J. E. LEDERMAN.

RECORDING AND VENDING MACHINE.

APPLICATION FILED AUG. 30, 1917.

1,344,909. **Patented June 29, 1920.**

5 SHEETS—SHEET 1.

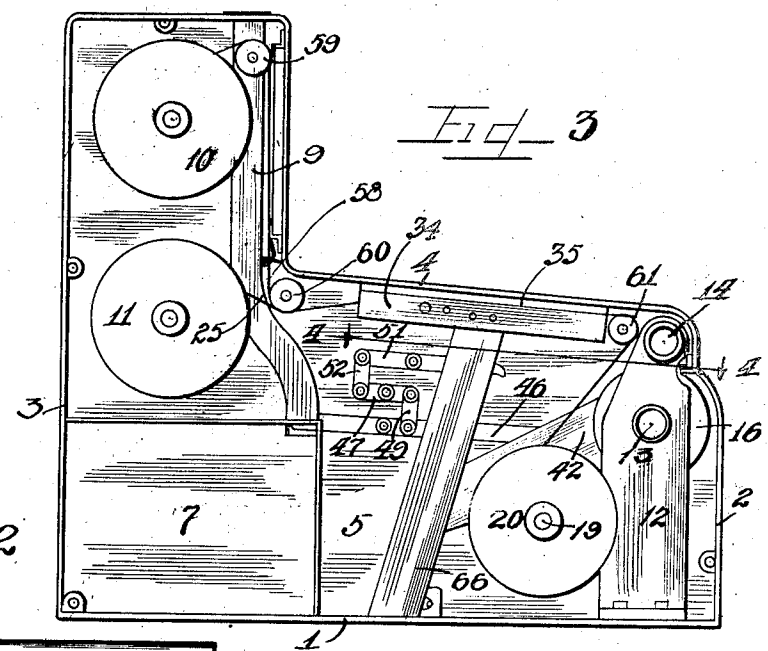


Fig. 3

Fig. 2

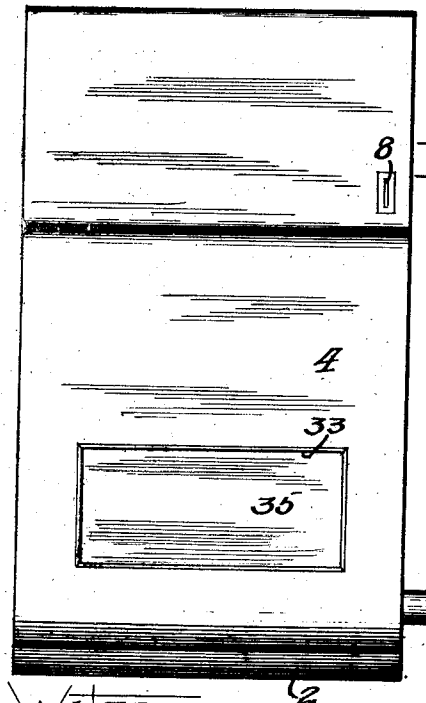
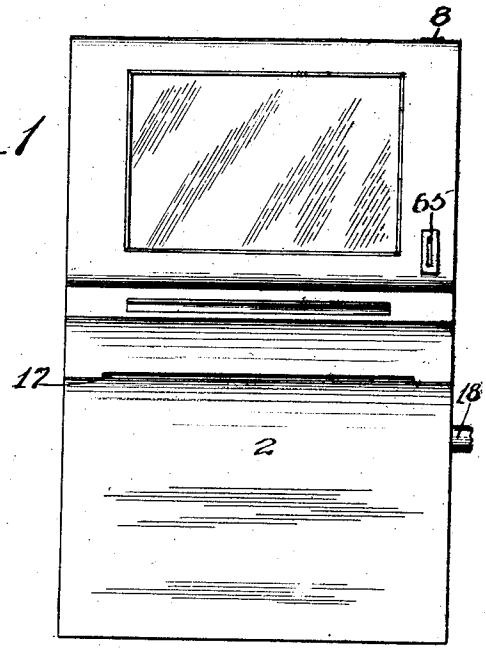


Fig. 1



Witnesses

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5 SHEETS—SHEET 2.

