

No. 610,415.

Patented Sept. 6, 1898.

A. H. ROGERS.
STATION INDICATOR.

(Application filed Aug. 28, 1897.)

(No Model.)

2 Sheets—Sheet 1.

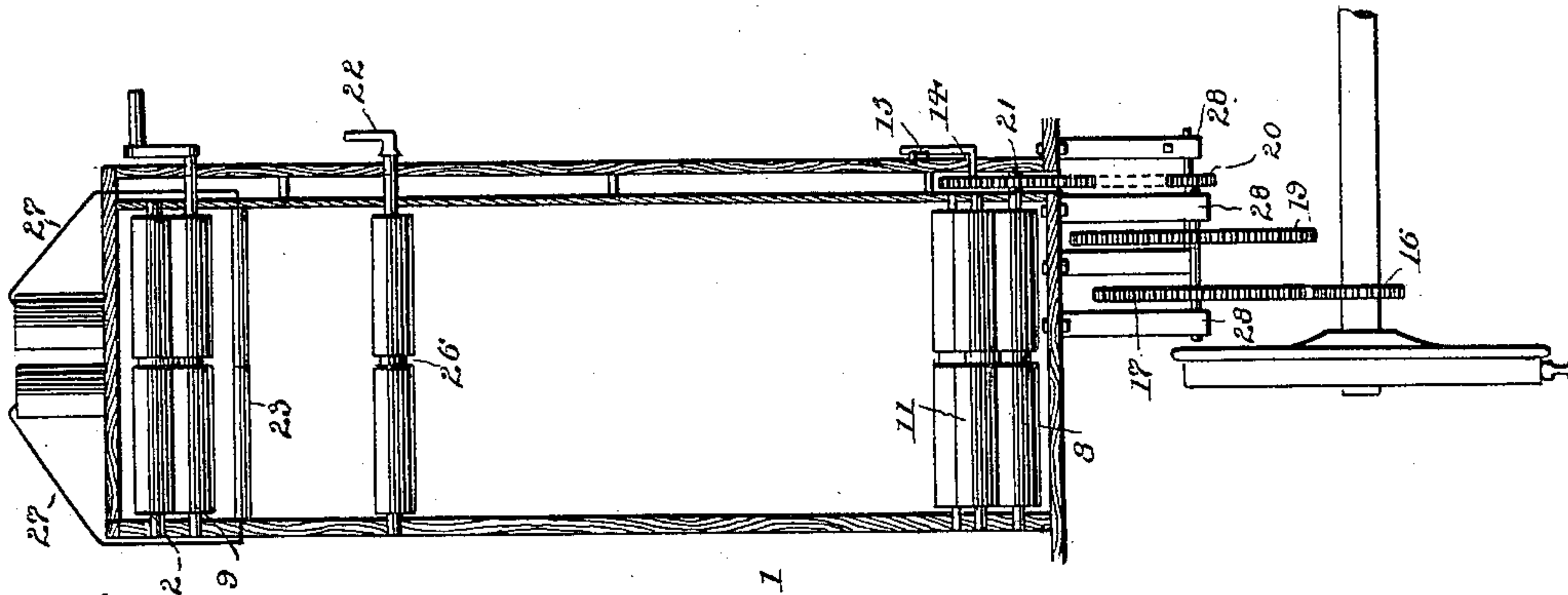


Fig. 2.

