E. A. LYON.

ADVERTISING DEVICE.

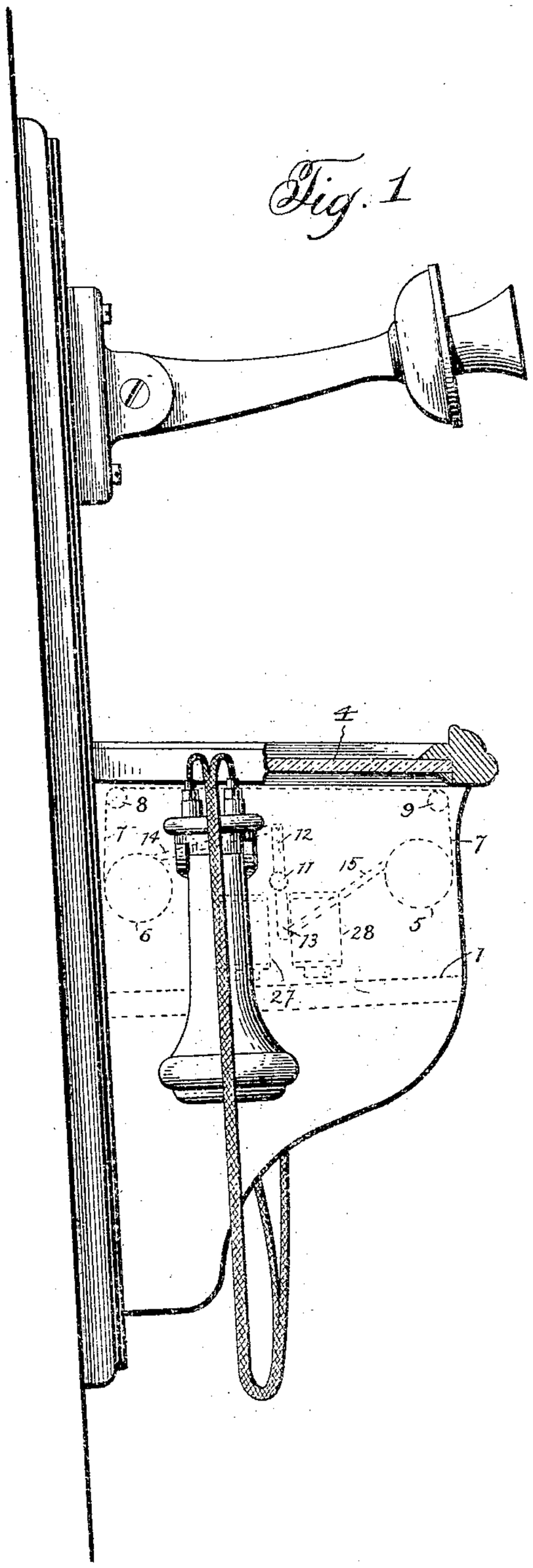
APPLICATION FILED SEPT. 22, 1905.

Patented Feb. 1, 1910.

948,285.

3 SHEETS—SHEET 1.

Fig. 1



Witnesses

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3 SHEETS—SHEET 2

Fig. 2.

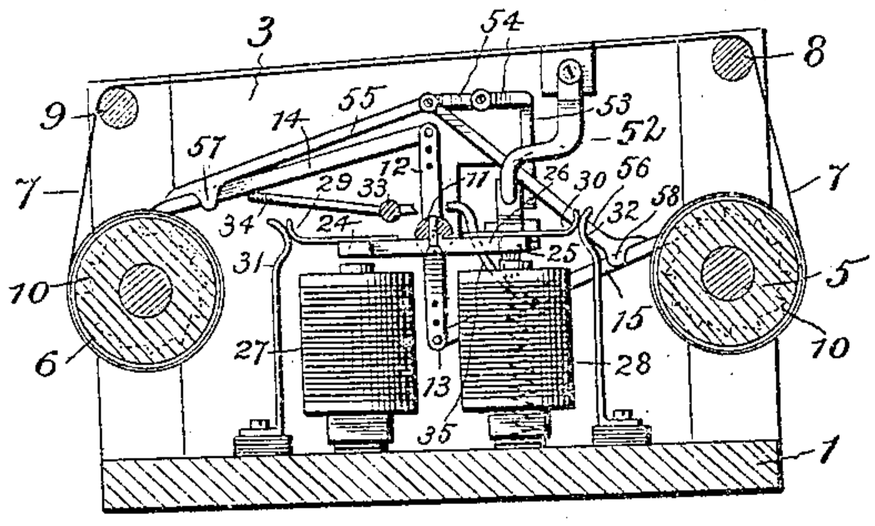
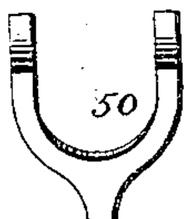


Fig. 3.



