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AUTOMATIC MOVABLE ADVERTISING APPARATUS.

APPLICATION FILED MAY 8, 1906.

Patented Apr. 6, 1909.

2 SHEETS—SHEET 1.

917,584.

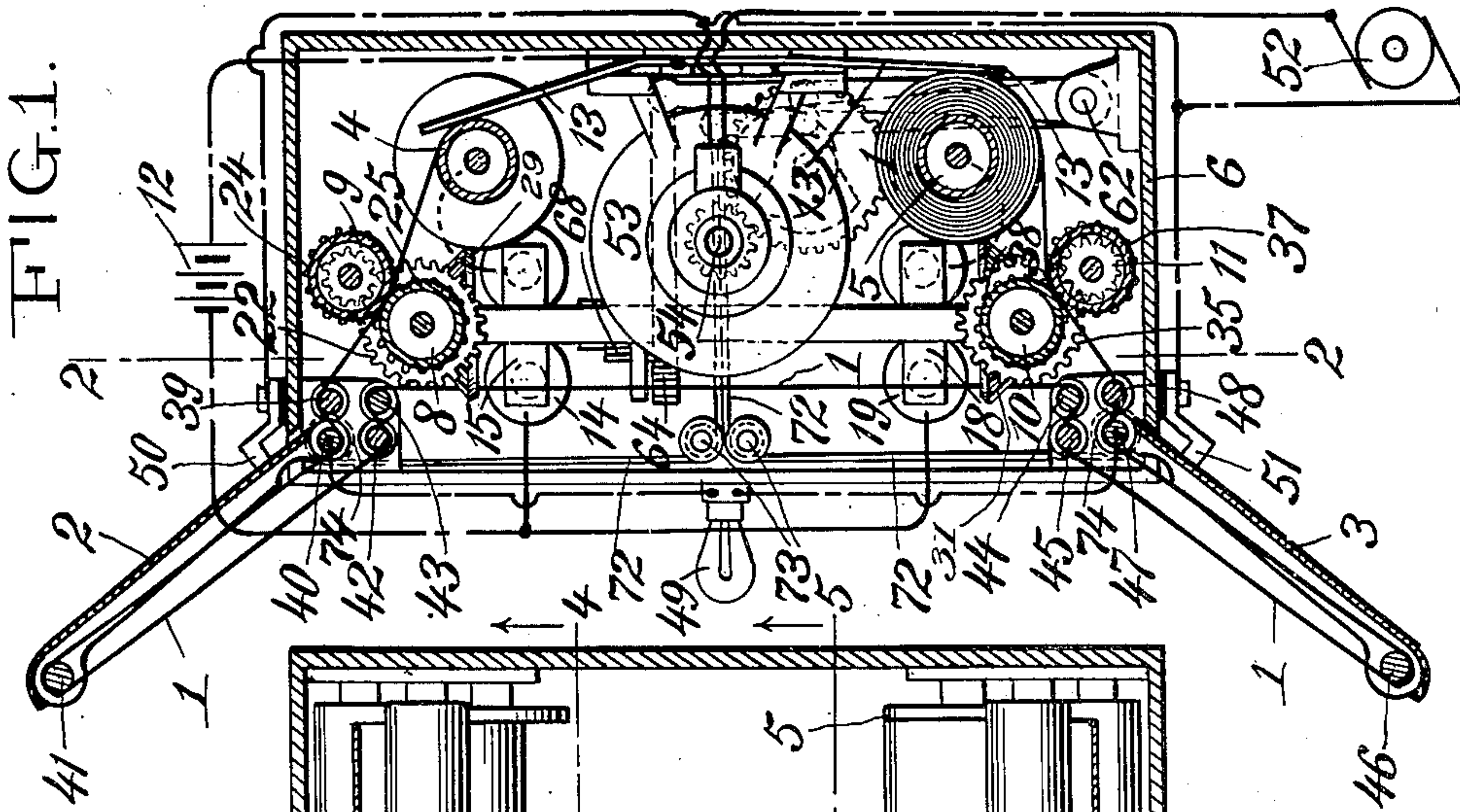
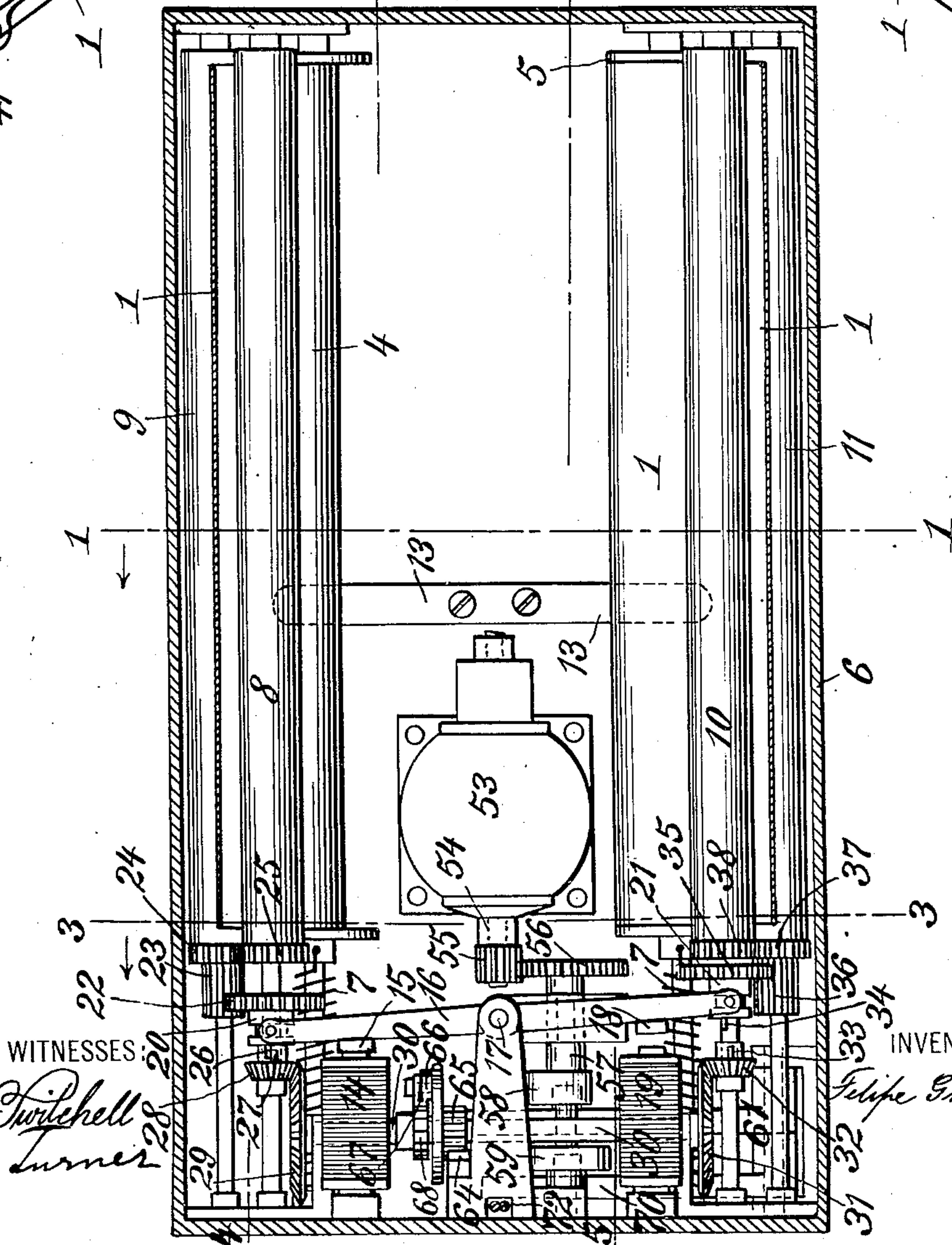