Fig. 4

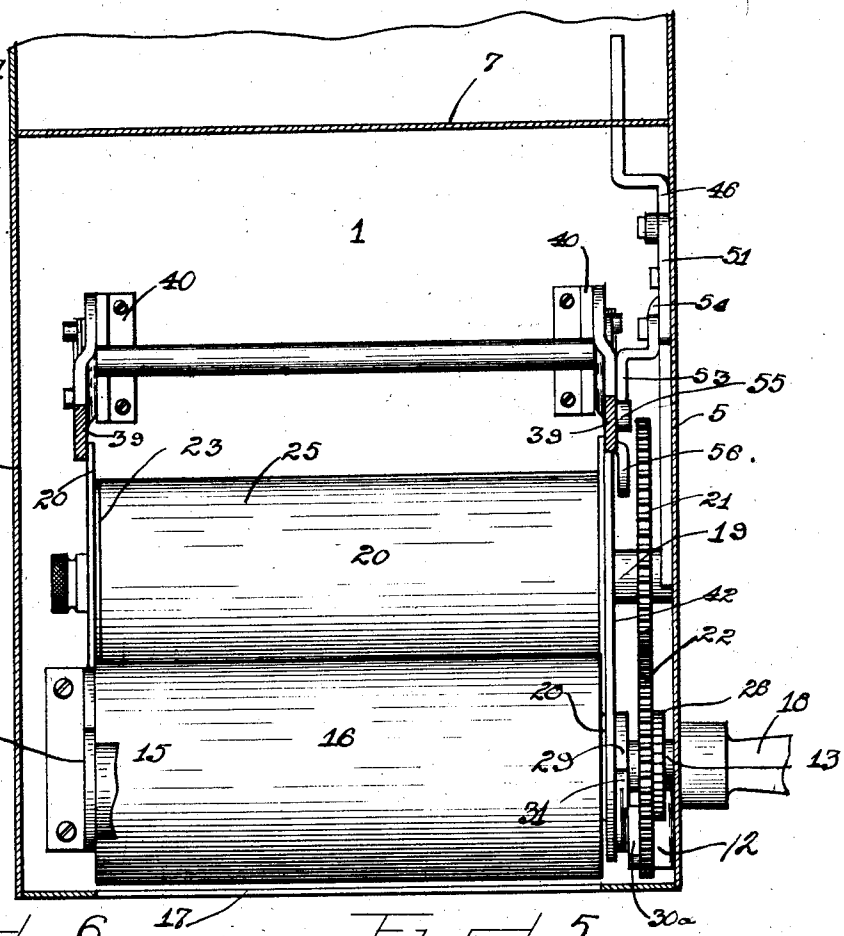


Fig. 6

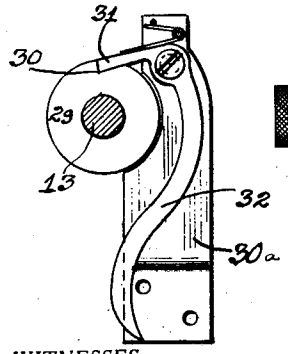
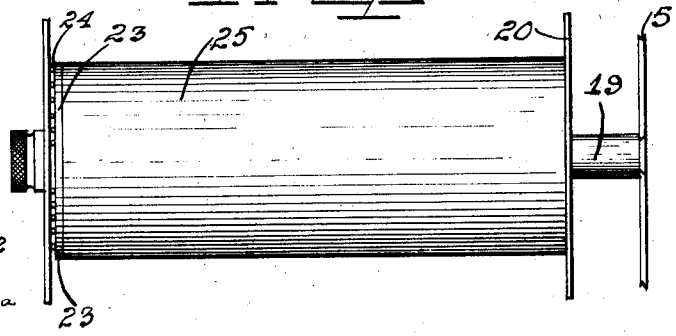


Fig. 5



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5 SHEETS—SHEET 3.

