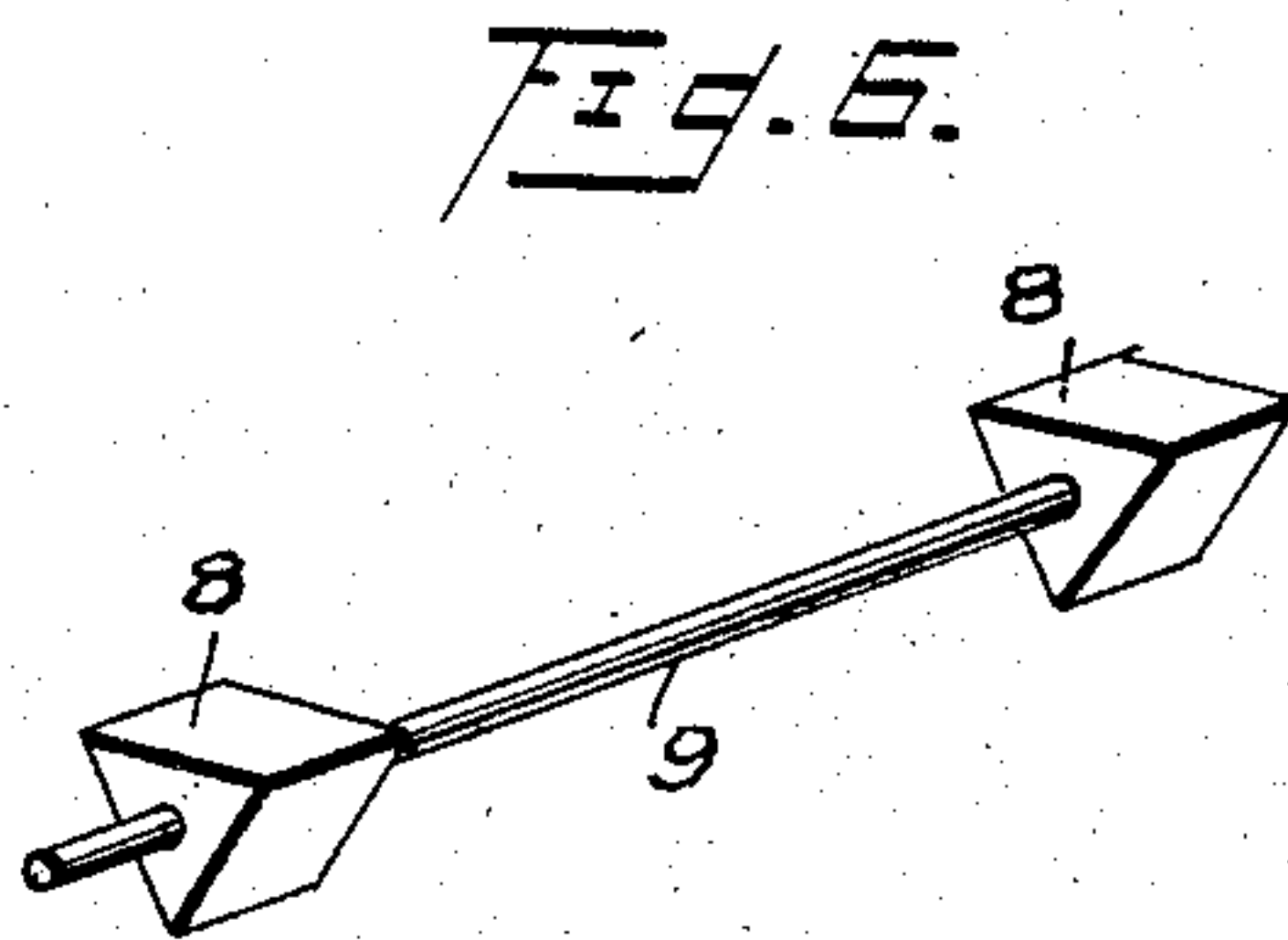