FIG. 2.



WITNESSES

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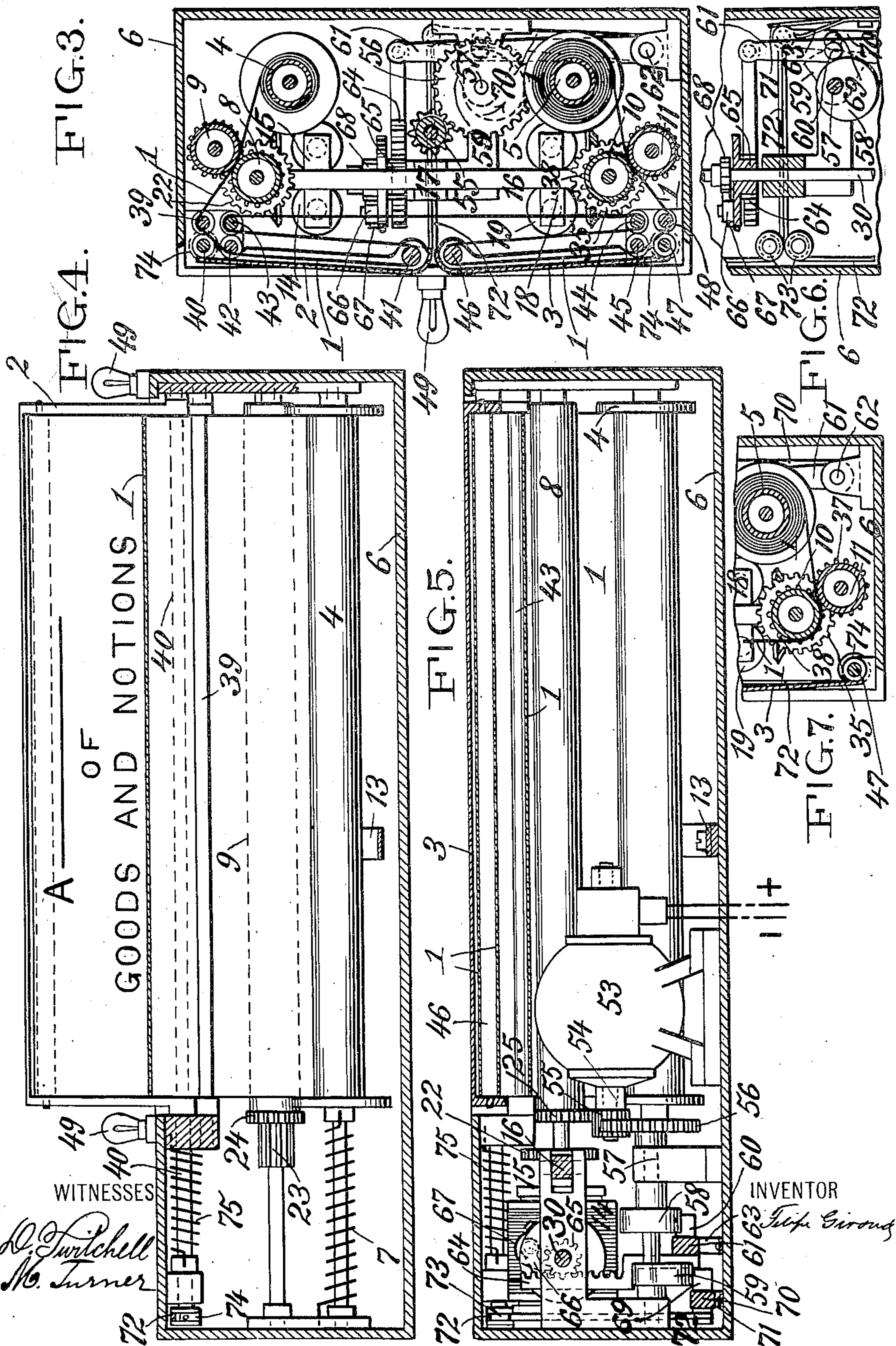
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# UNITED STATES PATENT OFFICE.

FELIPE GIROUD, OF NEW YORK, N. Y.

## AUTOMATIC MOVABLE ADVERTISING APPARATUS.

No. 917,584.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed May 8, 1906. Serial No. 315,752.

*To all whom it may concern:*

Be it known that I, FELIPE GIROUD, a citizen of Cuba, and resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Automatic Movable Advertising Apparatus, of which the following is a specification.

My invention relates to automatic, movable, advertising apparatus.

The object of the invention is to provide a means for automatically covering an advertising space at regular intervals, during which covered interval the advertisement is shifted, and another advertisement takes its place: the cover is then removed in order that the new advertisement may be exposed to view after which the first described operation will be repeated.

The invention consists in the use of a curtain which alternately moves and stands still, such alternate movement being accompanied by a corresponding closing and opening of doors which expose the curtain during the interval of no movement of the curtain, the doors then closing and remaining closed during the movement of the curtain.

The invention also consists of a reversing means whereby the curtain is caused to travel in an opposite direction when either end is reached. Such reversing means being provided at the end of movement of the curtain in either direction.

In the accompanying drawings Figure 1 is a vertical cross-section of the apparatus on the line 1—1 of Fig. 2 showing the doors open. Fig. 2 is a vertical longitudinal section on the line 2—2 of Fig. 1. Fig. 3 is a vertical cross-section on the line 3—3 of Fig. 2 showing the doors closed. Figs. 4 and 5 are longitudinal sections on corresponding lines 4—4 and 5—5 of Fig. 2 looking in the directions indicated by the arrows. Fig. 6 is a sectional elevation of a portion of the apparatus. Fig. 7 is a sectional elevation of a portion of a modified form of apparatus.