Fig. 7

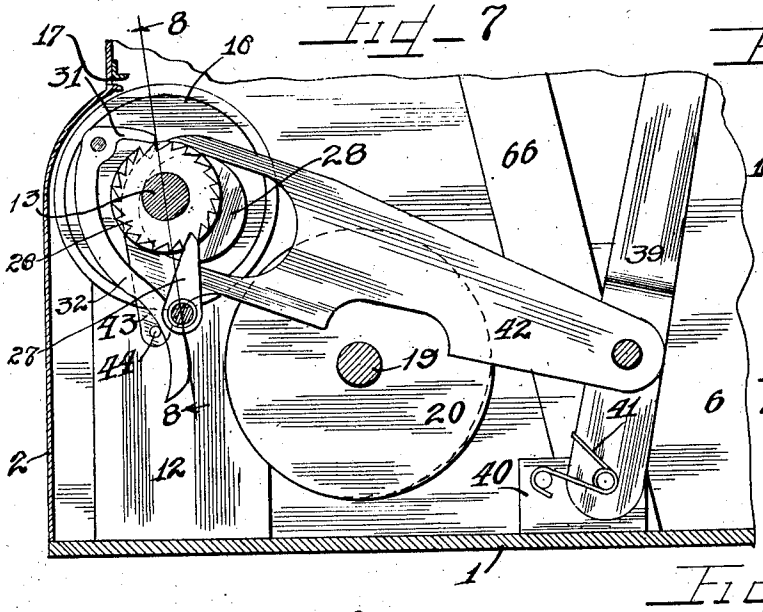


Fig. 15

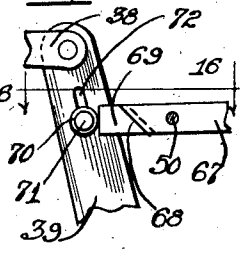


Fig. 16

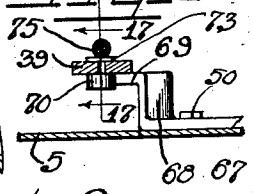


Fig. 9

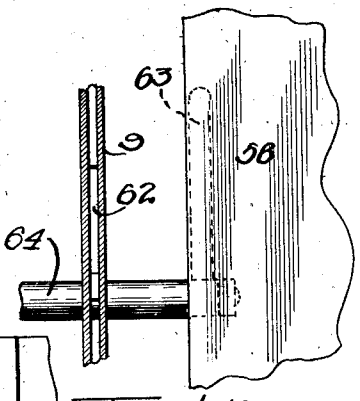


Fig. 8

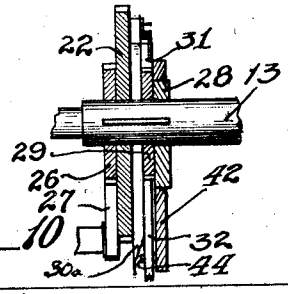


Fig. 10

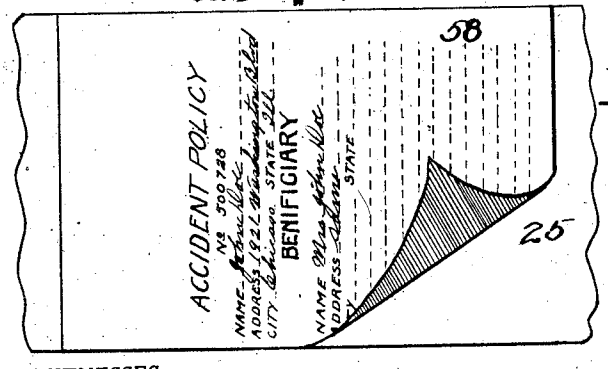
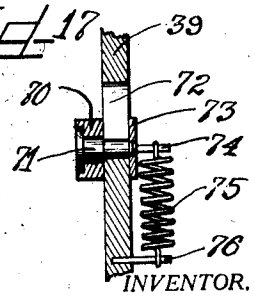


Fig. 17



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APPLICATION FILED AUG. 30, 1917.

1,344,909. **Patented June 29, 1920.**

5 SHEETS—SHEET 4.

Fig. 11

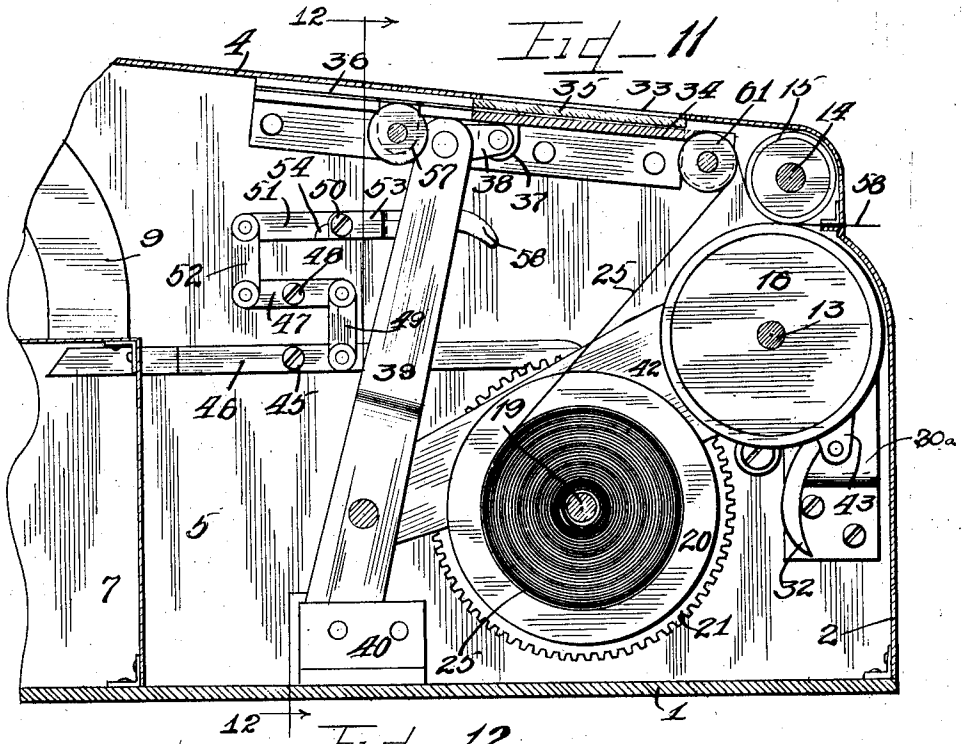
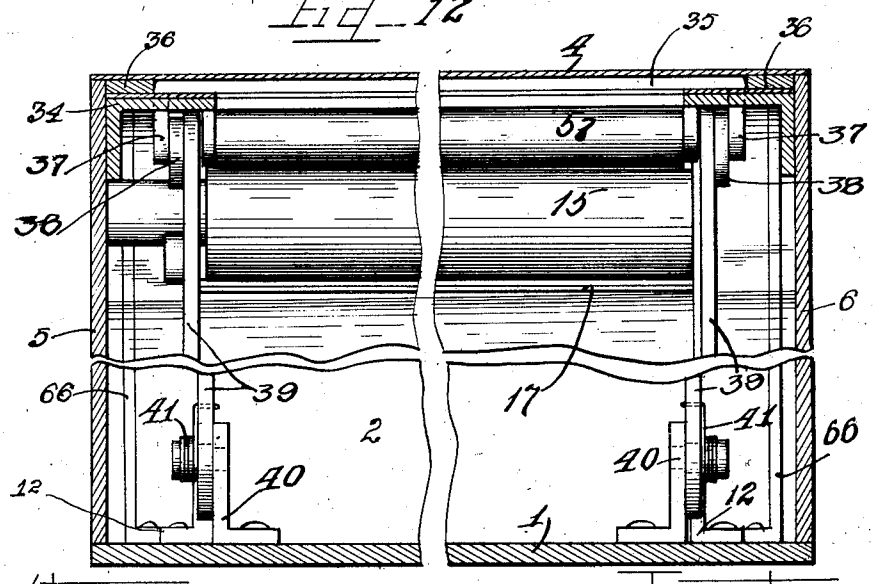


