

No. 618,335.

Patented Jan. 24, 1899.

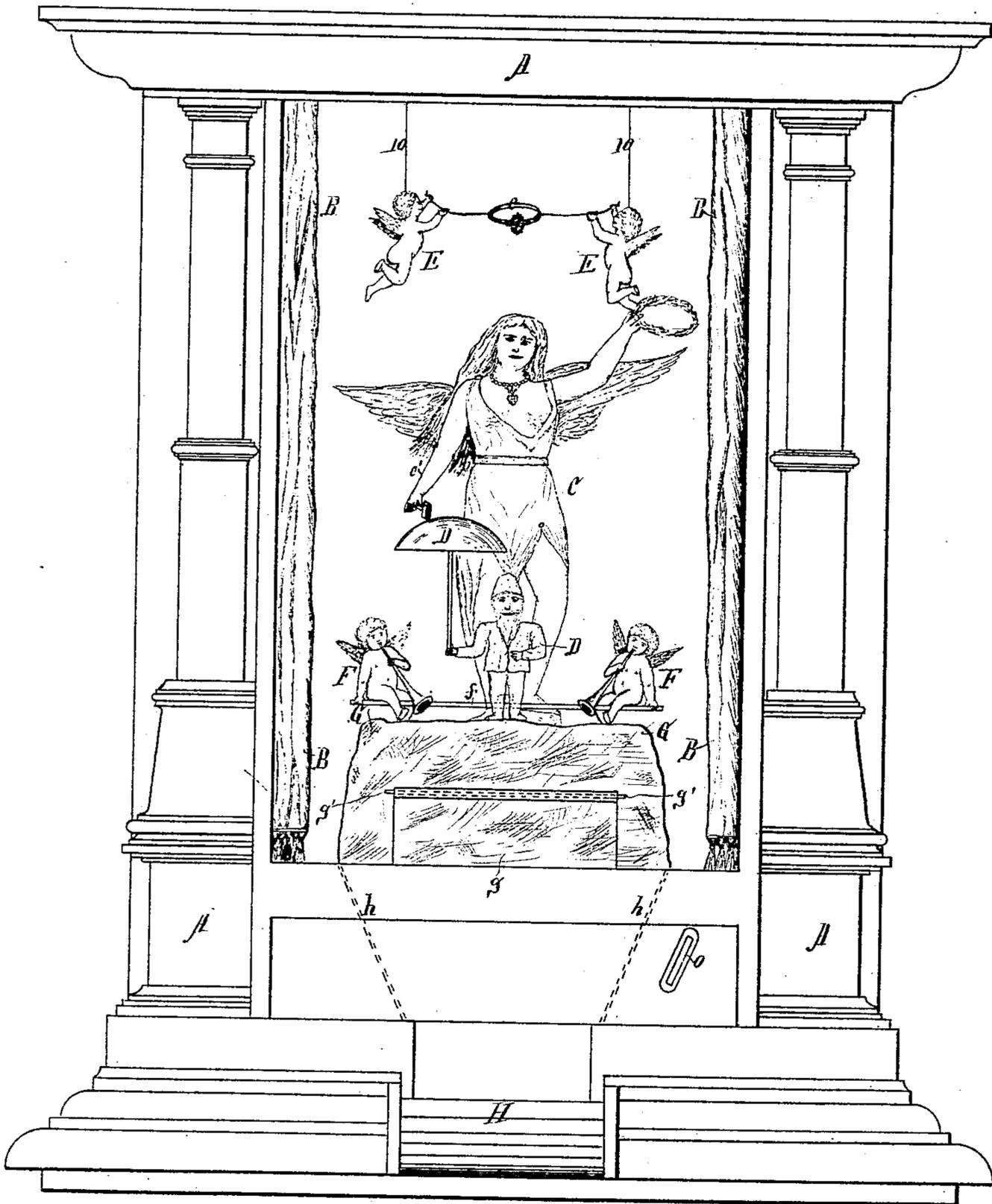
A. E. T. DALLMER.
COIN FREED DELIVERY AND EXHIBITION APPARATUS.

(Application filed Dec. 23, 1897.)

(No Model.)

4 Sheets—Sheet I.

Fig. 1.



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Fig. 3.

