

(No Model.)

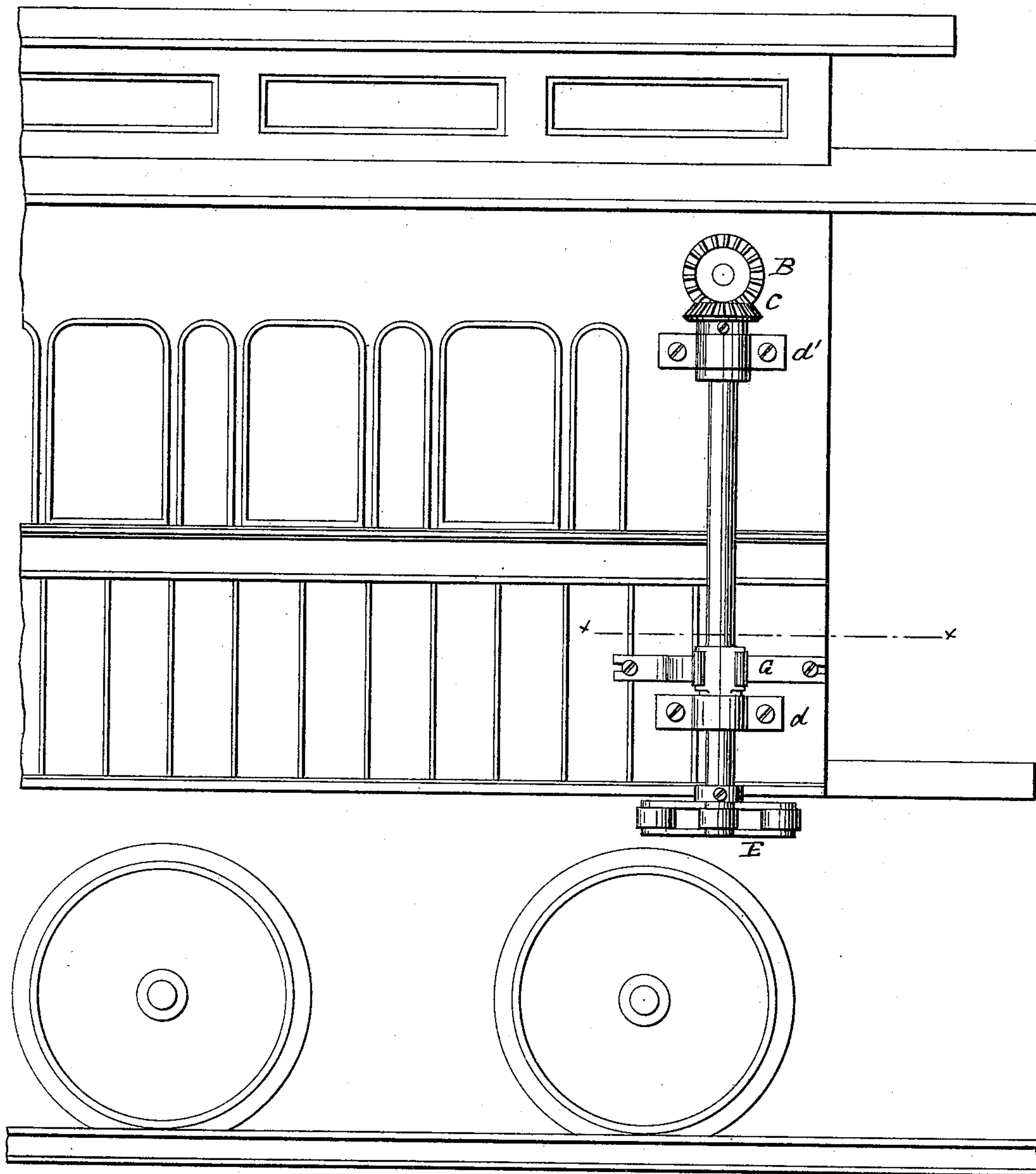
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J. IGLESIAS.
STATION INDICATOR.

No. 377,258.

Patented Jan. 31, 1888.

Fig. 1.



WITNESSES:

A. Schehl.
Carl Kapp

INVENTOR

José Iglesias
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ATTORNEYS.

(No Model.)