Fig. 12



Witnesses

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5 SHEETS—SHEET 5.

Fig. 13

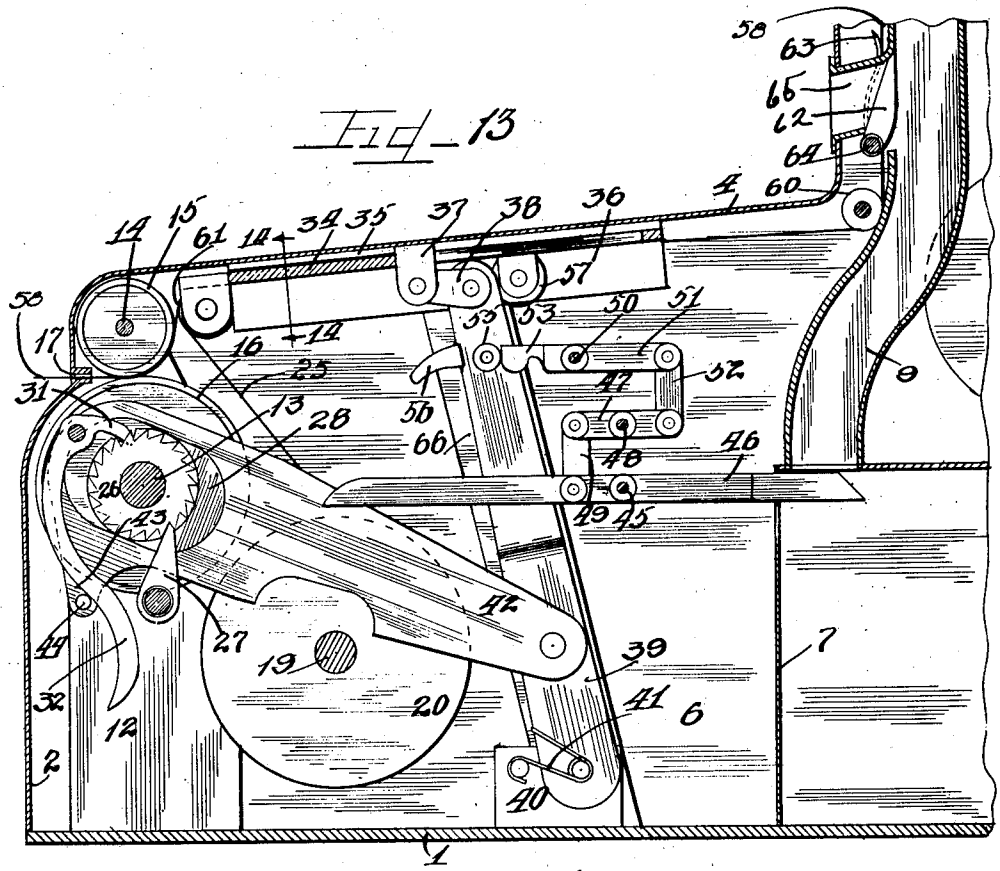
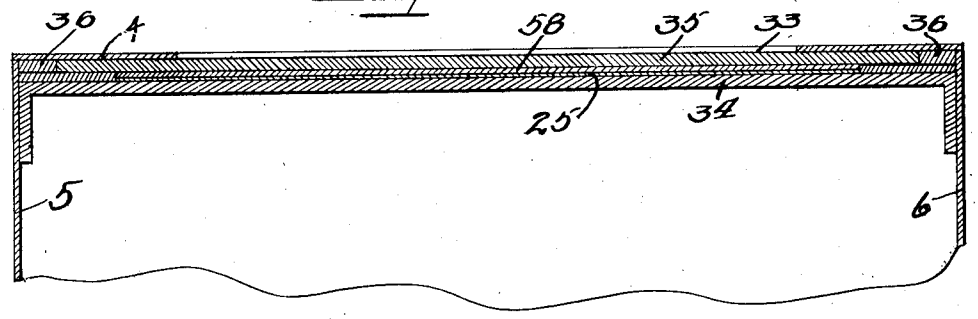


Fig. 14



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UNITED STATES PATENT OFFICE.

