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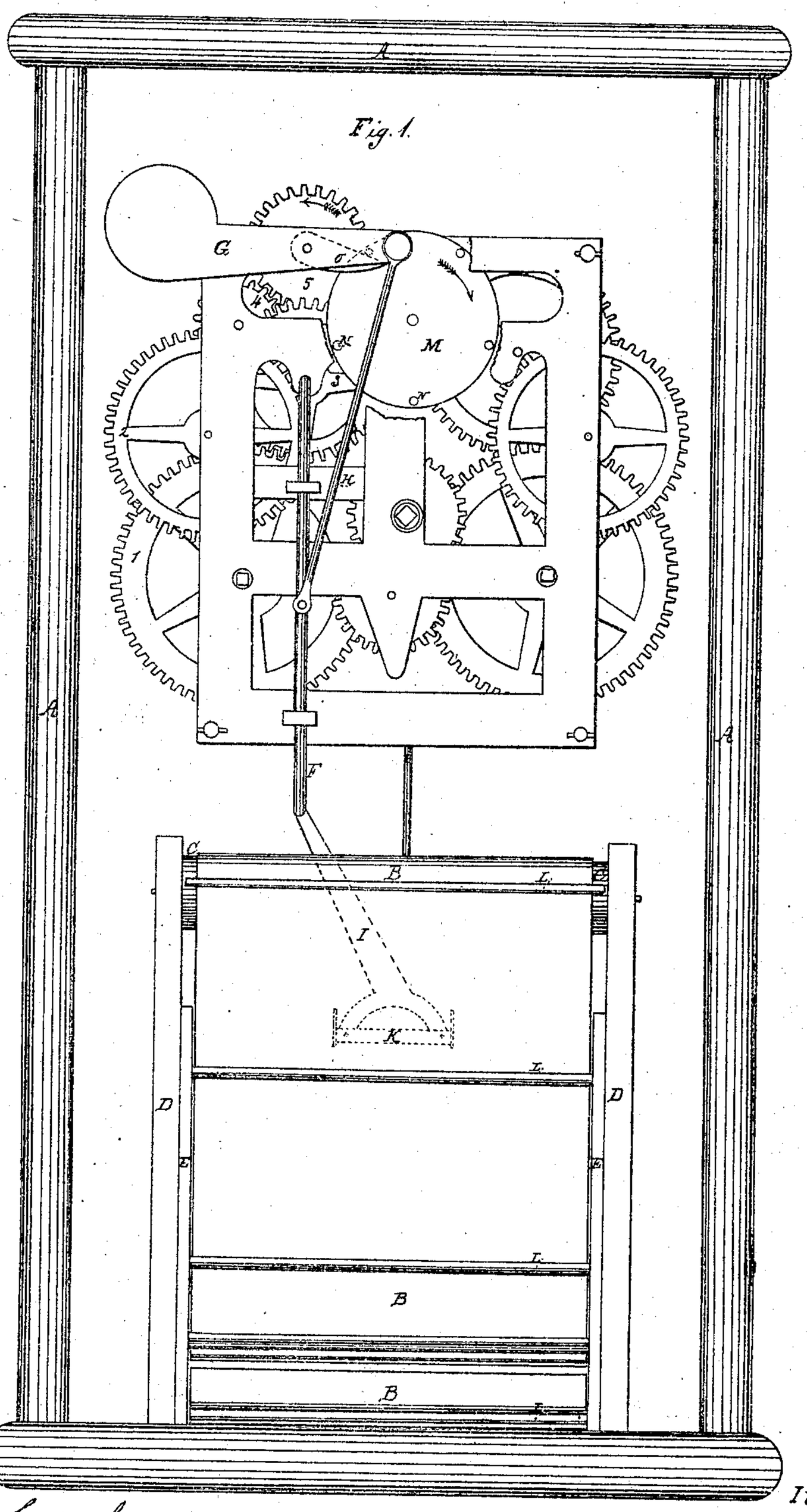
Sheet 1.

G. M. Levette

Clock & Advertiser.

No 74704 Patented Feb. 18, 1868.

Fig. 1.



Witnesses
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Inventor
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3rd

2 Sheets
Sheet 2

G. M. Levette.

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Fig. 2.