I will first briefly describe the operation of the apparatus, after which I will give a description of the mechanism for performing such operations.

A very long curtain or roll (1) of cloth or other suitable material has advertising matter inscribed upon different sections throughout its length which will be successively moved into view and stopped, then covered by means of swinging doors (2) and (3)

when the curtain will be moved to expose another section to view. The doors will then open; the curtain standing still while the doors remain open.

The ends of the curtain are secured to rollers (4) and (5) which revolve in bearings forming part of the casing (6). Upon each of the rollers (4) and (5) is coiled a spring (7), one end of which is secured to the roller and the other end secured to the casing, the springs acting in opposition to each other to keep the curtain wrapped upon the rollers and hold it taut. Movement of the curtain in one direction is caused by means of feed-rollers (8) and (9) and in an opposite direction by means of feed-rollers (10) and (11). When one end of the curtain is reached, an electric circuit through battery (12) is closed by means of a spring (13) which makes electric contact with the metal of roller (4), for example, which is electrically connected to an electro-magnet (14) which attracts its armature (15) secured to one end of a lever (16) having its center pivoted at (17) to part of the casing (6). The other end of the lever (16) is provided with an armature (18) which co-acts with an electro-magnet (19) made operative as spring (13) makes electric contact with metal of roller (5) when the opposite end of the curtain is reached.

The ends of the lever (16) are in engagement with sliding grooved clutch collars 20 and 21 loosely mounted on the shafts of feed rollers 8 and 10. Clutch collar 20 is provided with a gear wheel 22 in engagement with a pinion 23 having a broad face to permit sliding movement of gear wheel 22 without disengaging the gear teeth. Pinion 23 is secured to the shaft of feed roller 9 which also has a gear wheel 24 secured to it which is in mesh with a gear wheel 25 secured to feed-roller 8. Clutch collar 20 is also provided with a pin 26 which by the movement of lever 16 is thrown into or out of engagement with pin 27 on a bevel pinion 28 turning freely upon the shaft of feed roller 8.

Bevel pinion 28 is in mesh with a bevel gear wheel 29 secured to one end of an intermittently driven power shaft 30. Upon the opposite end of the shaft 30 is a bevel gear wheel 31 in mesh with a bevel pinion 32 turning freely upon the shaft of feed-roller 10. Bevel pinion 32 has a pin 33 which may be engaged by a pin 34 on sliding clutch collar 21. Clutch collar 21 is also



provided with a gear wheel 35 in mesh with a pinion 36 having a broad face, secured to the shaft of feed-roller 11. Feed roller 11 has a gear wheel 37 secured to it which is in mesh with a gear wheel 38 secured to feed roller 10.

From the foregoing description it will be evident that movement of lever 16 will disconnect one pair of feed-rollers from the driving shaft 30 and connect the other pair of feed-rollers to the shaft causing the curtain to be moved in one direction by one pair of feed-rollers and in the opposite direction by means of the other pair of feed-rollers.

The curtain as it comes from spring roller 4 passes between the pair of feed-rollers 8—9 thence partly around a roller 39 and the shaft 40 to which swinging door 2 is secured. From shaft 40 the curtain passes partly around a roller 41 mounted in the free end of swinging door 2, thence to rollers 42 and 43 from which it extends across the advertising space to two similar rollers 44 and 45, then partly around a roller 46 mounted in the free end of swinging door 3 to the shaft 47 to which the door 3 is secured. From shaft 47 the curtain passes partly around a roller 48 then between feed-rollers 10 and 11 to spring take up roller 5.

By reference to Fig. 1 it will be seen that the portion of the curtain extending from the roller 43 to the roller 44 is exposed to view and that the portion of the curtain extending respectively from the rollers 42 and 45 to the rollers 41 and 46 mounted in the free ends of the open doors 2 and 3 is also exposed to view. This arrangement of the curtain greatly increases the size of the advertising surface, compared to the size of the casing, every time the doors open. Such increase in size serves to attract attention, besides affording greater surface for advertising.

