

A. HINZPETER.
AUTOMATIC EXHIBITION DEVICE.
APPLICATION FILED OCT. 19, 1911.

1,039,397.

Patented Sept. 24, 1912.

2 SHEETS—SHEET 1.

Fig. 2

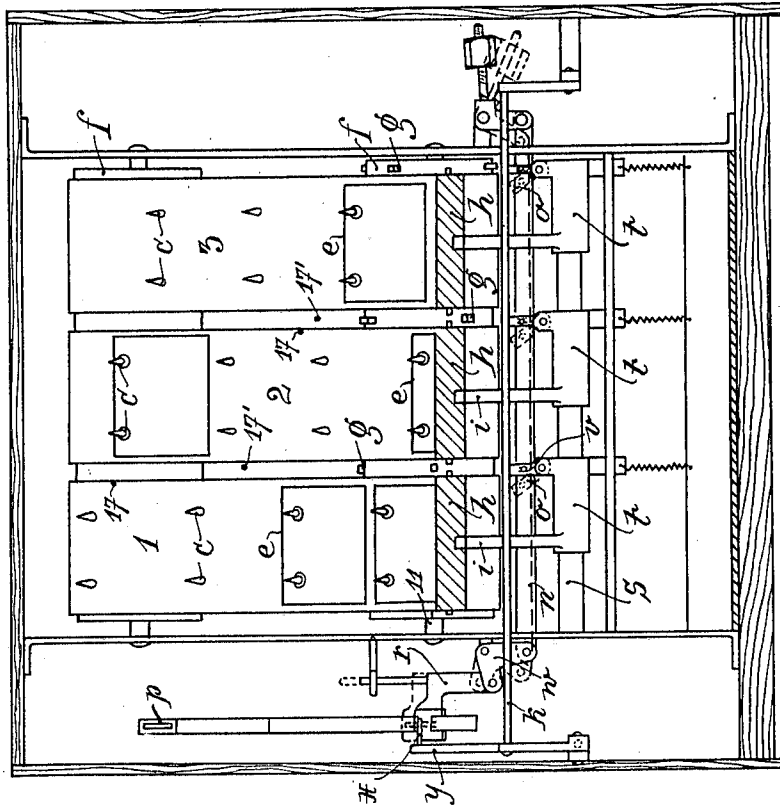
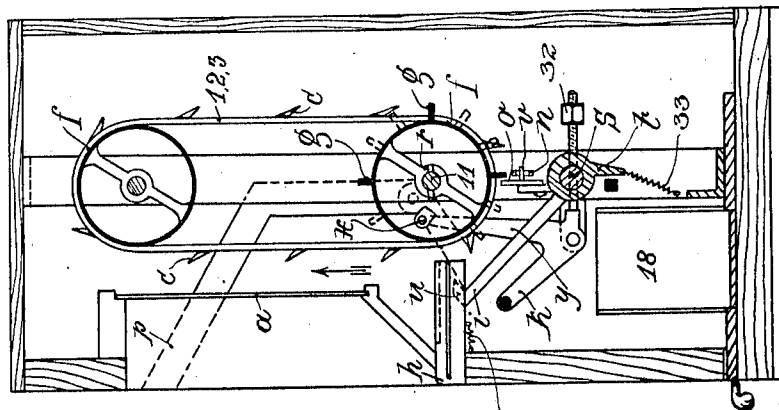