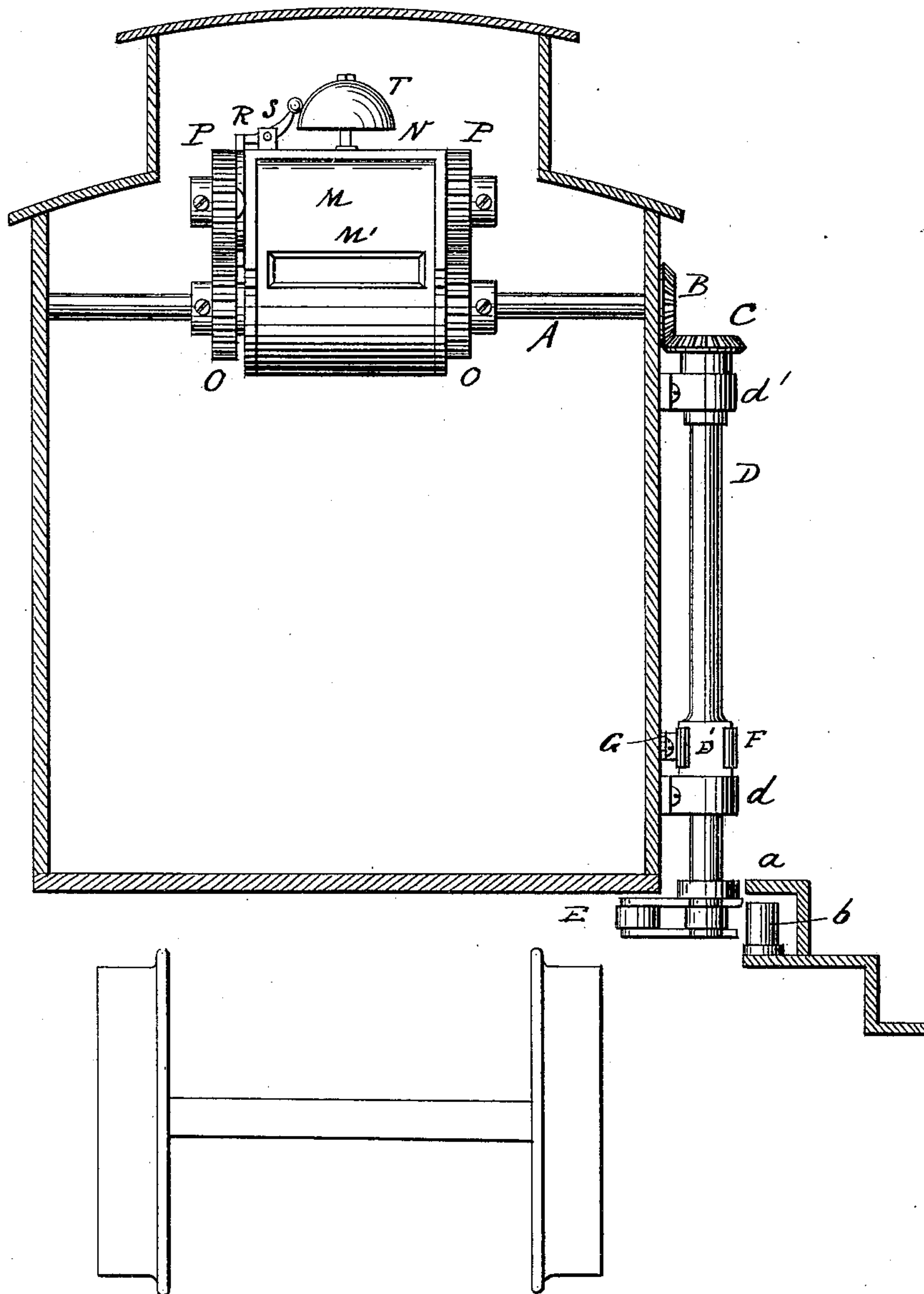
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fig. 2.



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Fig. 3.

