

(No Model.)

3 Sheets—Sheet 1.

C. M. WHEELER & E. B. HINDES

AUTOMATIC ADVERTISING DEVICE.

No. 313,143.

Patented Mar. 3, 1885.

FIG. 1.

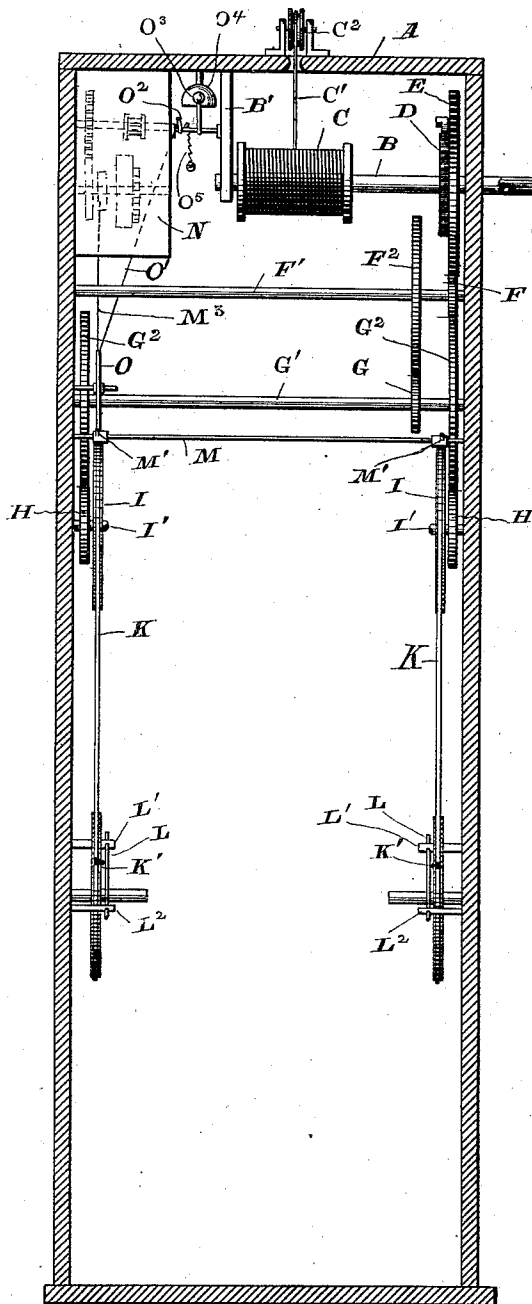
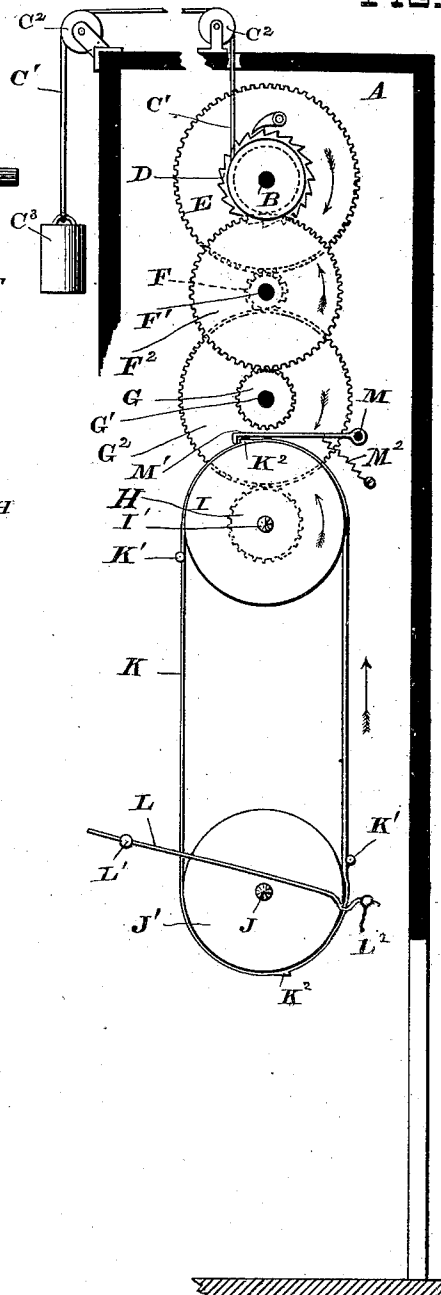


FIG. 2.