Fig. 1



Witnesses:
Clara Franck
Eugene Weir

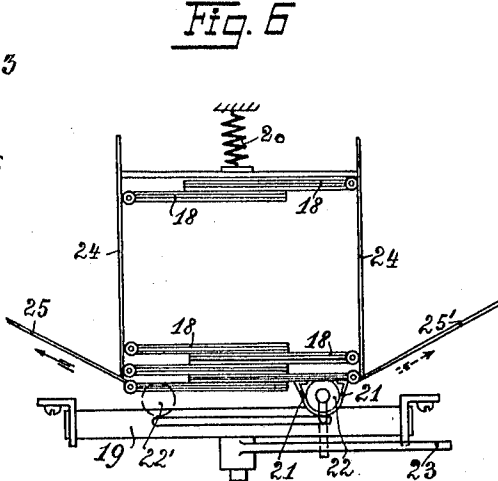
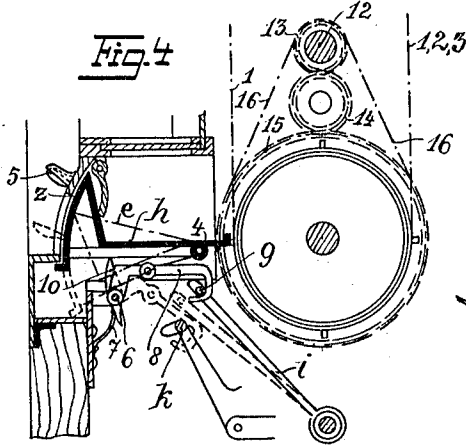
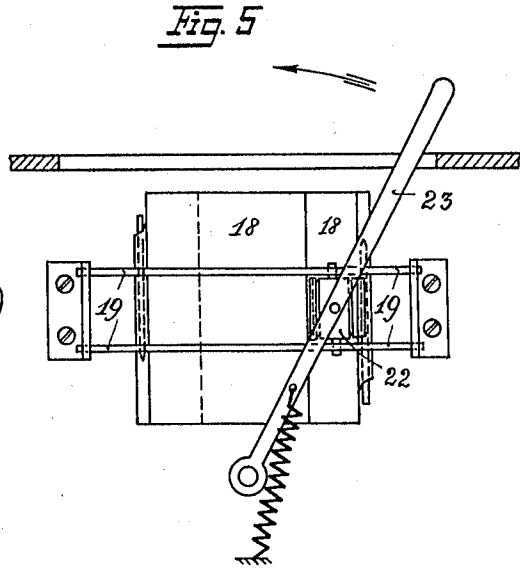
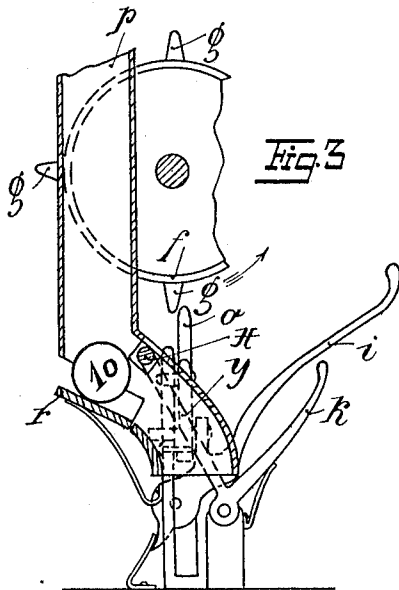
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

ALFRED HINZPETER, OF MUNICH, GERMANY.

AUTOMATIC EXHIBITION DEVICE.

1,039,397.

Specification of Letters Patent.

Patented Sept. 24, 1912.

Application filed October 19, 1911. Serial No. 655,468.

To all whom it may concern:

Be it known that I, ALFRED HINZPETER, citizen of Germany, residing at Munich, Bavaria, Germany, have invented certain
5 new and useful Improvements in Automatic Exhibition Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it
10 appertains to make and use the same.

The subject of the present invention is an automatic exhibition device with endless bands moving over rollers, said bands being provided with suitable means for holding
15 the cards. According to the present invention the bands are provided with hooks, the points of which project upward, thus catching and carrying upward the card introduced by a slide. In this way it is possible
20 to arrange the aperture for the introduction of the cards at about the height of a person's hand and the viewing surface opposite the person's head, thus affording convenience in use.

Further essential characteristics of the present invention are the especial form of construction of the coin locking device and the especially suitable form of slide for introducing the cards; further, a new coupling
30 device for the transport roller with indicating device to show when any one band is ready to receive a card; and finally, a delivery device operated by the introduction of a coin.

