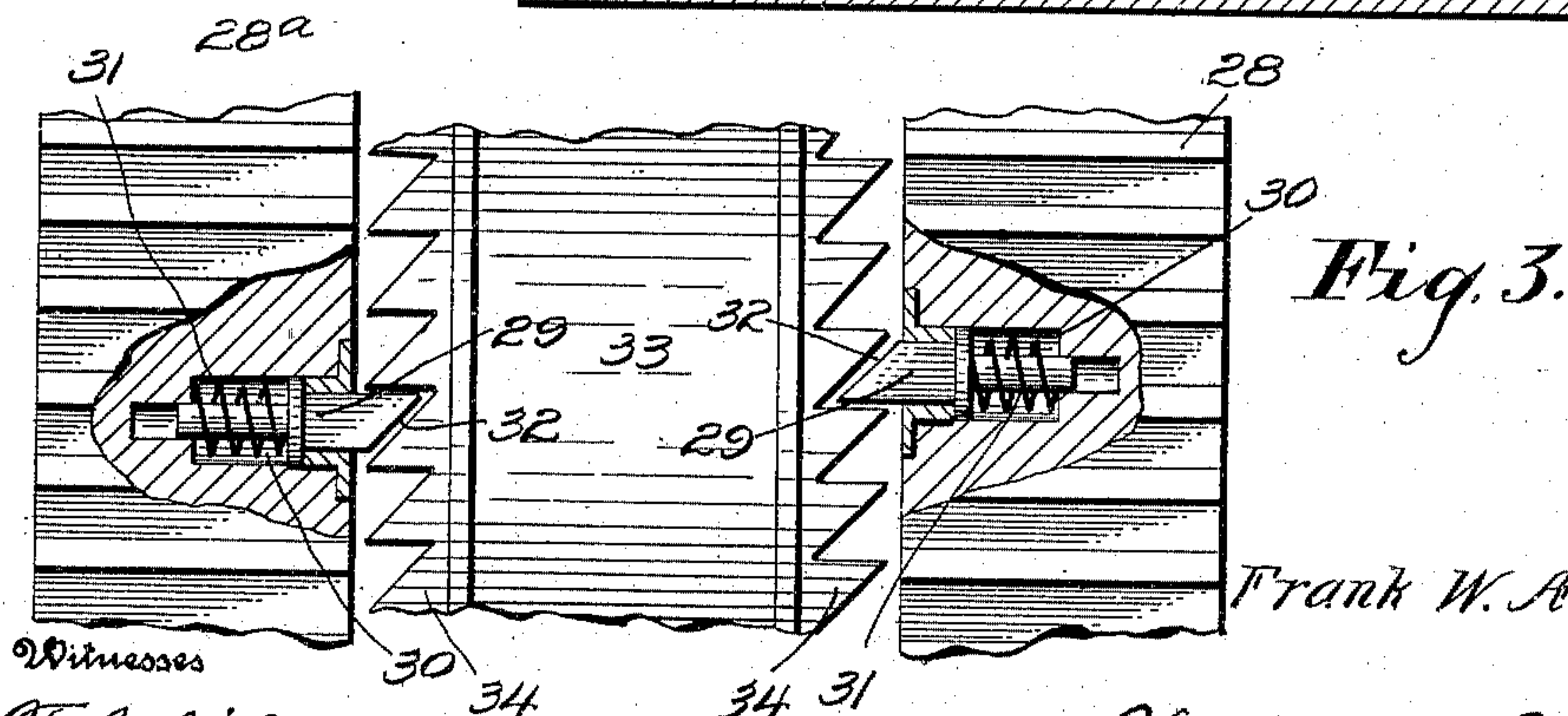