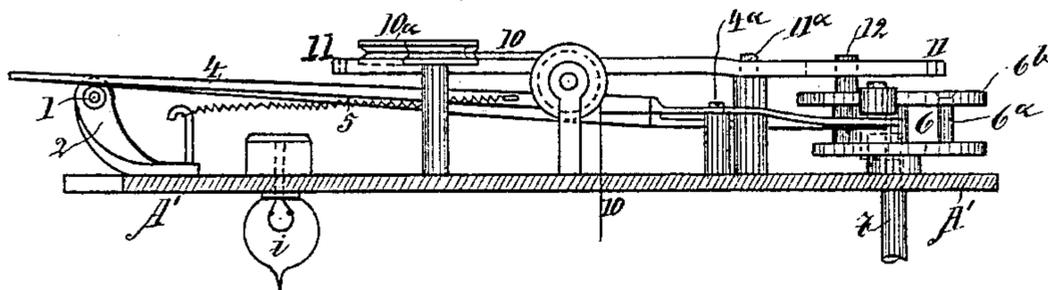
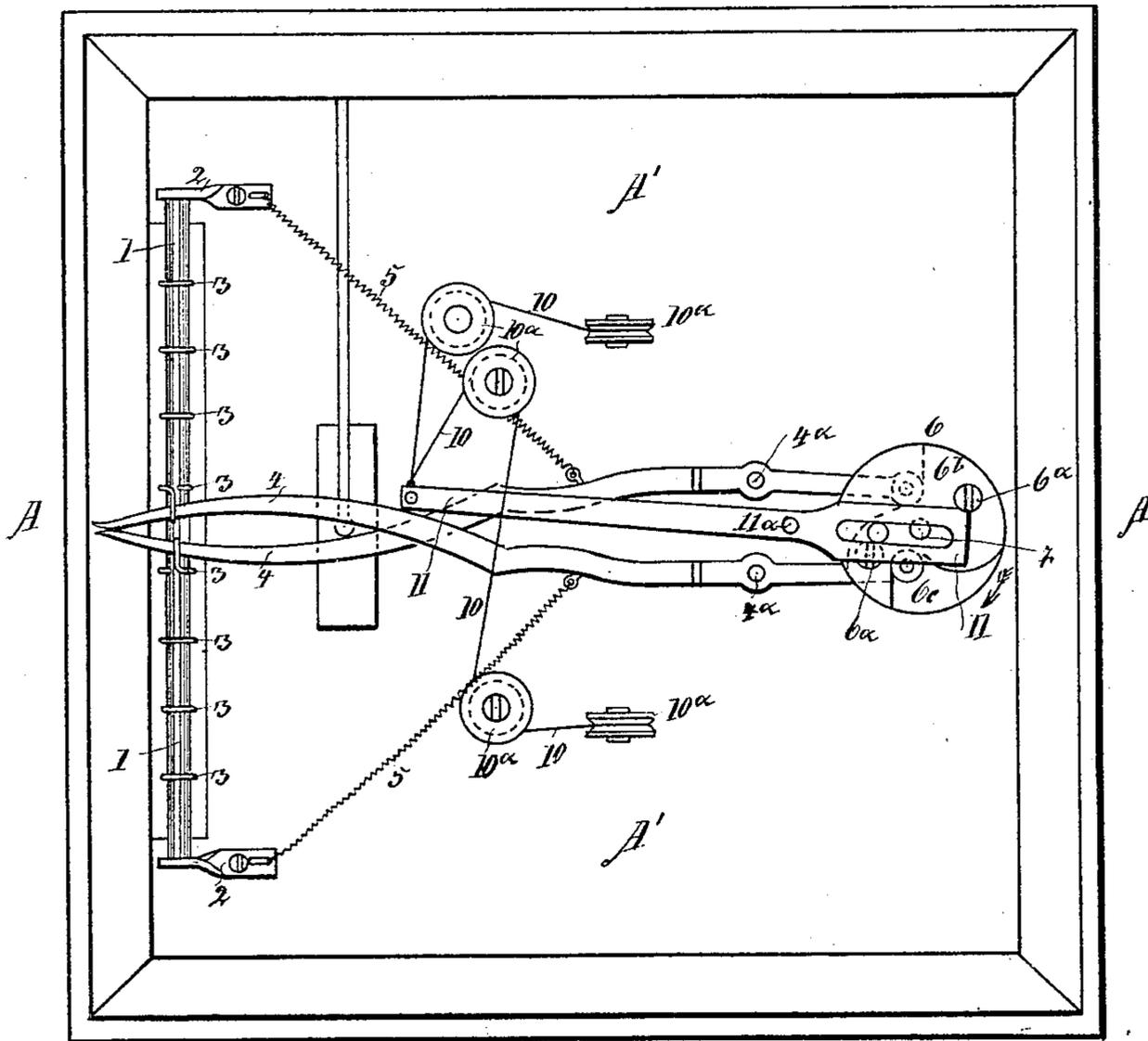