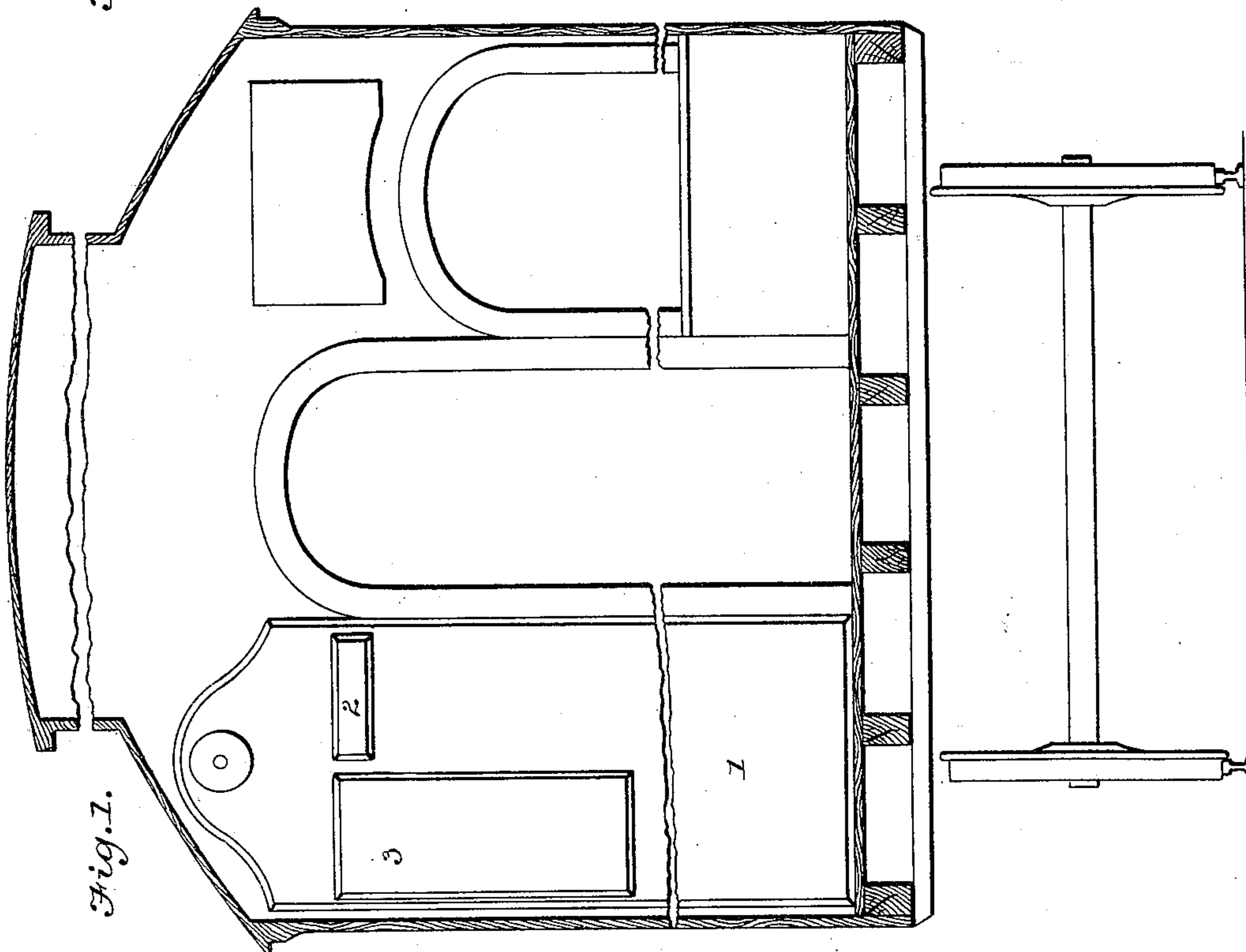


Fig. 1.

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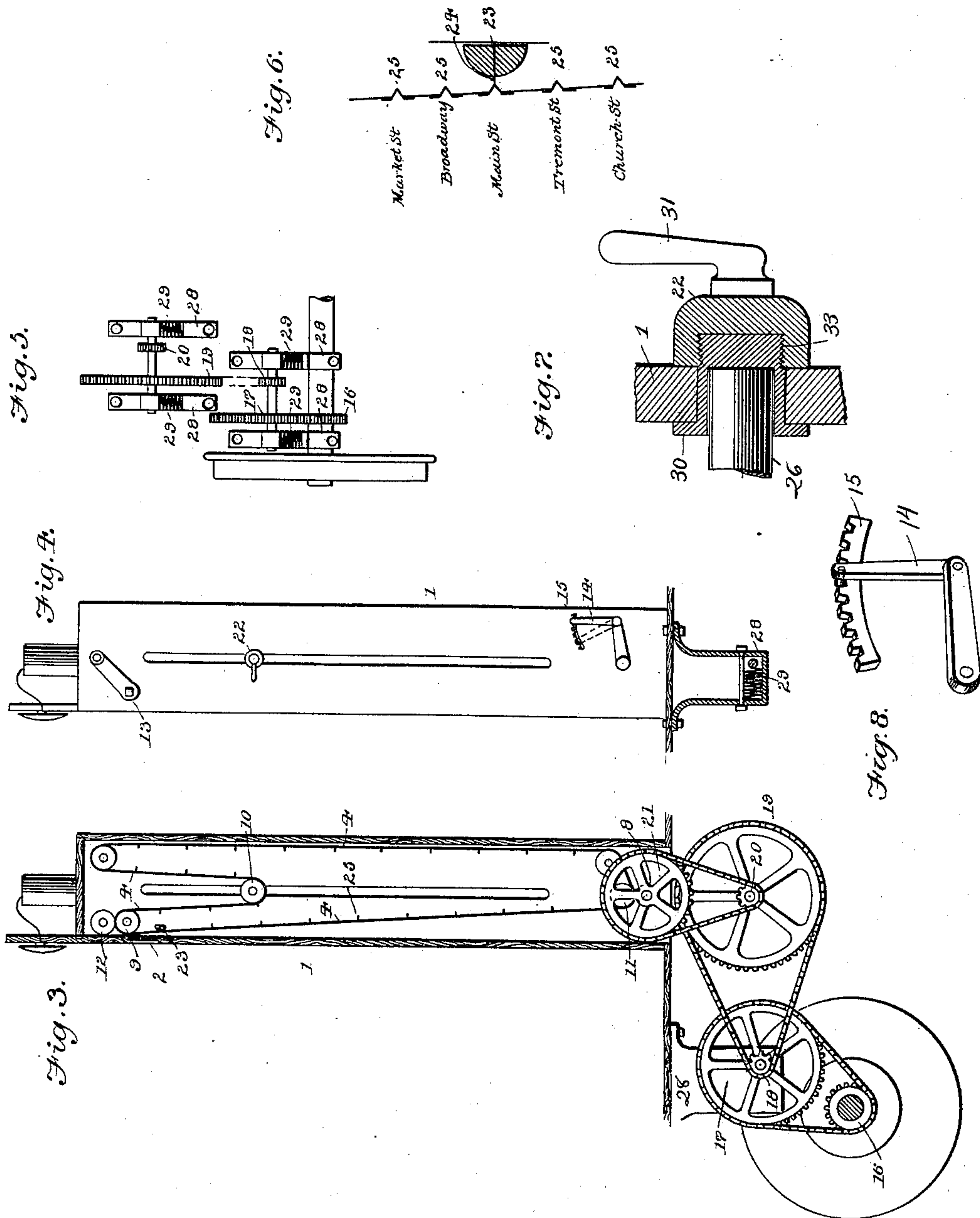
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UNITED STATES PATENT OFFICE.