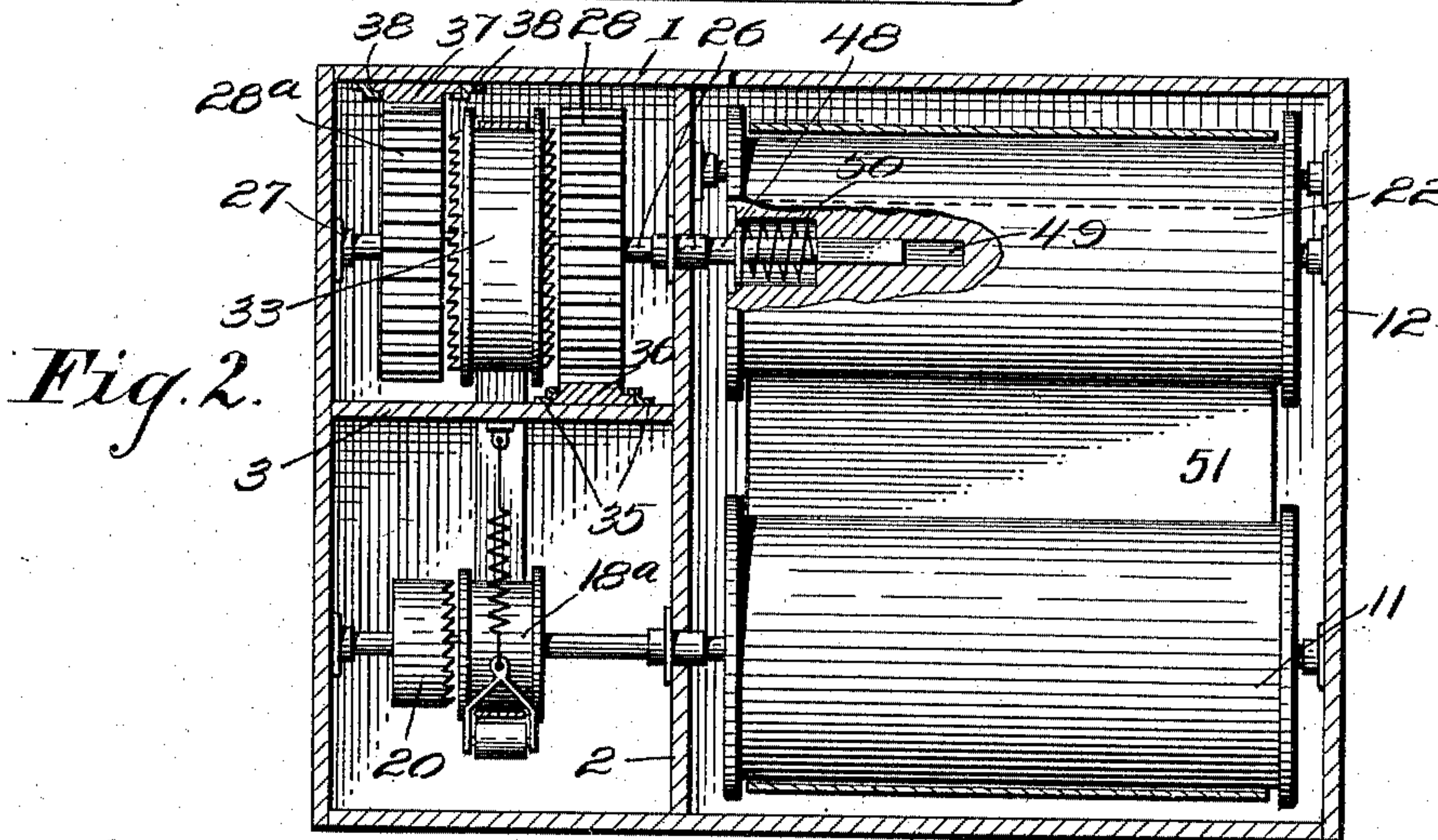