Fig. 2.



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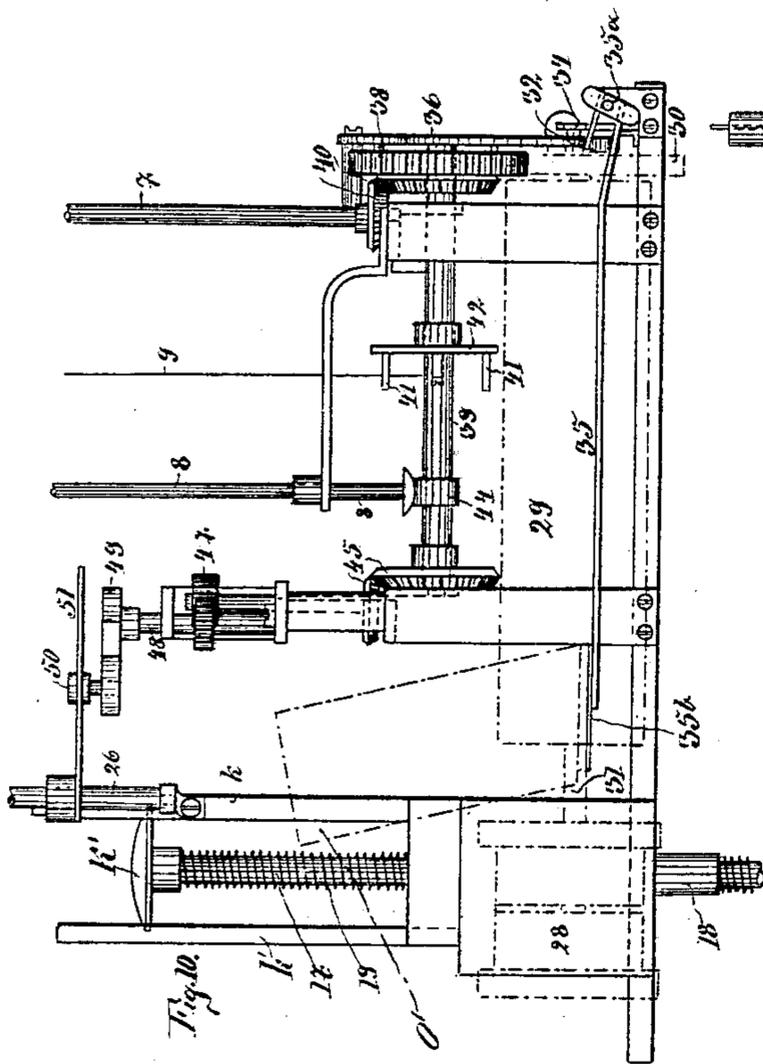


Fig. 10.