JOHN E. LEDERMAN, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO JULIUS KELLER, JR., OF PHILADELPHIA, PENNSYLVANIA.

RECORDING AND VENDING MACHINE.

1,344,909. Specification of Letters Patent. Patented June 29, 1920.

Application filed August 30, 1917. Serial No. 188,944.

To all whom it may concern:

Be it known that I, JOHN E. LEDERMAN, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Recording and Vending Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the numerals of reference marked thereon, which form a part of this specification.

This invention relates to a machine particularly adapted for the issuance of insurance policies, wherein, after deposit of a coin into the machine, access is had to an exposed portion of the policy to receive the signature of the applicant and other data, and thereafter by manual actuation of a crank of the machine, mechanisms serve to issue the policy and wind a record strip within the machine bearing a copy of the matter inscribed upon the original policy blank issued to the applicant. Of course, the machine is adapted for many other purposes than issuance of insurance policies, where it is desirable to receive certain data inscribed upon a blank form in the machine before issuance therefrom, and to preserve a record of the inscription made upon such blank form.

It is an object therefore of this invention to construct a machine comprising coin receiving mechanism and coin releasing devices adapted, after deposit of a coin, to actuate a concealing member into open position to expose a form blank upon which suitable data may be inscribed, and thereafter permitting discharge of the form blank from the machine with a copy preserved within the machine, by actuation of a crank.

It is also an object of this invention to construct a vending machine wherein a reel of blanks is provided together with a secondary reel on which a copy strip is wound, and with the first and second strips led together through the machine and finally separated, whereby sections of the first mentioned strip may be discharged from the machine, and the secondary strip wound upon a reel within the machine to preserve a record of the inscriptions made upon the first mentioned sheet before vending of the sections thereof.

It is also an object of this invention to construct a policy vending machine wherein blank form policies in a continuous strip are fed together with a copy strip over a marking plate, normally covered and concealed by a plate which by deposit of a coin into the machine is automatically withdrawn to expose a policy blank for inscription thereon by an applicant, and thereafter by actuation of a crank, the policy blank is fed outwardly from the machine, and the record strip wound about a reel within the machine coincident with the return of the cover plate over the marking plate of the machine, and complete restoration of all the parts to normal.

It is furthermore an important object of this invention to construct a vending machine adapted to vend blank forms therefrom after inscription upon the blank in the machine by the applicant, and with mechanism released by a coin deposited into the machine operating to expose the normally concealed blank form and with means within the machine preserving a record of the inscriptions made upon the forms.

Other and further important objects of this invention will be evident from the disclosure in the drawings and specification.

The invention (in a preferred form) is illustrated in the drawings and hereinafter more fully described.

On the drawings:

Figure 1 is a front view of a machine embodying the principles of my invention, with parts broken away.

Fig. 2 is a plan view thereof.

Fig. 3 is a side interior view thereof, with one of the side walls of the casing detached.

Fig. 4 is an interior plan view of the discharge mechanism of the machine with parts in section and parts omitted.

Fig. 5 is a detail of one of the discharge rolls.

Fig. 6 is a detail view of a lock mechanism preventing actuation of the crank of the machine until deposit of a coin.

Fig. 7 is a detail side view of a portion of the mechanism shown in Fig. 4, with parts in section and parts omitted.

Fig. 8 is a sectional detail taken on line 8—8 of Fig. 7.

Fig. 9 is a sectional detail through the coin chute or tube showing the mechanism for returning the coin when the supply of form blanks in the machine is exhausted.

Fig. 10 is a fragmentary plan view of the form blank strip and the copy strip beneath.

Fig. 11 is an enlarged interior view of the operating mechanism similar to Fig. 3, but with parts in section and parts omitted.

Fig. 12 is a fragmentary interior plan view of a portion of the operating mechanisms of the machine taken on line 12—12 of Fig. 11, with parts omitted.

Fig. 13 is a view similar to Fig. 11, with the operating mechanisms viewed from an opposite side.

Fig. 14 is an enlarged sectional detail on line 14—14 of Fig. 13.

Fig. 15 is a fragmentary detail view of a modified form of locking mechanism for the actuating arms.

Fig. 16 is a section taken on line 16—16 of Fig. 15.

Fig. 17 is an enlarged section taken on line 17—17 of Fig. 16, with parts shown in elevation.

As shown on the drawings:

The machine is formed with a base 1, and a cover casing comprising a front wall 2, a rear wall 3, a top wall 4, and side walls 5 and 6, respectively. Formed within said casing is a money compartment 7, and leading downwardly thereto from a slot 8, in the upper end of the casing is a coin tube 9. Journaled on the side wall 5, of the upper extension of the casing are feed rolls 10 and 11, respectively. Secured in upright relation upon the base plate 1, are frame members 12, between which is journaled a shaft 13, and shaft 14, respectively. Secured upon the shaft 14, is a yieldable friction roll 15, made of rubber or any other suitable material. Mounted upon the shaft 13, is a large friction roll 16, against which the friction roll 15, bears, and between which a form blank is adapted to be discharged through a slot 17, provided therefor in the front wall 2, of the casing, hereinafter described.