Reference being had to the accompanying drawing, Figure 1 shows a cross section, Fig. 2 a longitudinal section, and Fig. 3 details of the device according to the present invention. Fig. 4 shows a cross section of a
40 modified form of construction, and Figs. 5 and 6 a front view and plan view of the device for delivering the cards.

The form of construction according to Figs. 1 and 2 is as follows: The endless
45 bands 1, 2, 3 are moved upward behind the viewing surface *a* by means of rollers *f*, *f* driven continuously by clockwork or other suitable means. The bands are provided at suitable intervals with hooks *c* pointing upward, adapted to engage with correspond-
50 ingly positioned holes of the cards *e*, thus moving said cards upward behind the view surface *a*. The hooks of the several bands

are so situated in respect to one another, that one card appears in almost its whole extent (Fig. 2, band 3), the other about $\frac{1}{3}$ (band 2) and the third about $\frac{2}{3}$ (band 1). The slides *h* are operated by the single coin channel *p* in such a manner that, after a coin has been introduced, always that slide
55 springs up of which the band shows the next free field. The mechanism to attain this result consists of the following parts: On the shaft *s* a loose hub *t* is provided for each of the lower rollers *f* or slides *h*, said
60 hub being provided with an arm *i*, having at its end a hook *u* adapted to engage with a suitable recess of the appertaining slide box *h*, thereby holding said slide and preventing the introduction of a card. The hubs *t* are
65 further provided with pivoted lugs *o*, having pins *v* engaging in holes *v'* of a slide rod *n*, the latter being spring or weight pressed and connected with the coin balance
70 *r* by means of the bell crank *w*. On the circumference of the rollers *f* are situated pins
75 *g* at intervals corresponding to the intervals of the hooks *c* of the single bands. When the coin channel *p* is empty the coin balance will occupy the position shown by the dotted
80 lines in Fig. 2 and the slide rod *n* will be in such a position that the pivoted lugs *o* cannot engage with the pins *g*. If now a coin is introduced into the channel *p*, the coin balance *r* is depressed, the coin being
85 held in position by a pin *x* of the lever-arm *y* (Fig. 3). By the depression of the coin balance *r* the slide rod *n* is moved toward the right to the position shown by the full
90 lines in Fig. 2, so that the pivoted lugs *o* come to lie in the path of the pins *g* of the rollers *f*. The pin *g* which is at the moment nearest the lugs *o* will then engage with the
appertaining pivoted lug *o* and rotate the hub *t* under control of the spring 33, thus
95 causing the arm *i* with hooked end *u* to release the appertaining slide box *h*, which latter is then pressed outward by a spring 31. The card is now placed on the slide and the latter pushed in. In the meantime the
100 money has been caused to fall down by the pressure of the lever *i* against the pivoted beam *k*, which is connected with the arm *y*, thus causing pin *x* to release the coin, which then falls into the coin receptacle. The coin
105 balance now resumes its initial position, the

rod *n* slides again to the left, lug *o* and pin *g* cease to engage, and the beam *k* and lever *i* are moved by weights 32 into their former positions, so that the hook *u* again engages with the slide box *h*, thus locking the latter in position.

The slide mechanism may also be constructed as shown in Fig. 4. The front *z* of the introduction box is here curved and inclined inwardly. The box is pivoted on an axis 4 and is provided with a handle 5. Below each introduction box *h* a detent lever 8 is pivoted at 6 and pressed by the spring 7, said lever engaging with a pin 9 of the appertaining lever arm *i*, the latter corresponding in construction and operation to Figs. 1 and 2, as already described. When one of the lever arms *i* is depressed, its pin 9 moves the appertaining detent lever 8 into the position shown by dotted lines in the drawing, so that the nose 10 releases the bottom of the box *h* and the latter descends by its own weight making free a slit into which the card *e* can be introduced. The box *h* is then lifted by the handle 5 and closed, thus causing the card *e* to slide forward so that it can be grasped by the hooks *c*, as already described.