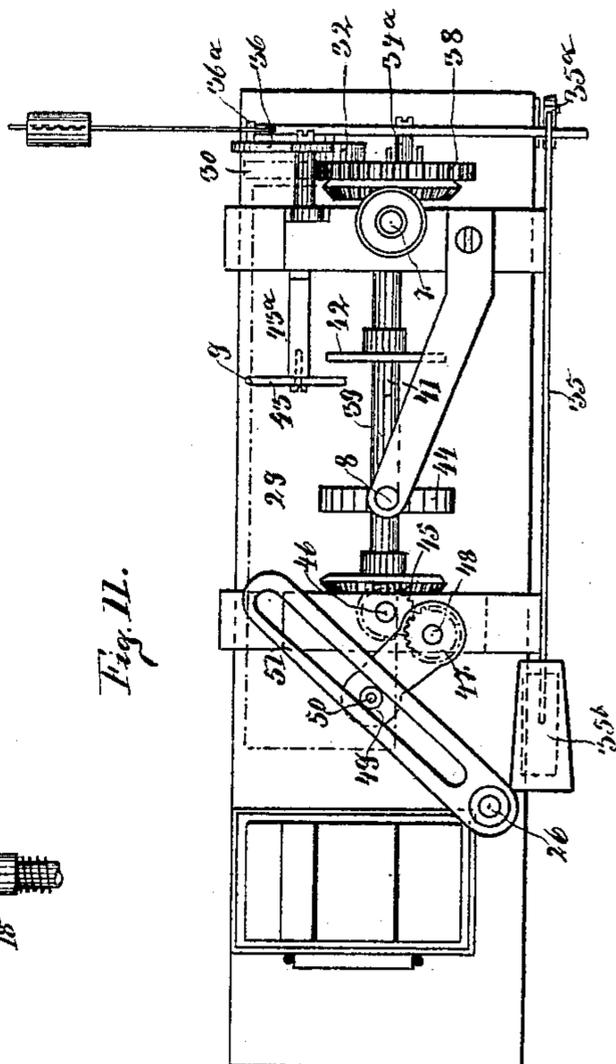


Fig. 11.

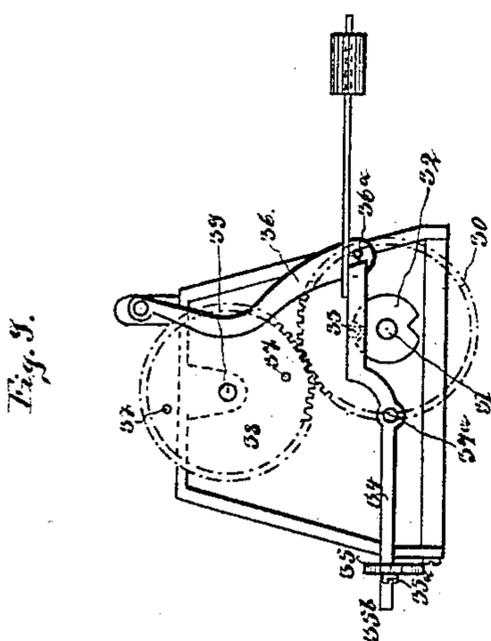


Fig. 12.

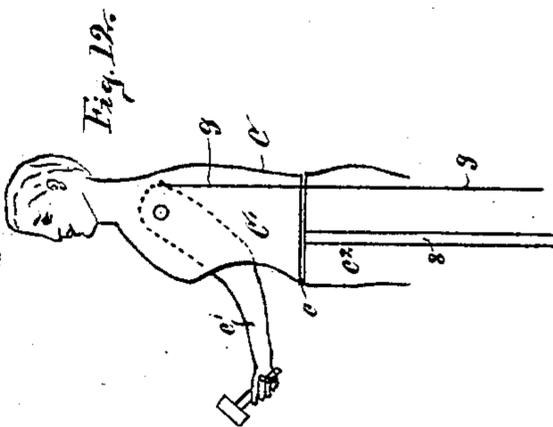


Fig. 13.

Witnesses:
 Thomas Durant
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Inventor:
 Albert E. T. Dallmer
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UNITED STATES PATENT OFFICE.

ALBERT ERNST THEODOR DALLMER, OF DRESDEN, GERMANY, ASSIGNOR
TO THE AKTIEN-GESELLSCHAFT, FAHRRAD AND MASCHINENFABRIK,
VORMALS H. W. SCHLADITZ, OF SAME PLACE.

COIN-FREED DELIVERY AND EXHIBITION APPARATUS.

SPECIFICATION forming part of Letters Patent No. 618,335, dated January 24, 1899.

Application filed December 23, 1897. Serial No. 663,192. (No model.)

To all whom it may concern:

Be it known that I, ALBERT ERNST THEODOR DALLMER, a subject of the King of Saxony, residing at Dresden, Saxony, in the Empire of Germany, have invented certain new and useful Improvements in or Relating to Coin-Freed Delivery and Exhibition Apparatus, of which the following is a specification.