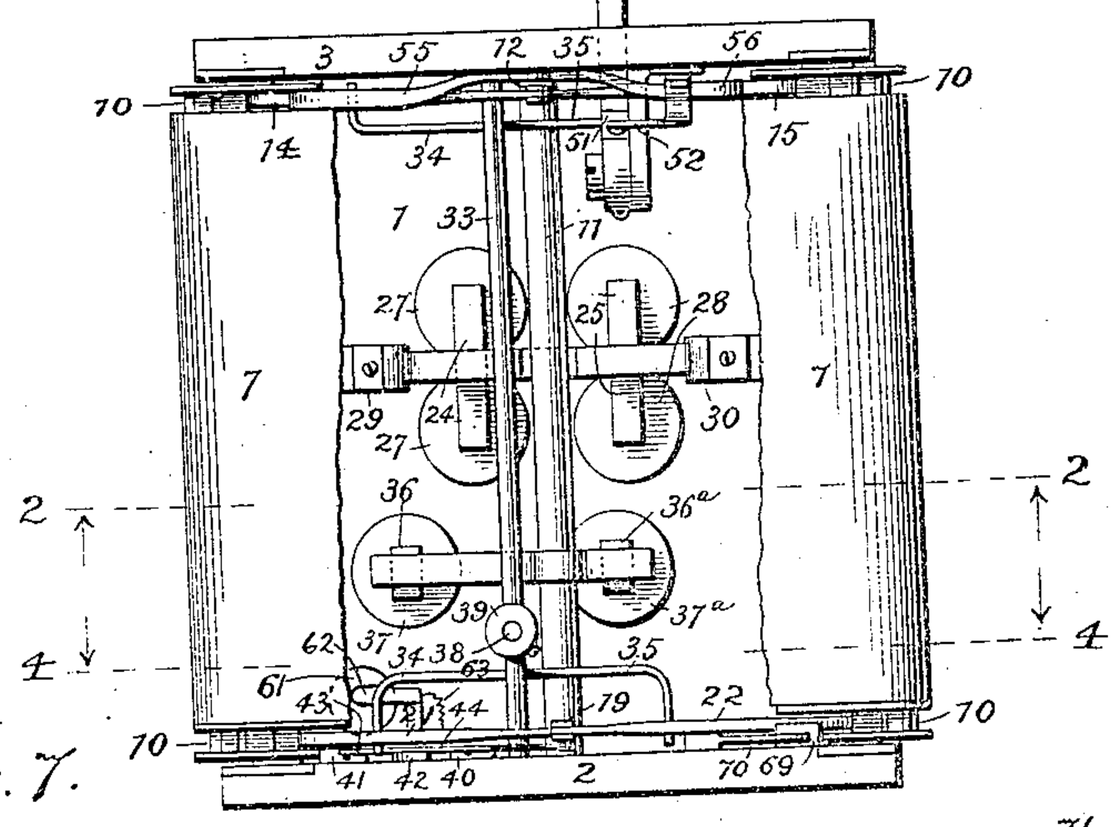
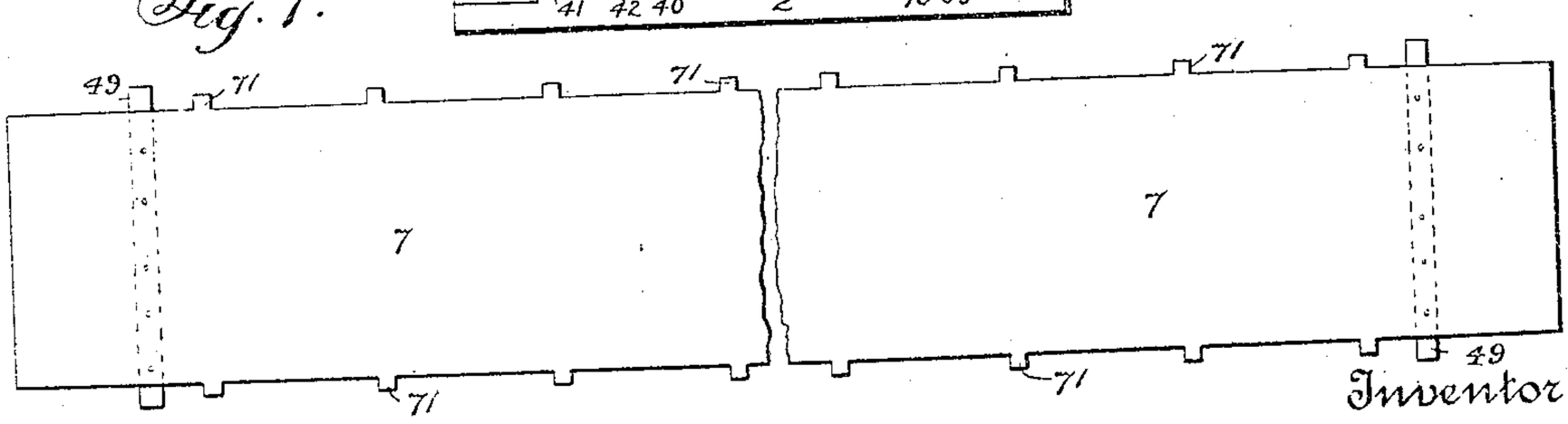


