N° 10,166 A.D. 1902

Date of Application, 2nd May, 1902—Accepted, 10th July, 1902

COMPLETE SPECIFICATION.

"Improvements in Coin Freed Apparatuses."

I, ADOLF RICHTER, Manufacturer of Rudolstadt, in the German Empire, do hereby declare the nature of my said invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

The mechanism of coin freed apparatuses, hitherto in use is started by the coin inserted releasing the detent device for the fan or other part of the main spring of the clockwork. This arrangement possesses the disadvantage that the mechanism may at times be set going by sharply shaking or striking the apparatus, another disadvantage is that if the coin sticks, it prevents the apparatus from being stopped or re-arrested.

According to the present invention these disadvantages are obviated by utilizing the coin inserted, not only to release the mechanism, but to keep the same going, so that the mechanism, when once set going by the insertion of the coin will keep running until the coin has been released, and at the moment of release of the coin the mechanism will stop.

In order to render the present specification easily intelligible reference is had to the accompanying drawing in which similar letters of reference denote similar parts throughout the several views:—

Fig. 1 is a plan view of such parts of the apparatus as are necessary for the proper explanation of the present invention, Fig. 2 is a side elevation of Figure 1, Fig. 3 a part plan view showing the position of the parts at the release of the coin, Fig. 4 a sectional side elevation of a counter mechanism employed in connection with the present apparatus, Fig. 5 is a plan of the counter mechanism, Fig. 6 and Fig. 7 are plan views showing mechanism for projecting a card or the like from the apparatus, Figure 6 showing the position of rest and Fig 7 the ejection of the card. Figs 8 and 9 are elevations of Figures 6 and 7 respectively, and Figure 10 shows a modified form of the ejecting device.

The casing a of the main spring is provided with a ring of teeth or pins b which engage the teeth of a gear c mounted in proximity to the said casing. The number of pins and teeth of the gear are controlled or arranged according to the number of revolutions, it is required to attain *i.e.* the length of time the apparatus is to run for the coin inserted—in the present case the gear c would be rotated once when the spring casing has revolved three times. A disc d is attached to the gear c and provided with a recess d^1 into which the end of a lever e may drop when the parts come into engagement. A lever k suitably pivoted to a stationary part of the apparatus at k^1 carries the coin holder m at one end and operates to stop the fan of the clockwork at the other side of its pivot, in the known manner. This lever is provided with a lug w, adapted, when the mechanism is at rest to contact with the edge of a segment i mounted on a spindle h suitably supported in bearings on a stationary part of the apparatus. The coin holder m is made in two parts (Fig. 3) and may be opened to allow the coin to fall through after the apparatus has performed its work. The moveable member l of the coin holder m is pivoted to the lever k at y and provided with a tail piece y^1, between which and the stationary piece a spring is interposed as at y^2, which acts to keep the two parts of the holder m properly

together. The segment *i* is provided with a downwardly extending pin *n* which when the said segment is revolved around its pivot or spindle *h* contacts with the tail of the lever *l* and forces the two members of the coin holder apart (Fig. 3). The lever *e* is linked at *g* to a radial arm of the segment *i* and is suspended at its free end by the swinging link *f*. A spring *o* wound around the spindle *h* tends to force the end of the lever *e* against the edge of the disc *d* and the segment *i*, which is fast to the said spindle *h* towards the lug *w*.

This part of the present invention operates in the following manner:—

Now on inserting a coin into the apparatus the same will be guided by the known channels to the holder *m* and its weight will depress this end of the lever *k* thus operating the said lever to release the fan or other member of the clockwork mechanism and allow the apparatus to work.

As soon as the casing *a* has completed three revolutions (in the present case) the gear *c* and with it the disc *d* will have completed one revolution and the recess d^1 will be opposite the end of the lever *e* which latter will be forced into the said recess by the action of the spring *o* and will, in moving, turn the segment *i* with its spindle *h* and force the pin *n* of the same against the tail of the moveable member of the coin holder *m*, opening the same and allowing the coin to fall through. The result is that the holder end of the lever *k* will be relieved of the weight of the coin and the lever will turn on its pivot and again arrest the fan or other member of the clockwork, bringing the mechanism to a standstill.