ALEXANDER HUNTER ROGERS, OF GALVESTON, TEXAS.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 610,415, dated September 6, 1898.

Application filed August 28, 1897. Serial No. 649,860. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER HUNTER ROGERS, of Galveston, in the county of Galveston and State of Texas, 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.

This invention relates to automatic street and station indicators for advertising.

The invention is intended to be used on board passenger-cars to automatically indicate or visually disclose the names of streets or stations as they are reached and simultaneously exhibit signs, cards, and other advertising devices.

The invention consists of the combination of a suitable casing adjusted within view of the interior of a car, an endless apron suitably mounted upon driving and guide rollers within the casing, a prime mover consisting of the axle of one of the trucks of a car, and a train of reducing-gearing connecting the car-axle and the driving roller or spool for driving the endless apron.

The invention further consists in the details of construction and certain other combinations hereinafter described, and particularly pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a cross-section through a car, showing my indicator arranged in one end of the car, a truck being shown in elevation beneath the car. Fig. 2 is a cross-section through the casing, showing grip and guide rollers in elevation above the floor of the car and showing the gearing between the axle of the car and the driving-roller of the apron. Fig. 3 is a section at right angles with that shown in Fig. 2, showing the driving and guide rollers in section and the gearing between the axle and driving-roller in elevation. Fig. 4 is a side elevation of the casing, the bottom of the car and one of the shaft-supporting brackets being taken in section. Fig. 5 is a top or plan view of the gearing between the axle and drive-roller. Fig. 6 is a section in segment of the endless apron and a tilting device operated by said apron. Fig. 7 is a sectional detail showing means for clamping

and holding an adjustable tension-roller in adjusted position. Fig. 8 is an enlarged sectional detail showing the clamping-nut or means for securing the take-up roll in position.

1 is a casing or cabinet arranged, as shown, in the forward left-hand corner of the passenger-car, having glazed openings 2 and 3, the opening 2 being for disclosing the street or station signal and will ordinarily be about one-third of the width of the casing, leaving two-thirds of the width of the casing to be utilized for advertising purposes. The opening 3 is considerably larger than the indicator-opening 2 and represents a space constantly in view and behind which is suspended or carried advertising matter. Within this casing is mounted an endless apron 4. The length of this apron will depend upon the length of the route over which the car is designed to travel and the amount of reduction obtained through the reducing-gearing. One part of this endless apron will be in a sense an epitome of the route over which the car travels—that is to say, there will be at intervals printed or stenciled or otherwise fixed upon the apron the name of a street or public building or other object of interest to which the attention of passengers is to be drawn—and these indicating-signs will be at their proper distances apart, the distances being proportioned to the actual distance over which the car must pass in order to reach the points indicated. Parallel with these indicating signs, on one or both sides of such signs, will be arranged advertising matter, which will be brought into view in regular order and succession as the car moves over the route. The endless apron carrying the indicating-signs and the advertising matter is supported within the casing and led over a driving-roller, around any desired and necessary number of guide-rollers, and back to the driving-roller. In the way I have illustrated this arrangement the apron extends over driving-roller 8, around one of a pair of gripping-rollers 9, an adjustable or take-up roller 10, and thence back to the point of beginning around any required number of guide-rollers. Next to the driving-roller and arranged to grip or bite the apron to cause it to travel is a pressure or gripping roller 11, and adjacent to the first