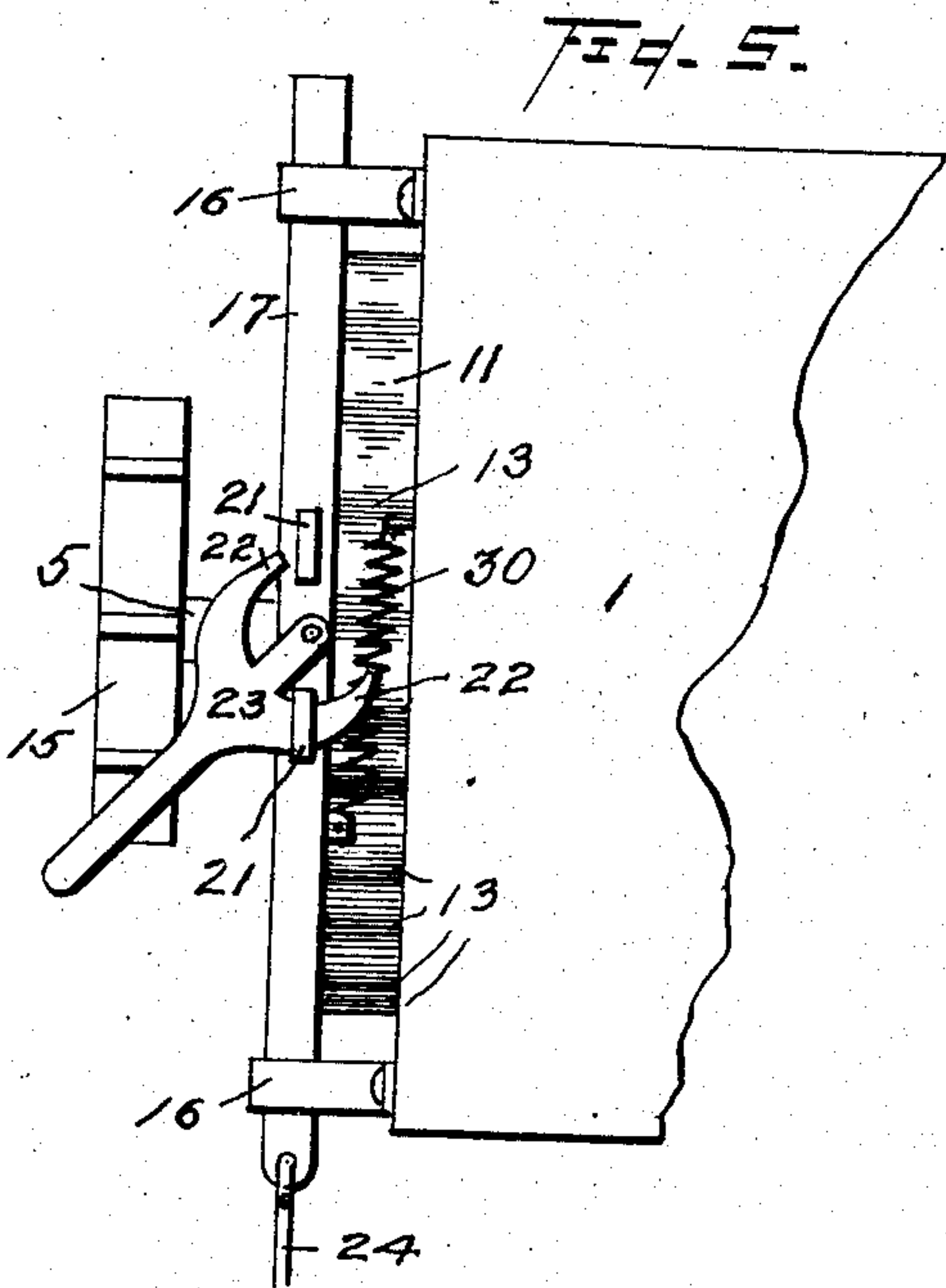
