

J. SCHIEMER.
VENDING MACHINE.
APPLICATION FILED FEB. 1, 1910.

991,900.

Patented May 9, 1911

6 SHEETS—SHEET 1.

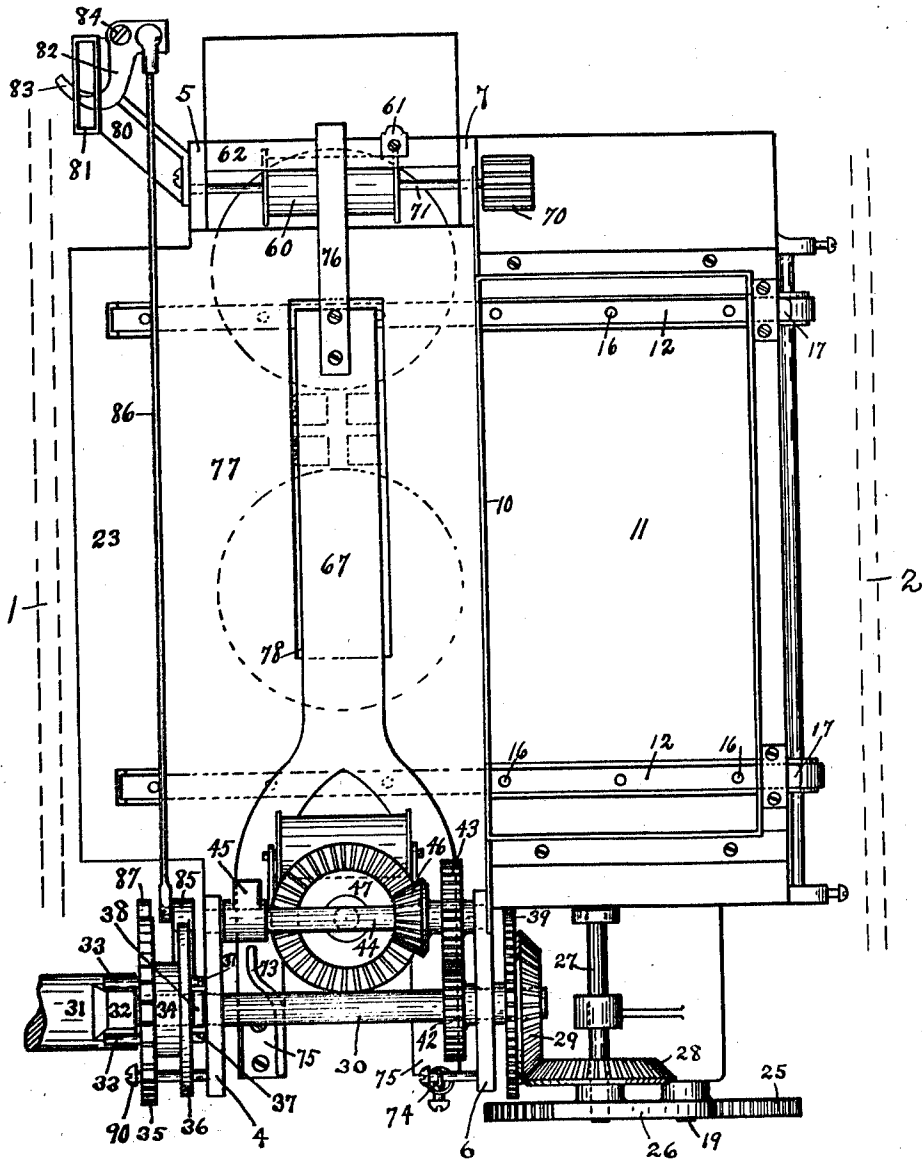


Fig. 1.