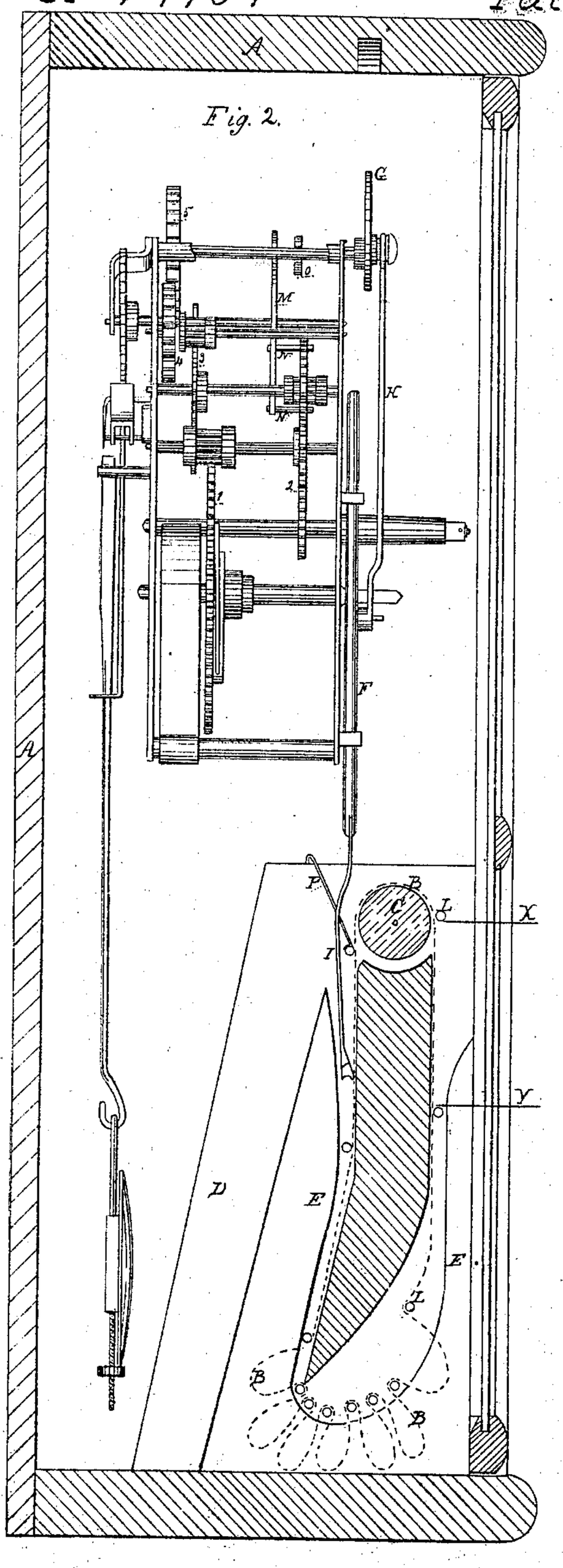


Fig. 3.

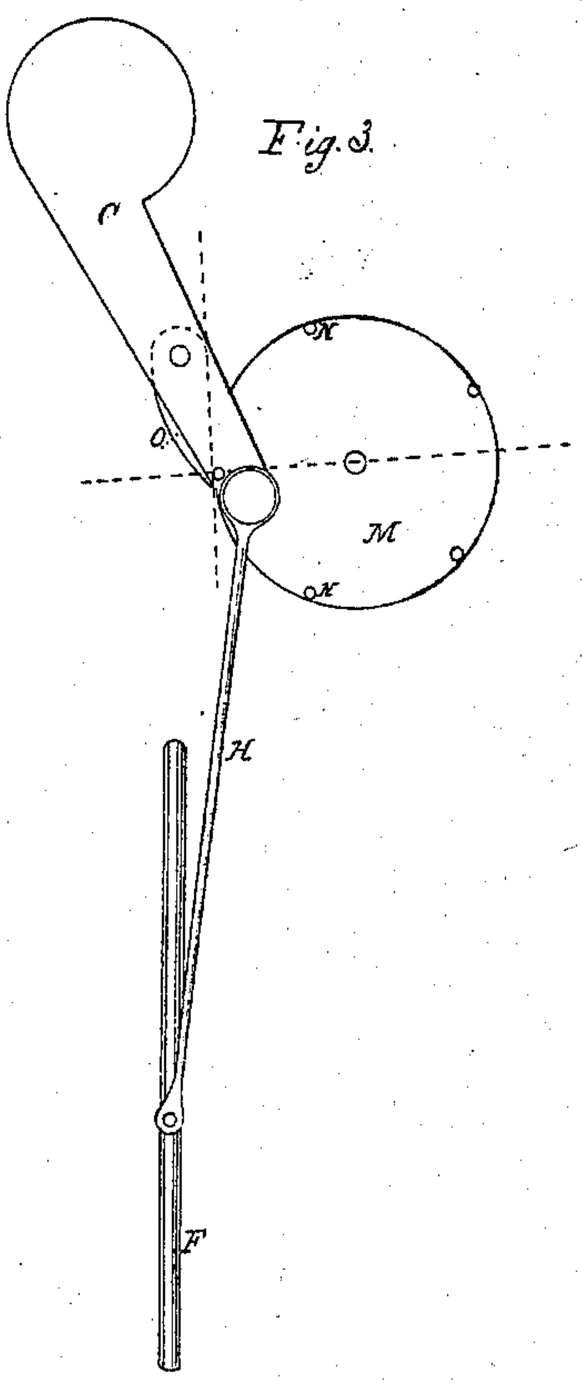
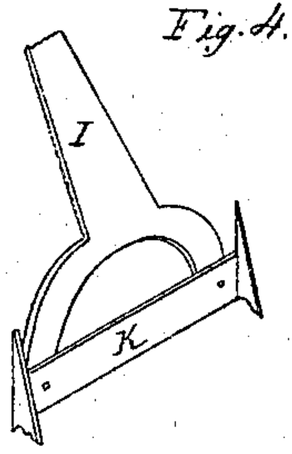