Fig. 7.



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3 SHEETS—SHEET 3.

Fig. 4.

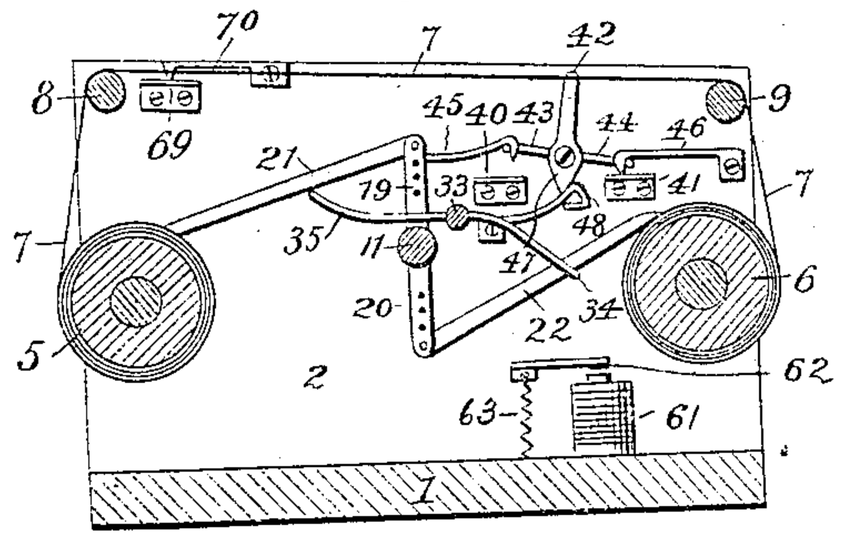


Fig. 5.

