

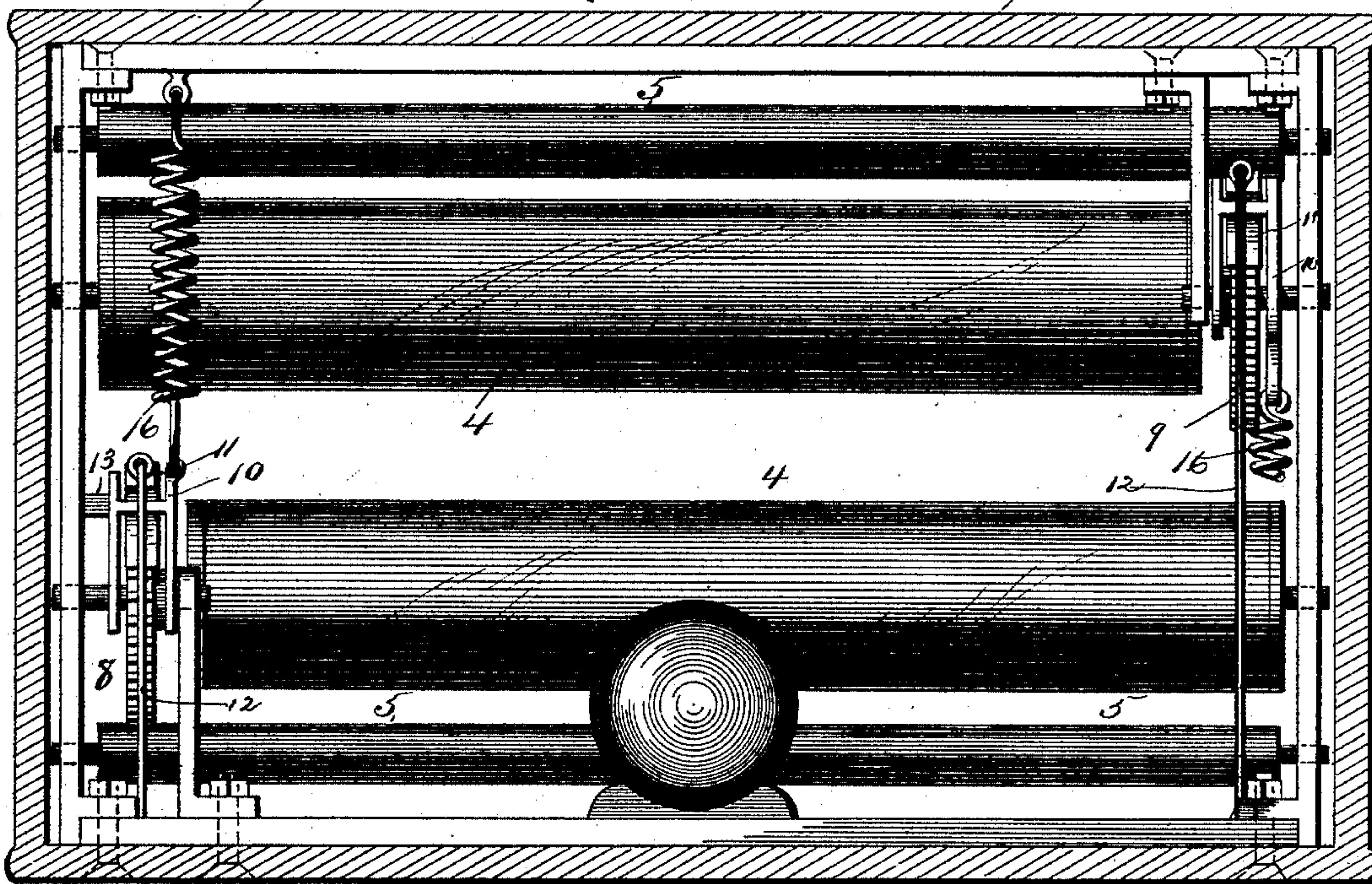
