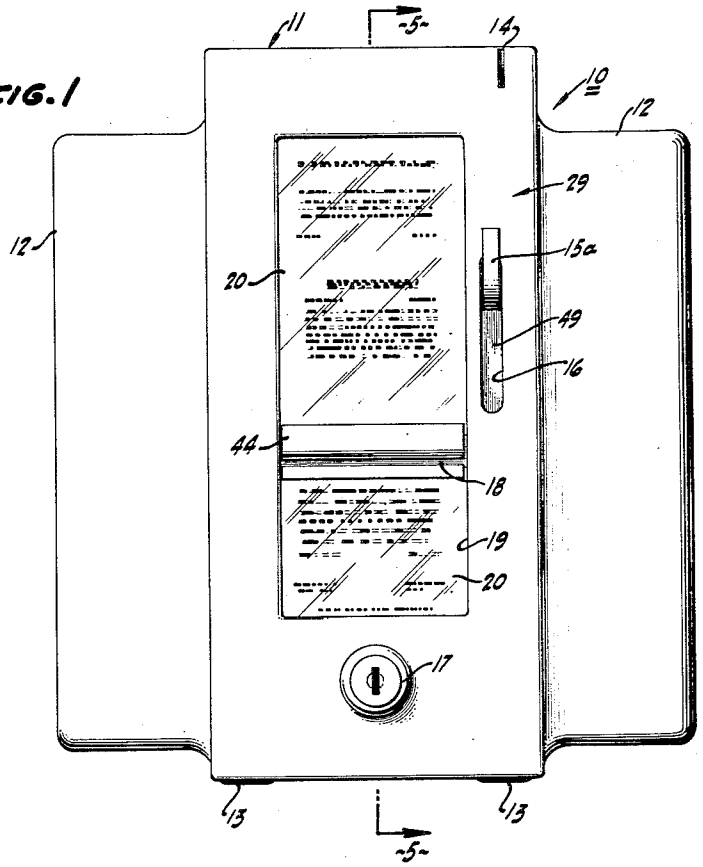
May 27, 1958 F. E. ERICKSON ET AL 2,836,325

DISPENSING DEVICE

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FIG. 1



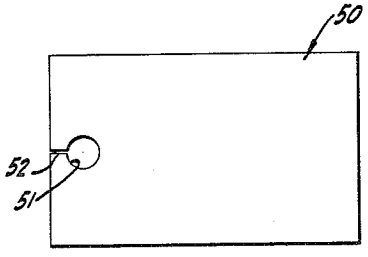


FIG. 2

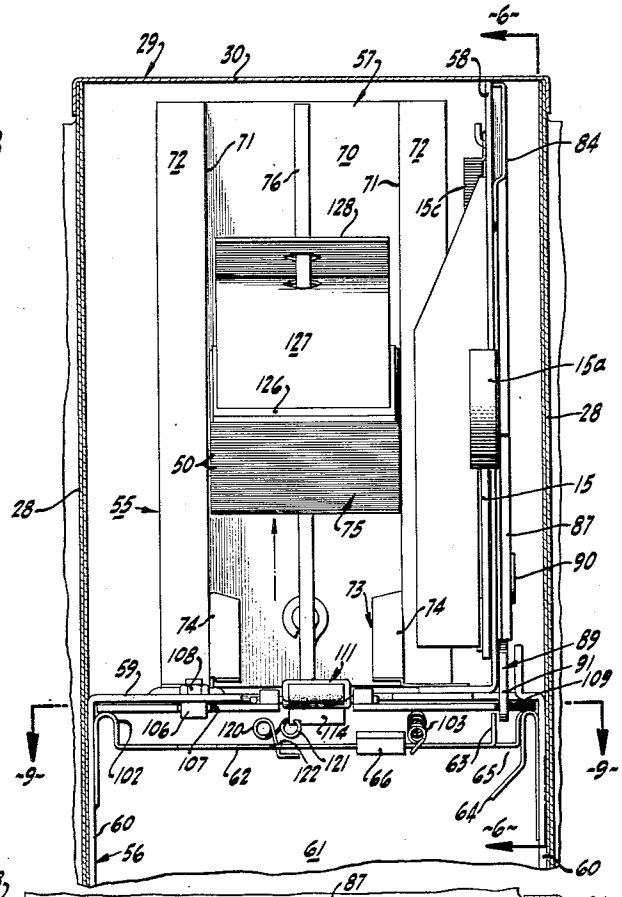
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DISPENSING DEVICE