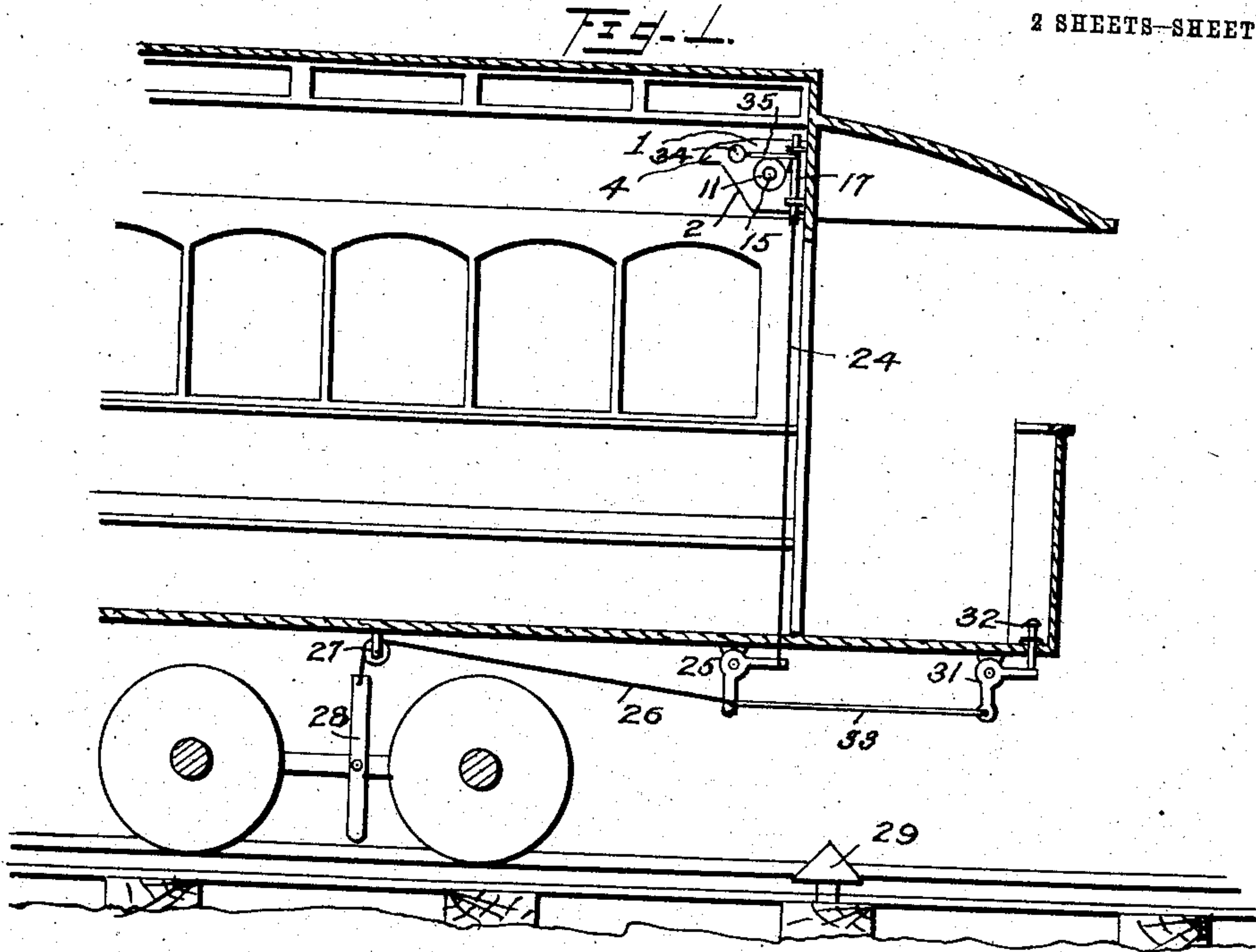