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FIG. 3.

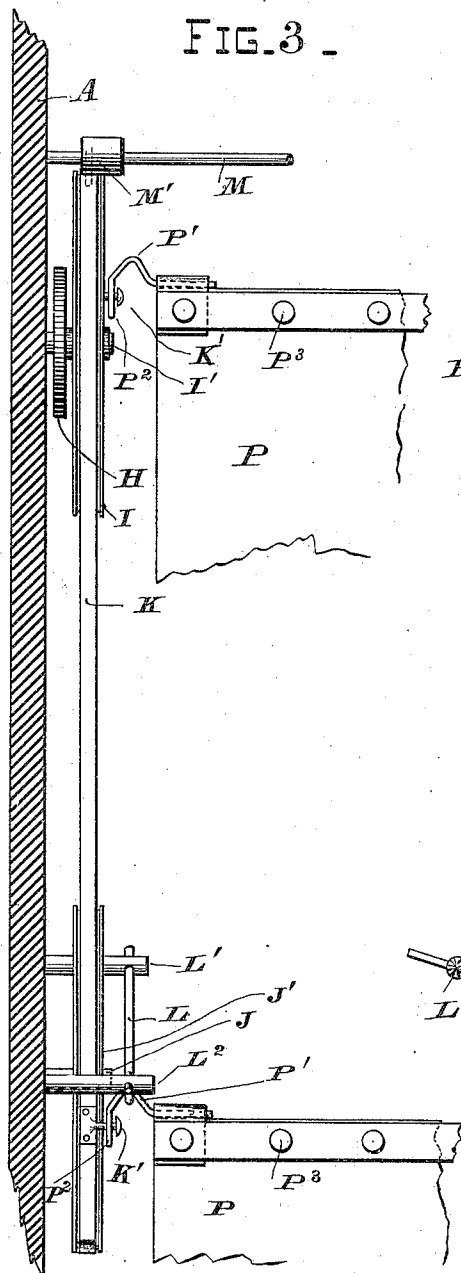
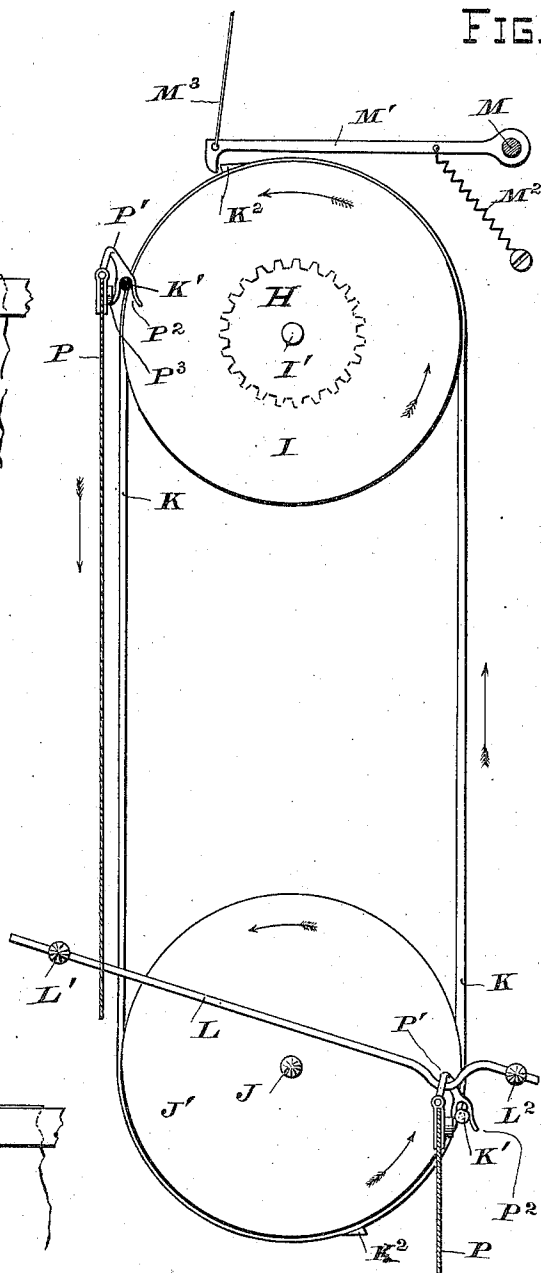


FIG. 4.