When the doors are closed the curtain assumes the position shown in Fig. 3, passing from the feed-rollers 8 and 9 partly around rollers 39 and 42 thence partly around roller 41 in the free end of door 2 to roller 43 and across the advertising space to roller 44 then partly around roller 46 in the free end of door 3 to rollers 45 and 48 to feed rollers 10 and 11. Doors 2 and 3 are in electric connection with lamps 49 so that as the doors are swung open they cause the lighting of the lamps by making electric contact with stops 50 and 51 which are connected to an electric generator 52. Electric generator 52 is also connected to an electric motor 53 for actuating the apparatus. The shaft 54 of the motor has a pinion 55 attached which is in mesh with and drives a gear wheel 56 secured to a shaft 57 to which is secured an eccentric cam 58 and a cam 59.

The eccentric cam 58 acts upon a roller

60 connected to an arm 61 pivoted at 62 which is held against the eccentric by means of a spring 63. The free end of the arm 61 is connected to a rack bar 64 in mesh with a gear wheel 65 loosely mounted upon the power shaft 30. Gear wheel 65 has a pawl 66 pivoted upon it, which by means of a spring 67 is caused to engage a ratchet wheel 68 secured to the power shaft 30. The action of the eccentric 58 is such that one-half of a revolution of shaft 57 causes movement of the power shaft 30 the other half revolution permitting the power shaft 30 to stand still while the pawl rides back over the ratchet teeth of wheel 68.

The cam 59 acts upon a roller 69 connected to an arm 70 pivoted at 62 which is held against the cam by means of a spring 71. The free end of the arm 70 is connected by means of cords 72 which pass over pulleys 73 and are connected, one to a roller 74 secured to shaft 40 of door 2 and the other to another roller 74 secured to the shaft 47 of door 3.

Each of the shafts 40 and 47 of doors 2 and 3 has a spring 75 attached which acts to open the doors, and the action of the cam 59 is to close them.

The relation which the cam 59 has to the eccentric 58 is such that during each one-half of a revolution of the eccentric which permits shaft 30 to stand still the cam will permit the doors to remain open. The cam then acts quickly to close the doors, and while they are closed the eccentric acts to turn the power shaft 30 and consequently to move the curtain.

In Fig. 7 is shown a modification in which the curtain is passed directly from one pair of feed-rollers to the other instead of passing over rollers in the doors in the manner described.

The apparatus is shown with the doors swinging up and down, and the curtain moving vertical to permit easy movement of the curtain. In some cases it may be desirable to stand the casing on one end, so as to cause the doors to swing horizontal and the curtain to move horizontal.

Having described my invention what I claim and desire to secure by Letters Patent is:

1. An advertising apparatus comprising an intermittently moved advertising curtain, alternately opened and closed doors carrying a part of said curtain, means for moving said curtain and doors, whereby the curtain is moved when the doors are closed, and when the doors are opened, the curtain stands still.

2. The combination with an advertising curtain and a swinging door which alternately covers or exposes the display field of the curtain said door carrying an adjacent portion of said curtain, a roller on said door over which the curtain passes; and rollers for supporting the curtain, when the door



swings from the curtain covering to the curtain exposing position.

3. In an advertising apparatus the combination with an intermittently movable curtain, of one or more doors adapted when closed to conceal the display field of the curtain, said doors carrying adjacent portions of said curtain, means automatically opening and closing the doors, and means shifting the curtain as the doors are closed for presenting a new advertising field of the curtain when the doors are next opened, substantially as described.

4. The combination with an advertising curtain in a casing and a swinging door which alternately covers or exposes the curtain, said door carrying a part of the curtain, means for imparting an intermittent movement to the curtain on the door and in the casing, and means for swinging the door, whereby the advertising curtain is exposed on the door and in the casing.

5. An advertising apparatus comprising a casing and doors, an advertising curtain supported in the casing and on the inner-side of the doors, and means for actuating the cur-

tain and the doors, whereby the opening of the doors simultaneously displays the curtain in the casing and on the doors.

6. In an advertising apparatus, the combination with an advertising curtain, and doors which cover the curtain, said doors carrying a part of the curtain, of means for imparting an intermittent movement to the curtain, and for opening and closing the doors.

7. An advertising apparatus comprising spring take-up rollers, an advertising curtain having the two ends secured to said spring take-up rollers, feed rollers interposed between which the curtain passes, doors which cover the curtain, said doors carrying a part of the curtain, and means for imparting an intermittent movement to the curtain and for opening and closing the doors.

Signed at New York in the county of New York and State of New York this 4th day of May A. D. 1906.

FELIPE GIROUD.

Witnesses:

DONN TWITCHELL,  
M. TURNER.