The automatic machine according to the present invention for selling packets of chocolates or other goods is combined with an automatic exhibition apparatus actuated by mechanism actuated by the coin releasing the selling mechanism. The stage is normally closed by a curtain opening and closing automatically.

The invention chiefly consists in the construction and manner of drawing the curtain, in the mechanism for effecting the performance, in the apparatus for receiving and delivering separate packets of goods, and in the device for releasing the mechanism by means of a coin.

In the accompanying drawings, Figure 1 is a view with the curtain drawn aside, the box-shaped foundation or lower portion of the frame being omitted, as it does not possess any special features. Fig. 2 is a plan corresponding to Fig. 1, the cover of the casing being removed. Fig. 3 is an elevation of the mechanism for drawing the curtain and giving the performance, being a section through the intermediate cover A', Fig. 2, of the casing. Fig. 4 is an elevation of the goods-containing part, with the delivery device, which latter is on the same level as the flap-door *g* in the base of the stage, Fig. 1. Fig. 5 is a plan, and Fig. 6 a vertical cross-section, of the delivery device; Fig. 7, a front elevation of the delivering device; Fig. 8, a plan of the frame 20, over which is arranged the delivering device; Figs. 9 to 11 are respectively front and side elevations and a plan of the operating mechanism, and Fig. 12 is a detail view of the movable body of the principal figure on the stage.

The upper part A of the casing, Fig. 1, is formed in imitation of a theatrical stage and

is provided with a background, &c., and in front is closed by a glass plate. Behind this glass plate there is arranged over an elongated opening in the intermediate cover A', Figs. 2 and 3, a rod 1, supported in bearings 2, the curtain B, made in two parts of any suitable fabric, (in Fig. 1 only partly visible,) being movably mounted on the said rod 1 by means of rings 3, Fig. 2. The rings 3 are shown in Fig. 2 in the position when the curtain is closed. With the two central rings 3—*i. e.*, those at the inner ends of the curtain-halves—engage by means of springs 5 levers 4, pivoted at 4^a, their rear ends being normally pressed toward each other by the springs 5. These ends of the levers are provided with friction-rollers, which are then pressed against a cam 6, consisting of two similar parts 6^b and 6^c, connected by pins 6^a, but arranged in a reverse position relatively to each other, as shown in Fig. 2. If this cam-disk, secured to a vertical spindle 7, rotates in the direction indicated by the arrow, Fig. 2, the rear arms of the levers 4 move outward, whereupon the front arms draw aside the two halves of the curtain. Then the friction-rollers move for a certain time on the concentric parts of the circumference of the cam 6, the curtain remaining open all the time. Finally the recessed portions of the cam 6 again come opposite the rollers, when the springs 5 cause the levers to return into their original position, Fig. 2, and close the curtain.

The spindle 7 is driven by the mechanism hereinafter described.

The principal figure on the stage is the "fairy" C, in the form of a jointed doll. The upper body C' of the figure, Fig. 12, is connected to the fixed lower body C² by a hinge-joint *c*. A rod 8, passing through the lower body C², presses against C' and causes the upper body to bend when the rod is raised. The arm *c'*, which, according to Fig. 1, holds a hammer, is pivoted to C' and connected to a cord 9. When the latter is pulled, the arm holding the hammer is raised and then falls and strikes the bell D', held by a dwarf D.

Cupids E E, Fig. 1, soar over the fairy and

hold a diadem *e*, with which they crown her when descending, and then rise again. They are suspended by strings 10, which, as shown in Figs. 2 and 3, are guided over pulleys 10^a, carried on the cover A' and secured to a lever 11, pivoted at 11^a. A crank-pin 12 on the cam 6 engages with the slotted rear arm of the lever and moves the latter at first to one and then to the other side when the cam 6 rotates, so that the cupids are at first lowered and then raised again. Two more cupids F F are seated on a board *f*, which advances and moves back, together with the hereinafter-described part for delivering the goods. They are provided with musical instruments, the music in reality being produced by a playing mechanism connected to the operating mechanism.

The plinth or base G, Fig. 1, representing a rock, is provided with a flap-door *g*, hinged by means of a hinge-joint *g'* at its upper edge. The door is opened by the packet of goods pushed forward by the advancing delivering part. The packet is thus pushed out and falls through a chute *h*, Fig. 1 in dotted lines, behind the glass plate into a cup H, arranged outside, from which it can be removed.

