

(No Model.)

A. E. TODD.
MAGNETO ELECTRIC TRANSMITTER.

No. 438,870.

Patented Oct. 21, 1890.

Fig. 1.

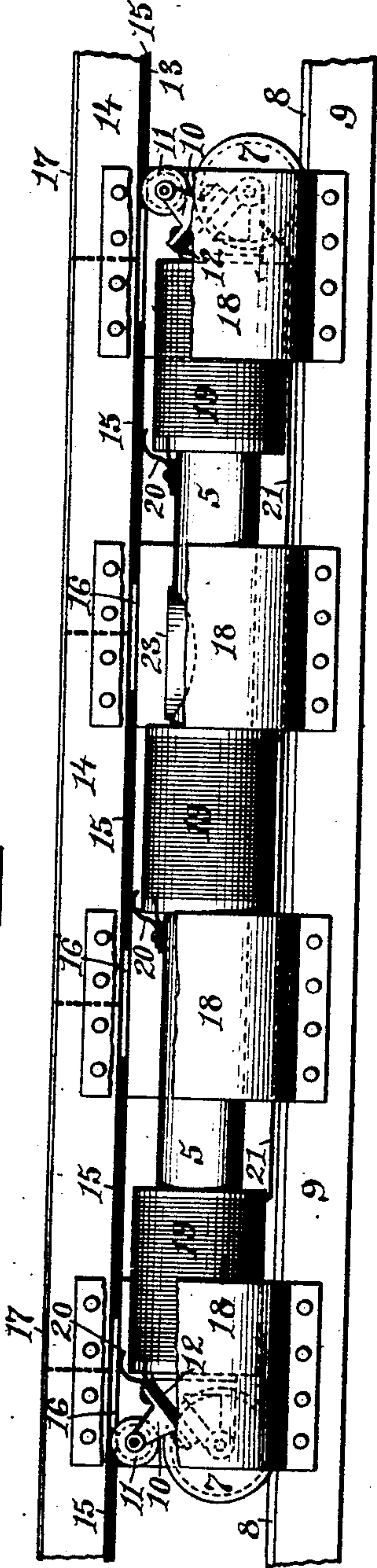


Fig. 2.