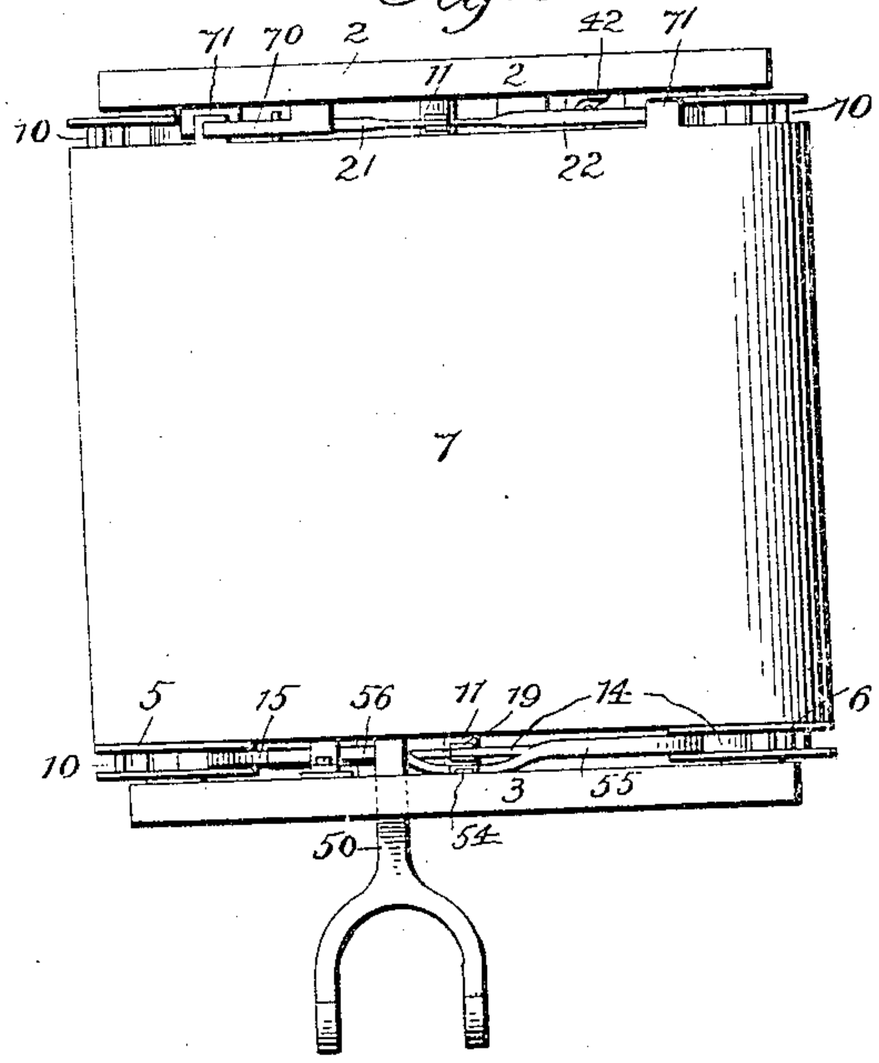
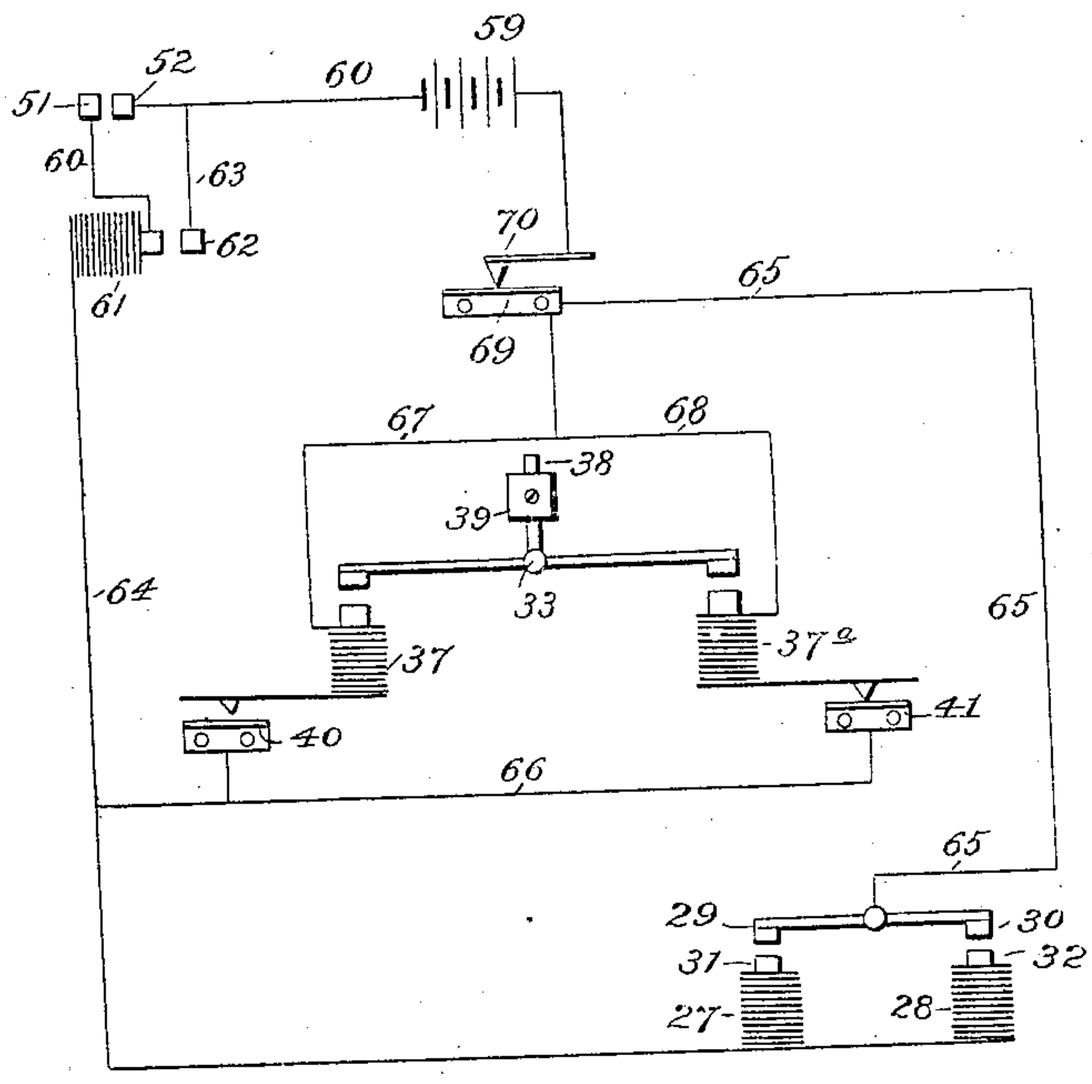