The performance takes place in the following manner: At first the curtain is drawn aside, and the fairy becomes visible. She bows, is crowned by the cupids, and by striking the bell causes the packet of goods to appear. At the same time music is heard and seems to be produced by the advancing seated cupids. After the packet has appeared the curtain is drawn again.

The stage may be illuminated when the curtain is drawn aside by means of an incandescent lamp *i* at A', Fig. 3, which is switched in or out in any well-known manner by means of the operating mechanism.

Of course the performance may be considerably varied as regards the meaning, arrangement, and movement of the figures, the other special features of the apparatus remaining the same.

The arrangement for holding and delivering the goods consists of a frame K, constituted by four vertical rods with the necessary cross-stays. The frame K is secured in the lower portion of the main frame, so that its top, with the delivering part, is on the level with the door *g*. The frame K is placed close behind the door *g*. Two angle-irons 13, arranged at the sides, Figs. 4, 6, and 8, serve to guide the packet pushed out toward the door. Both the bars *k* of the frame K, which are the rear ones in Fig. 4 and the right-hand ones in Fig. 6, are constituted by angle-irons. The two others, *k'*, consist of angle-irons only from the top down to the cross-piece 14, Fig. 4. Under the latter there is a frame 15, hinged at the bottom at 15^a and capable of opening outward and held closed by a pawl 16, mounted on the cross-piece 14. The superposed packets *x x* are suitably guided in their upward movement by the bars *k k'* or by the frame 15. They are introduced in lots through the free

space formed by opening the frame 15. For this purpose the piston K', mounted on the rod 17, is depressed and a number of packets introduced, the piston being then raised up to the cross-piece 14, whereby the packets are pushed up. The piston K' is then again depressed and a new lot of packets introduced, and so on. When the frame is full, the frame 15 is closed and held by the pawl 16. The rod 17 is suitably guided in a tube 18. A long helical spring 19 forces the piston and the packets upward.

Over *k k'* there is arranged an open rectangular frame 20, Figs. 6 and 8, at such a distance above the top of the bars that only one packet can pass at a time. Over the frame 20 there is a rod 21, affording a guide for the advancing part L. The latter consists of a slide-block 22, which engages at the bottom with a slot 23^a of the plate 23 and prevents the slide-block 22 from turning relatively to the rod 21, and of a slide 24, pivoted to the block 22 at 24^a. During the return movement (to the right-hand side, Fig. 6) the slide 24 slides on the top of the upper packet *x*, behind which it drops when the slide-block 22 passes beyond the packet. During the advance, however, the slide 24 engages like a hook with the top packet *x* and causes the packet to participate in its movement. The slide-block 22 is caused to move by means of the lever-arm 25, Figs. 4 and 5, carried on the vertical spindle 26, which is rocked by the operating mechanism. The slide-block 22 carries by means of a pin 27 the board or cross-piece *f*, carrying the cupids F F.

The operating mechanism is connected to a musical box of any well-known construction. The musical box shown in the example illustrated comprises a spring-barrel 28, (shown dotted in Fig. 10,) a toothed barrel 29, (shown in Figs. 10 and 11,) and a spur-wheel 30 on the spindle 31 of the roller shown in Figs. 9 to 11. On this spindle 31 is mounted a disk 32, with two diametrically opposite notches, Fig. 9, with one of which engages a pin 33 of a weighted ratchet-lever 34 after each half-revolution. (The barrel makes only half a revolution each time that it is actuated and plays, say, one piece each time.) The lever 34 is pivoted at 34^a. One arm of 34 engages with the coin-lever 35, pivoted at 35^a. The coin-lever carries a plate 35^b, over which is situated the end of the coin-chute O', (partially shown dotted in Fig. 10,) extending from the slot O on the front of the casing, Fig. 1. When the coin-lever 35 descends under the weight of a coin, (which falls off immediately afterward,) the end of lever 34 connected to the coin-lever is depressed and the opposite end elevated, and thus the pin 33 is disengaged from the disk 32, and at the same time the pin 36^a of the lever 36 comes under the raised arm of the lever 34, which pin normally rests against the end face of the lever 34, Fig. 9, and prevents the ratchet-lever 34 from again engaging with the disk 32. Only

