

1,035,574.

Patented Aug. 13, 1912.

2 SHEETS—SHEET 1.

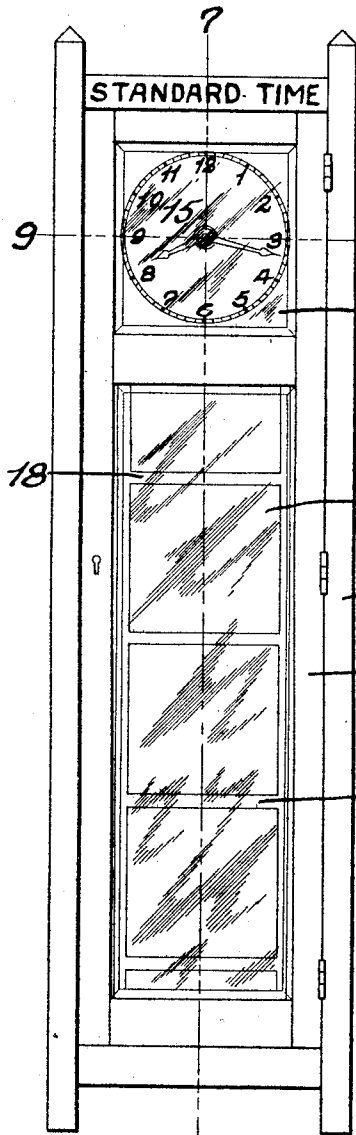


FIG. 1.

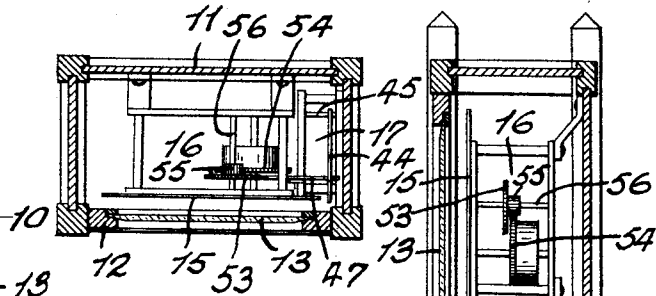


FIG. 3.

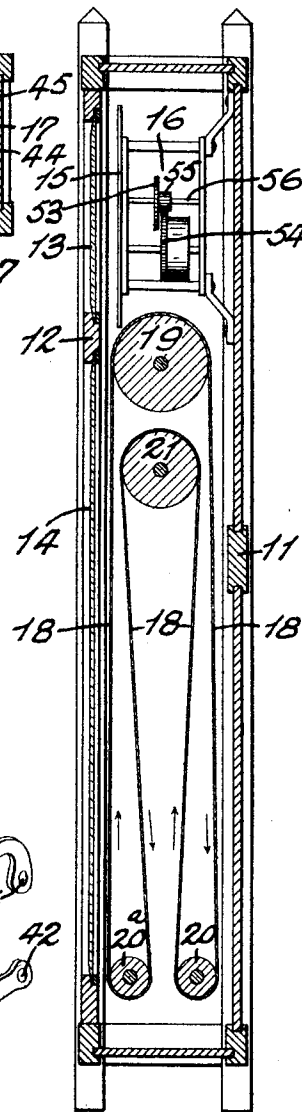


FIG. 2.

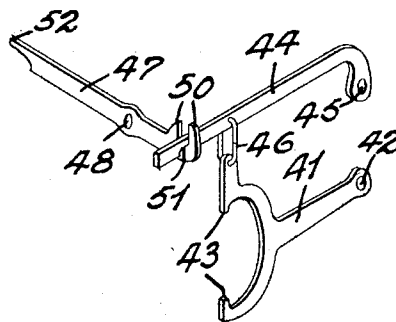


FIG. 6.

WITNESSES

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2 SHEETS-SHEET 2.