If the mechanism is to be arrested after the casing or drum *a* has performed less than three revolutions, this may of course be effected by making more than one recess in the disc *d* or by varying the proportions of the pins *b* and the teeth of the gear *c*, as will be readily understood.

In order to provide a controll for the apparatus a counter mechanism is provided as illustrated more particularly in Figures 4 and 5. This consists of an ordinary counter mechanism having a ratchet wheel attached to the unit disc as at *u* and this mechanism is mounted in proximity to the end of the spindle *h*. This spindle carries a crank *q* at its end having a crank pin q^1 extending into the housing of the counter mechanism and engaging a slot r^1 of a lever *r* pivotally mounted at *x*. The forward end of this lever *r* carries a pawl *s* mounted thereon and provided with a spring *t* and adapted to engage in the teeth of the ratchet wheel *u*. The pin q^1 of the crank *q* moves in an arc-shaped slot of the counter housing and when the segment *i* is turned as previously described the pin of the crank *q* moves in the slot *v* of the counter housing and operates the pawl *s* to move the unit wheel or disc of the counter mechanism one tooth further.

The mechanism for presenting a ticket, card or prize to the purchaser consists of the following parts:—Linked to the lever *e* is a lever *z* which is moved by the movement of the said lever *e*. The end of this lever *z* extends to a card ejecting mechanism and is suitably guided, and its movements limited by a guide 1 (Figs 6 and 7). The upper part of the end of this lever *z* is provided with a hook 2 and a shoulder 11 and in proximity to the end of the said lever a bell crank lever 6 is pivotally supported at 6^1 to a stationary part of the apparatus, indicated at 7. The hook 2 at the end of the lever *z* operates a star wheel 3, pivoted to the plate 7 and turns the same one tooth at each reciprocation of the said lever due to the movements of the lever *e*. This star wheel 3 is provided with a recess 3^1 and at each (in the present case) sixth reciprocation of the lever *z* the hook 2 will fall into the said recess under the action of the spring 5 so that the shoulder 11 will come into engagement with the pin 10 of the shorter arm of the bell crank lever 6 and, on the further movement of the said lever *z* will move the said bell crank lever from the position shown in Figure 6 to that of Fig. 7. The end of the longer arm of the bell crank lever 6 is provided with an upwardly extending pin 8, which engages in a slide 12 adapted to be moved thereby beneath a stack 13 containing the cards or the

like to be ejected. These cards or the like are continually depressed by means of a suitable weight or spring and when the slide 12 is moved forwards from the position shown in Figure 8 to that in Figure 9 by the action of the parts previously described, it ejects the lowest card or the like out of the stack through a suitable slot as will be clearly seen from Figures 8 and 9. As soon as this has taken place and the lever z recedes the spring 14 returns the slide 12 to its normal position.

In the device illustrated in Figure 10 the operation of these parts is reversed and the card is suddenly projected out, the slide being gradually returned to its normal position, thus when the recess 3^1 comes round the nose or hook 2 falls into the same and the shoulder engages the pin 10 of the lever 6 and gradually moves the slide 12 in, instead of out. When the slide has been moved in, the parts are thrown out as previously described and the spring 14 (in this case a flat spring) operates to eject the lowermost card or ticket as will be readily understood on reference to the figure.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1:—In a coin freed apparatus, the combination of a spindle h, to which motion is imparted by a lever e operated by a disc d with recess d^1, as specified and a crank arm q on the said spindle extending into a counter mechanism and means in connection therewith for moving the unit counter wheel of the mechanism at each operation of the said spindle substantially as described.