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Att

(No Model.)

3 Sheets—Sheet 3.

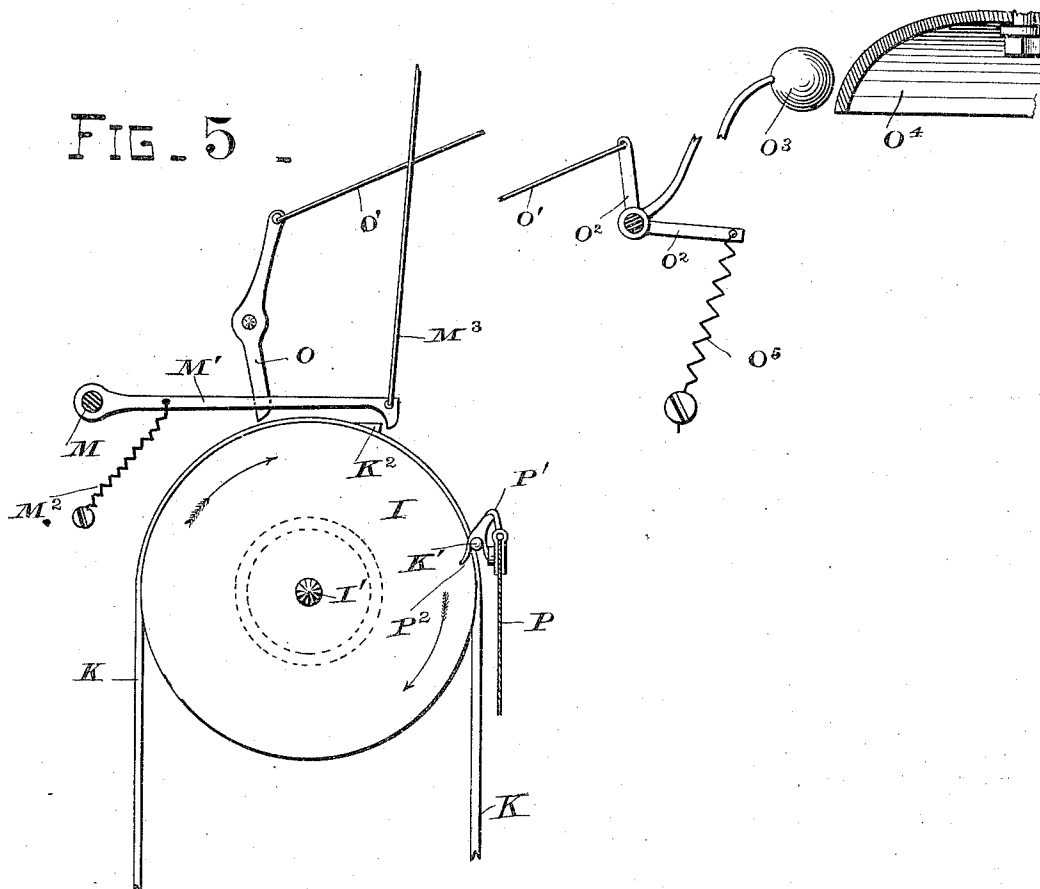
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FIG. 5.



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UNITED STATES PATENT OFFICE.

CHARLES M. WHEELER AND EDWARD B. HINDES, OF SAN FRANCISCO, CAL.

AUTOMATIC ADVERTISING DEVICE.

SPECIFICATION forming part of Letters Patent No. 313,143, dated March 3, 1885.

Application filed January 10, 1884. (No model.)

To all whom it may concern:

Be it known that we, CHARLES M. WHEELER and EDWARD B. HINDES, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Automatic Advertising Devices, of which the following is a specification.