Fig. 6.



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UNITED STATES PATENT OFFICE.

ELIAS ATHERTON LYON, OF YONKERS, NEW YORK.

ADVERTISING DEVICE.

948,285. Specification of Letters Patent. **Patented Feb. 1, 1910.**

Application filed September 22, 1905. Serial No. 279,636.

To all whom it may concern:

Be it known that I, ELIAS ATHERTON LYON, of Yonkers, in the county of Westchester, and in the State of New York, have invented a certain new and useful Improvement in Advertising Devices, and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a telephone wall bracket having my invention applied thereto; Figs. 2 and 3 are respectively a vertical section and a plan view of my mechanism removed from the wall bracket, Fig. 2 being taken on the line 2—2 of Fig. 3. Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 3; Fig. 5 is a plan view of the mechanism removed from the case. Fig. 6 is a diagrammatic view of the electric circuit; and Fig. 7 is a view of the band used in my machine.

The object of my invention has been to provide an advertising device, which, among other uses, shall be especially adaptable for use on a telephone, and by which, whenever the telephone is used, my advertising device will automatically move an advertisement into view of the person using the telephone, and will leave the said advertisement in such position until the telephone is again used, when another advertisement will be moved into view, and to such ends, my invention consists in the advertising device hereinafter specified.

In carrying my invention into practice, I provide a frame-work consisting of a base 1 and side pieces 2 and 3, which are adapted to be placed within the box of a telephone wall bracket, the upper edges of the side pieces being directly beneath the top of the box. The top of the box is provided with a transparent panel 4, through which the advertisements may be seen. Rollers 5 and 6 are provided at opposite ends of the side pieces, and the ends of a band 7, having the advertisements printed thereon, are wound about the said rollers, the said band passing over rods 8 and 9 which are mounted between the said side pieces, just below the transparent panel. Each advertisement is preferably of a length occupying the entire space beneath the panel. The rollers 5 and 6 are each provided with ratchet wheels 10 at their opposite ends. A rock-shaft 11 is mounted in its ends in bearings in the side pieces 2 and 3, and at each end is provided with opposite rock-arms 12 and 13. A pawl 14 is connected with the upper rock-arm 12, at one end of the shaft, by an adjustable connection, as by a cotter pin passing through one of a series of holes in the rock-arm and through a hole in the pawl, and such pawl 14 engages the ratchet wheel at one end of the roller 6. A similar pawl 15 on the lower rock-arm 13, at the same end of the rock-shaft, engages the ratchet wheel at the corresponding end of the roller 5 when the rock-shaft is oscillated. At the opposite end of the rock-shaft are upper and lower rock-arms 19 and 20, carrying pawls 21 and 22, respectively, whose action is the reverse of the pawls at the opposite end of the rock-shaft, so that, when the pawls on one side of the rock-shaft are in operative position, the tape or band of advertisements will be wound up upon one roller, and when the pawls at the opposite side of the rock-shaft are in operative position, the reverse action will occur, and the band will be wound upon the opposite roller. The rock-shaft is adapted to be oscillated by armatures 24 and 25 that are secured upon an arm 26 carried by the rock-shaft. The said armatures are mounted directly over magnets 27 and 28, respectively, and the armatures are preferably covered with copper or other non-magnetic material, to prevent their sticking to the magnet-poles. The arm 26 is electrically connected with a battery, and is provided with brushes 29 and 30, which are adapted to touch contact springs 31 and 32, to be later described.

