and which is capable of longitudinal counter movements through guides located near its ends, as the clip 10', and the opening in the top piece of the
10 framework. By reference to several of the views it will be seen that said bar 10 also extends between the disks 7 and 8.

Pivotaly mounted upon the outer side of bar 10 are engaging dogs 11 and 11', arranged
15 some distance apart. Projecting from the inner side of dogs 11 and 11' are pins 12 and 12', respectively, (see Figs. 2 and 8,) and normally holding said dogs parallel with the bar are springs 13 and 13', which are rigidly se-
20 cured at one end of the edge of bar 10 and having their free ends bearing upon said pins 12 and 12' of the dogs, the inward movements of said dogs being limited by the pins 12 and 12' coming in contact with the outer edge of
25 the bar.

It will be seen by reference to Fig. 2 that by drawing downward upon the bar 10 the dog 11 engaging one of the pins 8' would re-
30 volve said disk and the motion be transmitted to the roll 4 but for the stop-pin 9' being engaged in one of the notches 7' of the disk 7. In order to remove said stop-pin 9' from its engagement in the notch of disk 7, so that
35 said disks 7 and 8 may be revolved, I pivot releasing-dogs 14 and 14' to the inner face of bar 10, said dogs being more clearly illustrated in Fig. 8, in which view it will be seen that said dogs have beveled noses, together with
40 openings through their body portions concentric with their pivots, through which openings suitable pins are passed and secured into the bar to limit the movements of the free ends of said dogs.

15 and 15' represent springs which are rigidly secured at one of their ends to the inner
45 faces of bar 10, their opposite ends being provided with angled portions, which portions are adapted to engage in notches in the edges of said dogs 14 and 14', the tendency of said
50 springs 15 and 15' being to maintain the releasing-dogs 14 and 14' parallel with the longitude of the bar and in such a position that their noses will project beyond the front edge thereof, as clearly shown in Fig. 2 and sev-
55 eral of the other views.

16 represents a handle which is secured in any suitable manner to the inner side of bar 10 and which is of such length that it may extend through the slot 17 of case 1 and has
60 a knob 16' mounted thereon, by means of which the movable parts of the machine may be operated.

With the parts in the positions shown in Fig. 2 it will be seen that by pressing down-
65 ward upon knob 16' the bar 10 will descend, and as the nose of dog 14 comes in contact with the stop-pin 9' said pin will be forced

outward, the parts being so arranged that when said dog has pushed the pin 9' outward as far as its extension will permit the engag-
70 ing dog 11 of the opposite side of the bar will be in contact with one of the pins 8' of disk 8, and as said bar continues to descend the disk 8 will be revolved, as also the disk 7. As soon as the nose of the releasing-dog 14
75 has passed the pin 9' disk 7 will have been turned sufficiently to carry its notch out of the path of said pin, when said pin will bear upon the face of said disk 7, the disks being
80 revolved the distance between the notches of disk 7, which is a predetermined movement and of such length as to carry the name of one station from the opening in the case and to place a succeeding one theretofore.

When a succeeding movement is desired, 85 the knob 16' is again raised, and it will be seen by reference to Fig. 8 that as the nose of dog 14 comes in contact with pin 9' by reason of the curved slot through its body said dog will be depressed; but as it passes said
90 pin it will again project its nose through the agency of its spring.

The operation thus described will move the names upon the belt in succession before the opening in the case from the top downward; 95 but should the car in which it is used be returned it would be desirable to run the names backward in succession. To provide for such movement, I employ a plug 18, which in the foregoing operation was located between a
100 strip 19 and a block 20, both being secured to the side piece 3 of the frame, the block 20 being secured just at the rear of the handle 16, as shown by dotted lines in Fig. 2. To reverse the movement of the belt, said plug 18
105 is withdrawn from between the strip 19 and block 20, the handle 16 raised, and said plug inserted between said block and the strip 21 therebelow, by which operation it will be seen that the engaging dog 11' will be brought into
110 position to operate upon the disk 8 and its pins 8' and the releasing-dog 14' to operate upon the pin 9'; but as said engaging dog 11' bears upon the lower side of disk 8 the roll 4 will necessarily be revolved in the opposite
115 direction.