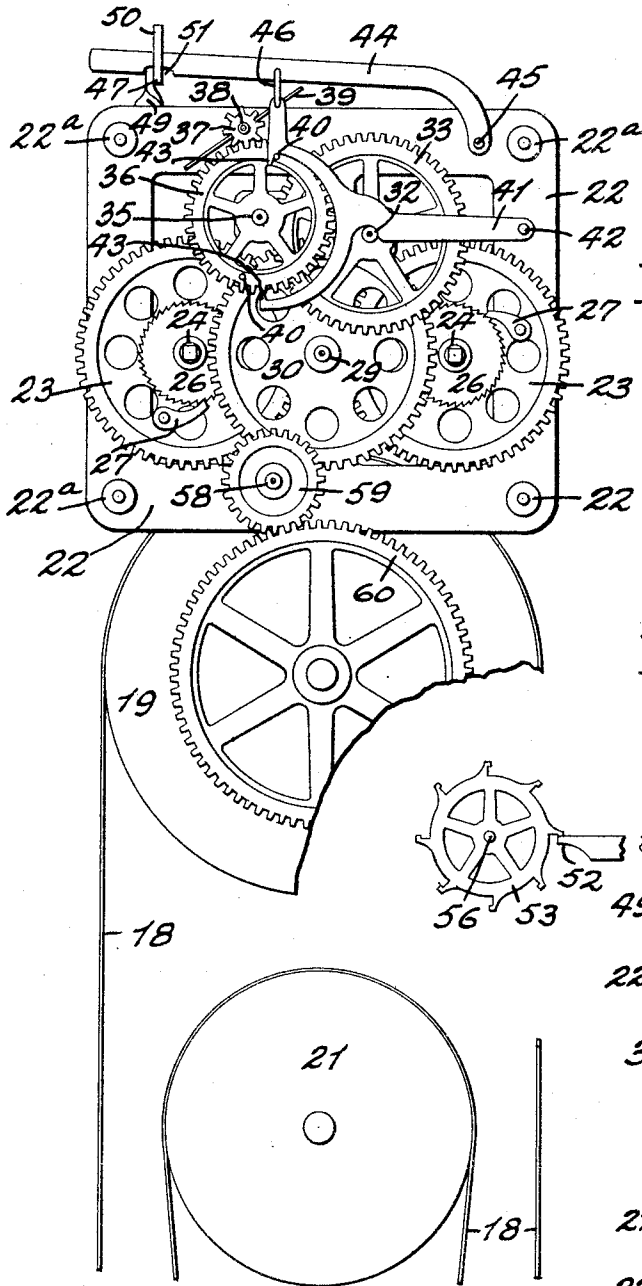
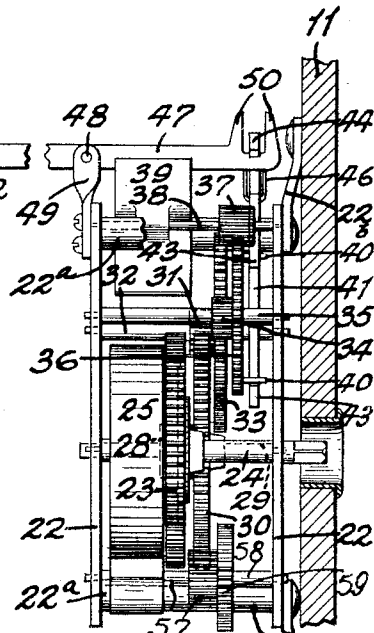


FIG. 4.

FIG. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

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ADVERTISING DEVICE.

1,035,574.

Specification of Letters Patent.

Patented Aug. 13, 1912.

Application filed October 11, 1909. Serial No. 522,183.

To all whom it may concern:

Be it known that I, JOHN GERHARDT, of the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improve-
5 ments in Advertising Devices, of which the following is a full, clear, and exact description.

10 This invention relates to advertising apparatus particularly adapted to be used in connection with a clock mechanism, and the object of the invention is to provide a device whereby a series of advertisements may be
15 displayed at intervals upon a roll actuated in conjunction with the clock itself.

The device consists essentially of a clock having its base formed of an elongated box with a glass door on the front thereof through which the advertisements may be
20 displayed. Within the base are a series of rollers carrying an endless belt on which the advertisements are placed, the belt being actuated by a motor of any desired form. The motor is connected with the clock mech-
25 anism by suitable means, and is actuated at intervals to drive the belt which carries the advertisements past the visible space at the front of the clock.

30 In the drawings which illustrate this invention:—Figure 1 is a front elevation of the device. Fig. 2 is a partial vertical sectional view on the line 7—8 of Fig. 1. Fig. 3 is a partial cross sectional view on the line
35 9—10 of Fig. 1. Fig. 4 is a side elevation of the motor with one frame plate removed. Fig. 5 is a front elevation of the motor showing the tripping device. Fig. 6 is a perspective view of the tripping and escape-
40 ment levers.

45 In the above defined figures, 11 designates a clock case of suitable design having a hinged front door 12 provided with a small glass panel 13 at the top, and a larger glass panel 14 occupying the remainder of the
50 door. The dial 15 of the clock is located behind the small panel 13 and covers the usual clock movement 16. A spring motor 17 is attached to the side of the clock adjacent the clock movement and is adapted to
55 shift an endless belt 18 passing over a driving roll 19, an idler roll 20 at the bottom of the clock, up and over a top idler roll 21 and down and over a second bottom idler roll 20^a, and again up to the driving roll 19. The upwardly moving portion of the belt,

last named, passes immediately behind the large glass panel 14 so that a series of advertisements placed on the belt will be visible through the glass panel.