The shaft 13, is continued through the side wall 5, of the casing, and is provided with a crank 18, for manual actuation thereof. Mounted upon a shaft 19, secured at its end in the side wall 5, is a drum 20, and on the end of said shaft between the drum 20, and the wall 5, is a gear 21, which meshes with a gear 22, secured upon the shaft 13. A thrust plate 23, impelled by a spiral spring 24, is mounted at one end of the drum 20, on the shaft 19, to bear against the reel of copy strip or tape 25, wound thereon. The under side of the form blank strip is carbonized as indicated in Fig. 10 so that any writing on the form blank is reproduced on the copy strip or tape. A ratchet wheel 26, is secured upon the shaft 13, as shown in Figs. 4 and 13, and a pawl 27, is pivoted on the bearing upright adjacent thereto to prevent retractive movement of said shaft 13.

Secured upon the shaft 13, at the same end with the ratchet wheel is a cam 28, the purpose of which will be hereinafter described. Also secured upon the shaft 13, is a disk or wheel 29, having a notch 30, in the periphery thereof, and pivotally mounted upon a bracket plate 30^a, as shown in Fig. 6, is a pawl 31, adapted to engage in the notch in said wheel, said pawl having a long tail extension 32, as shown in Fig. 6. Secured in stationary relation beneath an opening 33, in the casing wall 4, is a fixed or stationary plate 34, and slidable directly beneath said opening or aperture 33, and spaced above the stationary plate 34, is a protecting or concealing plate 35, adapted to move rearwardly between guides 36, provided upon the inner surfaces of the walls 5 and 6. Said plate 35, is provided near each end with depending lugs 37, which project through slots in the stationary plate 34, and pivoted to said lugs 37, are links 38, which are connected to the upper ends of a pair of long arms 39, which are pivoted at their lower ends in brackets 40, secured upon the base plate 1. A spring 41, is connected at the lower end of each of the arms 39, and to the respective bracket plates 40, operating normally to swing said arms 39, rearwardly in the casing. Pivoted on one of the arms 39, and extending forwardly therefrom is a long lever or arm 42, which, at its forward end is provided with an elongated slot which engages around the cam member 28, on the shaft 13. The lever 42, is provided with a depending extension 43, shown clearly in Fig. 13, in the lower end of which is a pin 44, adapted to co-act with the tail extension 32, of the pawl 31.

Mounted upon a pivot 45, on the inner surface of the side wall 5, is a long balanced lever 46, one end of which projects through a slot provided in the wall of the coin compartment 7, into a position beneath the coin tube 9, as shown in Figs. 11 and 13. Pivoted at 48 above the lever 46, is another lever 47, and connected to the end of the lever 47, is a link 49, which is also connected to said lever 46. Pivoted upon a pintle 50, and disposed above the lever 47, is another lever 51, and a link 52, is connected to the end thereof and to one end of the lever 47. Also pivoted upon said pintle 50, is a lever 53, which is normally in horizontal position and is prevented from swinging downwardly by a stop 54, provided on the lever 51, which contacts the end of said lever 53.

As shown in Fig. 13, a stop 55, is provided

on the outer side of one of the upright arms 39, and the end of the lever 53, contacts thereagainst to hold said levers 39, in the position shown in Fig. 13, against the stress of their springs 41. A curved extension 56, is provided on the arm 39, to elevate said lever 53, during retractive movement of the arm 39, in a manner hereinafter described. Mounted beneath the top wall 4, of the casing, is an idler roll 57, shown in Figs. 11 and 13, and the form blank strip or tape denoted by the reference numeral 58, is led from the roll 10, upwardly around a roll 59, then downwardly, and together with the copy strip 25, from the roll 11, passes beneath a roll 60, and forwardly over the roll 57, then between the slide plate 35, and stationary plate 34, and over a roll 61, from which said strips are led downwardly. The form blank strip 58, is led between the rolls 15 and 16, and then outwardly through the slot 17. The copy strip 25, is led to the winding drum 20, as it leaves the strip 58, at the roll 61.

A by-pass mechanism is provided to return a coin deposited after the machine is empty and this consists of a lever 62, pivoted within and at one side of the coin tube 9, and normally held elevated out of use by a finger 63, mounted upon the same shaft 64, with the lever 62. The finger 63, rests against strip 58, as shown in Figs. 9 and 13, and when the strip is exhausted, the finger and lever swing downwardly, the lever 62, falling across the chute 9, and acting as a stop for coins which strike the same and are ejected through a coin return slot 65. A pair of inclined brace members 66, are provided within the casing, as shown in Figs. 3 and 13, which extend upwardly from the base plate 1, to the stationary plate 34.