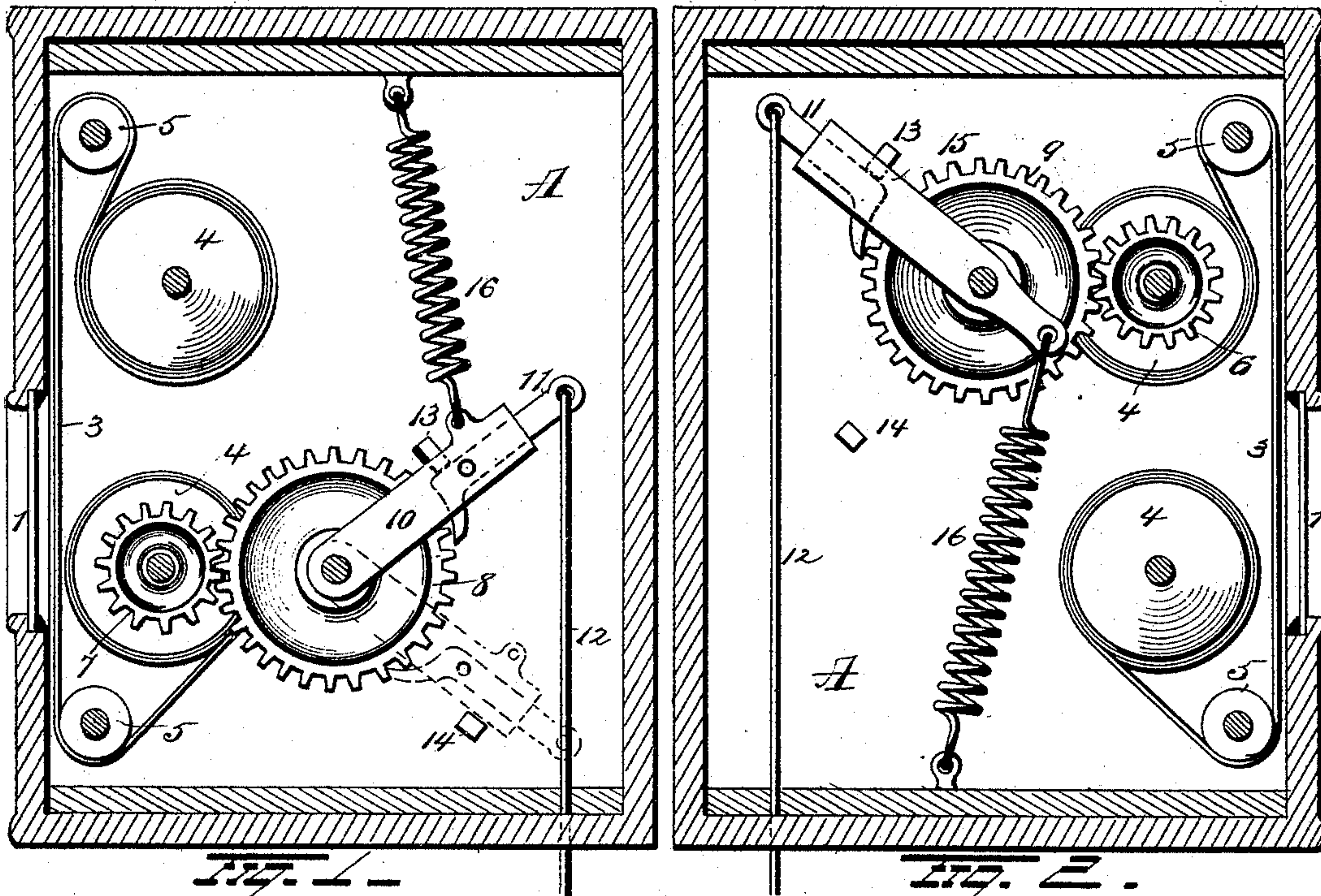
(No Model.)