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FIG. 3



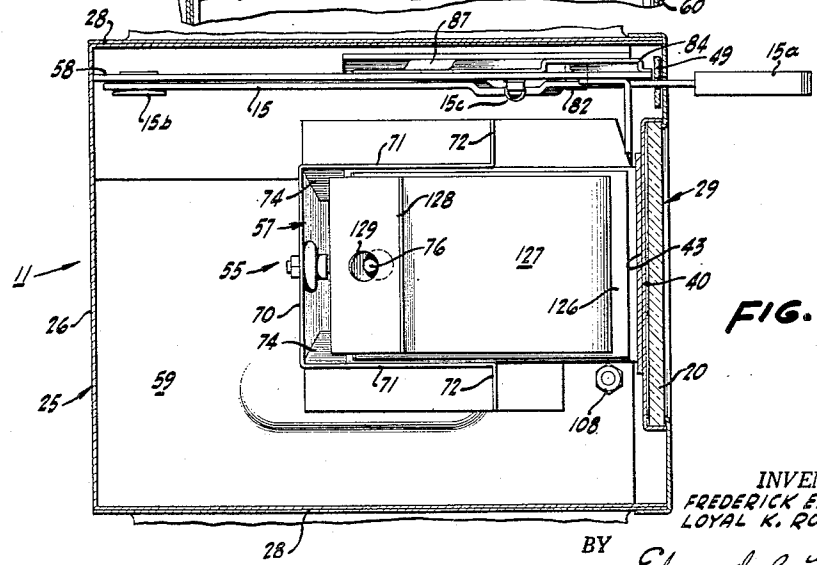


FIG. 4

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DISPENSING DEVICE

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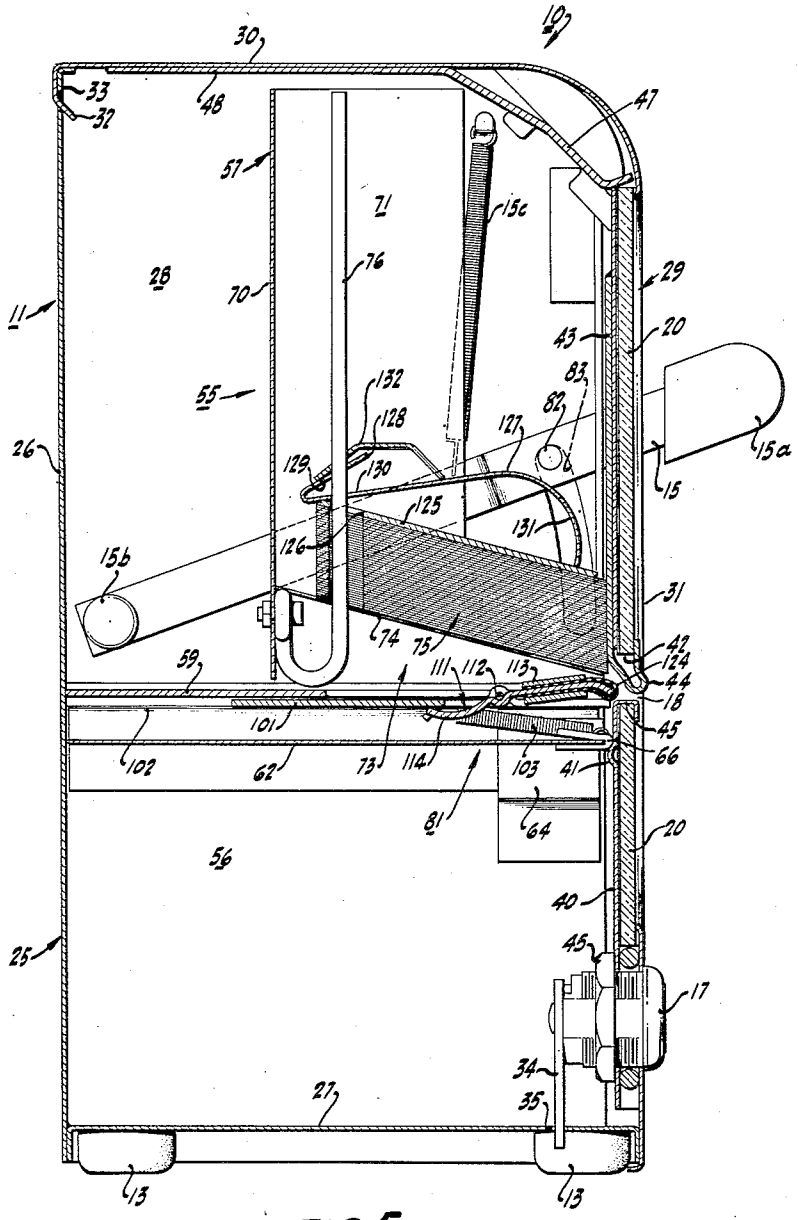


FIG. 5

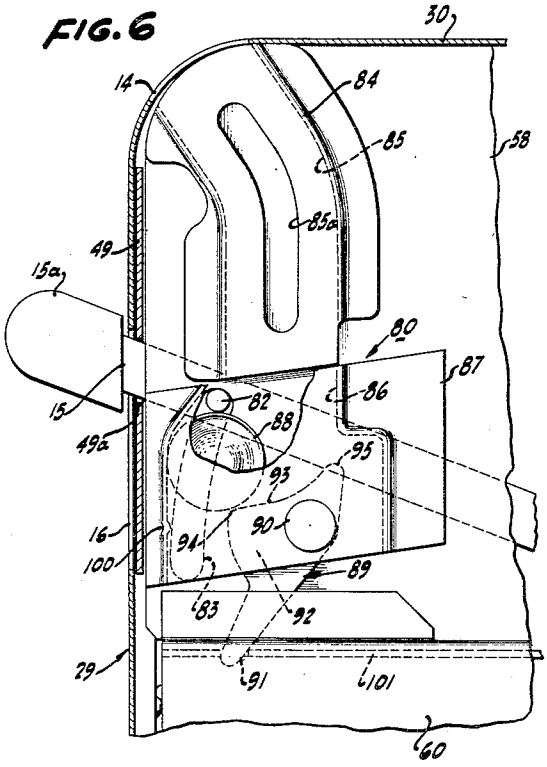
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DISPENSING DEVICE