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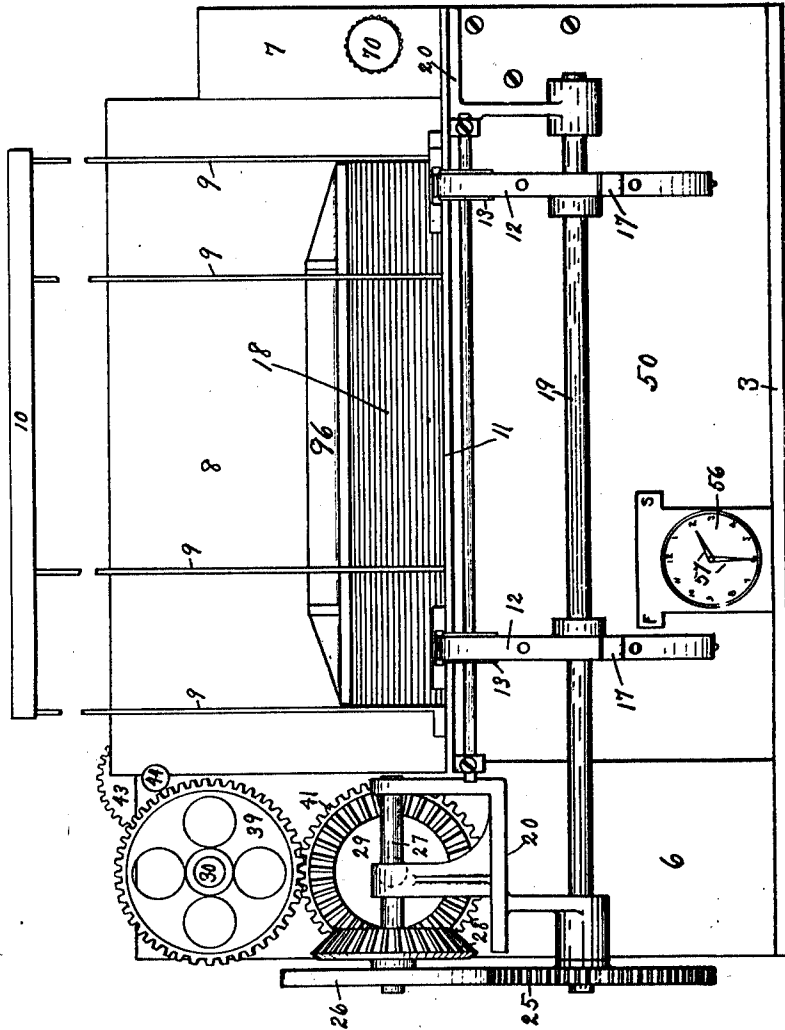
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6 SHEETS-SHEET 2.

Fig. 2-



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6 SHEETS—SHEET 3.