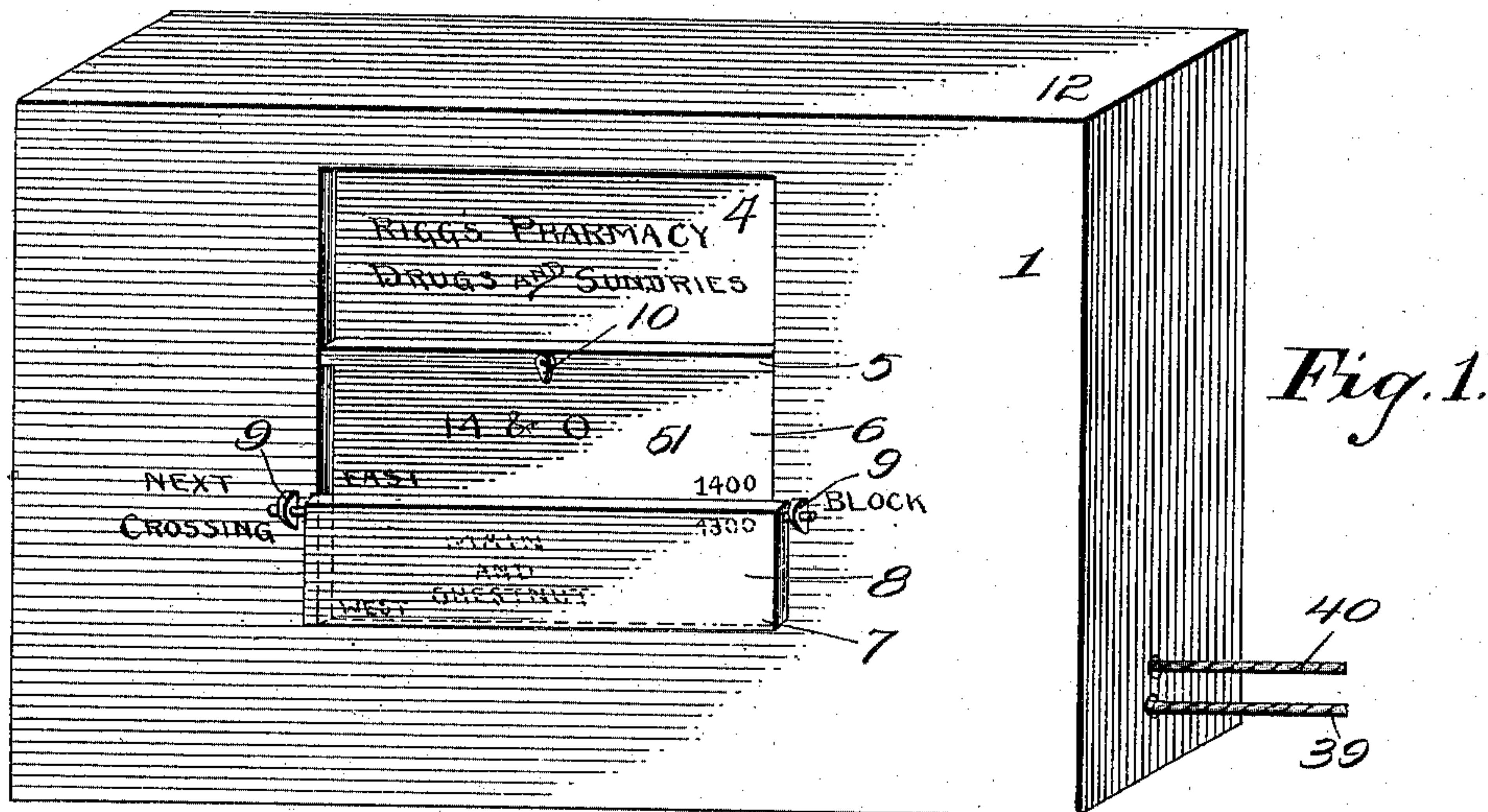