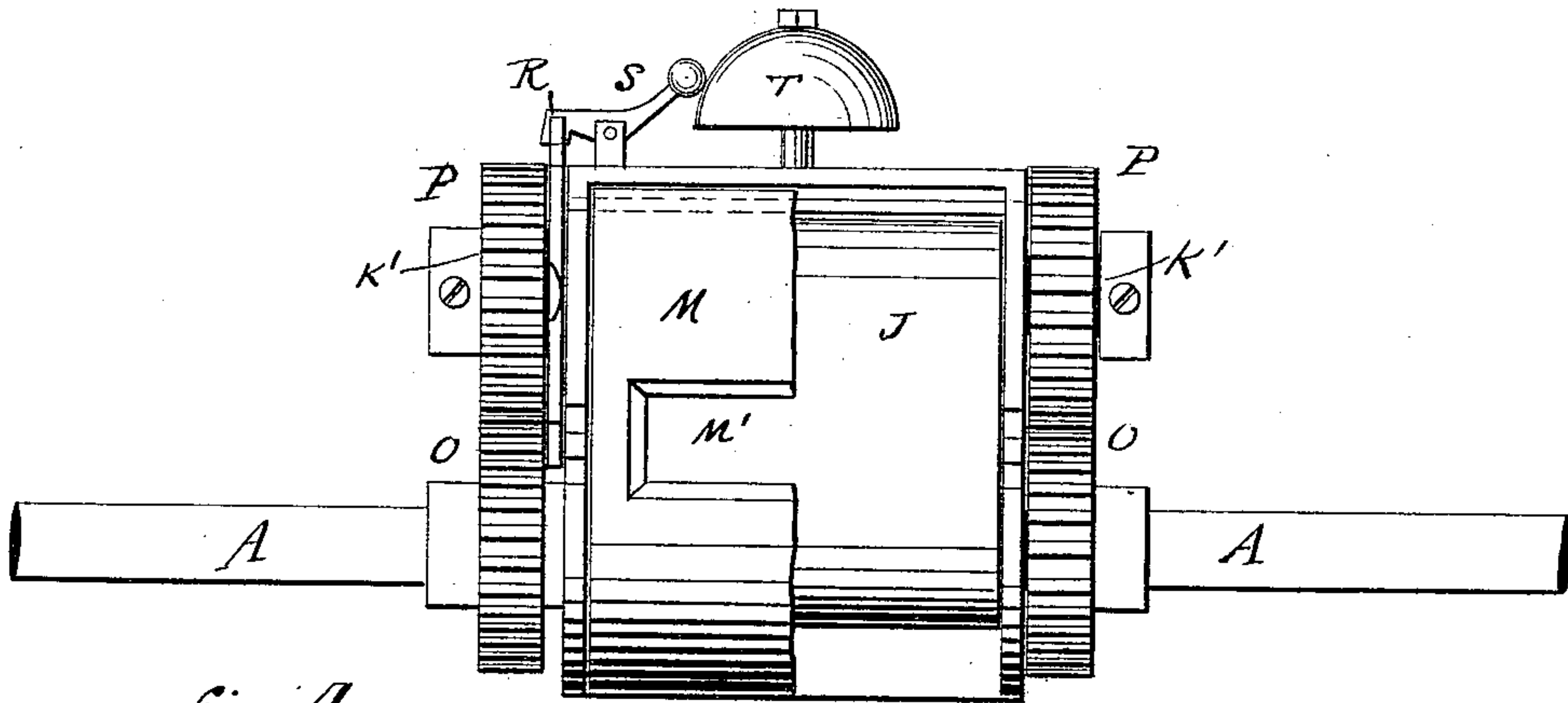


Fig. 4.