In order to put one pair of pawls into operation and to throw the other pair of pawls out of operation, the following arrangement is provided:—A shaft 33 is mounted in the side pieces 2 and 3, and is provided with cross-arms 34 and 35, each of which extends beneath the pawls of one of the rollers. Armatures 36 and 36^a are mounted on the said shaft above the poles of magnets 37, 37^a. An arm 38 is also mounted on the shaft 33, perpendicular to the armature, and is provided with a weight 39, which is preferably adjustable on the said arm.

In order to energize the magnet 37 or the magnet 37^a, when it is desired to reverse the direction of movement of the band, the following arrangement is provided:—Contact plates 40 and 41 are secured upon one of the sides 2 or 3, and a lever 42 is pivoted above

and between the said plates. Such lever has two arms 43 and 44, respectively, which extend under contact springs 45 and 46, each of the latter being in circuit either with the magnet 37 or the magnet 37ª. The lever 42 has a beveled nose 47 which bears against a spring 48, secured to the side piece 2 or 3, the said spring tending to hold the lever in either of two positions, in one of which it holds the brush 46 out of contact with the plate 41, and in the other of which it holds the brush 45 out of contact with the plate 40. The plates 40 and 41 are connected with a pole of the battery, as hereinafter described. The lever 42 is adapted to be thrown from one position to the other at the end of the travel of the band by the projecting end of either of two strips 49 secured to the said band, so that, at the end of the travel of the band the lever will be turned and the proper magnet 37 or 37ª energized to reverse the pawls on the rollers and to cause the opposite winding of the band. The hook 50, upon which the receiver is supported, is provided with a lug 51, which makes contact with an insulated spring 52, later referred to. A link 53 is pivoted to the said hook at its lower end, and at its upper end is connected to one end of a lever 54, to whose opposite end pawls 55 and 56 are pivoted. Said pawls rest upon the pawls 14 and 15, the said pawls being provided with lugs 57 and 58, which straddle the pawls 14 and 15.

Referring now to Fig. 6, illustrating the electric circuit, the battery 59 has one of its poles connected by a wire 60 to the spring 52, with which the lug 51 on the receiver hook makes contact, the lug being so shaped that when the receiver is lifted off the hook, the usual springs of the hook shall carry the lug 51 against the said spring. This completes the circuit from the battery to the lug 51, from whence the current passes, by a wire 60 to a magnet 61, which magnet has an armature 62 that is in circuit by means of a wire 63 with the battery. When the current passes through the magnet 61, the armature 62 is attracted, and a circuit closed at such point, thus cutting out the circuit through the receiver hook, so that, if the hook is raised and lowered, as is frequently done in calling "central", it will not interrupt the current operating my advertising device. From the magnet 61 a wire 64 extends to the magnets 27 and 28, to both of which is connected. The opposite end of the coil of the magnet 27 is connected to the contact spring 32, and the opposite end of the coil of the magnet 28 is connected to the contact spring 31. From the contact springs 31 or 32, the current passes to the brushes 29 or 30, and thence, by a wire 65, to the battery. The wire 64 is also connected to a wire 66, which is branched and connected with the plates 40 and 41. The plate 40 is in circuit with the magnet 37, and the plate 41 is in circuit with the magnet 37ª. The opposite ends of the coils of the said magnets are connected by wires 67 and 68 with the battery 59. The wire 65 is connected with a plate 69, over which the edge of the band passes, a brush 70 being mounted above the band and being in contact with the plate 69 and completing the circuit when the band does not interrupt. Lugs 71 are formed on the edges of the band, at proper intervals, to ride under the brush 70 and break contact with the plate 69, thus interrupting the rotation of the rollers at points where it is desired to stop the band.