The movement of the spring motor 17 60 comprises a pair of frame plates 22 held apart by posts 22^a, and attached to the side of the clock by brackets 22^b. A pair of barrel wheels 23 are loosely mounted on
65 spindles 24 in the framework. A pair of spiral springs 25 are mounted, one on each spindle 24, one end of each spring being fixed to the spindle, and the other end to the framework in the usual manner. A
70 ratchet wheel 26 is fixed to each spindle and is engaged by a pawl 27 pivoted to the barrel wheels, so that the unwinding springs will revolve the spindles and barrel wheels but the spindles may be rotated in a reverse
75 direction for winding independently of the barrel wheels. The two barrel wheels mesh with and drive a single pinion 28 mounted on a spindle 29, which carries the main
80 driving gear 30. The driving gear 30 meshes with a pinion 31 mounted on a spindle 32 which carries the second gear 33 in mesh with a pinion 34 on the spindle 35. The third gear 36 is mounted on the spindle
85 35 and drives the pinion 37 mounted on the fan spindle 38 which carries a small fan 39, such as used in the majority of clockwork movements.

A pair of pins 40 are mounted in the rim of the third wheel 36, diametrically across the wheel from one another, and parallel 90 with the spindle 35. A substantially Y-shaped escapement lever 41 is pivoted by the tail at 42 to the framework, the two remaining arms being approximately in line with the rim of the wheel 36, and each provided with an inwardly facing tooth 43
95 adapted to engage the pins 40. An intermediate lever 44 is pivoted at 45 to the framework and extends above the escapement lever, to the upper arm of which it is
100 connected by a link 46. A trip lever 47 is pivoted at 48 to a bracket 49 mounted on the framework so as to lie at right angles to the intermediate lever, and is provided
105 at the end adjacent the intermediate lever with a pair of upturned prongs 50, between which the free end of the intermediate lever rests, the lower side of said lever being
110 notched at 51 to prevent it slipping on the trip lever. The opposite extremity 53 of

the trip lever from the prongs 50, is reduced to a point and lies in the path of the teeth of a pin wheel 53 inserted in the clock movement, as shown in Figs. 2 and 3. In these figures, 54 designates the barrel wheel of the clock movement, and 55 a pinion in mesh therewith and mounted on a spindle 56 which carries the pin wheel 53. The spindle 56 carrying the pin wheel may be one of the usual spindles of the movement, or may be an additional spindle inserted so as to operate the pin wheel directly from the barrel wheel without placing a stress on the clock movement which would cause it to lose or gain time. A pinion 57 is provided meshing with the driving gear 30 and mounted on a spindle 58 which carries the gear 59. The gear 59 may mesh directly with the gear 60, carried on the end of the drive roll 19, as shown in Fig. 4, or may be connected thereto by a transmission gear train.

The operation of the device is as follows:—At predetermined intervals, depending on the number of teeth in the pin wheel 53, the pin wheel depresses the end of the trip lever 47, which raises the intermediate and escapement levers 44 and 41, respectively, so that the upper tooth 43 of the escapement lever releases the pin 40 and the gear 36 revolves until the other pin engages the other tooth of the lever. This constitutes the unlocking action. When the clock movement has revolved the pin wheel 53 sufficiently, the tip 52 of the trip lever 47 escapes from the tooth of the pin wheel, and the intermediate and escapement levers drop. This dropping of the escapement lever releases the lower pin from the lower tooth, and the gear revolves until the lower pin engages inside the upper tooth of the lever, the total movement at each tripping being 180°, or one half revolution. Each time the gear 36 is released, it releases the spring motor movement to revolve the drive roll 19

a predetermined amount, which shifts the belt up a corresponding distance to display a fresh advertisement and remove one previously displayed.

The advantages of this device for an advertising apparatus will be apparent. The clocks can be located in any prominent place, and besides being useful to indicate standard time, the advertisements will always attract attention on account of the automatic shifting of the roll, thus bringing new advertisements continually into view.

Having thus described my invention, what I claim is:—

In an advertising device the combination with a clock having a pin wheel inserted in the movement thereof and a transparent panel below the dial, of a clockwork motor located within the clock case, a drive roll and a plurality of idler rolls journaled within the casing, an endless advertisement carrying belt passing over said rolls in position to be visible through the transparent panel, an escapement wheel in the motor having a pair of diametrically opposite pins in the rim thereof, a pivoted escapement lever, a trip lever in engagement with the pin wheel of the clock, the pivotal point of said lever being adjacent the end remote from the pin wheel, jaws on the free end of said trip lever, an intermediate lever having a notch adjacent the free end thereof, said notched portion engaging the trip lever between the jaws thereof, a link connecting said intermediate and escapement levers whereby the escapement lever is actuated at predetermined intervals of time to release the motor for a predetermined time.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOHN GERHARDT.

Witnesses:

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E. R. MCKENZIE.