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FIG. 6



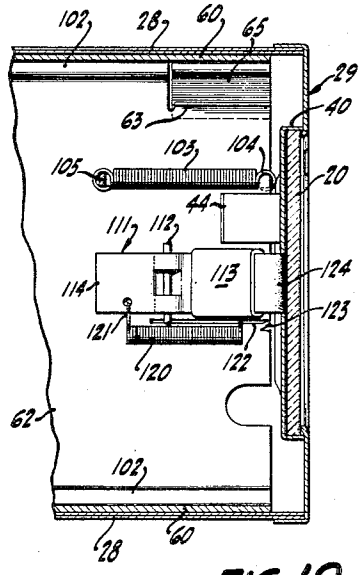


FIG. 10

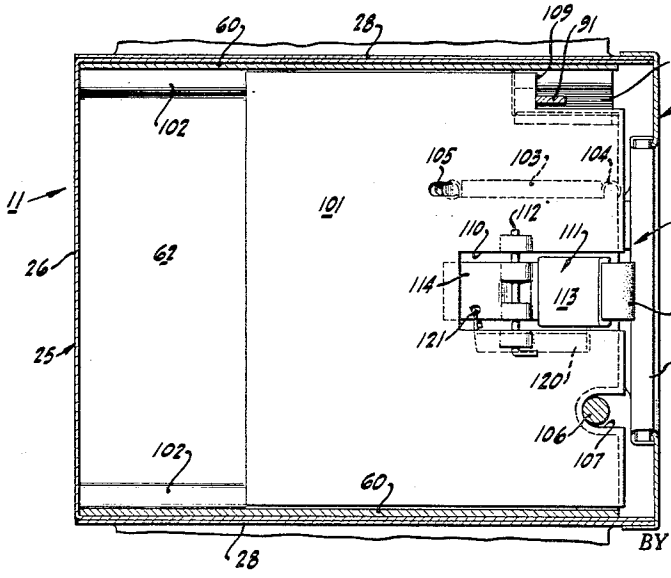


FIG. 9

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DISPENSING DEVICE

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FIG. 7

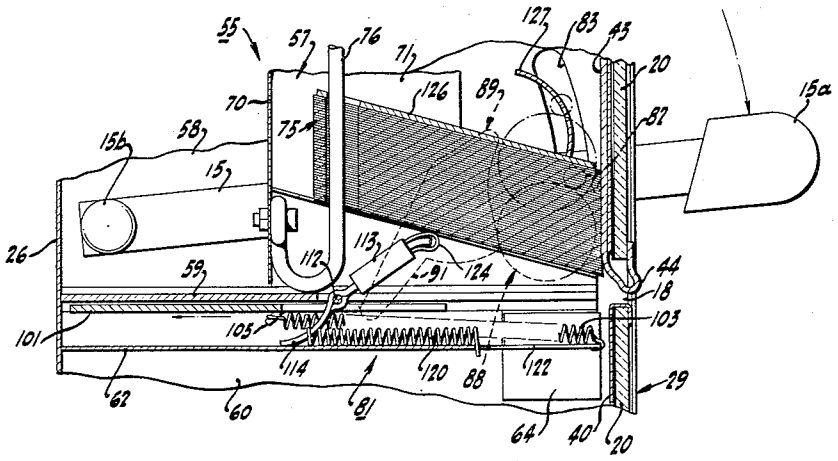
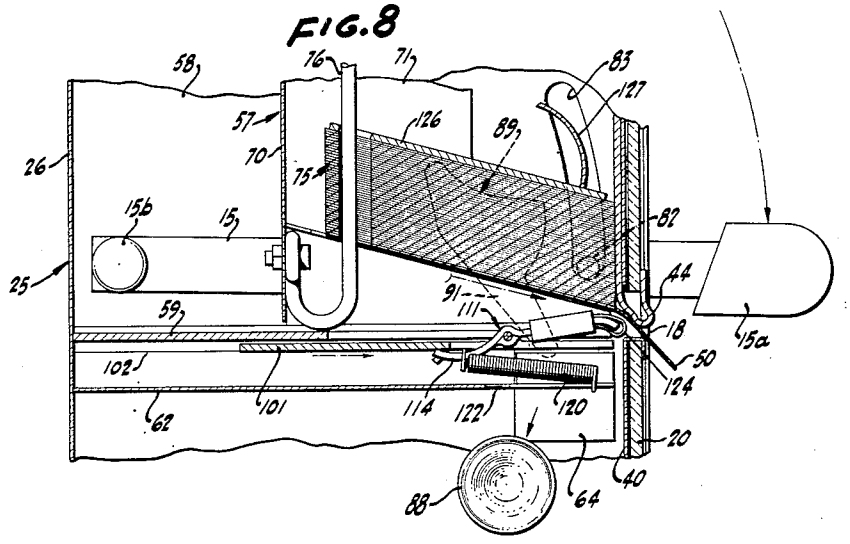


FIG. 8



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United States Patent Office

2,836,325

Patented May 27, 1958

2,836,325

DISPENSING DEVICE

Fred E. Erickson and Loyal K. Roe,
North Sacramento, Calif.