2:—In a coin freed mechanism as covered by Claim 1, the combination of the segment i having pin n and being fixed to the said spindle h, the said pin n being normally out of engagement with the tail end of the moveable part of the coin holder m substantially as described.

3:—In a coin freed apparatus as covered by Claims 1 and 2 the combination of a coin holder having a pivotally supported moveable member l normally held closed by a suitable spring and adapted to open the said holder laterally when operated substantially as described.

4:—In a coin freed apparatus of the class specified, the combination with the spindle h of a card or ticket ejecting mechanism consisting of a lever arm z, which, when the lever e enters the recess d^1 of the disc d, engages a star wheel 3, for regulating the periodical ejection of the cards or tickets, and, at certain points in the revolution of said star wheel is allowed to engage one arm of a bell crank lever 6, operating a slide 12, and thus causing the ejection of the lowest card ticket or the like substantially as described.

5:—A coin freed apparatus having the improvements herein set forth and illustrated in the accompanying drawings.

Dated the 2nd. day of May 1902.

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4, South Street, Finsbury, London,
Agents for the Applicant.

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A.D 1902. May 2. N° 10,166.
RICHTER'S Complete Specification.

SHEET 1.

FIG. 1.

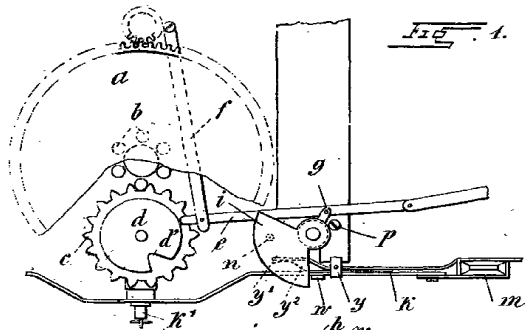


FIG. 2.

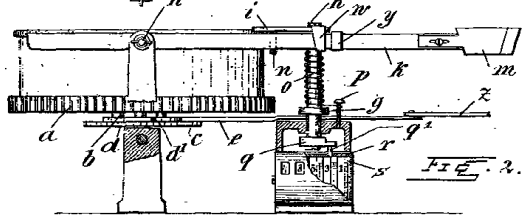
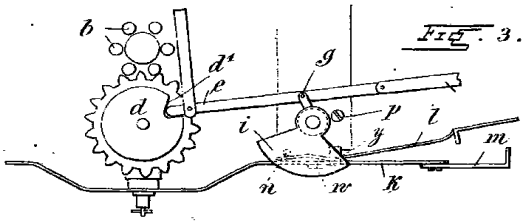


FIG. 3.



[3 SHEETS]
SHEET 2.

FIG. 4.

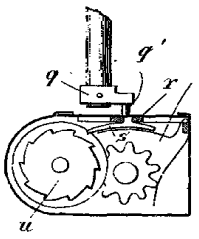


FIG. 5.

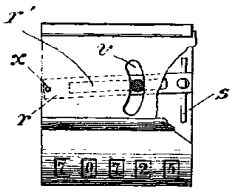


FIG. 6.

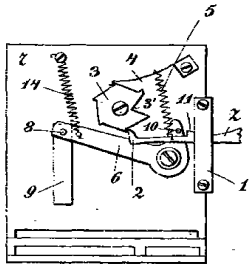
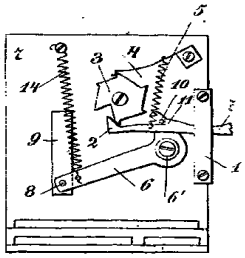


FIG. 7.



[This Drawing is a reproduction of the Original on a reduced scale.]

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A.D. 1902. May 2. N° 10,166.

RICHTER'S Complete Specification.

SHEET 1.