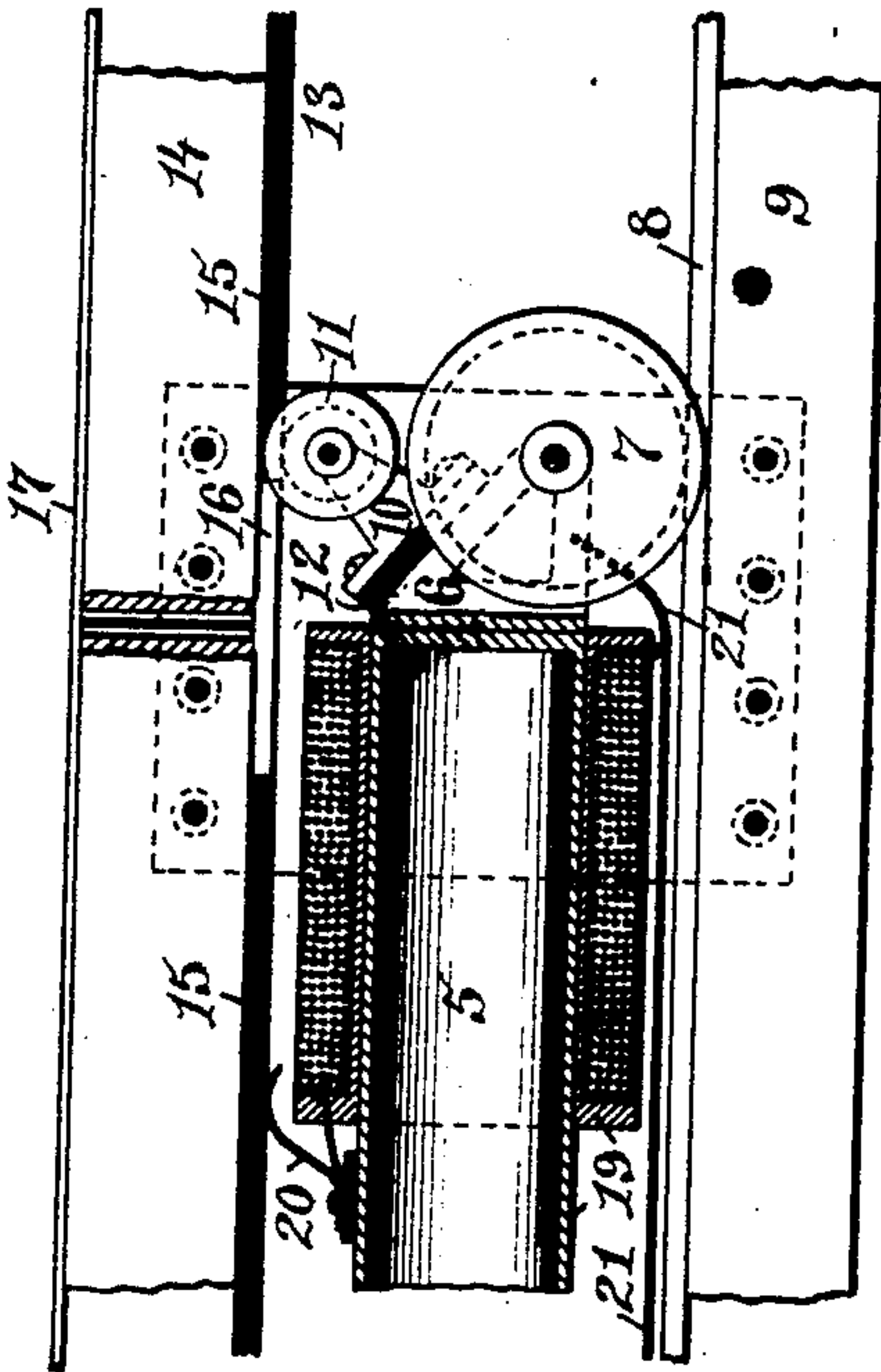
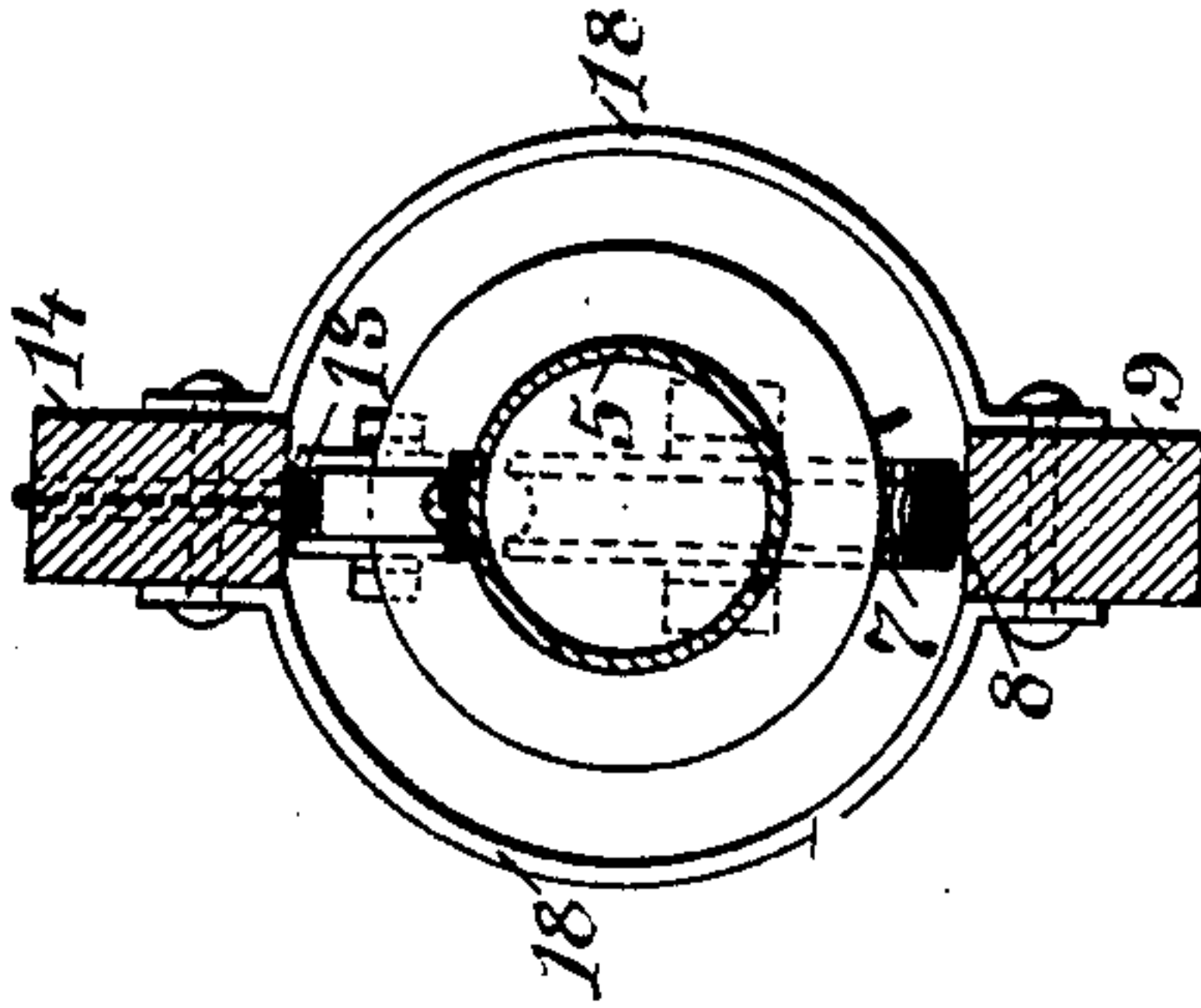


Fig. 3.