Application April 13, 1953, Serial No. 348,324

4 Claims. (Cl. 221—26)

This invention relates to a dispensing device for individual, one-by-one dispensing of paper slips or the like.

In prior dispensing devices for individual, one-by-one dispensing of cards, tickets and the like, the dispensing mechanism has employed, as the ejecting element, a dog or other like member which is intended to engage the rear edge of an individual card or ticket and to push the same forwardly. Such mechanisms may be coin operated or otherwise, but their mode of operation is such that it is necessary to employ cards, tickets or the like having a substantial thickness, whereby the lowermost or the uppermost in a stack of cards can be individually engaged by a dog or the like and pushed forward singly without pushing forward two or more cards simultaneously.

A need exists for a dispensing mechanism which will individually dispense thin paper slips of approximately the thickness of ordinary newsprint, i. e., about four points or 0.004 inch, such dispensing operation being rapid and automatic in its operation and not requiring an overly complex mechanism. An advantage of such a mechanism and operation is that a vastly greater supply of thin paper slips than of thick cards can be provided in a given storage space. Not only is space saved, but a dispensing machine can run much longer without refilling.

Heretofore, to our knowledge, no adequate, satisfactory means for accomplishing this result has been provided. It will be apparent that a need exists since, for many purposes, such as tickets, papers printed with answers to questions or telling a person's fortune or other purposes of a serious or entertaining nature, thin slips of paper are equally well adapted for the intended purpose provided a suitable dispensing mechanism can be provided.

It is an object of the present invention to provide a dispensing machine which is capable of individually dispensing paper slips of the thickness of average newsprint, i. e., about four points or 0.004 inch.

Yet another object of the invention is to provide a mechanism whereby thin slips of paper or the like can be automatically dispensed one-by-one with rapidity and with dependability.

A further object is to provide a machine of the character described, capable of dispensing small slips of paper individually from a stack of such slips, such slips having a thickness of about four points, and such machine being capable of dependable, speedy operation over long periods of time, being relatively simple in its construction and being manually operable without any skill on the part of the operator.

These and other objects of the invention will be apparent from the ensuing description and the appended claims.

One form of the invention is illustrated by way of example in the accompanying drawings, in which,

Figure 1 is a front elevation of the dispensing device of the invention, which is shown as being incorporated with a napkin holder.

Figure 2 is a plan view of the type of paper slip dispensed by the apparatus of the present invention.

Figure 3 is a view in front elevation of the dispensing mechanism with the front cover removed.

Figure 4 is a top plan view of the dispensing mechanism with the top cover removed.

Figure 5 is a longitudinal, vertical mid-sectional view taken along the line 5—5 of Figure 1.

Figure 6 is a section taken along the line 6—6 of Figure 3, showing the dispensing mechanism at the start of operation.

Figures 7 and 8 are fragmentary views similar to Figure 5 but showing the dispensing mechanism in successive stages of operation.

Figure 9 is a section taken along the line 9—9 of Figure 3.

Figure 10 is a fragmentary view similar to that shown in Figure 9 but with the slide plate removed.

Referring now to the drawings and more particularly to Figures 1 and 5, the device of the present invention is generally designated by the reference numeral **10** and it comprises an outer casing or housing **11** which is integral with wings **12** which are conventional holders for paper napkins. It will be understood, of course, that the latter feature is optional. Thus, if the sole function of the apparatus is dispensing, the wings **12** may be eliminated. The apparatus is supported on rubber pads or legs **13** to prevent scratching and scuffing of a surface upon which it rests.

Also shown in Figure 1 are a coin slot **14**, an operating lever **15** having a handle **15***a* (see Figure 5) which moves in a slot **16**, a dispensing slot **18** and an opening **19** to receive a glass window **20** and behind which may be located any desired decorative design, instructions for use of the apparatus, etc.

Referring now more particularly to Figure 5, the housing **11** comprises a main portion **25** having a back or rear wall **26**, a bottom **27** and side walls **28**. The main portion **25** is open at the top and front and is closed by means of a detachable front and top portion **29** having a top or cover portion **30** and a front or face portion **31**. The cover **30** has a hook **32** which is received in a slot **33** formed in the rear wall **26**. The lock **17** on the front portion **31** has a tongue **34** which is received in a slot **35** formed in the bottom **27**.

To the inner surface of the front plate **31** is fixed a channel-shaped member **40** which extends substantially from top to bottom of the device. About midway of the height of the channel **40** and just below the dispensing slot **18**, the channel **40** is formed with a raised portion **41** for a purpose which is described hereinafter. Just above this raised portion the channel **40** is formed with a transverse slot **42**. A bearing plate **43** of highly polished stainless steel construction is fixed to the inner surface of the channel **40** above the dispensing slot **18** and at its lower end it is formed with a rounded tongue **44** which, together with the adjacent edge **45** of the channel **40**, forms the dispensing slot **18**. The channel **40** is held in place at the bottom by means of a nut **45** on the barrel of the lock **17** and at the top by a bracket **47** which is integral with and extends downwardly from a plate **48** which is welded to the cover **30**. As is best shown in Figure 6, a strip or plate **49** having a hole **49***a* is provided through which the lever **15** extends. The purpose of the strip **49** is to move with the lever **15** and to maintain the slot **16** closed at all times. This prevents access to the interior of the housing **11** without the use of a key.