Fig. 4.



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United States Patent Office.

GILBERT M. LEVETTE, OF INDIANAPOLIS, INDIANA.

Letters Patent No. 74,704, *dated February* 18, 1868.

IMPROVEMENT IN COMBINED CLOCK AND ADVERTISER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GILBERT M. LEVETTE, of the city of Indianapolis, county of Marion, and State of Indiana, have invented a new and useful Device for Displaying Advertising-Cards Automatically by Means of the Time-Keeping Mechanism of Clocks; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of the specification.

My invention relates to the display of advertising-cards in hotels, depots, and other public places, in a manner that combines attractiveness and prominence with compactness and neatness, and consists in connecting the cards together on an endless band or apron, arranged within the clock-case, and exposing them to view, one or more at a time in intermittent succession, automatically, by means of suitable mechanism, that is connected with and controlled by the time-keeping movement of the clock.

Figure 1 is a front view of a clock having my advertising-device attached, the door and dial-plate being left off to show the works.

Figure 2 is a side view, showing the works in elevation, and the case and advertising-device in section.

Figure 3 is a detached view of the device for controlling the action of the advertising-mechanism.

Figure 4 is a perspective view of the catch K enlarged.

Similar letters of reference indicate corresponding parts in the several figures.

The following description will enable skilled artisans to make and use my invention.

A is the clock-case, which may be of any style or finish applicable to this purpose. My advertising-device may be attached to almost any style of clock, with or without striking-mechanism, or whether operated by weights or springs; but I prefer having the time-keeping movement and case, as well as the advertising-mechanism, made for the purpose, as being cheaper and neater.

The advertising-device consists of an endless band, B, hung over a roller, C, that revolves freely on pinions, having their bearings in the uprights D. The band B may be of any length or width desired to hold any size or number of cards, having reference, of course, to the dimensions of the clock-case, and the capacity of the actuating-mechanism.

The cards are printed on, or in any suitable manner affixed to, the band B, which is hung over the roller C, so that the cards may be drawn up opposite a glazed opening in the door of the clock-case, through which they are exposed to view. The position of the opening, which is opposite the top card, is indicated by the red dotted lines X Y in fig. 2.

The cards are exposed to view in intermittent succession, automatically, by means of the train of wheels 1 2 3 4 5, actuated by a coiled spring, applied to wheel 1 in the same manner as applied to the time-keeping and striking-movements of clocks.

To the end of the shaft of wheel 5, and in front of the plate which secures the movement, a crank, G, is fixed. This crank is connected, by a rod, H, to a vertical sliding rod, F, to the lower end of which is attached a flexible arm, I, terminating in a forked catch, K, in the position shown in fig. 1, so that the catch will stand about the middle of the belt B.

The catch K, which is more clearly shown in fig. 4, is arranged at the rear of the band B, and is held close to it by the flexible arm I, so that the lower ends of the little triangular pieces at each side will catch upon the horizontal rods L, attached to the band B, between the cards, for this purpose, as the rod F descends, as hereafter described.

The inclined edges of the triangular pieces press the catch K back as it passes the rod L in ascending, so as to prevent it catching against them.

E E are guides for the ends of the rods L, and, with the uprights D D, keep the band B in place.