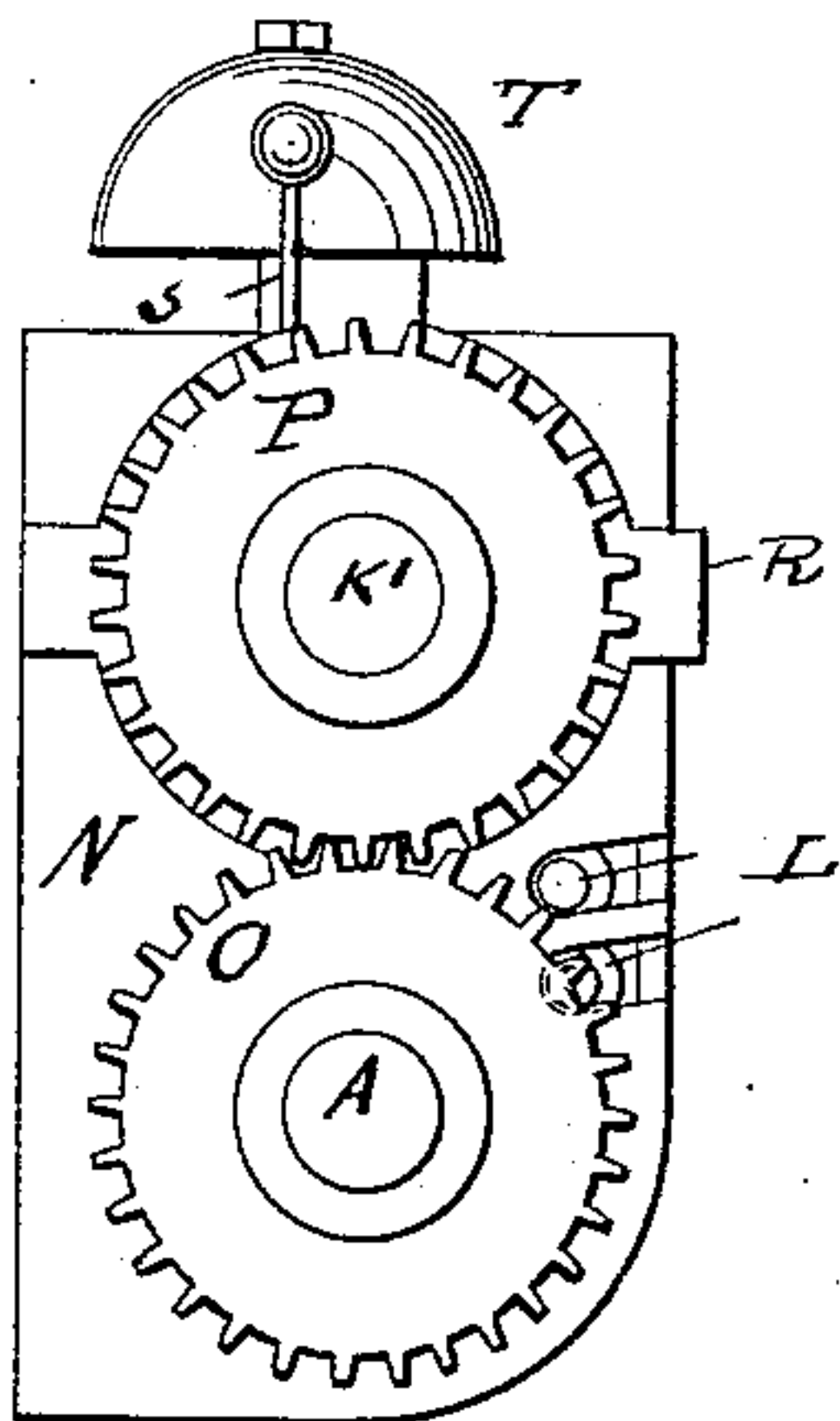


Fig. 5.

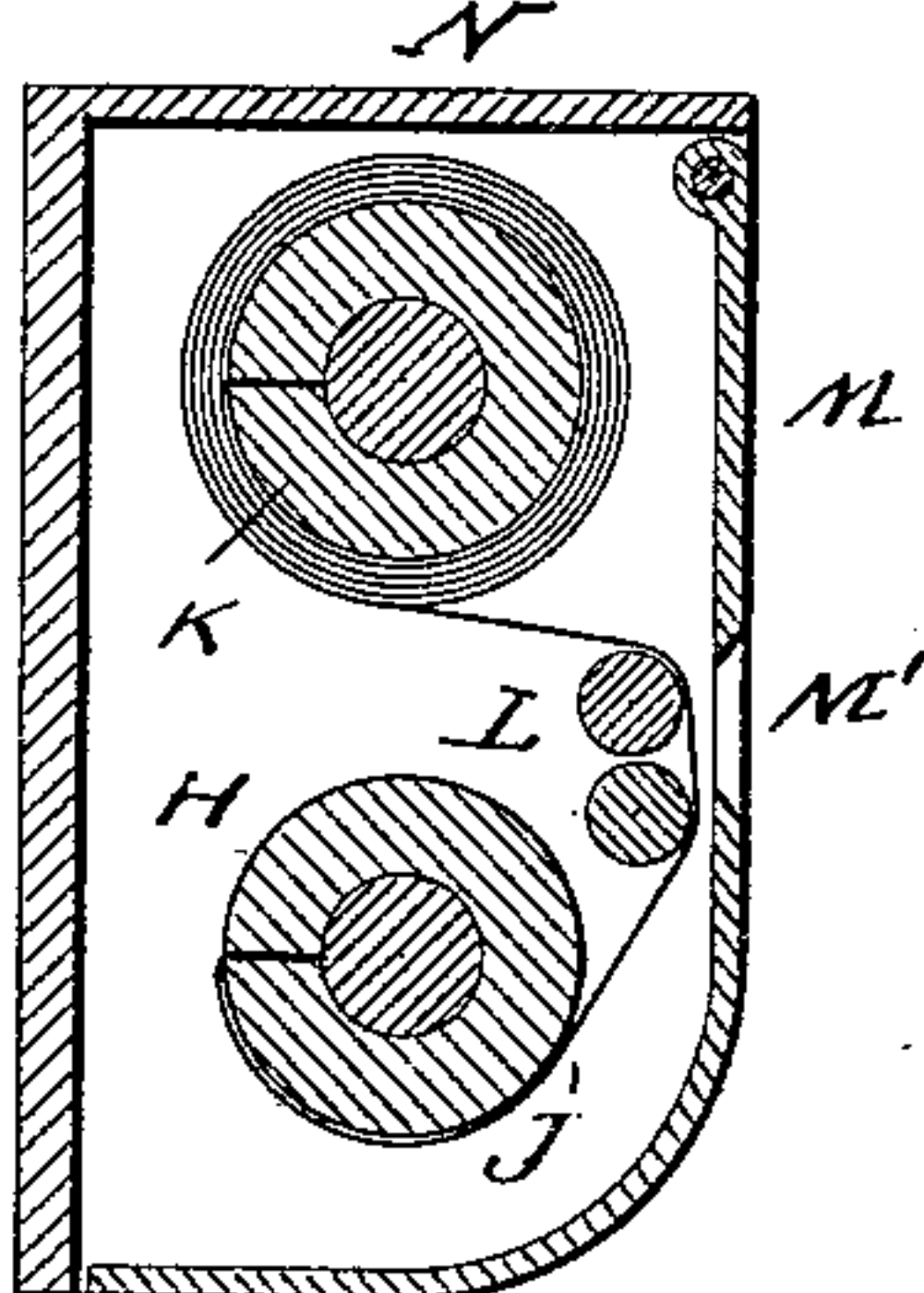


Fig. 6.

