

(No Model.)

D. E. CONNER.  
STATION INDICATOR.

No. 571,301.

Patented Nov. 10, 1896.

Fig. IV.

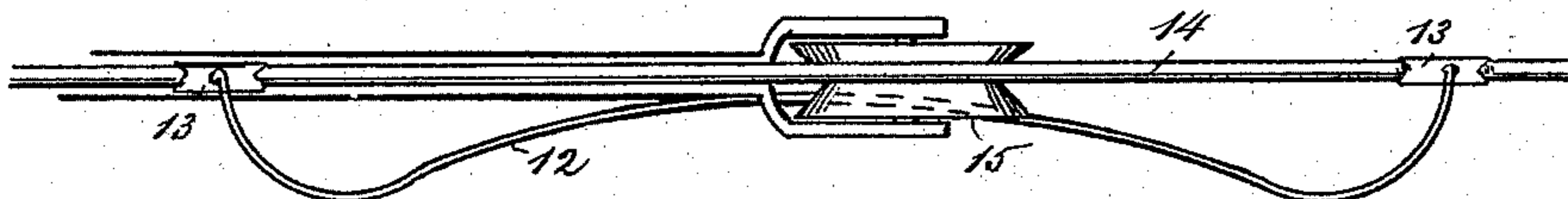


Fig. V.