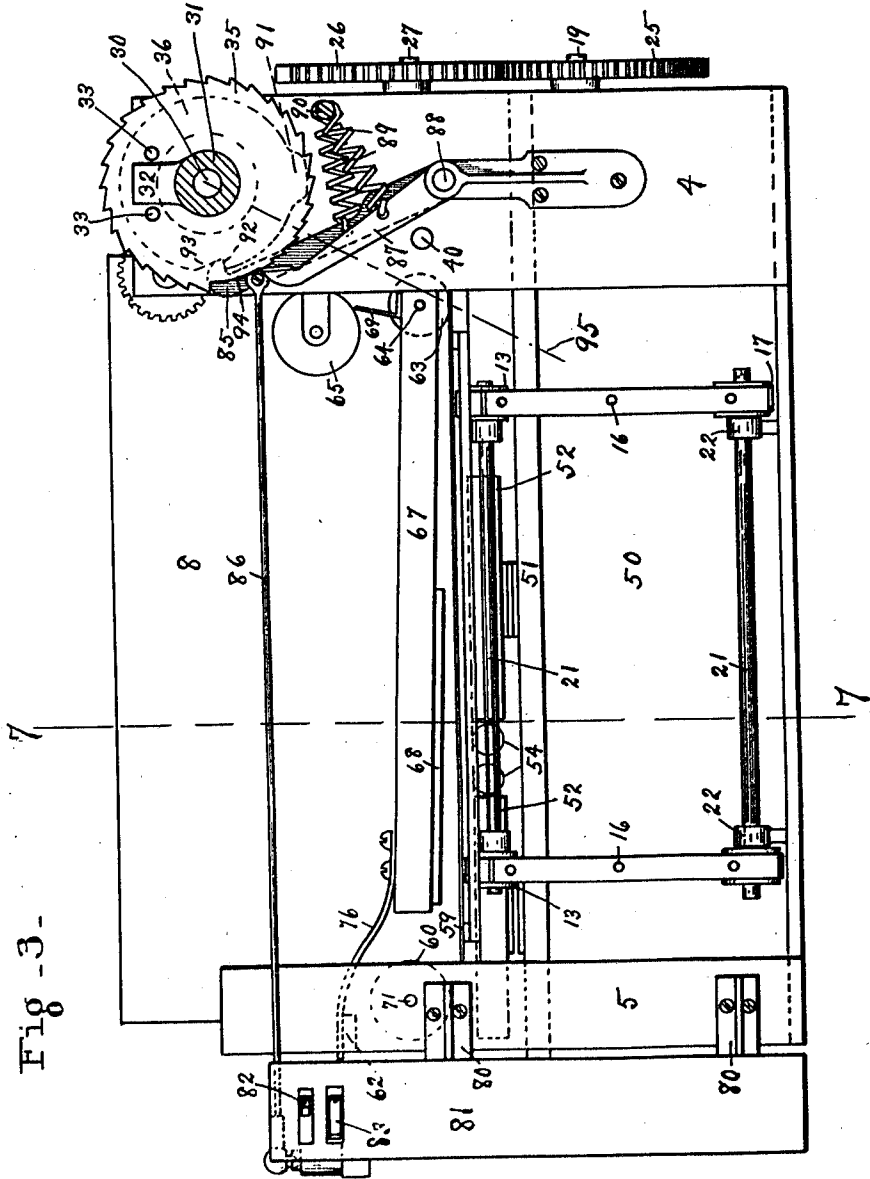


Fig. 3-

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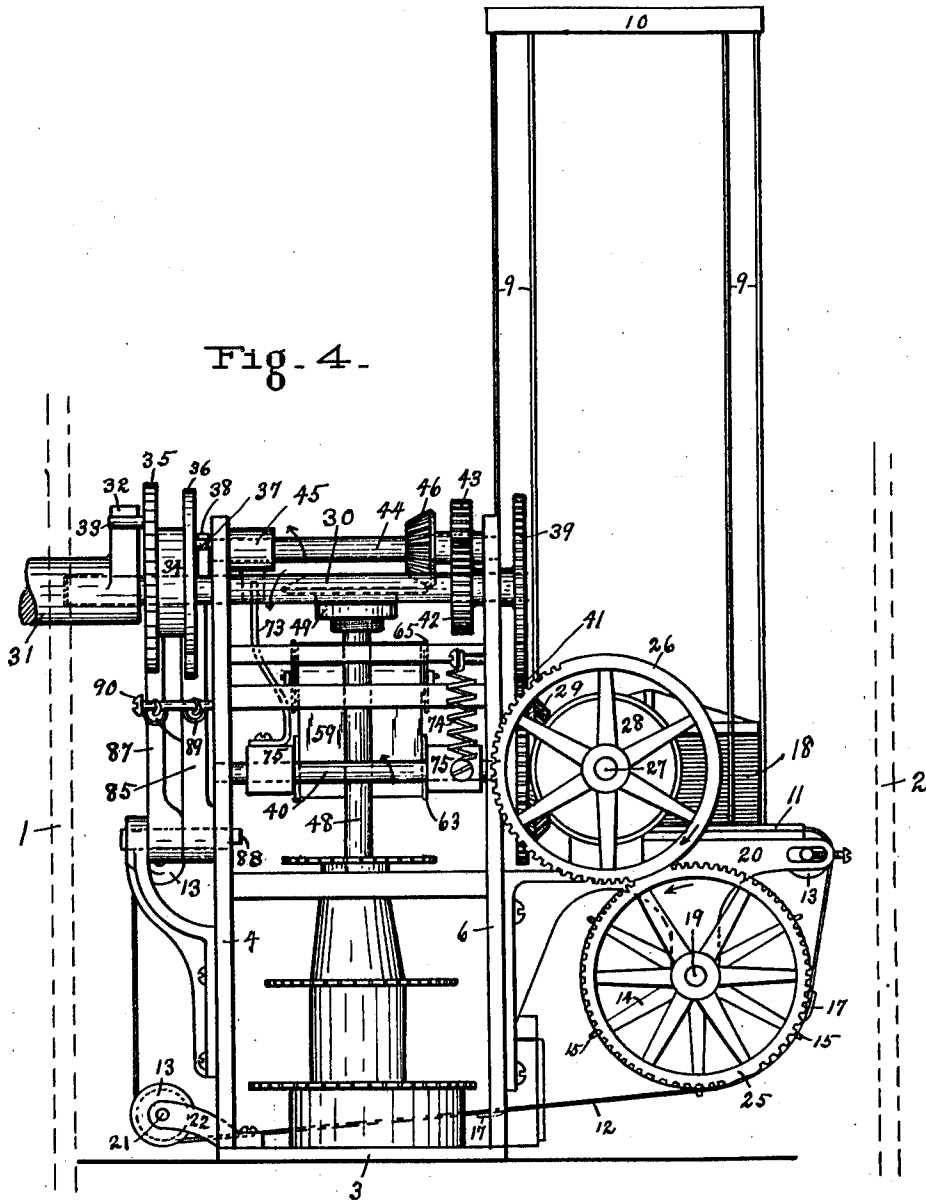
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6 SHEETS-SHEET 4.

