March 5, 1929. A. P. INGRAM 1,704,044

DISPENSING AND SEVERING DEVICE FOR ROLLED STRIP MATERIAL

Filed May 6, 1927 2 Sheets-Sheet 1

Fig. 1.

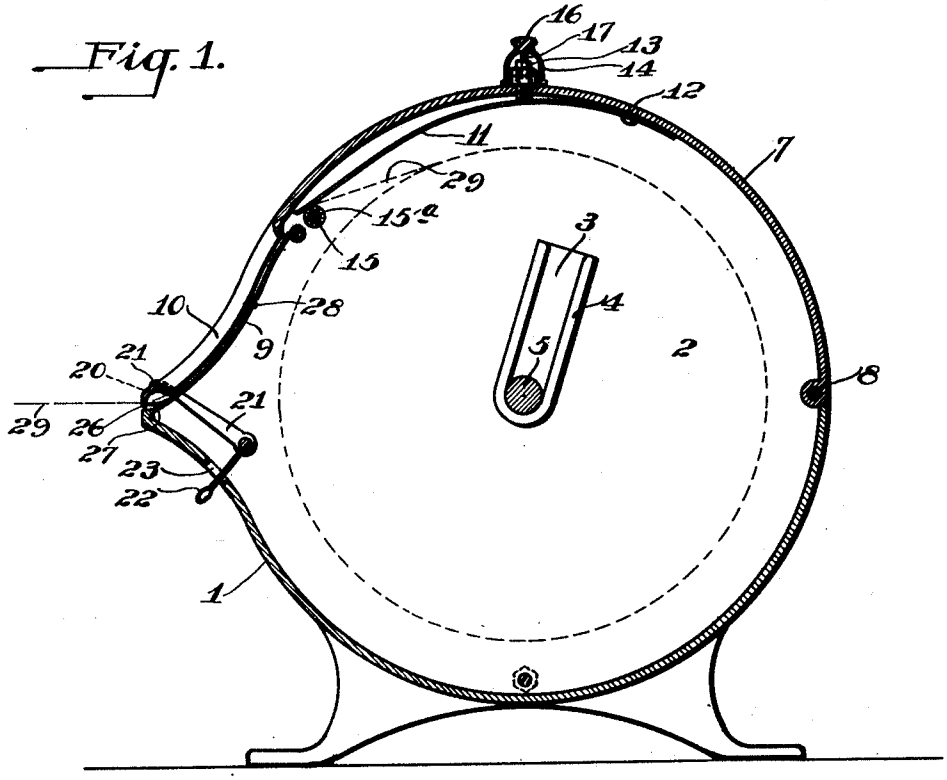
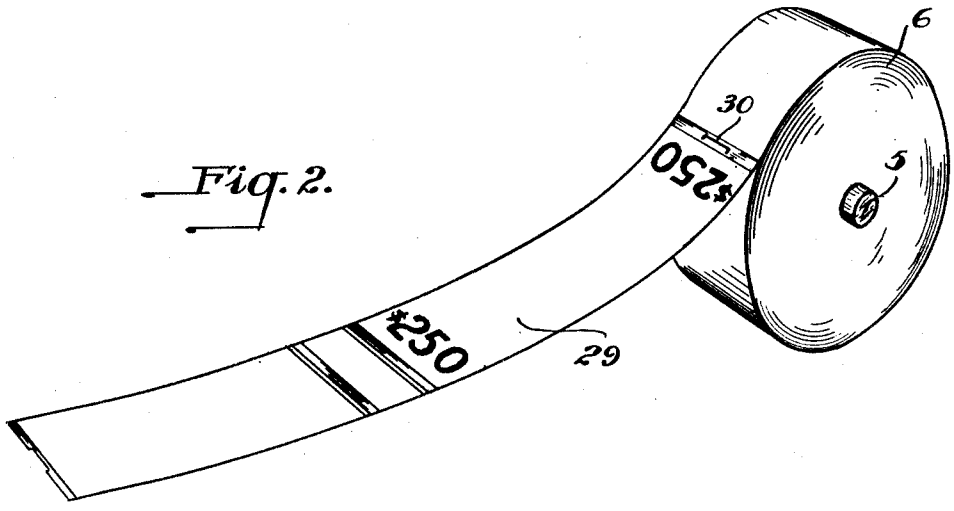


Fig. 2.



WITNESSES

A. B. Wallace.

INVENTOR

Alonzo P. Ingram

by

William B. Jaspert.

his Attorney.

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Fig. 4.

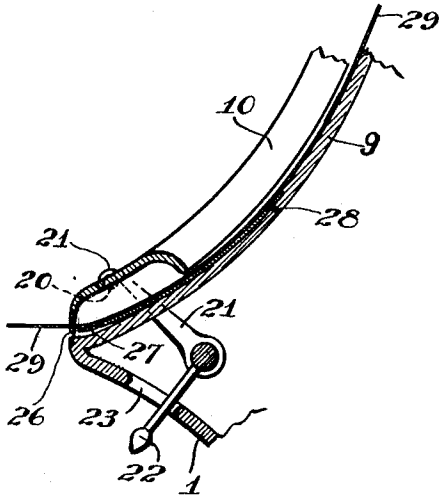
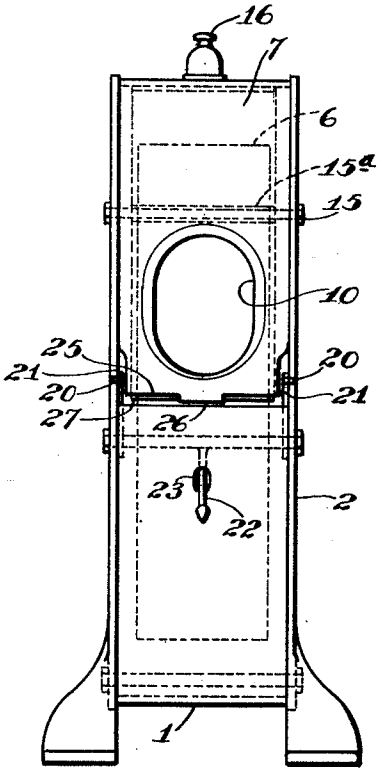


Fig. 3.