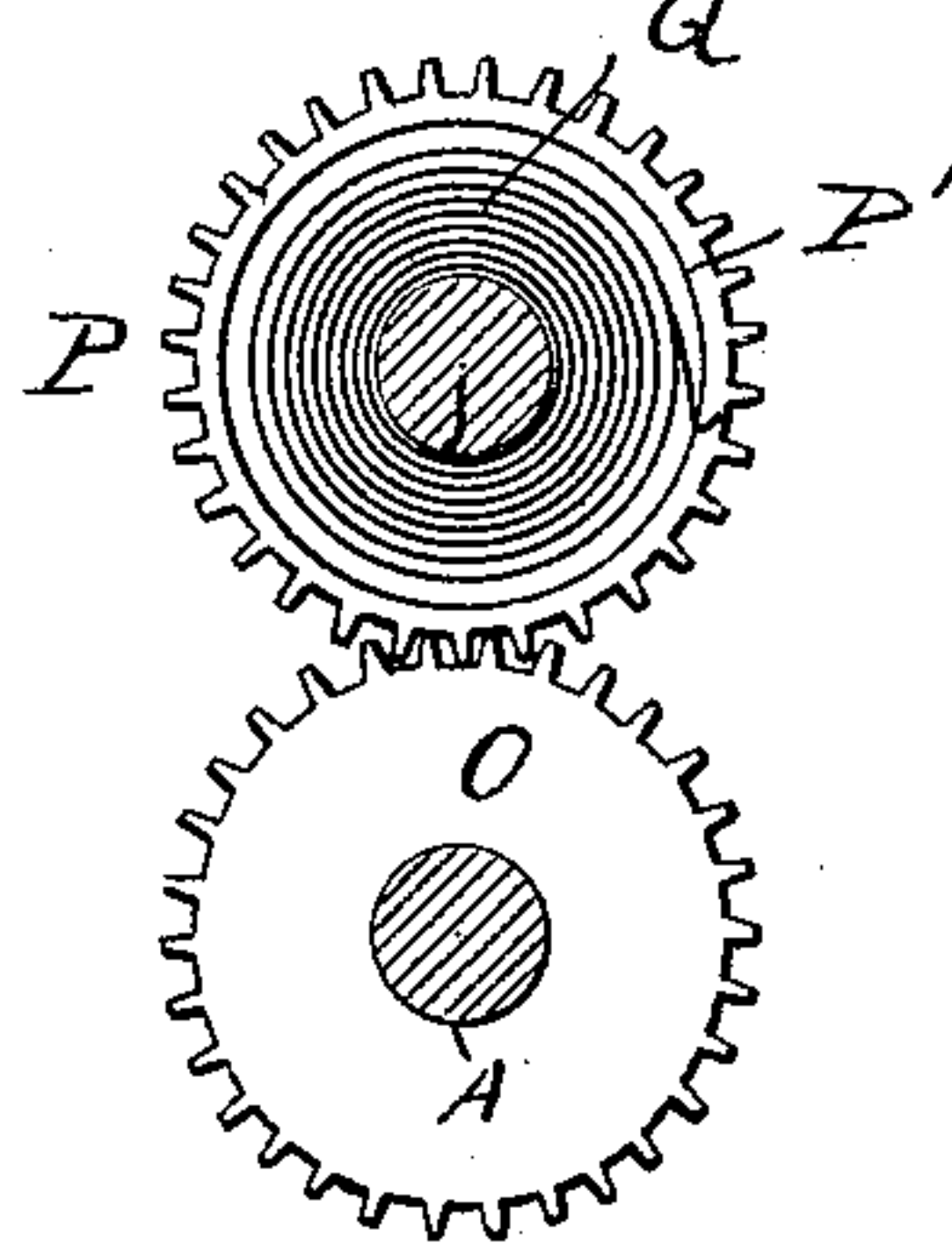


Fig. 7.