2 Sheets—Sheet 1.

C. W. BRADFORD.
STREET OR STATION INDICATOR.

No. 441,787.

Patented Dec. 2, 1890.



Witnesses
C. H. Hottingham
G. F. Downing

Fig. 3 - Inventor
Charles W. Bradford

By *his* Attorney
H. A. Sumner

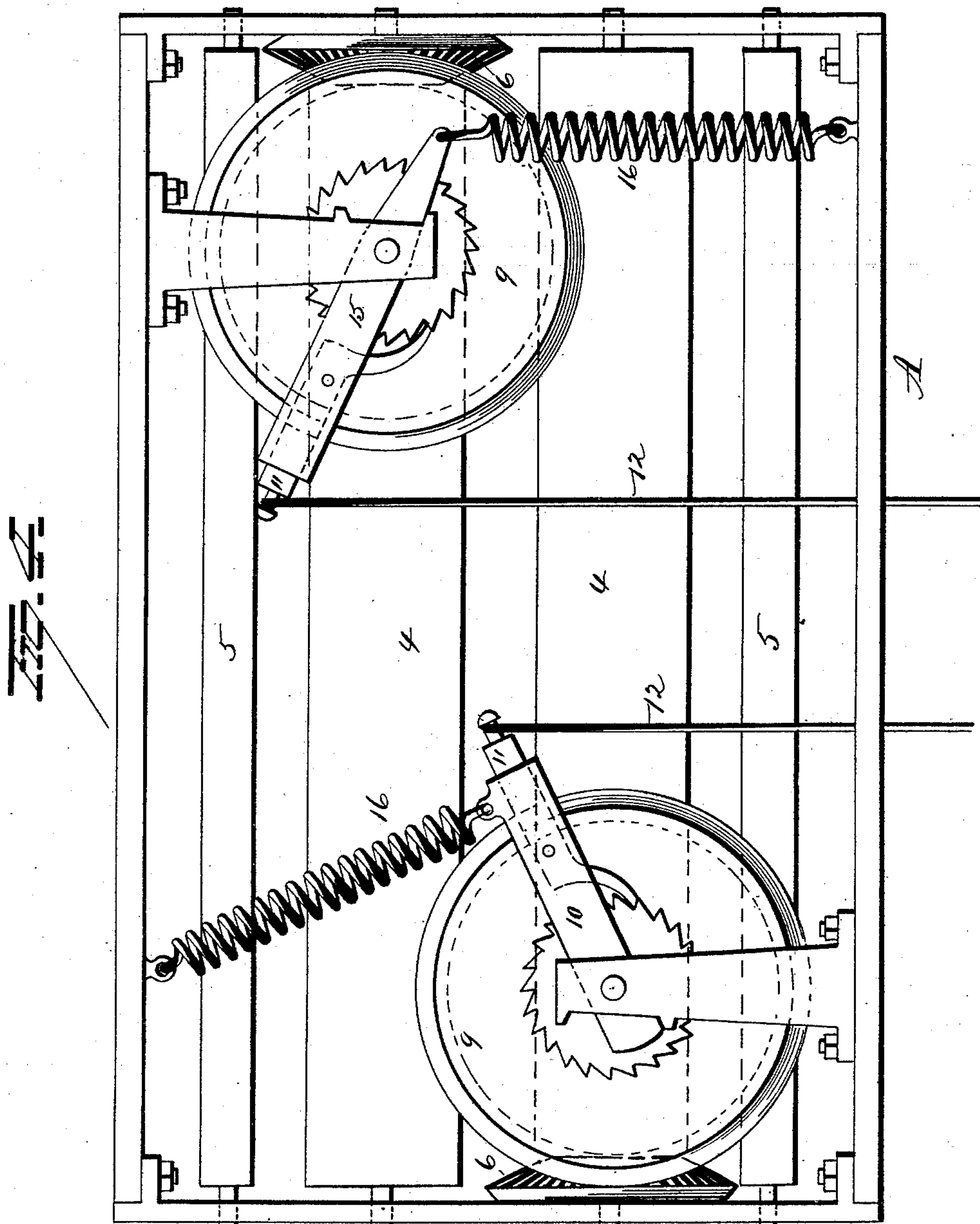
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

CHARLES W. BRADFORD, OF THORNDIKE, MAINE, ASSIGNOR OF ONE-HALF
TO EDWIN CORNFORTH, OF SAME PLACE.

STREET OR STATION INDICATOR.

SPECIFICATION forming part of Letters Patent No. 441,787, dated December 2, 1890.

Application filed May 5, 1890. Serial No. 350,605. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. BRADFORD, a resident of Thorndike, in the county of Waldo and State of Maine, have invented certain new and useful Improvements in Street or 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.