Our invention relates to improvements in automatically-operating advertising devices in which independent detached cards or mounted advertisements are exposed to view and then removed at stated intervals of time; and the objects of our improvements are, first, to provide a means whereby independently-detached sheets of card-board may be exposed to view for a stated period of time and then suddenly and automatically removed from sight and expose to view the next card of the set or series; second, to provide a means whereby a warning or sounding signal may be given upon the removal of the exhibited card; third, to provide a means whereby advertising-cards may be removed from view and replaced in position at the end of the series by a mechanism operating independently of the mechanism which causes the removal of the cards at regular intervals or stated periods of time; fourth, to provide a means for automatically tripping or releasing the card-carrying mechanism at stated intervals of time; and, furthermore, our invention relates to certain details of construction and operation, which will be more fully explained hereinafter. These objects we attain by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical section through the containing-case, and showing the principal working parts of our device. Fig. 2 is a vertical transverse section through the containing-case, showing the mechanism located upon the right-hand side thereof. Fig. 3 is a partial front view, and Fig. 4 is a side view, showing the card-carrying mechanism with the cards in place. Fig. 5 is a detail view showing the upper belt-pulley on the left-hand side of the containing-case, the tripping-lever, and the signal-sounding mechanism.

Similar letters of reference are used to indicate like parts throughout the several figures.

A represents the containing-case, within which is placed the advertising-cards and the operating mechanism. Near the upper end of this case we place a shaft, B, its inner end being journaled in a hanger, B', and its outer end passing through the side of the case and formed with a square head for the reception of a key or turning-wrench. Upon this shaft we secure a winding-drum, C, upon which is wound a cord, C', which passes up through the roof of the case and over pulleys C² C², and thence down alongside the back of the case, and has attached to its lower end a weight, C³, as shown in Fig. 2. Upon the said shaft we also secure a pawl and ratchet-wheel, D, and a spur-wheel, E, which meshes with a pinion, F, upon a shaft, F', carrying a spur-wheel, F². This last-named spur-wheel meshes with a pinion, G, placed upon a shaft, G', upon which is keyed at either end the spur-wheels G² G², which latter mesh with the pinions H H, attached to the inner ends of the hubs of the upper band-wheels, I I, which revolve upon the pintles or arbors I' I', which extend outwardly toward each other from both sides of the containing-case A. Near the lower end of the case, and in a vertical line with the arbors I' I', we place the arbors J J, which carry the band-wheels J' J', which are of the same diameter as the upper band-pulleys. The bands K K are placed one upon each side of the case, and pass over the band-pulleys I J', as shown in Figs. 1 and 2, and are each provided at opposite points and upon their outer surface with small horizontally-projecting pins K' K', and at a short distance to the rear of these pins we place also upon the outer surface of the belt the lugs or detents K² K², the office of which will be hereinafter more fully explained.

Parallel with the outer or opposing faces of the two lower band-pulleys we extend the ways or guide-rods L L, placed a short distance above the pulley-arbors, and which are held in place by being passed through posts L' L', extending outwardly from the sides of the case A. The rear posts, L' L', are placed at a somewhat higher elevation than the front posts, which are on about a horizontal line with the pulley-arbors, and the rods L L are inclined from the rear down toward the front

of the case, and when it approaches the front edge of the pulley a sag or downward curve is made in the rod. The outer portion of this curve or bend is made more abrupt and rises higher than that part next to the incline, and is then connected with the front post, as shown in Figs. 3 and 4.

In front of and on a horizontal line with the upper edge of the belt-pulleys I I we place the rock-shaft M, provided with hooked arms M' M', which extend over the upper band-pulleys and engage with the lugs K², and prevent movement of the belt and rotation of the gearing. A coiled spring, M², is attached to each arm and to the side of the case, and holds the hooked end of the arms down in close contact with the belting. To the outer end of one of the arms we attach a wire, M³, which extends upward, and is connected with any suitable clock-work mechanism, by means of which an intermittent lifting movement may be imparted to the wire and hooked arms M' M' on the work-shaft M. This clock mechanism (shown in dotted lines) may be located in a separate frame or box, N, situated in the upper part of the case, or, when the card-exhibiting device is used in connection with or placed within the case of a shelf-clock, the wire M³ may be connected directly with the time-indicating mechanism. A lever, O, is pivoted to one side of the case, above the upper band-pulleys, in such a manner that the lower end of the lever will be struck and moved forward by the lug K² when the belt is moving. A rod, O', leading from the upper end of this lever connects with a bell-crank, O², and hammer or striker O³ of the gong or bell O⁴. A coiled spring, O⁵, is attached to the lower arm of the bell-crank, and serves to throw the lever O back to its original position after it has been moved by the lugs on the belt. The advertising-cards P are stiffened along their upper edge by a batten of either wood or metal, and provided at each upper corner with a hook, P', by means of which the said cards are suspended from the rods L L. The outer or lower end, P², of this hook is bent a little forward and split or forked in a direction at right angles to the upper bend of the hook, as clearly shown in Fig. 4. When the cards are in position for exhibition, they rest or hang between the two guides or inclined supporting-rods L L, which are embraced by the hooks P', whose forked terminations project a short distance in advance of the face of the card; and in order to prevent the cards from crowding too closely upon one another, we provide the top edges of the said cards with small buffers or knobs P³, which press against the back of the preceding card, and thus a proper spacing of the cards is maintained.