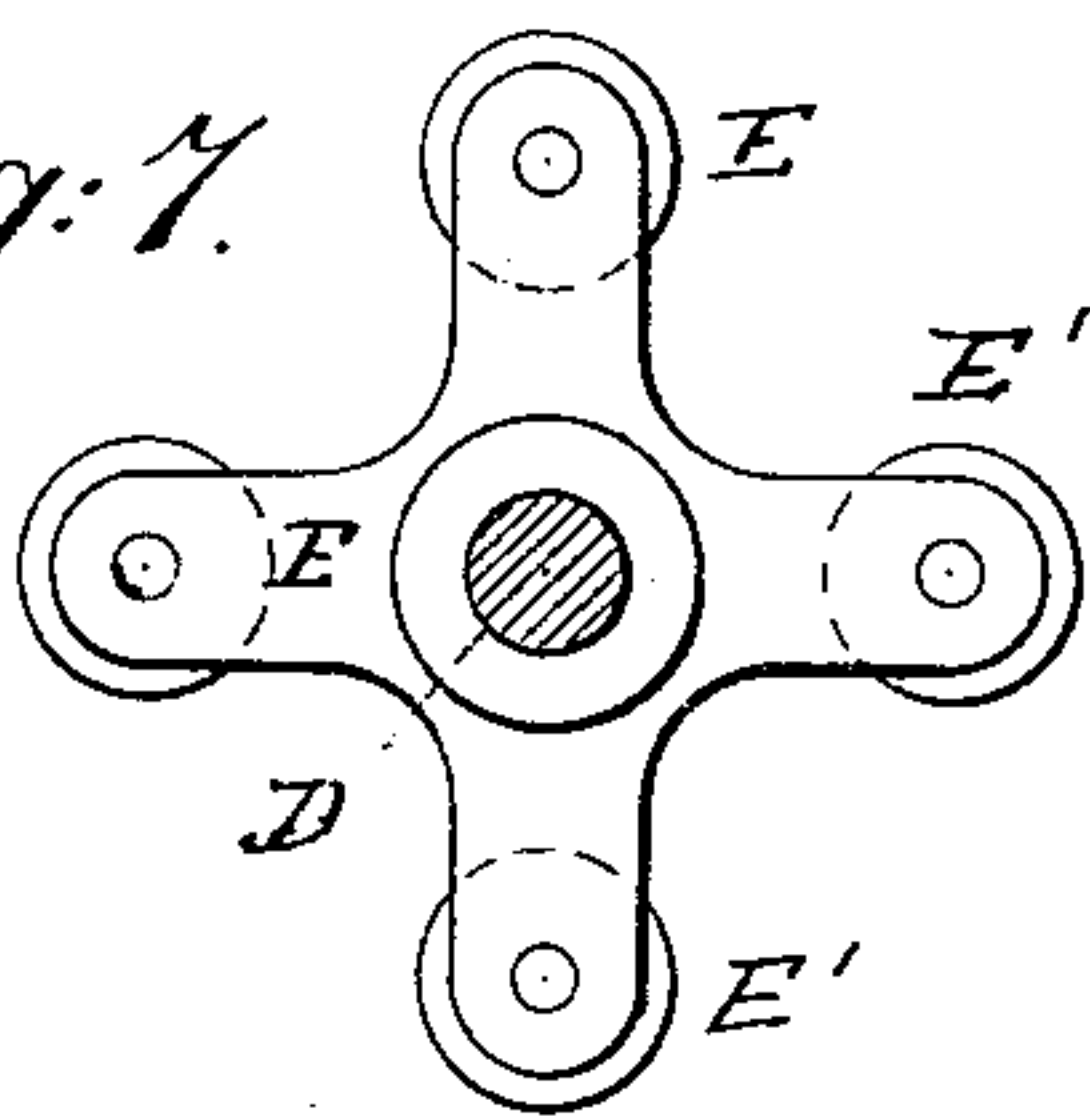
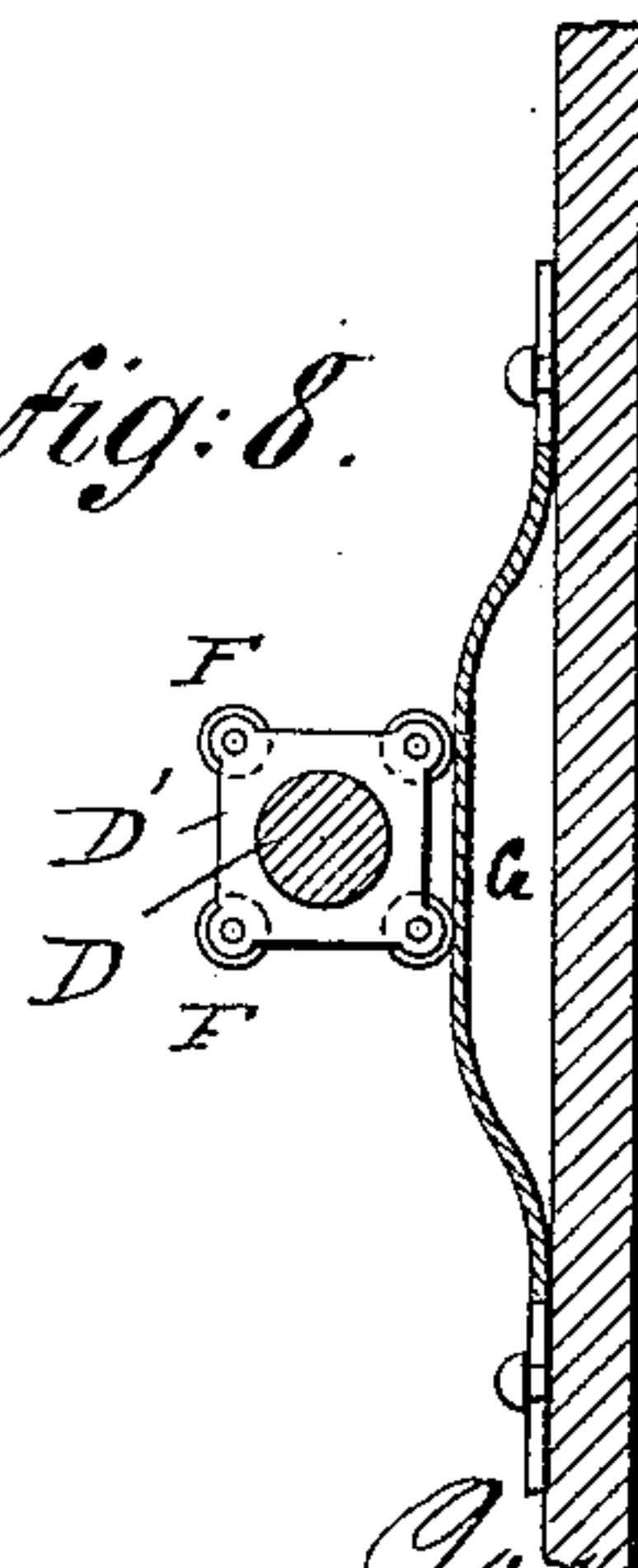