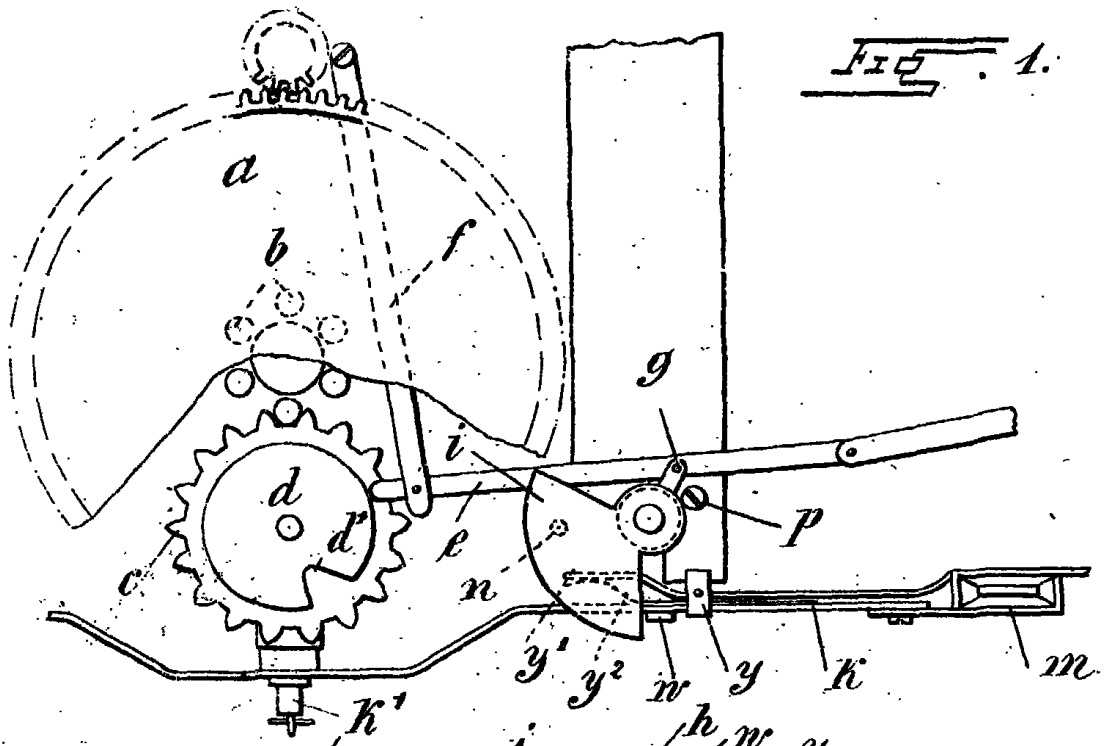


Fig. 1.

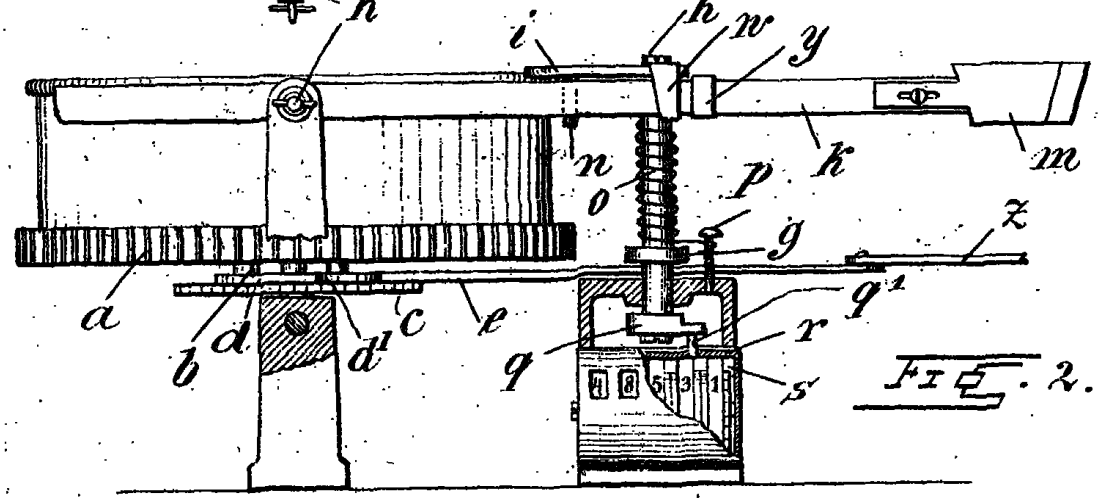


Fig. 2.