Fig. 4.



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6 SHEETS-SHEET 5.

Fig - 6 -

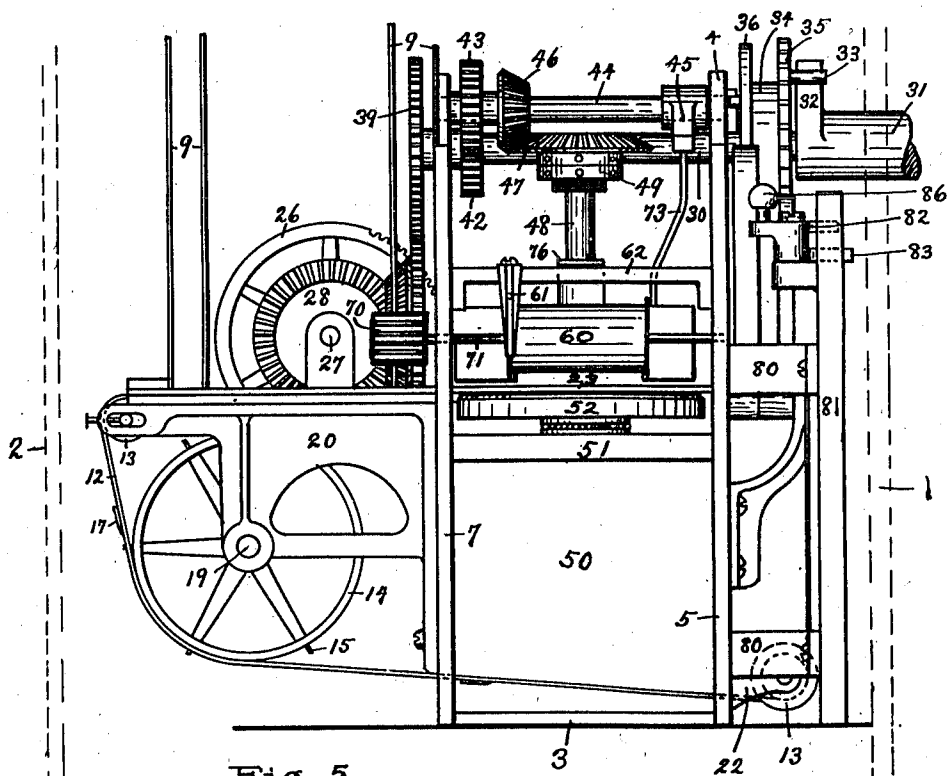
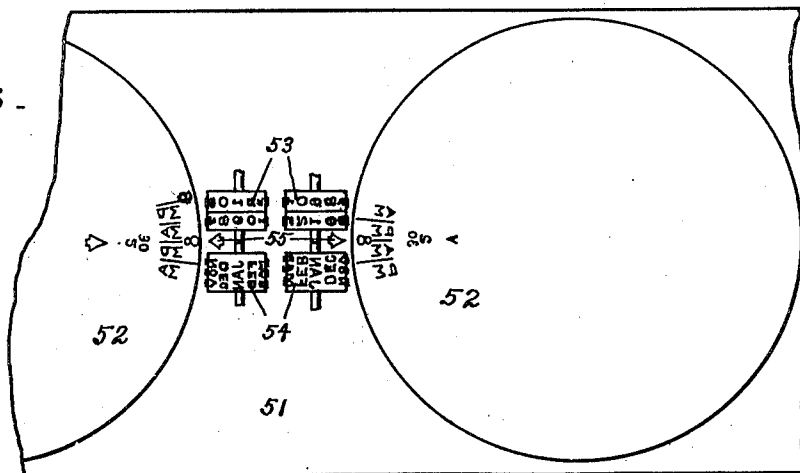