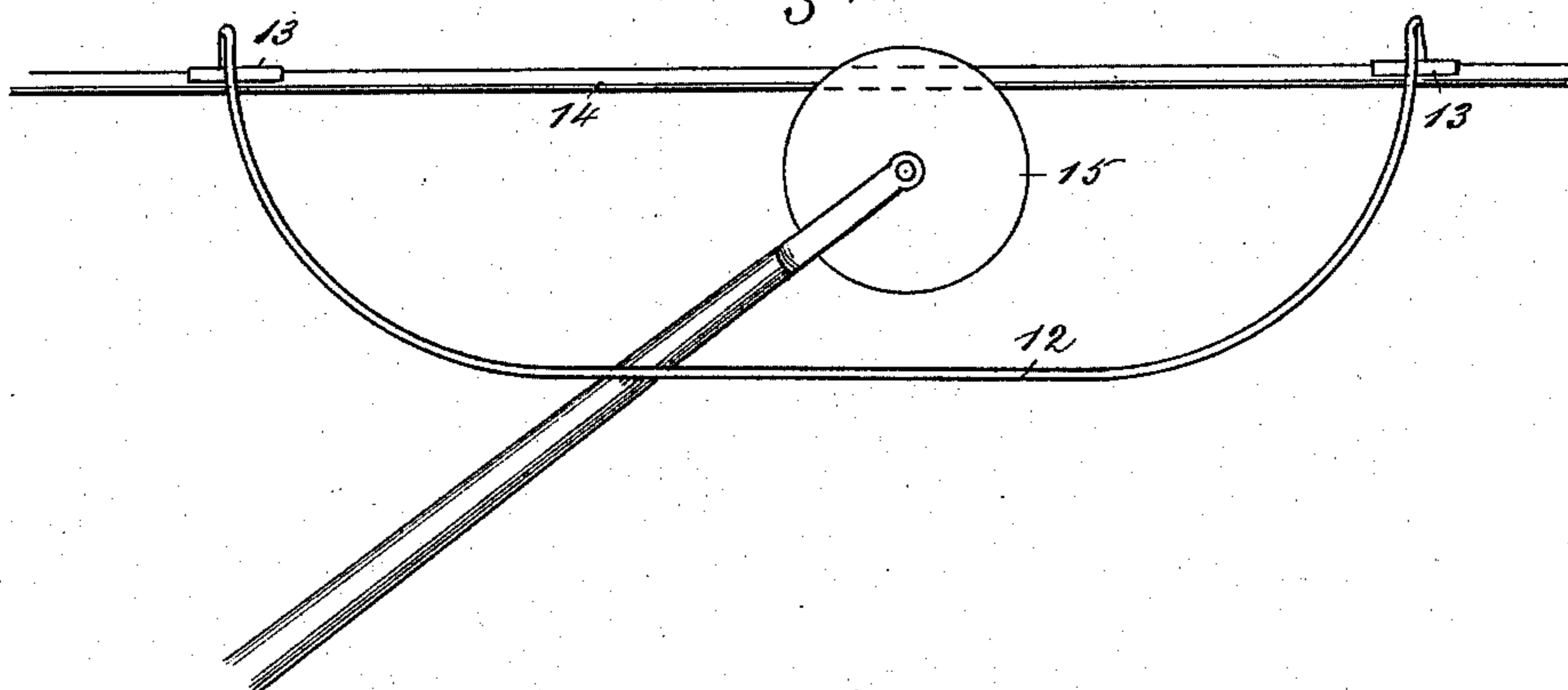


Fig. III.

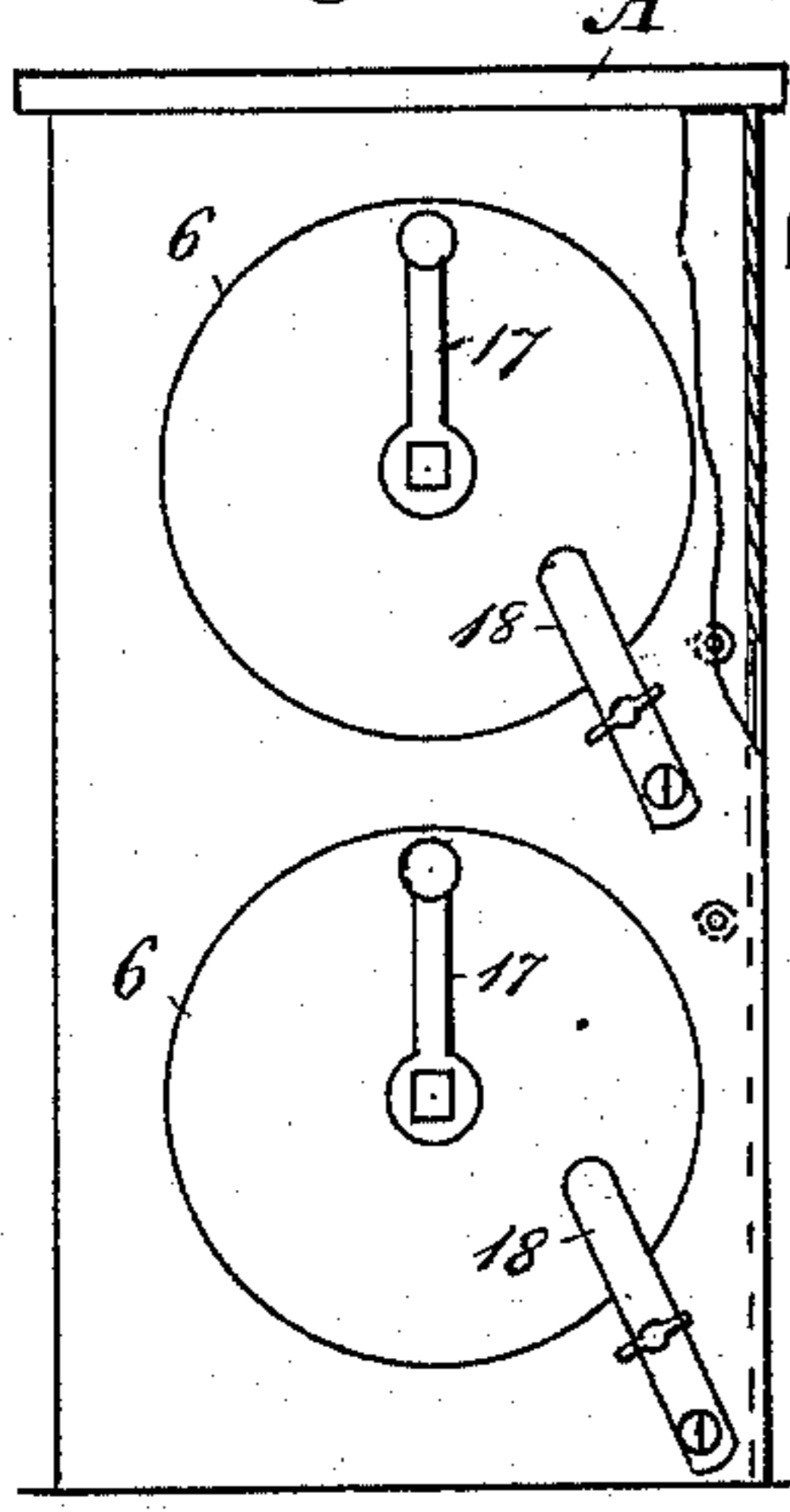


Fig. I.