The apparatus of the invention is intended to dispense paper slips such as shown at **50** in Figure 2. The dimensions of the slip presently dispensed are 2⅜" x 1¼" and the slip is the thickness of ordinary newsprint, i. e., about

four points or 0.004 inch. This is much too thin for one-by-one ejection from a stack of slips by mechanisms employed heretofore which rely upon a dog or the like to kick out the bottom-most or topmost card in a stack. The dimensions of the slip, of course, may vary widely. Another feature of the slip is a round hole or perforation **51** and a very narrow slit **52** which joins the adjacent edge of the slip to the hole **51**. On either or both faces of the slip **50** may be printed any information desired, e. g., an answer to a question, one's fortune, etc.

The dispensing mechanism is shown in Figures 3 to 10 and is there generally designated by the numeral **55**. It comprises a framework which includes a base **56**, a magazine or holder **57** and a side plate **58**. The base **56** consists of a horizontal plate **59** and spaced, parallel, upright legs **60** which fit snugly within the lower portion of the housing **11** and form therewith a coin box **61**. Disposed within the base **56** just below the plate **59** is a plate **62** which provides a frame member for attachment of certain of the operating elements of the mechanism as described hereinafter. An upturned portion **63** of the plate **62**, in conjunction with an adjacent bracket **64** which is welded to the adjacent side wall **60**, provides a coin passage **65** to guide coins down into the coin box **61** as explained hereinafter. At its forward edge the frame plate **62** is provided with a U-shaped wear member **66** over which the above-mentioned projection **41** snaps when the top and front portion **29** of the housing is closed.

The magazine **57** is a channel-shaped member and it comprises a rear wall **70**, side walls **71** and lateral wings or flanges **72**. A base **73** is provided for the magazine which, as shown in Figures 3 and 5, comprises spaced, parallel guideways **74**. The guideways **74** are spaced rather widely apart and are disposed at an angle of about 15°, slanting forwardly and downwardly. The guideways **74** provide bottom support for a stack **75** of slips **50** which are, therefore, supported at an angle of about 15°. The lower, forward end of the stack abuts and slides upon the bearing plate **43**. The side walls **71** are spaced apart approximately the width of the slips **50** so that the stack fits snugly but easily within the magazine.

The stack **75** is guided, and is restrained from sliding down the ways **74** by means of a rod **76** which is fixed at its lower end, beneath the ways **74**, to the rear wall **70** of the magazine and which is free at its upper end. The holes **51** in the slips **50** are in registry so that the rod will pass through all of these holes and will hold and guide the entire stack. The slits **52** in the slips **50** are substantially narrower than the diameter of the rod **76** so that the rod will hold the slips in position on the ways **74** until a sufficient positive force is applied to detach the slips as explained in detail hereinafter.

The dispensing mechanism **55** also comprises a mechanical linkage which is shown in elevation view and at the commencement of a cycle of operation in Figure 6 and which is generally designated by the numeral **80**. The dispensing mechanism also comprises an ejector mechanism which is shown in top plan view in Figures 9 and 10 and in side elevation in Figures 5, 7 and 8, such ejector mechanism being generally designated by the numeral **81**. The mechanical linkage **80** comprises the aforesaid lever **15** which is pivoted at **15***b* on the side plate **58** and is normally held in the up position shown in Figure 5 by means of a spring **15***c*. Near its forward end (i. e., to the left as viewed in Figure 6) the lever **15** has a pin or stud **82** which projects through an arcuate slot **83** which is formed in the side plate **58** and which has the pivot **15***b* as its center. A plate **84** is welded to the side plate **58** and is spaced therefrom and is so shaped as to provide an arcuate coin chute **85**. A slot **85***a* is provided to allow access to the coin chute in case an oversized coin or slug becomes jammed in the chute. At its upper end the coin chute **85** is in registry with the coin slot **14** and at its lower end it communicates with a coin chamber **86** formed by a plate **87** which is welded to the side plate **58**. A coin is shown in the coin chamber at **88**. The apparatus may be designed for operation with a penny, a nickel, a dime or a coin of any other desired denomination, or with slugs or tokens of suitable size and shape. Within the coin chamber **86** there is a link or cam **89** which is journalled on a shaft **90** fixed to the plate **87** and the side plate **58**. The link **89** has a tail portion **91** which operates the ejector mechanism as explained hereinafter, and it also has a body portion **92** which is formed with an arcuate edge having a low point at **93** and high points at **94** and **95**.

In operation the mechanical linkage **80** functions in the following manner:

When no coin is present in the coin chamber **86**, the lever **15** is mechanically disconnected from the link **89** and movement of the lever **15** has no effect whatsoever on the link **89**. But when a coin of the proper denomination is dropped into the coin chute **85** it travels down the chute into the coin chamber **86** and lodges on the high point **94** of the link **89** where it also abuts the opposite edge of the plate **87**. The coin is thus supported in the path of travel of the stud **82** on lever **15**. Hence, when the lever **15** is moved downwardly it will carry the coin with it and will rotate the link **89** in counterclockwise direction as viewed in Figure 6.