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MAGNETO-ELECTRIC TRANSMITTER.

SPECIFICATION forming part of Letters Patent No. 438,870, dated October 21, 1890.

Application filed July 23, 1890. Serial No. 359,602. (No model.)

To all whom it may concern:

Be it known that I, ARCHIBALD E. TODD, of the city of Providence, county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Magneto-Electric Transmitters; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improved device for transmitting articles by electro-magnetic force; and it consists in a receptacle provided with two or more electro-magnets, a contact rod or rail having alternate insulated sections connected with one arm of the circuit, a rail forming the other arm of the circuit or the ground, and a series of attracting-plates, as will be more fully set forth hereinafter.

Figure 1 is a side view of my improved magneto-electric transmitter. Parts of the curved plates are broken away to show the carriage more clearly. Fig. 2 is a sectional view of the rear part of the carriage and the track. Fig. 3 is a cross-section of the device.

Similar numbers of reference indicate corresponding parts in all the figures.

In the drawings, the number 5 indicates the body of the carriage, made in tubular form of any suitable non-magnetic material. On each end of the body of the carriage 5 the metal brackets 6 are secured, and in these brackets the wheels 7 are journaled. The wheels 7 run on the metallic rail 8, secured to the longitudinal sill 9.

To the brackets 6 the brackets 10 are secured, and in these brackets 10 the wheels 11 are journaled. The brackets 10 are insulated from the brackets 6 by interposing any good insulating material 12 between the brackets, as is shown in Figs. 1 and 2. The wheels 11 run on the rail 13, secured to the upper girder 14. (For the purpose of this specification the sill 9 and girder 14 are considered as made of wood.) The rail 13 is formed of alternate sections of electrically conducting and non-conducting material. The non-conducting material 15 is indicated in solid black, and the conducting-sections 16 by the white space between the two edge lines. The conducting or metallic sections 16 are connected

by short conductor-wires with the main conductor-wire 17, which forms one arm of an electric circuit. It is connected at one end with a dynamo or other source of electric energy and extends the whole length of the transmitting device.

The sill 9 and girder 14 are connected at intervals by the curved plates 18, which are firmly secured at their ends by bolts extending through the sill and the girder and through the ends of the two opposite plates 18, so as to form a space of circular or approximately circular cross-section between the two plates, through which the carriage may pass. The plates 18 are made of iron.

Surrounding the tubular carriage 5 are the soft-iron tubular cores of the magnets 19. One end of the wire of the spool of each magnet is connected with the spring-wiper 20, secured to and insulated from the carriage 5, just in front of the attractive end of the magnet-core, and the other end of the wire of the spool of each of the magnets is connected with the wire 21, which ends in and connects with the bracket 6 and through the wheel 7 with the rail 8.

The relative positions of the spring-wipers and the alternate sections of the rail 13 are such that at the instant when one wiper passes off from one contact-plate 16 another wiper is in contact with another contact plate or section 16.

To enable others skilled in the art to use my invention, I will now describe the operation of the device more fully.

The superstructure, consisting of the sill 9, the girder 14, the curved plates 18, the rail 13, having a succession of contact-sections 16 and insulated sections 15, the conductor 17, connected with a dynamo, and the rail 8, connected with the negative pole of a dynamo or at intervals with the ground, erected from any point to any other point of greater or less distance, forms a path for the carriage 5, which, being provided with a door or opening 23, is filled with such articles as are to be sent from one end of the structure to the other. At the entrance of the structure the insulated portion 15 of the rail 13 extends for a distance equal to the whole length of the carriage. When now the carriage is moved into the position shown in Fig. 1, the first

spring-wiper 20 is in contact with the contact-section 16, the circuit is closed from the conductor 17 through the contact-section 16, the wiper 20, the wire on the spool of the first magnet 19, the wire 21, the bracket 6, and wheel 7 to the rail 8, the magnet will be energized and the iron core of the magnet will be drawn forward to the two opposite curved plates 18, immediately in front of the magnet, and the carriage 5 will roll forward on the rail 8, being steadied by the wheels 11, running on the rail 13. Before the center of the first magnet is opposite the center of the curved plates 18 the wiper 20 of the second magnet has made contact with the contact-section 16. The second magnet is energized and draws itself and the carriage into or between the two curved plates 18, immediately in front of its attractive pole, and so on with the third or any number of magnets forming part of the carriage.

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

1. The combination, with the sill 9, the girder 14, the rail 13, conductor-wire 17, contact-sections 16, the rail 8, and the curved plates 18, of the carriage 5, the magnets 19, the brackets 6 and 10, wheels 7 and 11, the wipers 20, connected with the wire of the magnets, and the wire 21, connecting the wire of the magnets with the rail 8, as described.

2. The combination, with a track and a series of iron plates forming a succession of sections of practically tubular cross-section, of a tubular carriage surrounded by two or more magnets, each magnet provided with a wiper and connected with the track through the running-gear of the carriage, and a conductor connected with a dynamo and at successive intervals with contact-sections swept by the wipers, constructed to energize the magnets successively, as described.

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