In the form of construction according to Figs. 1 and 2 all the rollers have the same speed of rotation the driving-power being applied to the roller shaft 11. The device may, however, be so constructed, that each pair of rollers has a different velocity, the appertaining bands therefore also moving each with a different velocity. This may be attained, as shown in Fig. 4, by providing a separate driving shaft 12, connecting with the lower rollers by means of cog wheel gearing 13, 14, 15 or chain 16 or similar suitable means, the gearing being so chosen that different speeds of rotation ensue for each roller. The speeds may, for instance, be so chosen, that band 1 makes a complete journey in one hour, band 2 in two hours and so forth. Further, each band may be provided with an indicating device, which shows, when the slide appertaining to this band can be opened by the insertion of a coin. The simplest form of such indicating device will be the provision of laterally situated signs or dots on each band, 17, Fig. 2, which register with similar dots 17' on the glass *a* immediately before the mechanism of the appertaining roller is in a position for operation.

The delivery of the cards can be accomplished by mechanical means simultaneously with the insertion of the coin, as shown in the construction according to Figs. 5 and 6. The cards or card packs 18 are arranged alternately to right and left, one upon the other, as shown in Fig. 6. In front, a roller 22, vertically movable in the guides 19, presses in such manner on the pack, that the

uppermost card 18 remains free. At the back a spring 20, or a weight, presses the pack against the roller 22. The latter is provided with suitable formed pieces 21, abutting against the free card or card pack. Roller 22 is operated by a spring-pressed lever 23, either by hand or mechanically, said lever being generally locked in its position and automatically released after the insertion of a coin. On the right and left of the guides 24, delivery boards 25, 25' are arranged. If, after insertion of a coin and consequent release of the lever 23, the latter is moved in the direction of the arrow (Fig. 5) the uppermost card pack will be pushed out by the piece 21 onto the delivery board 25. The roller 22 then occupies the position 22' and is in a position to deliver another pack onto the opposite delivery board 25'. The further operation of the device, for instance, opening of the slide *h*, and so forth, does not take place until the uppermost card pack has been delivered, as above described.

What I claim as my invention and desire to secure by Letters Patent, is:

1. In an automatic exhibition device of the character specified, the combination with endless traveling bands having a series of hooks thereon projecting substantially in the direction in which said bands travel, of means for feeding cards to said bands, said cards having perforations in which the said hooks are adapted to engage.

2. In an automatic exhibition device of the character specified, the combination with a plurality of traveling bands each having a series of hooks thereon extending substantially in the direction in which said bands travel, of a plurality of means for feeding perforated cards to said bands with the perforations in the path of said hooks, a plurality of means for normally rendering said card-feeding means inoperative, and mechanism for selectively rendering any of said card-feeding means operative.

3. In an automatic exhibition device of the character specified, the combination with bands having hooks thereon projecting substantially in the direction of travel of said bands, of rollers over which said bands are adapted to travel, means for driving said bands, means for feeding perforated cards to the hooks on said bands, means whereby said card-feeding means is normally held in inoperative position, and means on said rollers whereby said card-feeding means is rendered operative.

4. In an automatic exhibition device of the character specified, the combination with a plurality of series of rollers and means for driving the same, of bands traveling over each said series of rollers, hooks on said bands projecting substantially in the direction in which said bands are adapted to travel, means for feeding perforated cards

to said hooks, means including a locking arm engaging said card-feeding means, for normally rendering the latter inoperative, and mechanism whereby said arm is moved out of engagement with the card-feeding means and the latter is rendered operative.

5. In an automatic exhibition device of the character specified, the combination with a plurality of series of rollers and means for driving the same, of endless bands traveling over each of said series of rollers, hooks on said bands projecting substantially in the direction in which said bands are adapted to travel, means for feeding perforated cards to said hooks, a shaft arranged in proximity to said rollers, said shaft having a series of hubs thereon each of which hubs has a projecting arm adapted to engage and normally render inoperative one of said card feeding means, and a lug projecting from said hub, pins on certain of said rollers, and mechanism whereby one of said pins is adapted to engage one of said lugs and move a predetermined arm out of engagement with one of said card feeding means and render the same operative.