966,879.

F. W. ANDRUS.
STATION INDICATOR.
APPLICATION FILED MAY 14, 1909.

Patented Aug. 9, 1910.

2 SHEETS—SHEET 1.



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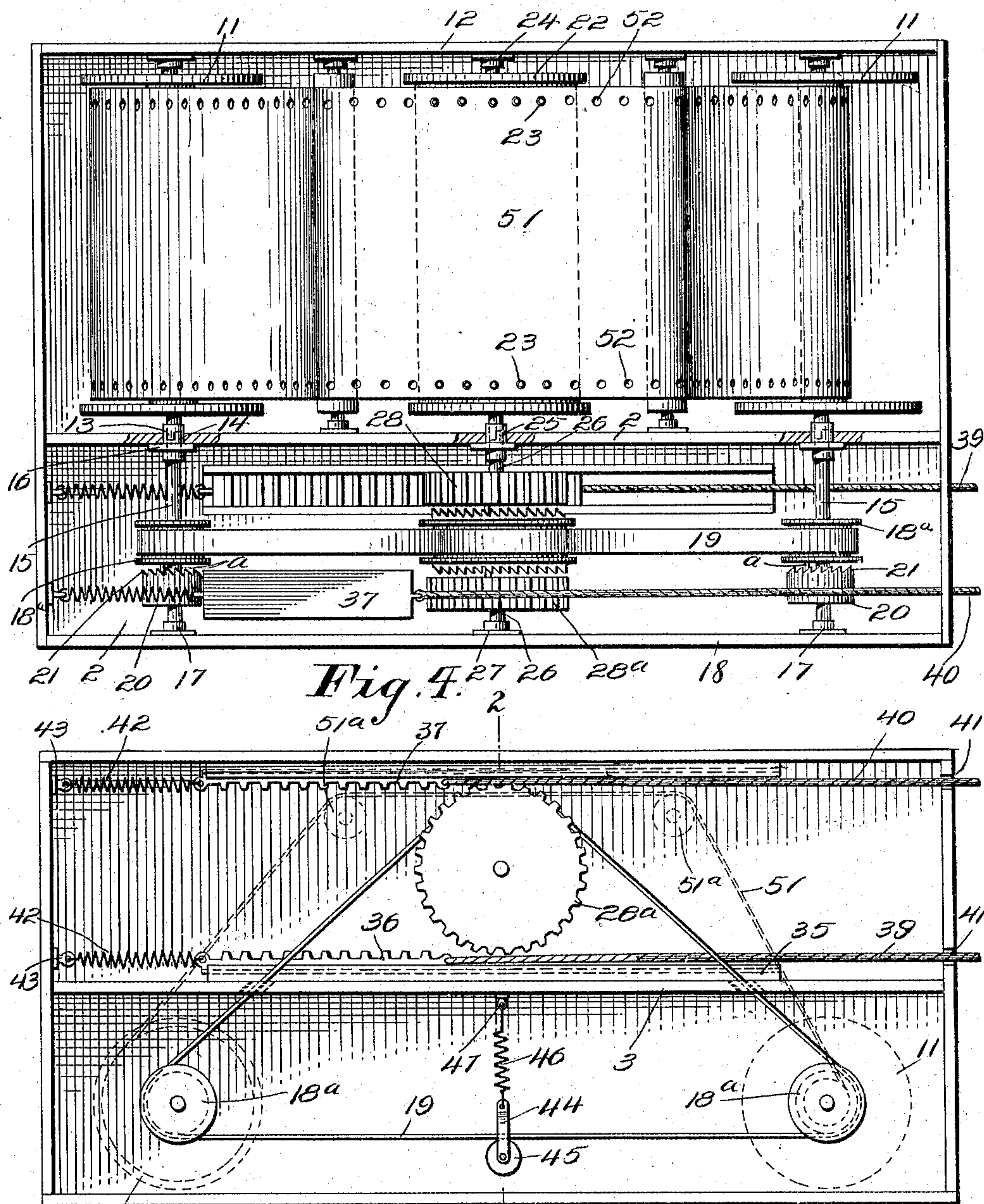


Fig. 4.

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FRANK W. ANDRUS, OF LINCOLN, NEBRASKA.

STATION-INDICATOR.

966,879.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed May 14, 1909. Serial No. 495,927.

To all whom it may concern:

Be it known that I, FRANK W. ANDRUS, a citizen of the United States of America, residing at Lincoln, in the county of Lancaster and State of Nebraska, have invented new and useful Improvements in Station-Indicators, of which the following is a specification.

This invention relates to station indicators, and one of the principal objects of the same is to provide a device of the character referred to which shall be simple in construction and which will display the stations or street corner crossings upon a movable band and at the same time expose an advertisement.

Another object of the invention is to provide a device more particularly adaptable for street railway systems for indicating the street crossings progressively, said device having a sight opening therein and a movable band within the casing behind the sight opening, said band being provided with an advertisement and with a street corner indicator, means being provided whereby when the car is going in one direction the crossings are indicated upon the band through said opening and when the car is going in the opposite direction the sight opening referred to is closed and another sight opening is utilized to expose another portion of the band to indicate the corners on the return trip.

Another object of the invention is to provide a simple and reliable means for moving the indicating band progressively in either direction.