Figs. 15, 16 and 17, disclose a modified form of device adapted to normally hold the levers 39, against the stress of their springs 41, and comprises a lever 67, pivotally mounted upon the pintle 50, and having a portion thereof bent at right angles thereto to afford an inclined plate portion 68. The end 69, of the lever, is bent at right angles to said inclined plate, and is disposed parallel to the main portion of said lever 67, and normally has the edge thereof in a position to contact a collar 70, rotatably mounted upon one end of a pintle 71, which projects through a slot 72, in one of the levers 39, and is held in position by means of a plate or washer 73, attached thereto on the opposite side of said lever 39, from the roller 70. Secured on an extension pin 74, integrally formed at one end of the pintle 71, is the upper end of a spiral spring 75, the lower end of which is attached to a pin 76, secured in the lever 39, below the slot 72, to normally hold the pintle 71, seated in the lower end of said slot 72.

The operation is as follows:

When a coin is deposited into the coin chute 9, through the slot 8, it falls by gravity to the lower end of the coin tube and strikes upon the end of the lever 46, thereby unbalancing the same to cause the other end of said lever 46, to swing upwardly. This upward movement of the lever actuates the pivoted lever 47, thereabove, through the link 49, and the lever 47, in turn actuates the lever 51, downwardly, thereby elevating the lever 53, which rests against the end thereof. Elevation of the end of the lever 53, from behind the stop pin 55, on one of the upright arms 39, releases said arms 39, so that the springs 41, throw the same rearwardly toward the coin compartment 7, thereby retracting the slidable plate 35, from beneath the aperture or opening 33, in the top wall 4, of the casing.

With the slide plate 35, thus retracted, a blank form is disclosed to view, and the applicant fills in the same with pencil or ink, and a copy of the inscription made is marked upon the copy strip 25, therebeneath. The applicant then turns the crank 18, on the exterior of the casing, thereby revolving the shaft 13. This causes a positive revolution of the roll 16, as well as the drum 20, on the shaft 19, which is gear connected to the shaft 13, thus drawing the two strips 25 and 58, from beneath the aperture 33, with the form blank 58, projected through the slot 17, and the copy strip 25, being wound upon the drum 20. The rotative movement of the shaft 13, causes the cam 28, thereon to pull the link 42, inwardly, thereby retracting the respective upright arms 39, against the stress of their springs 41, and returning the slide plate 35, beneath the aperture 33, to cover the exposed strip 58. During retractive movement of said arms 39, the curved extension 56, on one thereof swings the lever 53, upwardly, so that the same rides over the stop 55, and falls into position therebehind to hold said arms 39, in retracted position.

The initial release movement of said arms 39, caused the arm 42, to be drawn therewith, so that the pin 44, on the extension 43, of said arm, in striking the tail 32, of the pawl 31, elevated said pawl out of the notch 30, in the wheel 29. With the pawl 31, thus held out of the notch, rotation of the shaft 13, by the crank 18, was permitted, and, of course, retractive or reverse movement of said shaft is prevented at all times by the pawl 27, engaging the ratchet wheel 26. After a full actuating movement of the shaft 18, an entire form blank strip will have been projected through the slot 17, and the blank is then torn off, along the slot 17, of the casing. If, after the supply of form blanks 58, in the machine is exhausted, a coin is dropped into the machine, the coin will be returned in the following manner.

The lever 62, pivoted at one side of the coin tube 9, shown in Fig. 13, is normally in upright position, owing to the fact that the finger 63, also on the same shaft 64, with said lever, rests against the strip 58, which is trained downwardly alongside of the coin chute, and when the supply of blanks is exhausted, the finger 63 falls inwardly so that the lever 62, falls across the interior of the coin chute, effecting a stop or by-pass for ejection of the coin through the discharge slot 65.

In the modified form of stop arrangement for holding the levers 39, normally in position against the action of the springs 41, when a coin is deposited in the coin chute 9, it falls by gravity and actuates the levers 46, 47 and 51, thereby elevating the end 69, of the lever 67, from behind the roller 70, thus releasing said levers 39, which are thrown rearwardly by the action of the springs 41, thereby retracting the plate 35, and exposing a form 58, in the opening 33, of the casing. After filling out the form, the crank 18, is turned to project the form out of the slot 17, and wind the copy strip upon the drum 20. The cam 28, causes retraction of the levers 39, the roller 70, on one thereof rolls up the inclined plate portion 68, of the lever 67, over the upper edge of the end piece 69, and then drops in the slot 70, into place before the front edge of said lever 67, to again hold said levers 39, in retracted normal position against the action of the springs 41. The spring 75, attached to the roller pintle 74, and the pin 76, act to return the roller to its lowermost position in the slot 72, after the same has been raised therein by the return movement of the levers 39.

I am aware that various details of construction may be varied through a wide range without departing from the principles of this invention, and I therefore do not purpose limiting the patent granted otherwise than necessitated by the prior art.