The link **89** is not completely free to rotate but is normally resiliently held in the position shown in Figure 6 by the ejector mechanism in the manner described hereinafter. As the lever **15** is moved downwardly against this restraining force the coin **88** forms a part of the mechanical linkage and will rotate the link **89** from the position shown in Figure 6 to the position shown in Figure 7. When the center of the coin passes through the horizontal plane which includes the axis of shaft **90**, it will drop into the coin passage **65**, thence into the coin box **61**. The resilient force acting on the link **89** snaps it immediately back to the position shown in Figures 6 and 8. As a safety feature, a small projection **100** is provided in the plate **86** which is located opposite the link **89** and in the horizontal plane which includes the axis of shaft **90**. Thus in operation when the lever **15** is depressed and the center of the coin **88** is caused to pass the projection **100**, it is not possible to move the coin back again, and the device cannot be operated twice with the same coin. The operation of this safety feature will be more clearly understood after description of the ejector mechanism.

When the coin **88** has thus dropped through the passage **65** into the coin box **61**, the mechanical connection between the lever **15** and the link **89** is broken and, even though the lever may be held down manually, it is without effect on the link **89** which is returned automatically and instantly to the position shown in Figures 6 and 8. Should another coin be dropped into the slot while the lever is depressed, or if the chute has been supplied with two or more coins, the next coin will be rolled back in the coin chamber **86** by the stud **82** while the lever is returning to its up position and will then roll into operative position when the lever is in the up position. The presence of another coin does not, therefore, prevent return of the lever to its normal up position. In fact, the coin chute **85** and coin chamber **86** can be filled with coins, each of which will operate in its turn.

The ejector mechanism **81** comprises a slide plate **101** which is slidably supported on the upturned, curved edges **102** of frame plate **62**. A tension spring **103** is provided which is fixed at one end, at **104**, to the forward edge of the plate **62** and at its other end, at **105**, to the slide plate **101**, thereby urging the slide plate forwardly. Forward movement of the slide plate is limited by a screw **106** which is received in an open ended slot **107** formed in the slide plate and is fixed to the plate **59** by means of a nut **108**. The slide plate **101** is

formed with a recess or notch 109 at one side in which the tail 91 of the link 89 is received. The tail 91 abuts the inner edge of the notch 109 and thereby provides a mechanical connection between the mechanical linkage 80 and the ejector mechanism 81.

The slide plate 101 is cut away to provide a rectangular opening 110 which is centrally located with reference to the front of the apparatus and is located at the forward portion of the slide plate. Within the opening 110 is located a pawl 111 which is pivoted on a shaft 112 mounted in the slide plate 101 at the sides of the opening 110. The pawl 111 is weighted by means of a weight 113 forwardly of the fulcrum 112 so that normally the pawl is rotated clockwise as viewed in Figure 5 and is held in the position shown therein, i. e., it is rotated as far as the tail portion 114 of the pawl will permit. This tail portion abuts the under surface of the slide plate 101 to limit movement of the pawl 111. As is best shown in Figures 3 and 10, also in Figures 6 and 7, a helical coiled spring 120 is fixed at one end, at 121, to the tail portion 114 of the pawl 111 and at its other end it extends through a narrow slot 122 in the frame plate 62. The forward edge of the frame 62 is slit adjacent the forward open end of the slot 122 to provide a tongue 123 which is bent to partially obstruct the free end of the slot 122, thereby permitting insertion and removal of the free end of the spring 120 but preventing accidental or inadvertent dislodgement of the spring from the slot due to over travel or other cause. The outer end of the pawl 111 is provided with a rubber pad 124 having a coarse surface for frictional engagement with the slips 50 but which is reasonably soft to avoid a tearing or abrasive action.

The dispensing mechanism 55 also comprises a plate 125 (see Figure 5) having a hole 126 which receives the rod 76 and which rides upon the stack 75 of slips 50. The plate 125 has sufficient weight to hold the stack 75 down and to facilitate proper ejection as explained more fully hereinafter. The dispensing mechanism also comprises a follower 127 which has a V-shaped tail portion 128 which rests on the upper end of plate 125 and is formed with holes 129 and 130 and which has a convexly curved forward end portion 131 which rests upon the forward edge of plate 125. The holes 129 and 130 are so positioned relatively to each other that, when the end portion 131 is in the position shown in Figure 5, i. e., resting on the forward edge of plate 125, the holes 129 and 130 are substantially in the position shown in Figure 5 and the follower 127 is capable of only a slight degree of rotative movement in counterclockwise direction as viewed in Figure 5. However, the follower 127 is easily lifted free of the rod 76, is equally easily placed in the position shown and as easily follows the plate 125 downwardly as slips are dispensed. Additionally, the apparatus may comprise an inverted, U-shaped clamp or latch member 132 which serves to secure the loose or detachable parts of the magazine against displacement when the device is turned on a side or up-ended.