W. A. BRYANT.
STATION INDICATOR.
APPLICATION FILED SEPT. 16, 1909.

973,749.

Patented Oct. 25, 1910.
2 SHEETS-SHEET 1.



Witnesses
E. E. Duffly
C. H. Giesbauer.

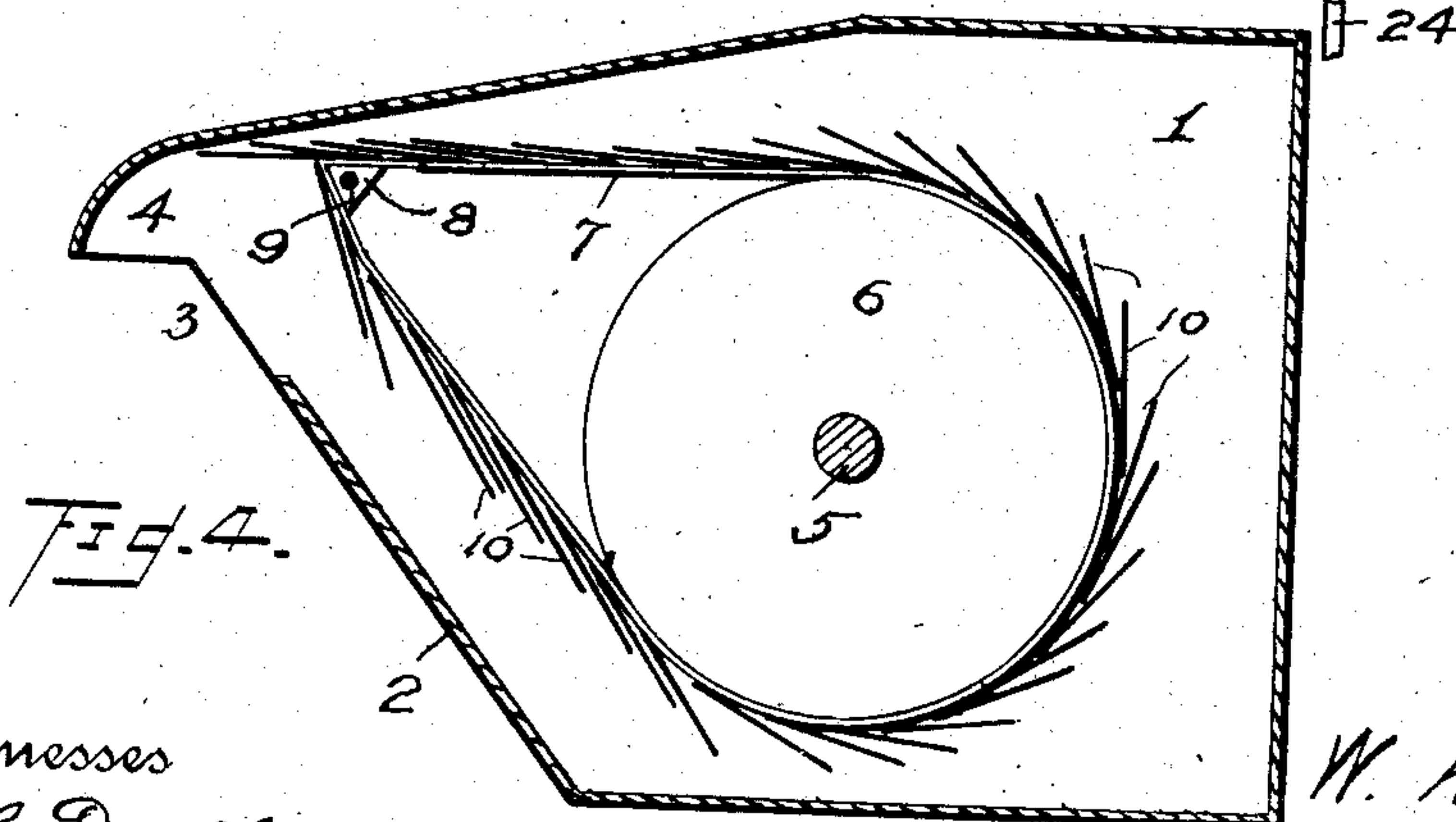
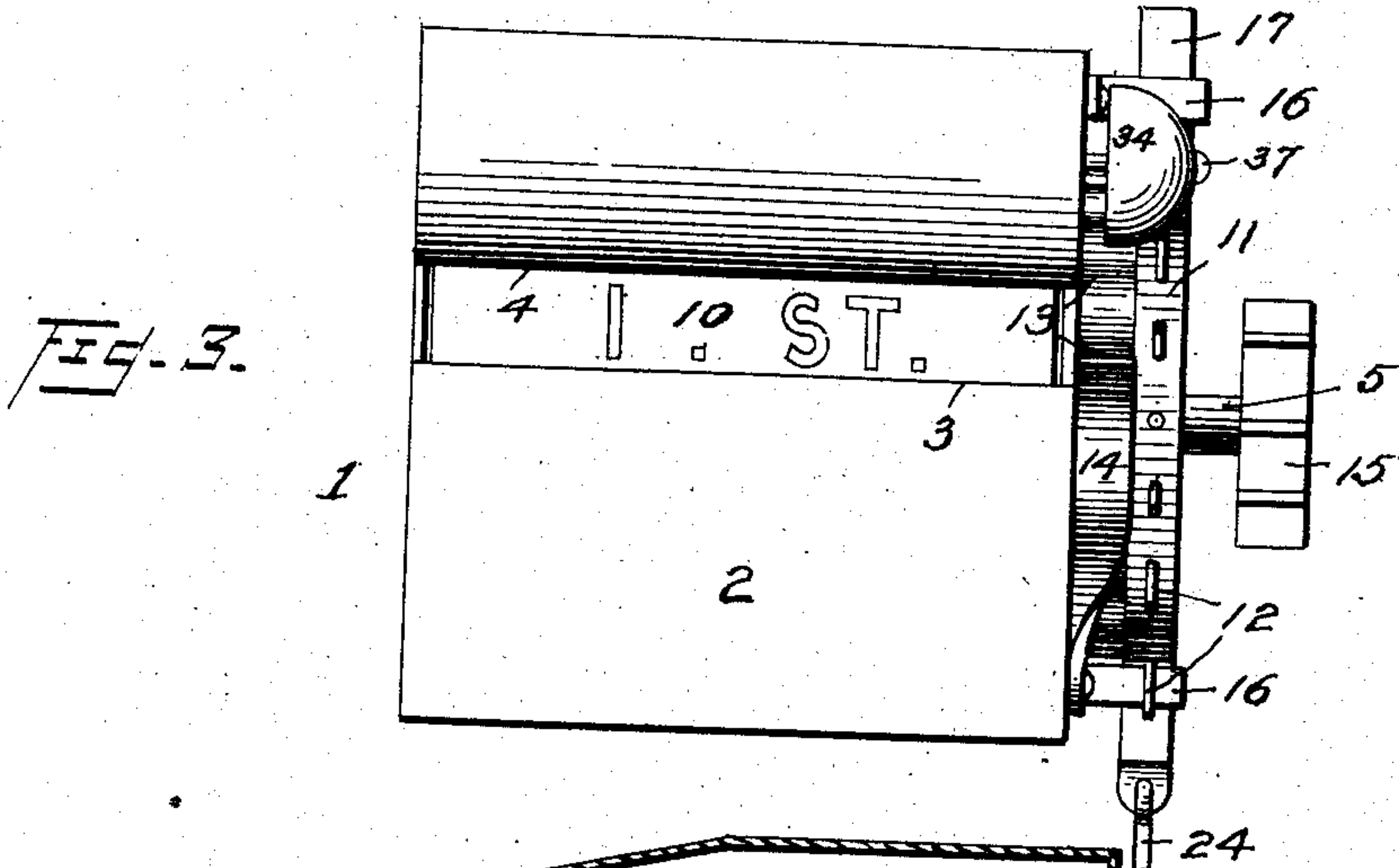