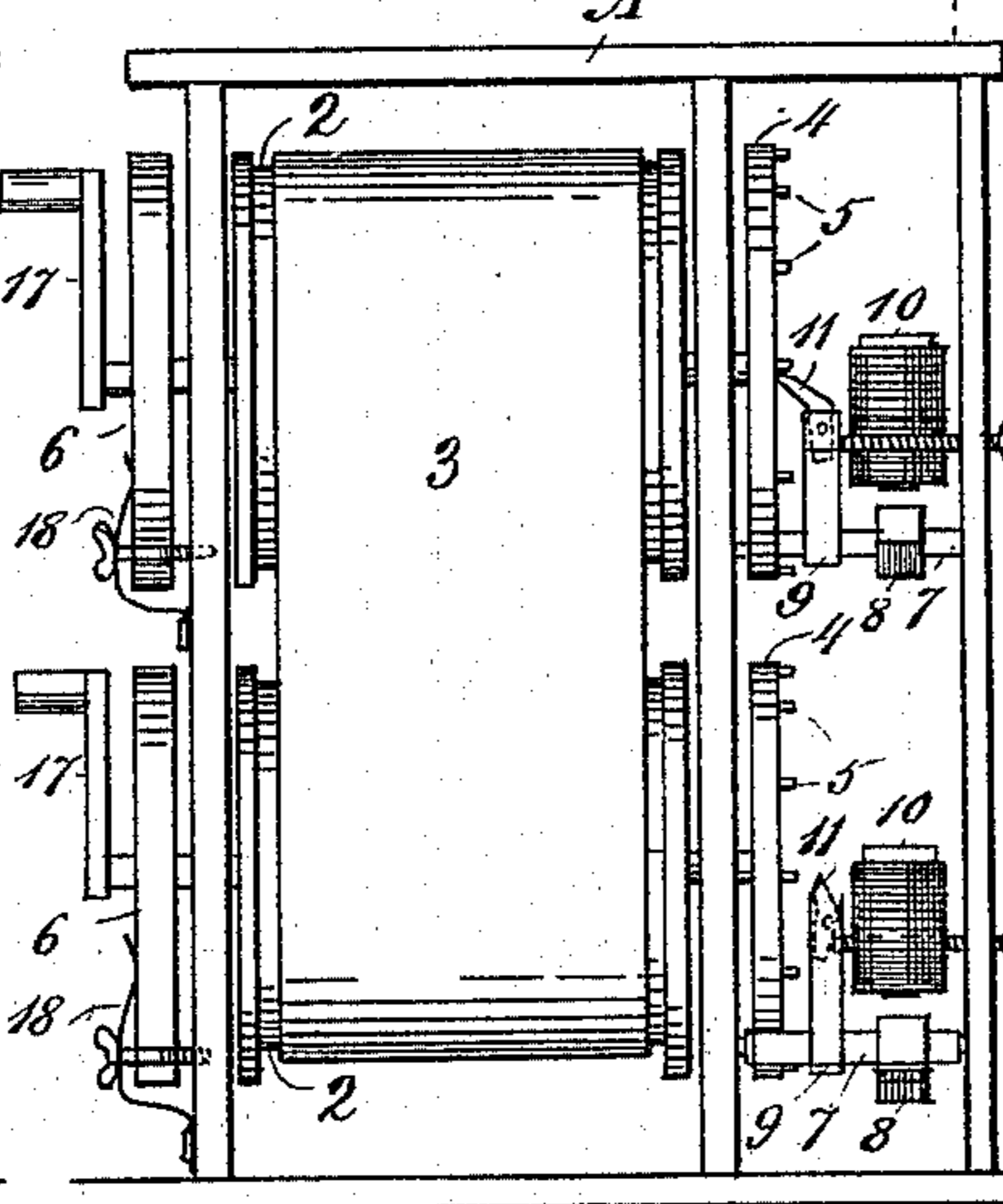