Having thus described the construction of our automatic advertising device, we will now proceed to describe the operation of the same. After the clock-work and winding mechanism have been wound up, a suitable number of cards

are hung upon the rods L L; yet in no case should the cards project beyond the periphery of the belt-pulleys. At stated intervals of time—say every five minutes—the action of the clock-work contained within the box N will cause the hooked arms M' to be momentarily lifted sufficiently high to release them from the lugs K² upon the belts or bands K K, and when so released the action of the weight C³ will produce, through the medium of the drum-shaft and spur-gear E, a revolution or partial revolution of the intermediate gearing and belt-pulleys, which motion will be continued until the next lug upon the belt comes against the hooked end of the arm M', when the movement of the card-shifting mechanism will cease until the action of the clock-work will again lift the detaining-arm clear of the lugs, when the same operation will be repeated. When the device is in a state of rest, the horizontally-projecting pins K' upon the belting are within the forked ends of the hooks P', as shown at the lower part of Fig. 4, and the front card is then exposed to view through the door of the case; but when the time for exhibition of that particular card has elapsed the mechanism will be operated and the card will suddenly be lifted up out of sight by the bands K K and pins K' K', thus exposing to view the next succeeding card of the series upon the inclined guide-rods L L. The first-named card is quickly lifted to the highest vertical point on the upper band-wheel and is carried backward and downward between the bands K K until it reaches a position diametrically opposite to that which it occupied while on exhibition, and will remain suspended from the band or belt pins until the device is again actuated. When the next change in the cards is made, the operation last described will be repeated, with the next card of the series suspended on the guide-rods L L, and while the last exhibited card is being carried upward and backward the card which was suspended at the back of the upper belt-pulley will be lowered down until the hooks P' P' overhang and rest upon the slanting guide and supporting-rods L L. The further travel of the carrying-belts will release the pins K' from the forked ends P² of the hooks, and they will be carried up into the hooks of the front card, ready to repeat the lifting operation, while the cards previously exhibited will remain suspended on the rods L L at the back of the series until their turn for exhibition again arrives, when they will slide one by one to the lower ends of the rods. When a new card is presented to view, the belt-lugs, before encountering the detaining-arms M', will first strike against the lever O and cause an alarm to be sounded upon the gong O⁴, which will attract attention to the device and to the new advertisement displayed therein.

It should here be remarked that we do not confine ourselves to the use of weights, cords, and drums to produce rotation of the gearing

and card-carrying bands or belts, as a coiled spring adapted to be wound up will answer the same purpose.

5 Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

10 1. In an advertising device, the combination, with the automatically-operated card-carrying belts K, having pins K', of intermittently-operated hooked arms M' M', and an alarm-sounding mechanism operated by the movement of the card-carrier, substantially as shown and described.

15 2. In an automatic advertising apparatus, the combination, with the card-carrying belts K, provided with outwardly-projecting lugs K², of the holding hooked arms M' M', operated by clock mechanism, substantially as shown and described.

20 3. In an advertising apparatus, the combination, with the automatically-operated card-

carrying belts K K, having lugs K² and pins K', of the inclined card-sustaining guides or rods L L, substantially as shown and described.

25 4. An automatic advertising device comprising the card-carrying belts K K, having pins K' and lugs K², adapted to carry cards P P, having hooks or hangers P', the inclined card-sustaining guides or rods L L, the intermittently-operated hooked arms M' M', and an alarm-sounding mechanism actuated by the movement of the card-carrier, substantially as shown and described.

30 In testimony that we claim the foregoing we have hereunto set our hands and seals.

CHARLES M. WHEELER. [L. S.]
EDWARD B. HINDES. [L. S.]

Witnesses:

WILMER BRADFORD,
C. W. M. SMITH.