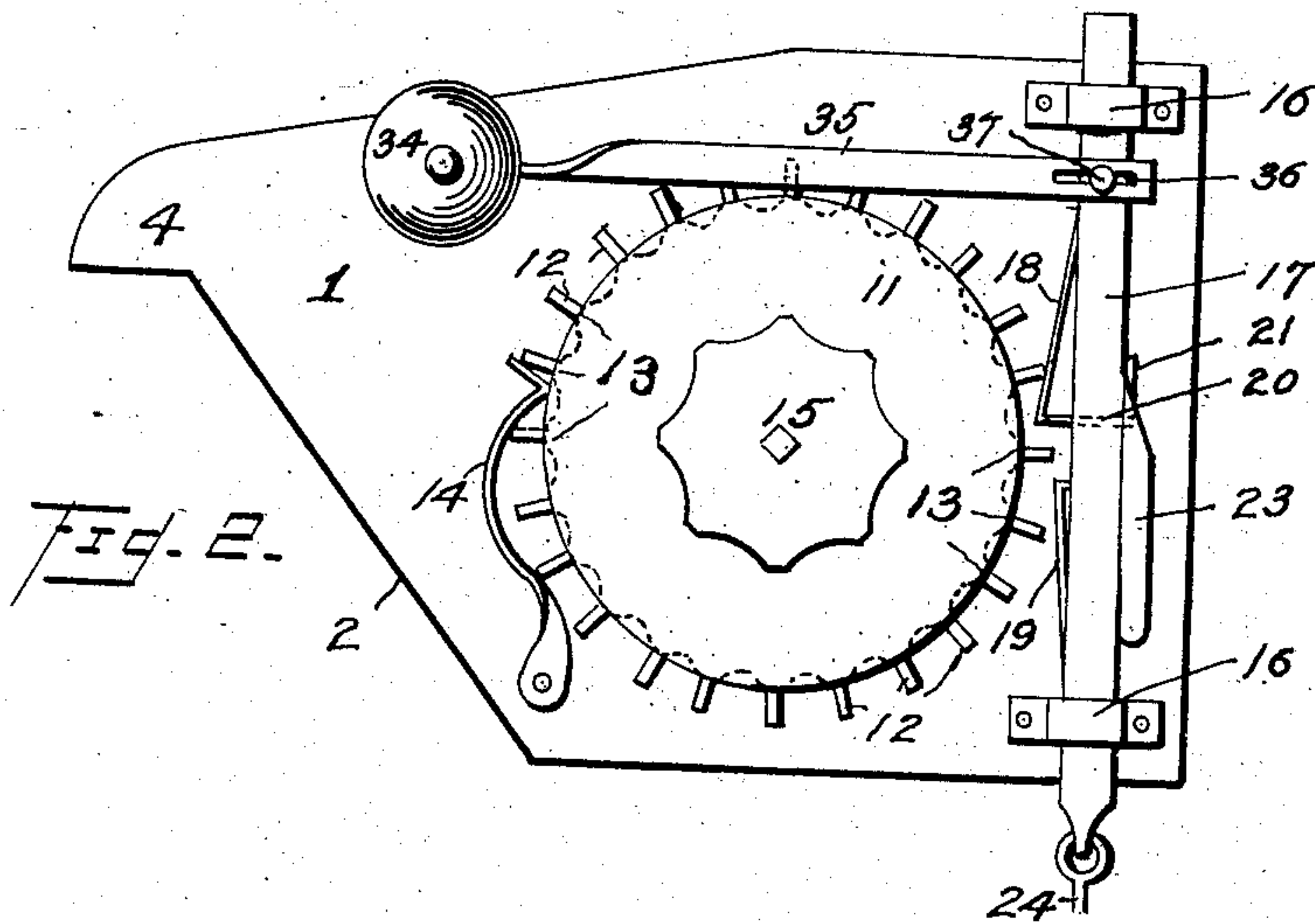
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UNITED STATES PATENT OFFICE.