Fig-5-

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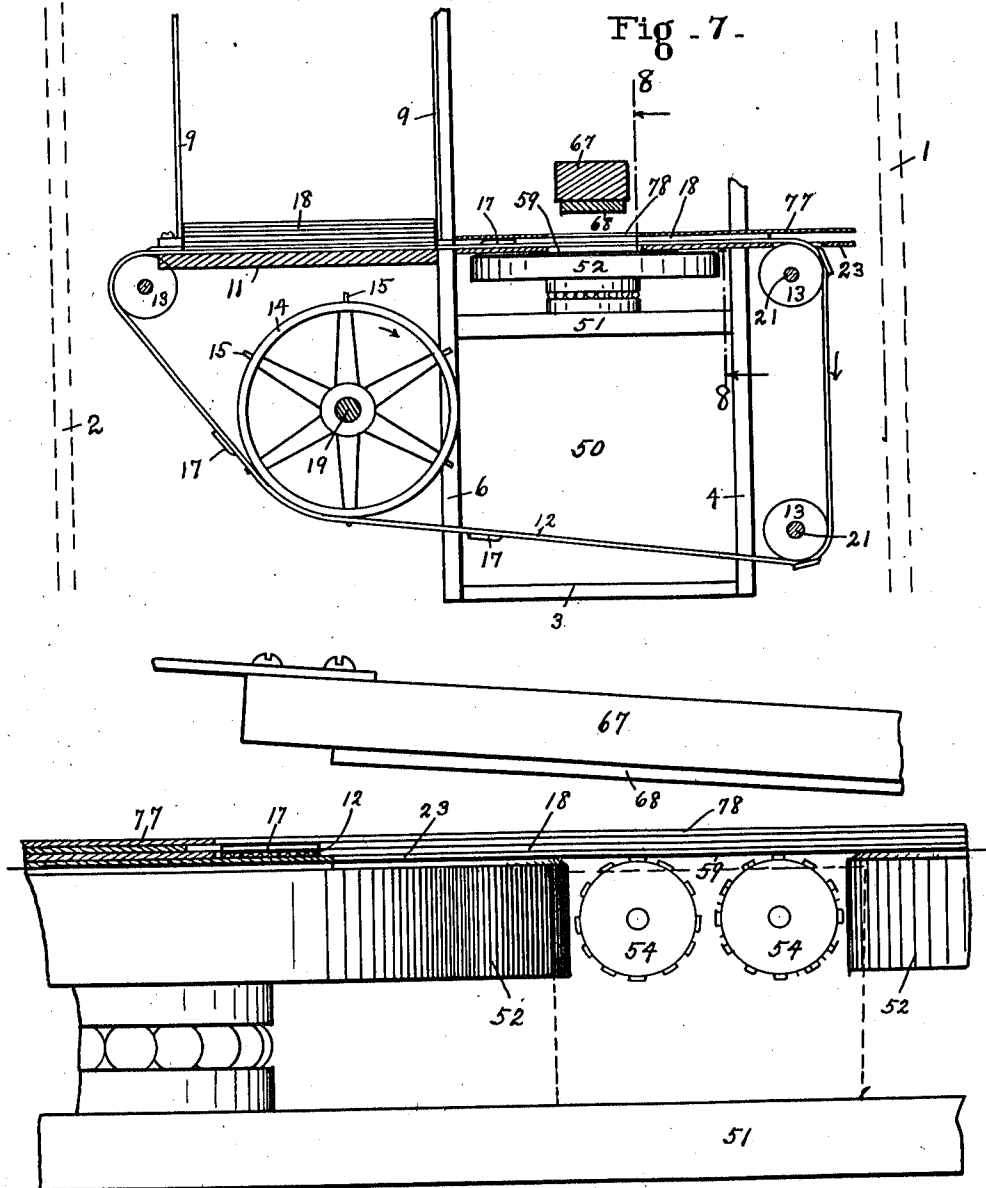
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6 SHEETS—SHEET 6.