My invention relates to an improvement in street or station indicators, the object being to provide a simple device for passenger-cars to indicate the streets or stations to passengers; and with this end in view the invention consists in certain novel features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view taken from one end of the indicator, the outside being removed to show the gearing. Fig. 2 is a similar view from the opposite end. Fig. 3 is an elevation, and Fig. 4 is a modification.

A represents the box or case in which the parts of the indicator are placed. This is preferably a closed box made usually in some ornamental design and provided on its front with an opening 1, conveniently covered with glass, through which the stations or streets are exhibited, and to assist the eye it is customary to paint or print over the opening in large and attractive letters the words "The next station is," or "The next street is," the name of station or street appearing through the opening, and by way of assistance also to the memory the legend "Don't leave your bundles" is placed below the opening; but this much of the invention is of not such importance that it cannot be changed to suit convenience or according to the demand, and of far greater importance is the mechanism, now to be described, which is employed for changing the indicator at the required intervals.

The names of stations or streets are printed or otherwise represented on a belt or apron 3, and the latter is wound on a pair of rollers 4

4, one adapted to wind it up while the other unwinds, and to bring the apron into proper position across and back of the opening it is conducted over idle-rollers 5 5, located above and below the opening. These idle-rollers could be dispensed with; but it is better to employ them, for the reason that otherwise the apron would not pass straight across the opening, which is advantageous in order to make the names appear plainly before the passengers. On one end of each roller 4, and opposite each other, small pinions 6 and 7 are located, and with these pinions the teeth of gear-wheels 8 and 9 are meshed.

Thus far the gearing on the two ends has been substantially the same; but as a slight difference in the other parts exists one side will first be described and then the other. As shown in Fig. 1, an arm 10 is pivoted in proximity to gear-wheel 8, and preferably on its axle, and this arm is provided with a pivoted pawl 11, from the outer end of which depends a pull cord or handle 12, which is pulled in order to throw the pawl into engagement with the teeth of the gear-wheel; but this arm is held normally elevated by the action of a spiral spring 16, extending from the top of the box or case to the outer or free end of the arm, and also the pawl is held normally out of engagement with the teeth of the gear-wheel by means of a stop 13, which the pawl strikes, and in engagement with which it is normally held by the tensile action of the spring. So this stop not only limits the upward movement of the arm, but also operates the pawl, and the downward movement is limited by another stop 14. At the other end the lever 15 is fulcrumed on the axle of gear-wheel 9, and a spiral spring 16 connects one end of this arm with the bottom of the box or case. In other respects the gearing at this end is the same as that at the opposite end, except, perhaps, slight differences in the location and arrangement of parts. One pull-cord is pulled to turn the apron one way and the other to rewind it the opposite way, each changing the name of street or station.

In the modification, in lieu of the pinions and spur gear-wheels, the wheels are bevel-

pinions and set at right angles to each other, as shown. In other respects the two constructions are alike.

The device can be put to various purposes—
5 as, for instance, it can be made for ball-rooms and dancing-halls, having the names of the dances and the figures in the several dances thereon. It could be used at stations to indicate next trains, and innumerable other ap-
10 plications might be mentioned; but these are deemed sufficient.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts described without departing
15 from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact construction herein set forth; but

Having fully described my invention, what I claim as new, and desire to secure by Let-
20 ters Patent, is—

1. The combination, with rollers and a belt or apron wound over these rollers, of a pivoted arm having a pivoted pawl connected therewith adapted to operate the rollers when
25 it is moved from its normal position, a stop

for normally holding the pawl out of contact with the roller, and a spring for yieldingly holding the pawl in contact with the stop, substantially as set forth.

2. The combination, with a case having an opening therein, rollers, a belt or apron wound over these rollers, and idle-rollers over which the apron passes after leaving the winding-rollers, of toothed wheels on one or both winding-rollers, toothed wheels meshed therewith,
35 an arm pivoted on the axle of the said wheel, a spring for regulating the position of said arm, a pawl pivoted to the arm, a cord for operating the pawl and arm, and stops for limiting the swing of the arm and releasing the pawl
40 from engagement with the teeth, substantially as set forth.

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

CHARLES W. BRADFORD.

Witnesses:

SAMUEL KINGSBURY,
W. H. McLELLAN, Jr.