Fig. 8.



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UNITED STATES PATENT OFFICE.

JOSÉ IGLESIAS, OF HAVANA, CUBA.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 377,258, dated January 31, 1888.

Application filed July 11, 1887. Serial No. 243,952. (No model.)

To all whom it may concern:

Be it known that I, JOSÉ IGLESIAS, of Havana, in the Spanish Colony of Cuba, have invented certain new and useful Improvements in Station-Indicators, of which the following is a specification.

The object of my invention is to provide a new and improved station-indicator for automatically showing the names of the different stations as they are reached, and also giving a signal at the same time, said indicator being operated by fixed objects at the sides of the track.

The invention consists in the combination, with a car, of a casing, a series of rollers in the casing, and a belt having its ends secured to the rollers, on which belt the names of the stations are produced in proper order, bevel-gearing for driving one of the rollers or drums, gear-wheels, and an interposed spring for rotating the other roller from the first-mentioned roller, and mechanism for rotating the shaft of the first-mentioned roller from fixed objects at the side of the track.

The invention also consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter, and then pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view of the end part of a car provided with my improved station-indicator. Fig. 2 is a cross-sectional view of the car and station-platform. Fig. 3 is a face view of the indicator. Fig. 4 is an end view of the same. Fig. 5 is a cross-sectional view of the same. Fig. 6 is a detail side view of the cog-wheels and the spring. Fig. 7 is a plan view of the star-wheel for operating the mechanism from fixed objects at the side of the track. Fig. 8 is a horizontal sectional view on the line $x x$ of Fig. 1, showing the locking-springs for the up-right shafts.

Similar letters of reference indicate corresponding parts.

The shaft A is journaled in the car at one end, or, if desired, such a shaft may be provided on each end. On one end of the shaft A is mounted a beveled cog-wheel, B, engaged with another beveled cog-wheel, C, on the upper end of the vertical shaft D, journaled in bearings $d d'$ on the side of the car, and on the

lower end of each shaft D a cross or star wheel, E, is rigidly mounted, so as to rotate in the horizontal plane, and in the end of each arm of the said star-wheel a roller, E', is pivoted. Said star-wheel is located slightly below the level of the top step, a , of the station-platform, below which step a roller, b , is mounted upon a vertical pin in such a manner that when the car passes the platform the arms of the wheel E can strike said roller. It is necessary to prevent the shaft D from making more than a quarter-turn at a time, and for this reason the shaft D is provided with a square part, D', on each corner of which a vertical roller, F, is pivoted. A spring, G, having a flattened part, is secured on the side of the car, and rests against the square part D' of the shaft or rollers F on the same, as shown in Fig. 2. Every time the shaft D is rotated a quarter-turn the spring G is slightly compressed and immediately snaps outward again, and by resting against the square part D' or the rollers on the same prevents the shaft D from turning too freely.