In operation the dispensing mechanism 55 functions as follows:

Referring to Figure 1, a coin of the proper denomination is dropped into the slot 14 and the lever 15 is then depressed manually. Referring to Figures 6, 7 and 8, the coin drops into the coin chamber 86 to the position shown in Figure 6 and becomes a part of the mechanical linkage 80. When the lever 15 is depressed the link 89 is rotated counterclockwise as viewed in Figure 6 and the coin is ejected into the coin box 61 when the center of the coin passes the projection at 100. Meanwhile, counterclockwise movement of the link 89 and of its tail 91 moves the slide plate 101 rearwardly. The forward, free end of the coiled spring 120 rides in the slot 122 and exerts no force on the pawl 111 until near the end of the rearward stroke of the slide plate 101, at which time it engages the closed inner end of the slot 122. The spring 120 is then placed under tension and immediately rocks the pawl 111 in counterclockwise direction as viewed in Figures 5 and 7 from the normally down position shown in Figure 5 to the rotated or up position shown in Figure 7. Meanwhile the spring 103 will have been placed under tension, likewise the spring 15c which urges the lever 15 to its normal up position. When the coin 88 has been ejected and the mechanical connection between the lever 15 and the link 89 is thereby broken, the spring 103 is free to return the slide plate 101 to its forward position and it does so with a very rapid snap action involving rapid acceleration. It will be noted that the high point 94 of link 89 prevents a coin of the proper size from dropping into the coin passage 65 until the lever 15 is pressed down, and that the high point 95 prevents the next coin from dropping until the lever 15 and link 89 are returned to their normal positions and a new cycle of operation is commenced.

At the end of the rearward stroke of the slide plate 101, the pad 124 on the pawl 111 is in proper position for frictional engagement with the bottom slip 50 of the stack 75. The plate 125 is of sufficient weight to hold the stack down and to keep feeding it downwardly as slips are ejected but it is not sufficient to insure that the stack and the plate will not rotate counterclockwise in response to upward pressure of the pawl 111, thereby counteracting or diminishing the ejecting effect of the pawl 111. The follower 127, however, prevents this from occurring.

When the forward stroke of the slide plate 101 commences, the tension on the spring 120 is, of course, relieved very rapidly, but this does not instantly cause the pawl 111 to drop back to its normal, down position. The inertia of the pawl and its weight 113 reacts against the rapid, forward acceleration and will hold the pawl in its active ejecting position during the forward stroke, or during a substantial part of the forward stroke of the slide plate 101. The rapidity of this forward stroke, the frictional engagement of the pad 124 with the stack 75, and the angle of the stack combine to bring about ejection of the bottom slip 50 without ejection of any other slip.

Further with reference to the operation of the ejector mechanism 81, the following features may be noted:

The optimum angle of the ways or shelf 74 which support the stack 75 can be determined by trial and error. For a machine of the size illustrated, and with an ejector mechanism of the construction illustrated, an angle of about 15° is optimum. We have found that a greater or a smaller angle will result in ejection of a slip to a lesser extent. However, should the factors be changed e. g., should the elevation of the tip 124 of pawl 111, or the inertia of the pawl 111 or the length of travel of the slide plate 101 be varied—then the optimum angle of the shelf or ways 74 will change.

Basically, the ejection operation is one of frictional engagement. There is, of course, friction between the bottommost slip 50 of the stack and the next higher slip, and between each adjacent pair of slips. There is also friction between the pawl tip 124 and the bottom slip and between the bottom slip and the ways 74. The friction between the pawl tip and the bottom slip should exceed the friction between the bottom slip and the next higher slip; and between the bottom slip and the ways 74; otherwise two slips will be ejected at once, or no ejection will occur at all. More generally stated, the friction between the ejector member (which may be a friction pawl, a friction wheel or other structure) and the immediately adjacent slip should exceed the friction between the immediately adjacent slip and the next slip, and it should also exceed friction between the immediately adjacent slip and its support.

We have found that a frictional pawl, normally inactivated, cocked by mechanical means, having a predeter-

mined forward stroke under conditions of fast acceleration to maintain the pawl in activated condition during its forward stroke and having a greater coefficient of friction between itself and a slip or sheet of paper or the like than exists between two such sheets, constitutes an efficient and dependable ejection mechanism.

Factors which control efficiency and dependability of operation are the smoothness of the paper slips, the relative sizes of the rod or spindle **76** and the holes **51** in the paper slip and the length of the slit **52**. Thus smooth paper slips will offer less frictional resistance to ejection of a single slip; a rod of small diameter, a large hole located close to an edge of the slip and the presence of a slit such as shown at **52**, decrease resistance to ejection. The slit **52** may be dispensed with and the slips may be torn from the holding rod, but this mode of operation is not preferred; bits of paper torn from the slips accumulate and may lodge on the pawl tip **124**. If this occurs, the coefficient of friction between the pawl tip and bottom slip are diminished and faulty ejection results.

The plate **125** adds a calculated, controlled degree of weight to the stack of slips, thus facilitating downward feed of the stack and controlling the degree of friction between the slips of paper. Also, it distributes the reactive force of the follower **127** over a wider area at the lower, forward end of the stack. The tail of the follower and its holes **129** and **130** are preferably adjusted to allow a slight degree of play, i. e., of rotative movement in response to the shock of the pawl **111** during ejection. If no play is allowed, successive shocks may cause the holes **129** and **130** to bind on the rod **76** and to increase friction between the slips **50** and between the bottom slip **50** and the ways **74**. On the other hand, excessive play is preferably not permitted; otherwise ejection will be faulty.