I claim as my invention:

1. In a vending machine, the combination of a case, an aperture therein, a feed roll adapted to draw a printed form beneath said aperture, a support for the form in its passage beneath the aperture, a plate adapted to slide between said aperture and the form, means for holding the plate in aperture closing position, means for sliding the plate to expose the form beneath the aperture, means for rotating the feed roll, coin controlled means for releasing the last-mentioned means, locking means released by the sliding of the plate to open position for normally preventing rotation of the feed roll, and positive means operated by the feed roll for returning the sliding plate to aperture closing position.

2. In a vending machine, the combination of a casing provided with an opening and an exit slot in the front wall thereof, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, a sliding door inside the casing for closing the opening, mechanism including a pair of ejecting rolls adjacent the slot in the front wall for advancing the tapes at the opening step by step toward the slot in the front wall of the machine and simultaneously moving the door in the same direction to close the opening and for issuing the dispensable tape from the casing, and coin controlled locking means for holding the door closed and holding said mechanism inoperative.

3. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, a door for closing the opening, means inside the casing for moving the door to close the opening, coin controlled mechanism for holding the door closed, and mechanism controlled by said door operating means for advancing the tapes step by step and issuing the dispensable tape from the casing.

4. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, a door for closing the opening, coin unlocked mechanism in the casing for operating the door, mechanism for simultaneously closing the door and advancing the tapes step by step and issuing the dispensable tape from the casing, and locking means for said latter mechanism controlled by the door operating mechanism in the casing.

5. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, a door for closing the opening, coin unlocked means for opening the door, mechanism for advancing the tapes step by step and issuing the dispensable tape from the casing, locking means for said mechanism released by the opening movement of the door operating means, and means operated by said mechanism for closing the door.

6. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, a door for closing the opening, means inside the casing normally empowered to open the door, coin controlled means for holding the door closed,

mechanism for advancing the tapes step by step and issuing the dispensable tape from the casing and closing the door, and locking means for said mechanism released by the operation of the door opening means.

7. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, a door for closing the opening, and coin controlled mechanism in the casing for sliding the door open and closed and intermittently rotating feed rolls and thereby advancing the tapes step by step and issuing the dispensable tape from the casing.

8. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening, so as to be written upon, mechanism for advancing the tapes step by step adjacent the opening and issuing the dispensable tape from an aperture in the casing, a sliding door for closing the opening, means for moving the door toward said aperture and simultaneously with the tapes for closing the opening, and coin controlled mechanism for holding the door closed and said mechanism inoperative.

9. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, mechanism for advancing the tapes step by step adjacent the opening and issuing the dispensable tape from an aperture in the casing, a sliding door having opening means operable independently of the said mechanism, means for sliding the door toward said aperture and simultaneously with the movement of the exposed tapes for closing the opening, and coin controlled mechanism for holding the door closed and said mechanism inoperative.

10. In a vending machine the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, a sliding door for closing the opening, coin unlocked means for preliminarily opening the door, mechanism released by the opening movement of the door to advance the tapes step by step adjacent the opening and issue the dispensable tape from an aperture in the casing, and means operated by said mechanism for sliding the door toward said aperture and simultaneously with the exposed tapes for closing the opening.

11. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, mechanism for advancing the tapes adjacent the opening step by step and issuing the dispensable tape from the casing, a sliding door for closing the opening, means operated by a partial movement of the advancing mechanism for closing the door previous to the completion of the advancing movement of the tapes, and coin controlled means for holding the door closed and said mechanism inoperative.

12. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, a door for closing the opening, coin unlocked means in the casing for opening the door, mechanism for simultaneously closing the door and advancing the tapes step by step and issuing the dispensable tape from the casing, a pawl for holding the advancing mechanism from operation, and means operated by the opening movement of the door to release the pawl and operated by the closing movement of the door to reëngage the pawl.

13. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, a door for closing the opening, means inside the casing for opening the door, coin controlled mechanism for holding said means inoperative, and locking the door closed, mechanism for advancing the tapes step by step and issuing the dispensable tape from the casing, controlling mechanism therefor operated by the aforesaid means so as to hold said tape advancing mechanism inoperative when the door is closed and release said tape advancing mechanism when the door is opened, and means operated by tape advancing mechanism for closing the door.

14. In a vending machine, the combination of a casing having an opening, means for supplying and supporting dispensable and record tapes in superimposed relation at the opening so as to be written upon, mechanism for advancing the tapes adjacent the opening step by step and issuing the dispensable tape from the casing, a sliding door for closing the opening, spring actuated means in the casing for opening the door, coin released mechanism for holding the spring actuated means inoperative and the door closed, a locking pawl for said tape advancing mechanism, an operative connection between the pawl and said spring actuated means whereby said pawl is released by the opening movement of the spring actuated means and reëngaged by the

closing movement thereof, and means operated by said tape advancing mechanism for sliding the door in the same direction and simultaneously with the advancing movement of the exposed tapes for closing the opening in the casing.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

JOHN E. LEDERMAN.

Witnesses:
CHARLES W. HILLS, Jr.,
EARL M. HARDINE.