On the shaft A a drum, H, is rigidly mounted, to which one end of a belt or band, J, is secured, the other end of which is secured to a drum, K, provided with the shafts K'. Between the drums H and K the belt J passes over two rollers, L, which are arranged directly behind a slot, M', in the front plate, M, of a casing, N, surrounding the said rollers and belts. Outside of the casing a cog-wheel, O, is mounted on the shaft A at each end of the drum H, said cog-wheels O engaging with like cog-wheels, P, mounted loosely on the shafts K' of the roller K, and said wheels P being each provided in the inner side with a recess, P', in which a spring, Q, is coiled, one end of which is secured on the side of the recess of the wheel, the other end being secured in the shaft K', so that motion is transmitted from the shaft A to the cog-wheels O, from the cog-wheels O to the cog-wheels P, and by means of the intermediate spring, Q, to the shaft K' and the roller K, said springs Q being coiled more or less, so as to have a certain tension, whereby the belt or band J is always stretched taut. The names of the stations are produced in their proper order in any suitable manner on the belt or band such distances from each other

that for every quarter-turn of the star-wheel or cross-wheel E the belt or band J is shifted the distance from one name to the other. The springs Q must also be provided, to permit the upper wheel to give, for the reason that the diameters on which the band is wound vary, the diameter of one of the rollers being greater when much of the belt is wound upon it. If springs were not interposed, the belt would be displaced.

On one of the pivots K' a ratchet-wheel, R, is mounted, which operates the hammer S for sounding the gong T on the top of the casing N. I prefer to provide rollers b at each end of the station-platform, so that when the train arrives at the beginning of the platform a star-wheel, E, is turned a quarter-turn and the belt J is shifted to show the name of the station. At the same time the bell is sounded, calling the attention of the passengers to the fact that the station has been reached. The belt remains in this position until the other end of the station is reached, when a roller, b, again strikes the star or cross wheel E, giving the same a quarter-turn, whereby the belt J is again shifted and the name of the next following station is shown. When this next station is reached, the belt is again shifted in the manner described; but the same name appears. When the pin is arranged only at the beginning of a platform, the names of the stations can appear singly in successive order on the belt; but when pins are provided at both ends of the platform it is evident that the duplicate names of the stations must be produced in successive order—that is, each name of the station is produced twice, then the name of the next station is produced twice, and so on. As the cars run on different tracks when running in the opposite direction, the shaft D and the star-wheel E must be provided on each side, as shown.

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

1. In a station-indicator, the combination, with a casing, of a shaft, a drum on said shaft, cog-wheels on said shaft, a drum provided with pivots journaled in the casing above the drum on the shaft, cog-wheels mounted loosely on the pivots of the drum and containing spiral

springs having one end secured to the pivots of the drum and the other end secured to the wheel, a belt secured on said drums and bearing the station-names, and mechanism for rotating the shaft and the drums, substantially as herein shown and described.

2. The combination, with a car, of a transverse shaft in the same, a station-indicator mounted on and worked by the shaft within the car, a bevel cog-wheel on one end of the shaft, a vertical shaft on the side of the car, said shaft being provided with a squared part, a bevel cog-wheel fixed on the upper end of the vertical shaft and engaged with the bevel cog-wheel on the end of the transverse shaft, a flat spring interposed between the squared part of the shaft and side of the car, a star-wheel on the lower end of the vertical shaft, and a projection or obstruction on the station-platform for engagement with the said star-wheel, substantially as herein shown and described.

3. The combination, with a car, of drums, a belt or band secured to said drums, a transverse shaft for operating said drums, a vertical shaft on the side of the car geared with said transverse shaft, the squared part D' on said vertical shaft, rollers F on the corners of the squared part, and the spring G, secured on the side of the car, substantially as herein shown and described.

4. The combination, with the casing N, of the shaft A, the drum H on the same, the drum K, the shaft K', the cog-wheels O on the shaft A, the cog-wheels P, mounted loosely on the shaft K' and engaged with the cog-wheels O, the spiral springs Q in the recesses of the wheels P, and having one end secured to the wheel and the other to the shaft K', the belt or band J, the rollers L, the ratchet-wheel R, connected with one of the wheels P, the hammer-lever S, and the gong or bell T, substantially as set forth, for operating the parts, substantially as herein shown and described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOSÉ IGLESIAS.

Witnesses:

OSCAR F. GUNZ,
LOUIS DE CALATRAVE.