P is a spring-catch, attached by its upper end to the upright, D, and having its lower end bent to rest on the rods L, to keep the weight of the band on the front from drawing it back. The spring-catch P allows the rods L to pass freely as the band is pushed down by the arm I, but prevents them from moving in the opposite direction.

The position of rod F, arm I, and catch K, as represented in figs. 1 and 2, is about midway of its upward movement, preparatory to catching upon the next horizontal rod L on the band to push it down.

The weight of the catch K, arm I, rod F, and connecting-rod H, is balanced by the enlarged, elongated portion of the crank G, opposite the wrist to which rod H is attached, in order to make the motion of the rod F more steady.

Without control, the action of the spring attached to wheel 1, upon the train of wheels 1 2 3 4 5, and crank G, would be to cause a continuous rotary motion, that would give the rod F, arm I, and catch K, a rapid reciprocating motion, and actuate the card-band B, and shift the cards with corresponding rapidity. This action is controlled by means of a disk, M, which I place on the shaft of the escapement-wheel of the clock.

The disk M is furnished with pins, N, set in its face near the periphery, that engage with an arm or pawl, O, on the same shaft with wheel 5 and crank G.

The escapement-wheel and disk M revolve in the direction indicated by the arrow on the disk, and the pawl O rests against one of the pins N, preventing any action of the advertising-mechanism until the disk M is revolved to carry the pin beyond the end of the pawl, which, being then released, allows the advertising-mechanism to revolve the crank G, and actuate the vertical reciprocating rod F, arm I, and catch K, which, on descending with a quick, strong movement, catches upon one of the horizontal rods L on the card-belt, pushes it down from the rear the width of a card, and raises another card up on the front, opposite the glazed opening in the door.

The number of pins N set in the disk M is determined with reference to the time it is desired to expose each card; and the diameter of disk M and the pins N is arranged with reference to the length of pawl O, so that, when the card has been shifted, as just described, the further revolution of the crank G will be arrested by the pawl O engaging with the next pin N in succession; and thus the operation of releasing and engaging the pawl O by the pins N in disk M goes on automatically, controlled and regulated by the escapement-wheel of the time-keeping movement.

In the model represented by the accompanying drawing, the escapement-wheel, on the shaft of which disk M is fixed, revolves about three times per minute; and, there being five pins on the disk, the exposure of the cards will be about four seconds each, or fifteen cards per minute.

In order that the time-keeping movement shall not be affected by the action of the advertising-mechanism, the pawl O is so arranged that, when it is arrested by the pin N, as described, it will strike the pin directly in a line drawn through the centre of the shaft of the escapement-wheel and the pin, so that the blow from the pawl will neither accelerate nor retard the movement of the escapement-wheel, as would be the case if the pawl were arrested by the pin when in any other position. This particular feature of my device is of vital importance to the practical combination of the advertising with the time-keeping mechanism, in order that the accuracy of the latter shall not be affected thereby.

The position of the pin N, when it stops the pawl O, is clearly shown in fig. 3, being in the angle of a right angle, formed by the red dotted lines, drawn along the edge of the pawl, and through the centre of the pin N and shaft of the escapement-wheel.

The rods L, attached to the belt B across its face, are placed equidistant from each other, for the catch K to take hold of to shift the cards, as before described. The rods may be of ornamental moulding, to mark the divisions between the cards. The ends of the rods project beyond the edges of the belt into the guides E, that keep them in place.

The guides E are curved at the bottom, to collect the rods together, the band arranging itself in folds, as represented by the red lines B B, in fig. 2, thus admitting the use of a longer belt, and, consequently, greater number of cards within a given space.

I do not confine myself to any particular number or arrangement of wheels employed in the advertising-mechanism, as these may be varied at convenience, to suit various constructions of clocks.

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

1. The disk M and pins N, on the shaft of the escapement-wheel of the time-keeping movement, for controlling and regulating the action of the advertising-mechanism, substantially as and for the purpose set forth.

2. The pawl O, on any suitable part of the advertising-mechanism, in combination with the disk M and pins N, as and for the purpose set forth.

3. The rods L, or their equivalents, attached to the advertising-band B, as and for the purpose set forth.

4. The catch K and flexible arm I, attached to the reciprocating rod F, arranged and operating as and for the purpose set forth.

5. The rods L, in combination with spring-catch P and catch K, arranged and operating substantially as set forth.

GILBERT. M. LEVETTE.

Witnesses:

WM. H. WEEKS,

O. F. MAYHEW.