In the operation of my device, when the receiver hook is released, by removing the receiver, its spring throws the lug 51 into contact with the spring 52, and the movement of the receiver hook raises the link 53, swinging the lever 54, and throws out the pawls 55 and 56 along the upper surface of the pawls 14 and 15. That one of the pawls 55 or 56 which is over the pawl 14 or 15 that is in operative position, is thus thrust into contact with a ratchet wheel, and the corresponding roller is rotated sufficiently to carry the lug 71 out from under the brush 70, permitting such brush to contact with the plate 69, thus completing the electric circuit and energizng either magnet 27 or 28. Supposing the current to pass through the magnet 27, it will draw down the armature 24, causing the roller 6 to be moved one tooth by the pawl 14. This action, however, will draw the spring 30 away from the contact 32, and will break the circuit of the magnet 27, while, at the same time, it will complete the circuit of the magnet 28 through the spring 29 and contact 31. The magnet 28, thus being energized will draw down the armature 25, and cause the pawl 21 to again move the roller 6, such oscillation taking place so long as the spring 70 is permitted to be in contact with the plate 69, owing to the edge of the band being cut-away during such travel. The band will thus travel until a new advertisement has been fully moved into position, at which point a tooth 71 on the edge of the band will ride under the brush 70, interrupting its contact with the plate 69, stopping the apparatus, and deënergizing the magnet 61, and permitting the armature contact 62 to be retracted by its spring.

The operation above described will continue until the projecting end of the strip 49 at one end of the band comes in contact with the lever 42, when the said lever will be thrown over to the opposite position, permitting the brush 46 to come in contact with the plate 41, and raising the brush 45 from contact with the plate 40, thus causing the magnet 37ª to be energized, and causing the

shaft 33 to be oscillated, and one of the cross-arms 34 or 35 to raise the pawls, which have been operating, away from contact with their ratchet wheels, and causing the other of said arms to drop the pawls of the opposite roller into operative position. This action results in a reversal of the direction of movement of the band.

I believe myself to be the first to provide a telephone with a movable advertising device, which is actuated by placing the telephone in condition for use, and I desire broadly to claim such invention.

I claim:

1. The combination with a telephone, of a movable advertising device adapted to be electrically operated, a contact in the circuit of said device adapted to be made by the releasing of the receiver hook of the telephone, and a magnet adapted to short-circuit said contact, said magnet being actuated by the current passing through said circuit.

2. The combination with a telephone of a movable advertising device adapted to be electrically operated, a contact in the circuit of said device adapted to be made by the releasing of the receiver hook of the telephone, a magnet adapted to short circuit said contact, said magnet being actuated by the current passing through said circuit, and means carried by said advertising device that are adapted to interrupt said circuit at the desired point in the travel of the advertisements.

3. In an advertising device, the combination of a band having advertisements thereon, electrically operated means for moving said band, a brush and contact in the circuit of said means, and projections on said band which are adapted to pass between said brush and contact at points where it is desired to stop the movement of said band.

4. In an advertising device, the combination of a band having advertisements thereon, electrically operated means for moving said band, a brush and contact in the circuit of said means, projections on said band which are adapted to pass between said brush and contact at points where it is desired to stop the movement of said band, and means for reversing the movement of said band when it has reached the limit of its travel.

5. In an advertising device, the combination of two rollers, a band having advertisements thereon and adapted to be wound upon said rollers, pawls for actuating each of said rollers, means controlled by the movement of the band for moving one or the other of said sets of pawls to operative position whereby said band may be automatically wound alternately upon one or the other of said rollers, said means comprising a rock shaft, two magnets, one for oscillating said shaft in one direction, and the other for oscillating said shaft in the opposite direction, and arms carried by said shaft and adapted to engage said pawls.

In testimony that I claim the foregoing I have hereunto set my hand.

ELIAS ATHERTON LYON.

Witnesses:
EDWIN J. PRINDLE,
CHAS. J. WILLIAMSON.