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Fig - 8 -

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UNITED STATES PATENT OFFICE.

JACOB SCHIEMER, OF DETROIT, MICHIGAN, ASSIGNOR TO NATIONAL INSURANCE SCALE COMPANY, A CORPORATION OF ARIZONA TERRITORY.

VENDING-MACHINE.

991,900.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed February 1, 1910. Serial No. 541,228.

To all whom it may concern:

Be it known that I, JACOB SCHIEMER, a citizen of the United States, and a resident of Detroit, county of Wayne, and State of Michigan, have invented a new and useful Vending-Machine, of which the following is a specification.

This invention relates to insurance policies vending machines containing means for printing the time on a plurality of sections of a card simultaneously, which means are mounted within the case of a vending machine adjacent to a card receptacle; it further embraces novel means for conveying cards from the card receptacle to the time-stamp and out of the case, which actuating means are controlled by a coin-governed device.

The object of this invention is to produce a coin-controlled vending machine for life or accident insurance policies in the form of cards, whereby the time at which the policy is purchased is printed upon the policy itself and the coupon attached to said policy, which printing on the two portions of the card is simultaneously performed.

In the accompanying drawings, Figure 1 is a plan of the actuating mechanism and the card receptacle. Fig. 2 is a rear elevation of the vending mechanism. Fig. 3 is a front elevation of the same. Fig. 4 is an elevation of the right side and Fig. 5 an elevation of the left side of the same. Fig. 6 is a plan of the printing mechanism. Fig. 7 is a vertical central cross-section on the line 7—7 of Fig. 3. Fig. 8 is a cross-section on the line 8—8 of Fig. 7 on a larger scale.

Similar reference characters refer to like parts throughout the several views.

Life and accident insurance policies are often sold by means of slot machines and each policy card is composed of a main portion or policy and a coupon, the latter of which after being properly filled in, is broken or torn off and returned to the machine. It is desirable that the exact time should be printed on both the policy and the coupon and this present invention is embodied in a machine containing a duplicate printing device for such purpose. The interior clock-mechanism of the time-printing device is not illustrated as it forms no part of this invention, and any desired

construction may be employed to actuate the printing wheels. As the case does not enter into consideration, the front 1 and back 2 of the case are indicated by dotted lines. In this type of mechanism it is usual to have the back of the case hinged so as to render all the mechanism easily accessible. As the sides of the case have nothing to do with the operation of this machine, they are not indicated in the drawings.

All the mechanism shown is mounted on a base plate 3 which can be supported in any desirable manner. Extending upward from the base plate are the two front uprights 4 and 5, and two intermediate uprights 6 and 7 between which latter extends the plate 8. The upwardly extending rods 9 are connected at the tops by means of frame 10. The lower ends of these rods connect to a plate 11 and together with the frame 10 and the plates 8 and 11 form the receptacle for the cards. The plate 11 is supported by the brackets 20. The cards are moved out of this receptacle by means of a pair of belts 12, which pass around idlers 13 and the driving wheels 14, which wheels have projecting pins or teeth 15 which extend through apertures 16 in the belts. Secured to these belts at regular intervals are blocks 17, preferably of metal, each of them substantially the thickness of a policy card 18. The driving mechanism is so proportioned that the distance this belt travels at each actuation of the machine is equal to the distance between the front faces of successive blocks 17. As shown in Fig. 7, the belt 12 travels over the plate 11 forming the bottom of the card receptacle and therefore the bottom card in the receptacle will always be carried out. The wheel 14 is mounted on the shaft 19 carried by the brackets 20 secured to the intermediate uprights 6 and 7. The front idlers 13 are mounted on shafts 21 supported in bearings 22 carried by the bottom plate 3 and by the top plate 23 which extends between and is supported by the uprights 4, 5, 6 and 7. On the right end of the shaft 19 is an intermittent gear 25 which is driven a one-half revolution at each full revolution of the mutilated gear 26, mounted on the shaft 27. A miter gear 28 on this shaft meshes with a miter gear 29 on the intermediate shaft 40. It will thus be seen that at each revolution of the shaft

40 the shaft 19 revolves one-half a revolution and as the circumference of the wheel 14 is equal to twice the distance between the blocks 17, a new card 18 will be moved forward at each actuation of the shaft 40.