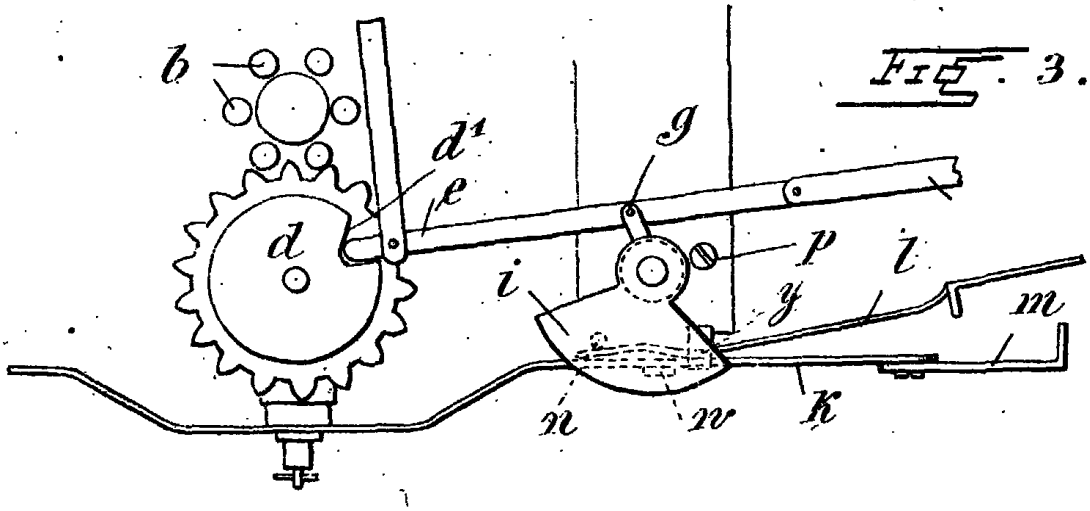


Fig. 3.

FIG. 4.

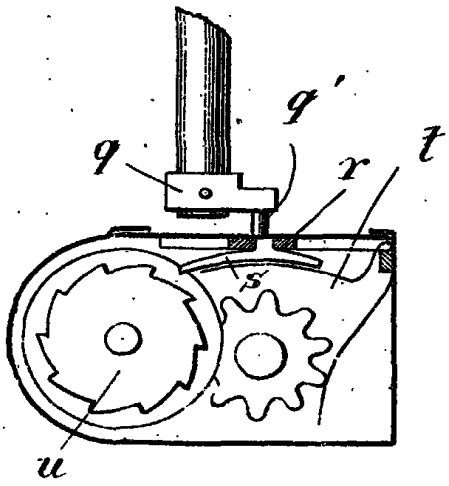


FIG. 5.

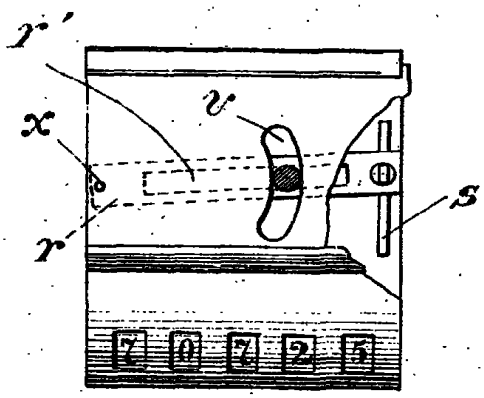


FIG. 6.