when one of the two pins 37 on the side of the spur-wheel 38 forces back the pawl 36 the ratchet-lever 34 can engage again with the disk 32 after one-half of a revolution has been completed. The spur-wheel 38, mounted upon the horizontal shaft 39, meshes with and is driven by the spur-wheel 30 on the spindle 31. Two bevel-wheels 40 cause the spindle 7 to turn through one revolution at each half-revolution of 39, (the spindle 7 serving to draw the curtain and effect the performance.) Further, at each half-revolution of 39 one of the pins 41 on the disk 42, Figs. 10 and 11, presses against the lever 43, pivoted about 43^a, this latter lever having attached to it the cord 9 for moving the arm *c'* of the figure C, Fig. 12. A cam 44 on the shaft 39, with two diametrically opposite projections, Fig. 11, raises the bar 8 for inclining the upper part C' of the body C forward, Fig. 12. Finally, a pair of bevel-wheels 45 drives the intermediate spindle 46, and the latter by means of a pair of spur-wheels turns the vertical spindle 48, provided with a crank 49 and a crank-pin 50. This latter pin engages with the slotted arm 51 on the lever-shaft 26, actuating the delivering part L, Fig. 4, causing it to reciprocate.

The working of the apparatus is as follows:
 30 The curtain is closed. The delivering part L is in the position shown in Fig. 6, which has been brought about by the piston K' rising after the uppermost packet has been pushed out and raising a new packet against the frame 20. This packet at the same time raised the slide 24 into the position shown in Fig. 6. By introducing a coin the ratchet-lever 34 is released from the engagement with the disk 32 through the intermediary of the coin-lever 35. The pin 36^a of the lever 36 then comes under the lever 34 and the mechanism begins to act. At first the curtain B is drawn aside by means of levers 4 and the cam-disk 6. During the time that the music plays the fairy C bows and the cupids E E descend and crown her with the diadem. Her arm *c'*, carrying the hammer, is raised and strikes the bell. Meanwhile the delivery part L (together with the cupids F F) has retreated and advanced again, and at the moment of the hammer striking the bell a packet falls through the door *g* into the cup H. Thereupon one of the pins 37 disengages the lever 36, and the ratchet-lever 34 engages with the next notch of the disk 32, the curtain closing just before this takes place.

I do not wish to confine my invention to the particular devices described, as of course

many details may be varied without departing from the spirit of the invention.

I claim—

1. In an apparatus such as described, the combination with the motor set in operation by the insertion of a coin, of the article-delivery mechanism operated by said motor, the figure having an upper jointed portion and pivoted arm, the drive-shaft, the cam thereon, the rod connected to the upper portion of the figure, and adapted to be raised by the cam, the disk carried by the drive-shaft and having the pins, the pivoted lever adapted to be struck by the pins on the disk, a flexible connection between the pivoted arm of the figure and the said lever, and the bell whereby an alarm will be given when the apparatus is working; substantially as described.

2. In an apparatus such as described, the combination with the frame carrying the articles to be delivered, of the plate mounted at the top of said frame, having the slot therein the rod carried by said plate, the block sliding on said rod, and extending down into the slot, whereby the block will be guided and prevented from turning on the rod, and coin-controlled mechanism for operating said block; substantially as and for the purpose set forth.

3. In an apparatus such as described, the combination with the frame carrying the articles to be delivered, of the plate carried by said frame, having the slot therein, the rod mounted on said plate, the block sliding on said bar and extending down into the slot, the finger or catch pivoted on the lower end of the block to turn in but one direction, whereby when the block is moved back the catch will slide over the top of the packet and drop behind the same when the block passes beyond the packet, and coin-controlled mechanism for moving said block; substantially as and for the purpose set forth.

4. In an apparatus, such as described, the combination with the rectangular frame carrying the articles to be delivered, formed of the vertical angle-irons, the flanges on the lower portion of two of the bars being moved, whereby the articles may be inserted in the frame, and the pivoted frame for holding the articles in the frame; substantially as described.

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

ALBERT ERNST THEODOR DALLMER.

Witnesses:

OTTO WOLFF,
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