In connection with the mechanical linkage **80**, as the slide plate **101** is retracted and the ejector mechanism **81** is cocked, the center of coin **88** passes the projection **100** when the free end of the pawl cocking spring **120** reaches the end of its slot **122**. Not until then is the pawl cocked, hence not until then can a slip be ejected. Since this stage of operation corresponds to passage of the coin beyond the projection **100**, the coin is irretrievable and cannot be manipulated to eject two or more slips.

It will, therefore, be apparent that a mechanism has been provided for dispensing articles such as slips of paper of extreme thinness compared to cards and the like which are ordinarily dispensed. This mechanism is relatively simple in its construction and operation, it is easy to assemble, to repair and to service and it operates over long periods of time without mechanical failure and with the assurance of ejecting one slip, and only one slip, during each cycle of operation. A coin operated mechanical linkage is provided wherein the coin itself serves as a part of the mechanical linkage and without it the linkage cannot be operated. The mechanism can, of course, be non-coin operated, to eject a slip at will whenever an operating lever is manipulated. A safety feature is provided to prevent manipulation of the mechanism to cause one coin to do the work of two. The mechanical linkage is such that a number of coins can be fed to the coin chute at the same time, but only one will operate at a time while the others remain in reserve for subsequent operation.

The ejector mechanism including the magazine, the means for mounting the slips of paper, the angle at which they are mounted, the plate which weights them down and the follower which prevents their rotation, are novel mechanical features which contribute to smooth, dependable operation.

The pawl arrangement whereby the pawl is normally held in inactive position, is mechanically rocked to active position when the machine is cocked and is held in such active position by dynamic forces during the process of ejection are also novel features which contribute to dependable operation of the mechanism. The speed of operation of the slide plate, the delayed operation of the pawl, and the sustaining effect of inertia during forward acceleration, all contribute to a speedy, dependable mechanism.

We claim:

1. An ejection mechanism for one-by-one ejection of sheets of paper from a stack of like sheets which comprises a frame, a magazine for holding such stack with the bottom sheet exposed, a slide slidable in said frame beneath said stack between a forward position and a retracted position, a spring fixed at one end to said frame and at the other end to said slide to normally hold the slide in its forward position and capable of returning the slide from its retracted position to its forward position with a rapid snap action, a pawl carried by the slide and rotatable between an inactive position spaced from the stack and an active position wherein the pawl frictionally engages the bottom sheet of the stack, a weight so located with reference to the fulcrum of said pawl as normally to hold said pawl in its inactive position, a spring connected at one end to said pawl and connected at its other end to said frame in such manner as normally not to oppose said weight but to rock said pawl to its active position during the last increment of retraction of the slide.

2. An ejector mechanism for one-by-one ejection of slips of paper from a stack of the same which comprises a magazine for supporting such a stack with the bottom slip exposed and free to move forwardly in response to a frictional force exerted against the surface of the sheet and substantially in the plane of the sheet; a frame; a slide plate supported by the frame for sliding movement beneath said stack and between a forward position and a retracted position relatively to the direction of ejection; resilient means urging said slide plate to its forward position and operable, when actuated, to so move the slide plate with a snap action; a pawl carried by said slide plate for rotation between an inactive position out of engagement with said stack and an active position for engagement with the bottom sheet thereof, said pawl having friction means for frictional engagement with said bottom sheet; a spring fixed at one end to said pawl for rotating the pawl to active position when tension is applied to the spring; and means interconnecting the other end of said spring to said frame to apply tension to the spring during the last increment of retraction of the slide plate.

3. An ejector mechanism for one-by-one ejection of slips of paper which comprises a magazine for supporting a stack of slips in vertical position but with the slips tilted forwardly and downwardly, said magazine leaving the bottom slip of the stack exposed, said magazine normally supporting the stack in such position but offering relatively little resistance to separation of the bottom slip by shearing movement of a frictional member in the plane of the bottom slip; said mechanism also comprising a frame and a slide member slidable in the frame beneath said stack forwardly from a retracted position to a forward position in the direction of ejection of said slips and rearwardly from said forward position to said retracted position; a spring connected to the frame and to the slide to normally hold the slide in its forward position and capable, when actuated, of returning the slide to its forward position with rapid acceleration; a pawl having a weighted forward end and pivotally supported on the slide to rock between an inactive position in which it is normally held by the weighted end and is out of engagement with said bottom sheet, and an active position for engagement with said bottom sheet; a spring connected at one end to the opposite end of the pawl and means including a slotted portion of the frame for holding the other end of the spring to apply tension to the spring and to rock the pawl to its active position during the last increment of retraction of the slide.

4. Holding means for holding a stack of paper slips or the like to present the bottom slip to an ejector member, which comprises a rack having side walls spaced apart to snugly and slidably receive such a stack, an open bottom providing bottom support for the stack but allowing access of such ejector member to the bottom slip of the stack, said bottom member being pitched at an angle sloping downwardly in the direction of ejection, an upright rod disposed within said rack at the rear thereof for reception in perforations in said slips, a plate having a perforation to receive said rod, said plate being adapted to overlie and rest upon such stack to provide a weight for feeding the stack downwardly and for providing a frictional force between adjacent slips, and a follower member having a forward portion resting upon said plate to distribute its reactive force over the forward end of said stack and a rear portion formed with spaced perforations so aligned that when said rod is received therein

they will allow free downward movement of the follower but will allow only a slight degree of rotation of the stack in response to upward pressure of such ejector member.

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