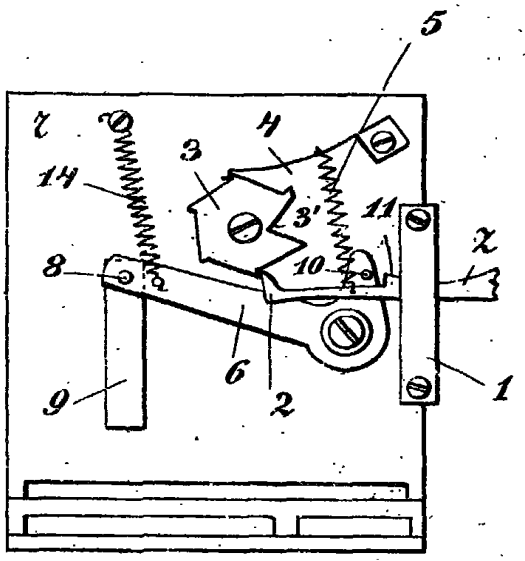
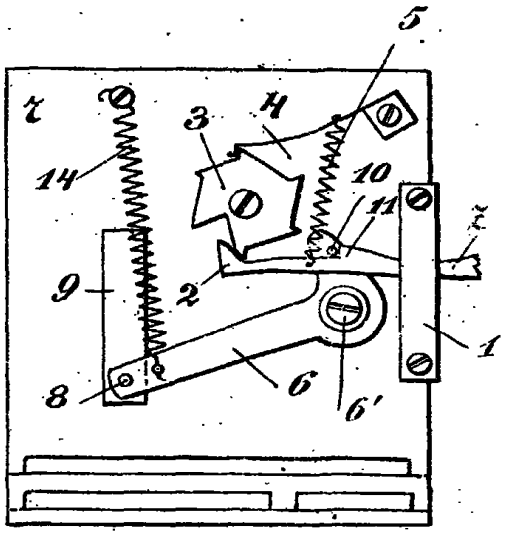


FIG. 7.



[This Drawing is a reproduction of the Original on a reduced scale.]

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FIG. 8.

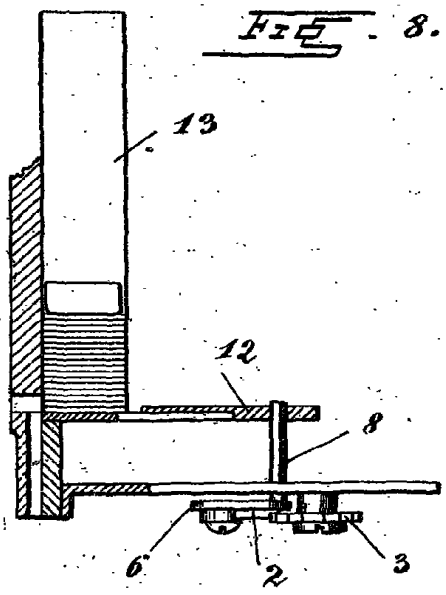

FIG. 9.

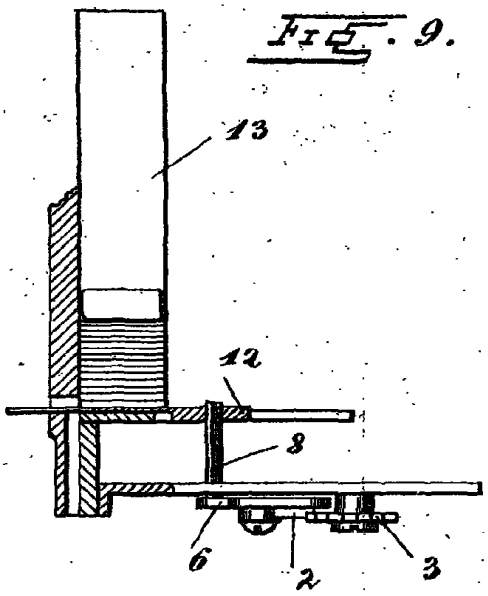

FIG. 10.