WILLIAM A. BRYANT, OF WETUMPKA, ALABAMA, ASSIGNOR OF ONE-THIRD TO JOHN A. LANCASTER AND JOHN R. GAMBLE, BOTH OF WETUMPKA, ALABAMA.

STATION-INDICATOR.

973,749.

Specification of Letters Patent.

Patented Oct. 25, 1910.

Application filed September 16, 1909. Serial No. 518,051.

To all whom it may concern:

Be it known that I, WILLIAM A. BRYANT, a citizen of the United States, residing at Wetumpka, in the county of Elmore and State of Alabama, have invented certain new and useful Improvements in 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.

This invention relates to improvements in street or station indicators for cars.

One object of the invention is to provide an indicator of this character having an improved construction of operating mechanism which may be quickly and easily adjusted to reverse the movement of the indicating mechanism.

Another object is to provide means whereby the device may be operated automatically or manually by the motorman or conductor of the car.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of one end of a street railway car, showing my improved indicator arranged thereon and the means by which the same may be automatically or manually operated; Fig. 2 is an enlarged side view of the indicator; Fig. 3 is a front view of the indicator; Fig. 4 is a vertical longitudinal section of the same; Fig. 5 is a rear view of a portion of the indicator, showing the construction of the reversing mechanism; Fig. 6 is a detail view of one of the triangular pulleys near the display opening in the casing and around which the slat supporting belts pass.

In the embodiment of the invention, I provide a casing 1 adapted to be arranged in a suitable position in the car. The casing is preferably provided with an inclined front 2, in the upper portion of which is formed a display opening 3, through which the names of the streets or stations are displayed. The upper front portion of the casing is provided with an overhanging pro-

jection 4, the purpose of which will hereinafter appear.

Revolubly mounted in the opposite sides of the casing and extending transversely therethrough is an operating shaft 5 on which within the casing are mounted pulleys 6 around which are arranged slat supporting belts 7 which are also engaged with triangular shaped pulleys 8 mounted on a supporting shaft 9 journaled in the sides of the casing, adjacent the display opening 3 in the front side thereof. On the belts 7 are secured a series of overlapping slats 10 which are preferably formed of sheet metal and are adapted to contain the names of the streets or stations which are passed by the car in which the indicator is arranged. The triangular pulleys 8 around which the belts 7 pass are provided to hold the slats in proper position for displaying the name thereon through the opening 3 in the casing when brought opposite thereto.

On one end of the shaft 5, adjacent to one side of the casing, is fixedly mounted a combined tappet and ratchet wheel 11, the outer portion of which is provided with a series of radially projecting tappet pins 12, while the inner portion is provided with an annular series of ratchet teeth 13. The ratchet teeth 13 are adapted to be engaged by a spring pawl 14 which holds the wheel 11 and the indicating mechanism against casual retrograde movement or from being turned more than the proper distance for displaying one slat at a time. On the end of the shaft, adjacent to the wheel 11, is secured a hand wheel 15, by means of which the shaft may be operated by hand to turn the indicating mechanism in one direction or the other, in order that the indicator may be properly set at the beginning of each trip.

Slidably mounted in suitable bearing brackets 16, on one side of the casing adjacent to the wheel 11, is an operating bar 17, on the side of which, adjacent to the wheel 11, are secured upper and lower spring pawls 18 and 19, one or the other of which is adapted to project into the plane of the tappet pins on the wheel 11, whereby when the bar 17 is operated, said projecting pawl will engage the pins 12 and thereby turn the wheel and thus operate the indicating mechanism. When the upper pawl 18 is projected, it will

be brought into engagement with the pins 12 on the downward movement of the operating bar and when the lower pawl 19 is projected, said pawl will engage the pins of the wheel on the upward movement of the bar, thereby turning said wheel and the indicating mechanism in a direction opposite to that in which it is turned by the upper pawl.