5 The main driving shaft 30 is preferably actuated by a crank-handle, but any other desired device may be employed. The outer end of the crank is not shown but its hub 31
10 may be provided with an aperture to receive the end of the shaft 30 so they will remain in line with each other. (See Fig. 4.) On this hub is a projecting finger 32 which extends between the pins 33 on the sleeve 34.
15 To this sleeve are connected the ratchet wheel 35 and the cam 36, as well as the pins 37. The shaft 30 has a finger 38 which extends between the pins 37. The proportions and materials of the pins are such that when
20 the hub 31 is turned under ordinary conditions, the pins 33 will carry the stress to the sleeve 34. But if anything is wrong with the interior mechanisms of the machine, these pins will be sheared off before anything else is broken. In a similar manner
25 the pins 37 will carry normal pressure to the shaft 30 but will shear before anything beyond can be injured.

On the rear end of the shaft 30 is secured
30 a gear 39 which engages a similar gear 41 on the shaft 40, so that these shafts turn at the same speed in opposite directions. On the shaft 30 is a second gear 42 which engages a gear 43 on the shaft 44 journaled
35 in the uprights 4 and 6. The shaft 44 carries an arm 45 to actuate the printing platen, and also carries the bevel pinion 46 which engages the bevel gear 47 revolubly mounted on the upper end of the vertical
40 shaft 48. A friction disk 49 is secured to the upper end of the shaft 48 in engagement with the hub of the gear 47. The shaft 48 drives the winding mechanism of the time-printing mechanism so that when
45 winding is required, the shaft will be turned, but when the device is wound up, the gear 47 will slip on the disk 49. Any desired friction device may be employed for this purpose.

50 Extending between the uprights 4, 5, 6 and 7 is a rectangular case 50 of the time-printing mechanism which has an upper plate 51 above which are the dials 52 for the hours, the rollers 53 for the days and rollers 54 for the months, also the small pointers 55 for locating the central line. See Fig. 6.

As the operative driving mechanism of this printing device forms no part of this
60 present invention, the printing portion only is indicated. The different portions are in duplicate so that the hour, day and month will be printed on both portions of the card. At the rear of the case 50 may be placed a
65 dial 56 and hands 57 which are operatively

connected with the dials 52 so the same can be easily set without removing the plates above them. A printing ribbon 59 passes across over the dials 52 and rollers 53 and 54 and beneath the plate 23, which plate is
70 apertured to permit the platen to press the card down against the ribbon and type. The ribbon winds from around the spool 60 at the left side of the machine, which roller is retarded by a spring 61 carried by a cross
75 bar 62 between the uprights 5 and 7. At the opposite side, the ribbon passes around an idler 63 on the shaft 64 carried by the platen 67 and thence to the spool 65. The ribbon may be rewound by means of the
80 button 70 on the shaft 71 of the spool 60.

The platen 67 is forked at its right end and there mounted on the shaft 40 between the uprights 4 and 6. It is provided with a striking-face 68 preferably of moderately
85 hard rubber, which is adapted to press a portion of the card against the ribbon and type. A finger 69 on the platen engages the flange on the spool 65 at each upward movement of the platen and turns the spool
90 a short distance, winding the ribbon. An arm 73 on a fork 75 projects into the path of the finger 45 on the shaft 44 and at each revolution of the shaft, the arm 73 will be swung to the right, raising the platen
95 against the pull of the spring 74 which is connected to one of the outwardly extending forks 75. When the finger 45 passes the arm 73, the spring will snap down the platen onto the card sufficiently hard to cause the
100 card to be printed. A light leaf spring 76 at the opposite end of the platen rests on the bar 62 and raises the platen out of the path of the next card after the spring 74 has expended its energy. A plate 77
105 extends above the belts 12 and prevents the card from moving upward. This plate has a slot 78 to admit the striking-face of the platen.