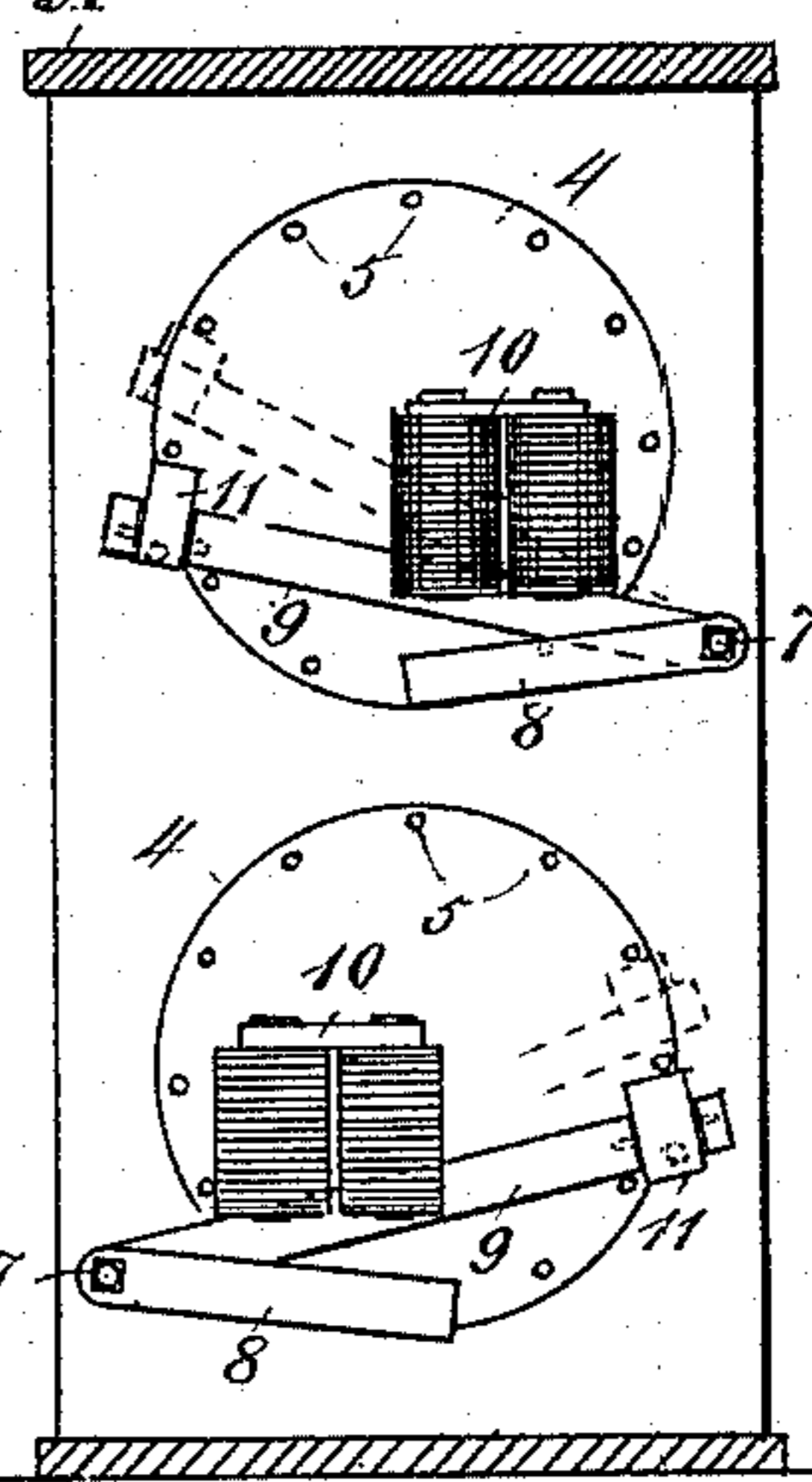