10 The pawls 18 and 19 are in the form of spring metal strips, the inner ends of which are bent at right angles and extend through slots 20 formed in the bar 17. The projecting ends of the pawls are bent in opposite
15 directions to form retracting lugs 21 which are adapted to be engaged by suitably beveled fingers 22 formed on a pawl retracting lever 23 which is pivotally mounted on the bar 17 as shown. When the lever 23 is
20 swung downwardly the lower finger 22 thereon will be engaged between the adjacent lug 21 of the lower pawl 19 and the rod, thereby retracting the same to a position out of the plane of the pins 12 on the
25 wheel 11, while the finger 22 on the upper side of the lever will be retracted out of engagement with the lug 21 of the upper pawl, which will permit the same to spring outwardly or extend to a position wherein
30 the same will be engaged with the pins of the wheel 11, when the operating bar is operated.

To the lower end of the operating bar 17 is connected the upper end of an operating
35 cord 24 which extends downwardly through the bottom of the car and is connected with one end of a bell crank lever 25 which is pivotally mounted on the underside of the car, as shown. To the opposite
40 arm of the lever 25, is connected an operating cord 26 which extends rearwardly beneath the bottom of the car and passes over a guide pulley 27 and is connected to the upper end of a trip lever 28 which is suitably pivoted in the running gear of the car
45 or in any other suitable supporting mechanism. The lower end of the lever 28 projects downwardly and is adapted to engage a V-shaped projection or trip 29 arranged in
50 the road-bed of the railway preferably between the rails and secured to one of the cross ties. By means of the operating mechanism just described, the operating bar will be pulled downwardly each time the
55 trip lever comes into engagement with one of the trips or projections 29 which are arranged at suitable positions along the railway and said operating bar when thus pulled downwardly, will turn the operating
60 wheel 11 in the manner hereinbefore described. The operating bar 17 is provided with a suitable retracting spring 30 whereby the same is retracted after being operated
65 scribed.

In addition to the automatic trip mechanism, I preferably also provide means whereby the indicator may be manually operated by the foot of the motorman or conductor of the car. The manual operating
70 mechanism is here shown and preferably consists of a bell crank lever 31 which is pivotally mounted in a suitable bracket beneath the platform of the car. In said platform is arranged a suitable plunger 32,
75 which is adapted to be depressed by the foot of the motorman or conductor and is adapted, when so depressed, to engage one arm of the bell crank lever 31, thereby rocking the same. This movement of the bell crank lever
80 31 is transferred to the bell crank lever 25 by means of a connecting rod 33, whereby said bell crank lever 25 is actuated in the proper direction to operate the indicator.

It will be understood that when the automatic trip mechanism is employed, the manual operating mechanism is disconnected or removed and when the latter mechanism is employed the automatic mechanism is disconnected from the indicator operating
85 90 mechanism.

In connection with the indicating mechanism, I preferably employ an alarm, whereby the attention of the passengers in the car will be attracted, each time the indicating
95 mechanism is operated, to display the name of a different street or station. The alarm is here shown and preferably consists of a bell 34 which may be of any suitable construction and has connected thereto an operating
100 lever 35, in the free end of which is formed a slot 36, with which is engaged a pin or stud 37 on the operating bar 17 whereby when the bar is shifted by the operating mechanism hereinbefore described,
105 said lever will be operated to sound the bell.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.
110

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined in the appended claims.
115

Having thus described my invention, what I claim is:

1. In an indicator, an endless belt, indicating cards thereon, a toothed wheel for operating said belt, an operating rod, a pair of spring pawls secured to said rod and having their free ends passing therethrough, and a lever pivoted to the rod adapted to
120 125 throw one of said pawls out of operative position.

2. In an indicator, an endless belt, indicating cards thereon, a toothed wheel for operating said belt, an operating rod, a pair
130

of oppositely arranged spring pawls secured to said rod and having their free ends passed through said rod, hooks on the free ends of said pawls adapted to engage said rod to
5 limit the movement of the pawls, a lever pivoted to said rod, intermediate said hooks, and cam extensions carried by the lever on either side of its pivotal point adapted to enter between the rod and hooks to alter-
10 nately draw one of the pawls from opera-

tive position, together with a spring to retract said rod.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM A. BRYANT.

Witnesses:

F. LOYD TATE,

R. L. LE FEVRE.