These and other objects may be attained by means of the construction illustrated in the accompanying drawings, in which,—

Figure 1 is a perspective view of a station indicator made in accordance with my invention. Fig. 2 is a central vertical section taken on the line 2—2 of Fig. 5. Fig. 3 is an enlarged detail plan view illustrating the ratchet wheel and the spring pawl for engaging the same. Fig. 4 is a front elevation of the indicator with the front portion of the casing removed. Fig. 5 is a bottom view of the casing with the top of the casing removed.

Referring to the drawings, the numeral 1 designates a casing of any required size, said casing being provided with a horizontal partition 2 and a vertical partition 3. In the front side of the casing 1 is a sight open-

ing 4 which is separated by means of a cross bar 5 from an enlarged sight opening 6 which extends from the bar 5 to the point 7, and a cover 8 is hinged at 9 at a point nearly central to the sight opening 6 so that said cover 8 may be swung upward and secured by means of the latch 10 to expose the lower portion of the sight opening 6, and when said cover 8 is down in the position shown in Fig. 1 the upper portion of the sight opening 6 is exposed. A pair of drums 11 are provided with projecting stub axles journaled in the top 12 of the casing 1 at one end, while the opposite ends of the axle are provided with projecting lugs 13 which engage similarly projecting lugs 14 on the shafts 15, said shafts 15 being connected to the shafts at the ends of the drums 11 by a sleeve 16 extending through the partition 2. The purpose of this construction is to permit the drums 11 to be removed by sliding the sleeves 14 on to the shafts 15. The opposite ends of the shafts 15 are journaled in keepers 17 secured to the bottom 18 of the casing. Loosely mounted upon the shafts 15 are the grooved pulleys 18^a over which passes a belt 19. Fixed to each of the shafts 15 is a ratchet collar 20 provided with crown teeth 21, said teeth being disposed in opposite directions, as shown more particularly in Fig. 4.

A roller 22 provided near its opposite ends with projecting pins 23 is journaled vertically in the casing 1 at the center of said casing immediately in rear of the sight opening 6, said roller being journaled at one end in a keeper 24 secured to the top 12 of the casing. The opposite end of the shaft of said roller is cut away and provided with a projection, similar to the projection 13, said shaft being mounted in a sleeve 25 secured to the partition 2. Extending into the sleeve 25 is a shaft 26 journaled at its opposite end in a keeper 27 in the bottom of the casing. Loosely mounted upon the shaft 26 is a pair of pinions 28 and 28^a, said pinions being spaced apart and provided each with a spring-projected dog 29 normally extending outward from the side face thereof, said dogs each being mounted in a recess 30 and provided with a spring 31 which surrounds the shank of a dog and normally projects the bevel end 32 into the path of an intermediate pulley 33 rigidly mounted upon the shaft 26, said pulley having oppositely disposed

ratchet teeth 34 projecting from the sides thereof. The belt 19 passes around over the grooved pulley 33.

Supported upon the partition 3 in suitable
5 guideways 35 is a sliding toothed rack bar 36 which is in mesh with the pinion 28. A similar rack bar 37 is mounted to slide in guideways 38 secured to the front of the casing 1. Connected to the rack bar 36 is a rope
10 or cable 39, and connected to the rack bar 37 is a similar rope or cable 40, said cables extending through openings 41 in the end of the casing. Connected to the rack bars 36 and 37 are springs 42, the opposite ends of
15 said springs being connected to eyes 43 secured to the inner wall of the casing. The springs 42 are for the purpose of returning the rack bars 36 and 37 to their normal inward position after the cables 39 and 40 have
20 been pulled upon to progressively move the indicator belt in front of the sight opening 6.

To hold the belt 19 tightly around its pulleys a spring belt tightener 44 may be utilized, said tightener having a roller 45 journaled in a yoke connected to the partition 3
25 by means of a spring 46, said roller bearing upon the belt 19 to take up any slack in said belt. The spring 46 is secured to an eye 47 attached to the partition 3. The roller 22 is
30 provided with a stub axle 48 mounted in a recess 49 in one end of said roller, said stub axle being projected by means of a spring 50 surrounding said axle. Whenever it is desired to remove the roller 22 by pressing
35 inward upon the spring 50 the stub axle 48 is removed from the sleeve 25, as will be understood.