Fig. II.



Witnesses,

R. S. Millar  
L. M. Adams.

Inventor,

Daniel E. Conner.

J. Bailey Atty.

# UNITED STATES PATENT OFFICE.

DANIEL ELLIS CONNER, OF COVINGTON, KENTUCKY, ASSIGNOR TO JAMES STEFFEN, OF SAME PLACE.

## STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 571,301, dated November 10, 1896.

Application filed June 29, 1896. Serial No. 597,402. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL ELLIS CONNER, a citizen of the United States, residing at Covington, in the county of Kenton and State of Kentucky, have invented a new and useful Improvement in Station-Indicators, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a front view of my improved station-indicator; Figs. 2 and 3, side views of the same; Fig. 4, a plan view of my contact-switch, and Fig. 5 a side view of the same.

My invention pertains to certain improvements in station-indicators especially designed for electrically-propelled railway-cars, and my purpose is to provide a novel, inexpensive, and reliable device whereby stations on country lines and cross-streets in cities may be automatically and plainly presented to the view of all the passengers in a car.

The peculiar features and special advantages of the invention will be apparent by referring to the accompanying drawings, in which—

A indicates the frame of the apparatus. Two spools or rollers 2 of suitable size are journaled in the frame one above the other. A flexible belt 3, of suitable material, has its ends attached to the spools in such a manner that it may be unwound from one and transferred to the other when desired. The names of the stations or streets are plainly printed or painted on the belt in their regular order.

It will be understood that when the apparatus is completed it is incased in a suitable box, which is fixed in a prominent position and has a sight-opening through which the names of the stations may be clearly seen as they come successively into view during the progress of the car.

The spool-axles extend through the frame and are attached at one end to disks 4, which are provided at regular intervals near their peripheries with horizontally-projecting studs 5. The opposite ends of the axles carry plain disks 6, the purpose of which will be hereinafter explained. Two rock-shafts 7 are journaled in the frame near the studded disks. Each shaft carries two arms 8 and 9. The shorter arms are made of soft iron and op-

erate as armatures for the electromagnets 10. The free ends of the longer arms are provided with pivoted pawls 11, which are adapted to engage the studs 5 when desired and move the spools at each impulse of the electromagnet. These magnets are placed in an independent circuit and are actuated by a current from the line-wire through a contact switch or wire to the trolley-pole and thence downward to the magnets. The said circuit is normally open, but is automatically closed at fixed intervals by the said contact-switch, formed by a wire 12, the ends of which are provided with saddles 13, which are accurately fitted and soldered to the top of the main conducting-wire 14 in such a manner as to avoid contact with the trolley-wheel 15. The extremities of the wire being perpendicular are first bent laterally a sufficient space to escape the path of the trolley-wheel, then downwardly below the range of the same, and finally bowed inwardly in the center, as shown in Fig. 4. It will be seen that a positive frictional contact is thus made with the trolley-pole, which is provided at that point with a suitable device for closing the independent circuit hereinbefore mentioned. The electromagnet is thus brought into action, the armature and the adjacent arm are drawn up, the pawl 11 engages a stud, and the spool is moved a sufficient distance to bring into view the name of the next street or station. When a car reaches its destination, all that is required is to switch the circuit through the other magnet. The motion of the spools is thus reversed and the stations will be indicated accordingly on the return trip of the car. It will be observed that when the current is changed from one magnet to the other the pawls belonging to the idle disk are raised and held out of engagement by thumb-screws 16.

If for any reason it should be desired to change or adjust the belt from one spool to the other while a car is not running, the work may be easily performed by a crank 17. In order to prevent too free a movement of the spools and a consequent slacking and derangement of the belt, I employ adjustable friction-plates 18, which engage the plain disks 6 and regulate the movement.

What I claim as new is—

In a station and street indicator for electrically-propelled railway-cars, the combination with the herein-described contact-switch  
5 and electromagnets of the winding spools or rollers, the belt attached at its extremities to the spools and having the names of the stations or streets printed or painted thereon in regular succession, the disks provided with  
10 studs as shown and attached to the outer ends of the spools, the vertically-swinging arms adapted to move in unison with the armatures

of the magnets and having pawls at their free ends to engage the studs, all arranged substantially as and for the purpose herein specified.

In testimony that I claim the foregoing I have hereunto set my hand, this 19th day of June, 1896, in the presence of witnesses.

DANIEL ELLIS CONNER.

Witnesses:

A. C. WINTERMYER,  
P. MARINUS FERG.