guide-roller and just above the opening in the casing is a pressure or gripping roller 12, whose purpose is to provide means whereby the apron may be adjusted to the right position through the medium of a crank 13, connected with the shaft of roller 9. This adjustment can only take place when the gripping or pressure roller 11 has been thrown out of its gripping position. This is done through the medium of a lever 14, operating a rod or shaft for lifting said roller. The lever is readily held in adjusted position with the roller raised by means of a notched quadrant or flange 15, into which the lever readily falls, the same being made of spring metal. The driving-roller within the casing is operated through a train of gear between said roller and the axle of a car. This gearing is by preference sprocket-and-chain gearing, the same being better adapted for this purpose than other kinds of gear. The gearing which I have shown consists of a sprocket-pinion 16, mounted on the axle of a car, a sprocket-wheel 17, another sprocket-pinion 18 on the shaft of the wheel 17, a sprocket-wheel 19, a sprocket-pinion 20 on the shaft of wheel 19, and a sprocket-wheel 21 on the shaft of the roller which drives the apron. The shafts of the intermediate wheels and pinions are suitably supported by brackets connected with the bottom of the car, and the wheels and pinions are coupled together in the usual way by means of sprocket-chains.

Obviously the train of gearing may be carried to any extent, so as to reduce the speed of the traveling apron relatively to that of the traveling car to any degree desired. This may be accomplished to such an extent that my device may be practically operated as a station-indicator upon steam and other cars passing over long distances. The take-up or movable guide-roller 10 is mounted in bearings which slide up and down in the casing through a considerable distance in slots, so that a long range of slack may be taken up by this roller.

In Fig. 7 is shown a means for clamping and holding the take-up roll 10 in its adjusted position. This is done through the medium of lever and clamping-nut 22. In order to provide for and to give an alarm or signal whenever the car is approaching a street or station, I provide a rocking shaft 23, suitably mounted in the sides of the casing, as the half of a cylinder or rod, and arranged athwart the casing just below the glazed opening 2, this rocking shaft carrying a finger or projection 24, to be operated or vibrated by means of metallic studs 25, projecting from the face of the endless apron. All of the rollers, both guide-rollers and driving-rollers, are grooved, as shown at 26, for the passage of the studs 25. The rock-shaft 23 is connected with wires

27 in such way that they either make or break an electric circuit and connected with a bell or other like alarm, so that when the bracket on the apron comes in contact with the projection on the rock-shaft the alarm is sounded.

In order to compensate in a measure for the surging of the body of the car and its movement with relation to the axle of such car, I mount the shafts carrying sprocket-wheel 17 and pinion 18 and the shaft carrying sprocket-wheel 19 and pinion 20 in movable boxes 28, as shown particularly in Figs. 4 and 5, the boxes being held to their normal position by means of springs 29.

In order to arrange the position of the street or station names on the apron, I adjust a blank apron in the casing long enough to make the entire circuit of the car of a belt line or the length of the trip, if otherwise. Take some point for a starting-point and just before you reach a street or station mark the space on the belt where it would show in the casing. Continue to do this at every succeeding street until the circuit has been made or the line has been covered. Then take the belt out, cut it off the proper length, and fasten together. Then you have a pattern from which you can complete and print as many aprons as you need. If there are more than one road or line, repeat this operation. This indicator works equally well going backward or forward.

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

1. In automatic station and street indicators, the combination of a casing, an endless apron mounted within the casing, a gripping or pressing roller arranged above the glazed opening in the casing, means for releasing the apron from its driving-roller, and means as a crank or lever for turning the gripping-rollers above the opening for adjusting and properly placing the apron, substantially as described.

2. In a station and street indicator and advertising device, the combination of an endless apron carrying the directions and advertising matter, suitable supports upon which said apron is mounted, a rocking shaft having a projection arranged athwart the passage of the apron, brackets or projections on the apron, an alarm mechanism, and intermediate connections between the alarm mechanism and the rocking shaft, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

ALEXANDER HUNTER ROGERS.

Witnesses:

R. W. CAMPBELL,
R. H. FULKERSON.