6. In an automatic exhibition device of the character specified, the combination with a plurality of series of rollers and means for driving the same, of endless bands traveling over each of said series of rollers, hooks on said bands projecting substantially in the direction in which said bands are adapted to travel, means for feeding perforated cards to said hooks, a shaft extending parallel to the longitudinal axes of said rollers, hubs loose on said shaft, each said hub having an arm normally engaging one of said feeding means, and a pivoted lug carried by said hub, pins projecting from the rollers in proximity to said shaft, and mechanism adapted to move said lugs into the path of said pins, whereby one of said hubs is revolved about the shaft and its arm disengaged from one of the feeding means to render the latter operative.

7. In an automatic exhibition device of the character specified, the combination with a plurality of series of rollers and means for driving the same, of endless bands traveling over each of said series of rollers, hooks on said bands projecting substantially in the direction in which said bands are adapted to travel, means for feeding perforated cards to said hooks, a shaft extending parallel to the longitudinal axes of said rollers, hubs loose on said shaft, each said hub having an arm normally engaging and rendering inoperative one of said card feeding means, and a pivoted lug having a pin projecting therefrom, carried by said hub, a slide bar having slots into which said pins extend, pins on the rollers in proximity to said shaft, and mechanism whereby said slide bar moves said lugs into the path of said pins to revolve one

of the lugs about the shaft and disengage its arm from one of the feeding means to render the same operative.

8. In an automatic exhibition device of the character specified, the combination with a plurality of series of rollers and means for driving the same, of endless bands traveling over each of said series of rollers, hooks on said bands projecting substantially in the direction in which said bands are adapted to travel, means for feeding perforated cards to said hooks, a shaft extending parallel to the longitudinal axes of said rollers, hubs loose on said shaft, each said hub having an arm normally engaging and rendering inoperative one of said card feeding means, and a pivoted lug having a pin projecting therefrom, carried by said hub, a slide bar having slots into which said pins extend, pins on the rollers in proximity to said shaft, and mechanism whereby said slide bar moves said lugs into the path of said pins to revolve one of the hubs about the shaft and disengage its arm from one of the feeding means to render the same operative, and means for returning the locking arm and slide bar to their initial positions.

9. In an automatic exhibition device of the character specified, the combination with a plurality of series of rollers and means for driving the same, of endless bands traveling over each of said series of rollers, hooks on said bands projecting substantially in the direction in which said bands are adapted to travel, means for feeding perforated cards to said hooks, a shaft extending parallel to the longitudinal axes of said rollers, hubs loose on said shaft, each said hub having an arm normally engaging and rendering inoperative one of said card feeding means, and a pivoted lug having a pin projecting therefrom, carried by said hub, a slide bar having slots into which said pins extend, pins on the rollers in proximity to said shaft, and mechanism whereby said slide bar moves said lugs into the path of said pins to revolve one of the hubs about the shaft and disengage its arm from one of the feeding means to render the same operative, and means for returning the locking arm and slide bar to their initial positions, said last named means including a pivoted beam arranged in the path of the locking arm.

10. In an automatic exhibition device of the character specified, the combination with a plurality of series of rollers, of means for driving the several series at different rates of speed, a band traveling over each of said series of rollers, hooks projecting from said bands substantially in the direction in which said bands are adapted to travel, and means for feeding cards having perforations in which said hooks are adapted to engage.

11. In an automatic exhibition device of

the character specified, the combination with a frame having indicating marks thereon, of a plurality of series of rollers and means for driving the same, endless bands adapted to travel over said series of rollers, each of said bands having indicating marks thereon adapted to register with those on the frame, hooks on said bands projecting substantially in the direction in which the bands are

adapted to travel, and means for feeding 10 cards having perforations in which said hooks are adapted to engage.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

ALFRED HINZPETER.

Witnesses:

OTTO FERTIG,

ARTHUR V. W. COTTER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."