As the policies are not to be delivered until a coin is inserted, any desirable coin-controlled mechanism may be employed to lock and unlock the operating mechanism. That
110 illustrated in the drawings and now to be described has been found satisfactory and may be employed. Supported by brackets 80 mounted on the upright 5 is a coin chute 81. Two curved fingers 82 and 83 are pivoted at 84 and are connected to the pawl 85
115 (Fig. 3) by means of the link 86. The pawls 85 and 87 are mounted on the pin 88 and are held against the cam 36 and ratchet wheel 35 respectively by the springs 89, which springs attach to the pin 90. See Fig. 3. The cam 36 has a high portion 91,
120 a notch 92 and an incline 93. The ratchet wheel lacks a number of teeth at 94. The position of the handle when the parts are as shown in Figs. 3 and 4 is on the line 95, a position it does hold because of its weight. 130

When in the position shown in the figures, the finger 82 will not permit a coin to pass down the chute, but upon releasing the handle, its weight will turn the cams 36 back a short distance, (no teeth on the ratchet wheel 35 interfering) and the incline 93 on the cam will force the pawl 95 out, swinging the finger 82 out of the path of the coin which falls onto the finger 83. When the handle is now turned to the right, the pawl 85 cannot enter the notch, being prevented by the coin which is in the path of the finger 82. The crank handle can therefore be turned, not being stopped by the pawl 85, and the high point 91 on the cam will next engage the pawl 85 and force it back so far that the finger 83 will be swung out of the path of the coin, permitting it to drop. When the handle has made a complete revolution, the pawl 85 will again engage in the notch 92 and stop the movement. The first half of the movement of the crank turns the finger 45 against the arm 73 on the platen and so performs the printing. During this time, the smooth part of the gear 26 passes the gear 25. During the next half of the movement, the gear 26 turns the gear 25, the shaft 19 and the wheels 14 one half revolution, carrying the card which was over the time-printing device out of the case and at the same time carrying a second card, the bottom card in the card receptacle, from the receptacle to position over the time stamp. A weight 96 may be used to hold down the cards in the receptacle.

The details of the construction may be varied by those skilled in the art without departing from the spirit of my invention.

Having now explained my construction, what I claim as my invention and desire to secure by Letters Patent is:—

1. In a vending machine, the combination of a card receptacle, a card ejector movable below the card receptacle, a driving shaft for the ejector, a main shaft, intermittent gearing between said shafts, a notched wheel on the main shaft, a pawl engagement therewith to prevent the reverse movement of the main shaft, a printing device, a platen, and

means driven by said main shaft to actuate said platen alternately with said ejector.

2. In a vending machine for insurance policies, a printing device comprising a pair of printing disks having time characters on the upper face, a pair of rollers having month characters on their outer surface, and a second set of rollers having date characters on their outer surface, said rollers mounted between and symmetrical to the disks.

3. In a vending machine, the combination of a case, a frame within the case, a duplicate printing mechanism and a card receptacle mounted on the frame, a card conveyer passing below the receptacle for carrying a card to the printing mechanism and another card from the printing mechanism out of the case, a platen pivoted at one end to said frame and spring-held to extend above the printing mechanism, a shaft mounted in the frame above one end of the platen, a cam on the shaft adapted to engage the platen to print a card before the actuation of the card conveyer, a main driving shaft and connecting means adapted to actuate the platen and the card conveyer alternately, means connected to said main shaft to limit its movement to one revolution, releasing devices for said shaft, and means to prevent the reverse revolution of the same.

4. In a vending machine, the combination of a case, a card receptacle and a printing mechanism mounted therein, a card conveyer passing below the card receptacle above the printing mechanism, a mutilated gear for actuating the card conveyer, a main shaft to drive the gear, means to limit the movement of the same, a printing platen, an auxiliary shaft actuated by the main shaft, a cam on the auxiliary shaft to actuate the platen before the actuation of the conveyer, and means to release the main shaft.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JACOB SCHIEMER.

Witnesses:

ELIZABETH M. BROWN,
EDWARD N. PAGELSEN.