The indicator belt 51 is provided with a row of perforations 52 at the top and bottom
40 of the same, and the pins 23 on the roller 22 engage these perforations to move the belt from one of the rollers 11 to the other. The belt 52 has printed or painted thereon a series of advertisements running across the upper
45 portion of said belt. Across the center of the belt is printed or produced thereon the various street car corners or stations running in one direction, and at the bottom of the belt is a line of crossings or stations
50 printed to indicate the stopping places or stations upon the return trip of the car.

The operation of the invention may be briefly described as follows: The casing 1 may be secured over the front door of a car,
55 and the cables 39 and 40 are laid over pulleys to the front or rear end of the car, said cables being provided each with a ring or handle at its end for operating the same. As the car moves from corner to corner the conductor or motorman pulls upon one or the
60 other of the cables 39 or 40, depending upon the direction in which the car is going. When the cable 39 is pulled the rack bar 36 is drawn toward the right, and this rotates
65 the pinion 28. The pulley 33 is rotated

toward the right by means of the dog 29 connected to the pulley 28^a. This movement of the pulley 28 rotates the roller 22 and carries the indicating belt 51 to the right one
70 space, indicating the next crossing. In the meantime the pulleys 18^a are rotated by the ratchet collars 20 which are engaged by spring dogs *a* carried by each of the grooved pulleys 18, said spring dogs *a* being of similar construction to the dogs 29 and operated
75 in substantially the same manner. After the car has arrived at the end of its trip and is about to return, the cover 8 is thrown upward and engaged by the latch 10. This exposes the lower edge of the indicating belt
80 51 upon which is indicated the crossings of the return trip, and in order to expose them progressively in the opening 6 below the cover 8, the cable 40 is drawn outward to move the indicator belt toward the left and
85 rewind the indicator belt from the drum 11 at the right hand side to the drum 11 at the left hand side of the casing, as will be understood. The indicator belt 51 passes over guide rollers 51^a which holds the exposed
90 part of the belt 51 before the sight opening 6.

From the foregoing it will be obvious that a station indicator made in accordance with my invention can be used as an advertising
95 medium; will indicate the stations or street crossings when the car is going in either direction; that the device is not liable to get out of order and will operate smoothly and will require but little attention on the part
100 of the conductor.

I claim:—

1. A station indicator comprising a casing having a sight opening therein, an indicator belt in the casing, drums around which said belt may be wound in one direction or the
105 other, a roller provided with projecting pins, said belt provided with perforations to be engaged by said pins, means for rotating said roller in either direction, said means comprising pinions, guideways in said casing, rack bars mounted to slide in said guideways and adapted to engage said pinions, a pulley between said pinions provided with oppositely disposed ratchet teeth, means between said drums and pulley for rotating said
110 drums, spring dogs carried by the pinions for engaging one or the other of said oppositely disposed ratchet teeth, and means for moving the rack bars and rotating said pinions.

2. In a station indicator, the combination
120 of an indicator belt, drums around which said belt may be wound in opposite directions, a roller provided with means for engaging said belt for moving the same, pinions mounted upon the shaft of said roller, rack bars engaging said pinions, springs connected to said rack bars for moving them in one direction, cables connected to said rack bars for moving them in the opposite direction against the tension of said springs,
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spring dogs carried by said pinions, a pulley, means between said drums and said pulley for rotating the drums and ratchet teeth connected to said pulley to be engaged by
5 either of said dogs.

3. In an advertising station indicator, the combination of a casing having a sight opening therein, a belt mounted to move in opposite directions in front of said opening,
10 means for moving said belt comprising pinions, rack bars engaging said pinions, means for moving said rack bars in one direction, springs for returning said rack bars, a pulley

between said pinions, ratchet teeth on said pulley, dogs on said pinions, shafts, grooved
15 pulleys on said shafts, ratchet collars connected to said shafts, and a belt passing around said grooved pulleys and over the pulley between said pinions, said belt being
20 connected to move with said pulleys.

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

FRANK W. ANDRUS.

Witnesses:

HARRY C. SILVERNAIL,
EMMA J. HEDGES.