The operation of the dogs 11 and 14 is minutely illustrated in Figs. 5, 6, and 7, in which Fig. 5 shows the releasing-dog 14 out of notch
120 7' of disk 7 and the engaging dog 11 about to bear upon the pin 8' of the disk 8.

Fig. 7 shows the bar 10 down to the end of its stroke, the pin 9' engaged in the succeeding notch of disk 7, and the nose of dog 14
125 below said pin 9'.

Fig. 6 represents the bar 10 as being raised, the engaging dog 11 swung outward and riding over a pin of disk 8, the nose of the releasing-dog 14 depressed, and the pin 9' re-
130 maining seated in the notch of disk 7.

It will now be seen that the construction and arrangement of parts hereinbefore described and illustrated produce a station-in-
indicator that is simple in construction and op-

eration, one that may be easily manipulated, and one wherein the name of the stations may be changed at will or the number increased or diminished, and the device as a whole rendering a needed and beneficial service.

Having thus fully set forth my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a station-indicator, the combination of the frame, the flanged roll journaled in the upper end thereof, the corresponding roll journaled in the lower portion thereof and capable of adjustment in the direction of the longitude of said frame, the endless name-bearing belt passing around said rolls, the slats secured to the circumference of one of said rolls, corresponding slats mounted upon the inner face of said belt, one of said rolls being rigidly connected with a disk having engaging notches in its face, also having rigid connection with a similar disk which is provided with pins corresponding in number and location with the notches of said first-named disk, means for engaging in the notches of the locking-disk, means for releasing said locking-disk from its locked condition, and means for operating one of said rolls by engagement with one of the pins of said operating-disk, substantially as shown and described.

2. In a station-indicator, the combination of the frame, the flanged roll journaled in the upper end thereof, the corresponding roll journaled in openings extending longitudinally through said frame, the endless name-bearing belt passing around said rolls, the projections upon the surface of said first-named roll, the projections extending across the inner face of said belt and adapted to engage with the projections of said roll, the notched disk mounted upon the axle of the roll in the upper part of the frame, a pin-bearing disk also mounted upon said axle, the spring-leaf carrying a stop-pin mounted upon the edge of said frame in such position that said pin may be engaged in the notches of said notched disk, the operating-bar extending between said disks; said bar having a dog thereon adapted to engage

with the pins of said pin-bearing disk, and the spring-depressed dog also mounted thereon and adapted to engage with said stop-pin to carry it out of the notches of its disk, and the parts adapted to operate for the purpose set forth.

3. In a device for operating a roll of a station-indicator, the same consisting of a bar having spring-engaged releasing-dogs pivoted upon one side thereof and spring-retained dogs pivoted upon the other side thereof, a suitable handle secured to said bar, and guides to direct the movements of said bar, all arranged substantially as shown and described.

4. In a station-indicator, the combination of the case 1, the framework therein, the roll 4 having strips 4' upon its surface, said roll being journaled in the upper portion of said frame, the endless name-bearing belt passing around said roll and a corresponding roll loosely supported in the lower portion of said frame, slats or strips upon the inner face of said belt adapted to mesh with the strips of said roll, the disks 7 and 8 secured to the axis of roll 4, the spring 9 having a stop-pin 9' thereon and said spring secured to the side piece 3 of said frame in such position that its pin may engage in the notches of disk 7, the bar 10 extending parallel with the side of said frame, the spring-retained dogs 11, 11', 14, and 14' pivoted thereon, the handle 16 secured to said bar, said handle having a knob 16', adapted to project through an opening, 17, in the case 1, and the plug 18 adapted to be alternately entered between a block, 20, and strips, 19 and 21, to reverse the revolution of roll 4, when said parts are operated substantially as shown and described, for the purpose set forth.

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

WILLIAM B. GODFREY.

Witnesses:

DAVID W. PEABODY,
JOHN HORRELL.