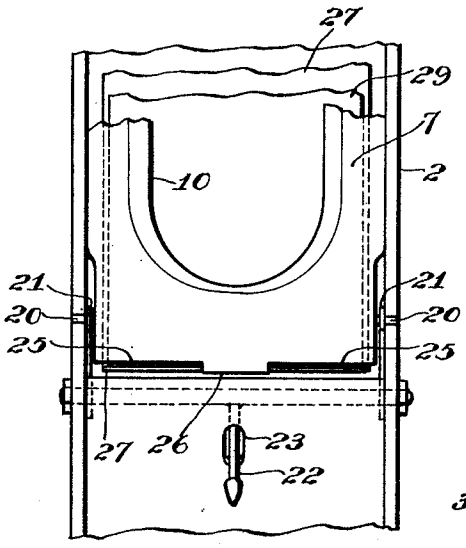


Fig. 5.

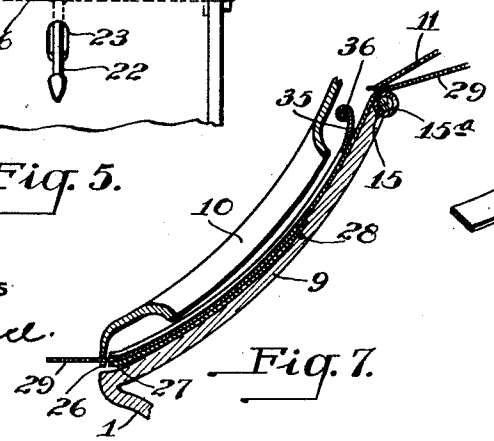


Fig. 7.

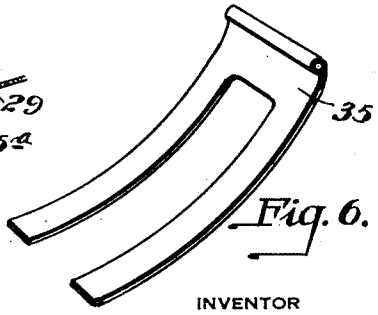


Fig. 6.

WITNESSES

A. B. Wallace.

INVENTOR

Alonzo P. Ingram

by

William B. Jaspert.

his attorney.

Patented Mar. 5, 1929. 1,704,044

UNITED STATES PATENT OFFICE.

ALONZO P. INGRAM, OF PITTSBURGH, PENNSYLVANIA.

DISPENSING AND SEVERING DEVICE FOR ROLLED STRIP MATERIAL.

Application filed May 6, 1927. Serial No. 189,259.

This invention relates to a dispensing and severing device for rolled strip of binding material and to an improved roll of strip material which is especially applicable for use therein.

Various forms of dispensing devices for strip material have been heretofore proposed, their construction being such as to retain a rolled strip one end of which is projected through an outlet provided in the casing from which it is drawn in the desired lengths for use in binding packages or the like. Provisions having been made for severing the strip by providing a severing edge at the outlet portion of the casing and in some instances moistening devices have been attached or embodied in the dispensing mechanism whereby the gummed portion of the strip is moistened as it is drawn through the casing outlet.

In accordance with the present invention the dispensing and severing mechanism is designed to sever the strip of binding material in predetermined lengths and at definite portions of the strip for reasons to be hereinafter stated; and it is among the objects of the invention to provide a dispensing and severing device which shall be of simple and durable mechanical construction and in which the parts are readily accessible for the manipulation of the rolled strip in refilling the device and which shall be adapted to maintain the roll in its proper working position in the casing.

Another object of the invention is to provide a dispensing device which is formed to provide a passage or outlet for the strip, the outer end of which being provided with a severing edge having a tongue projecting thereon which is adapted to engage weakened portions such as slits or perforations provided in the strip at the proper line of severing and which shall maintain the strip under suitable tension to prevent unreeling and possible damage to the strip within the casing member.

Still another object of the invention is to provide a dispensing device which shall be interchangeable with its supporting brackets for use as a unit or in multiples as may be desired.

In the accompanying drawings forming a part hereof and in which like reference characters designate like parts, Fig. 1 is a sectional elevational view of the dispensing mechanism embodying the principles of my invention; Fig. 2 illustrates a rolled strip of binding material in perspective which is embodied in the device shown in Fig. 1; Fig. 3 is a front elevational view of the dispensing mechanism; Figs. 4 and 5 are sectional elevational and front elevational views respectively of the outlet portion of the dispensing mechanism; Fig. 6 is a view in perspective of a hinged strap; and Fig. 7 is a sectional elevation of the outlet channel showing the position of the strap of Fig. 6.

As shown in Fig. 1 the dispensing device comprises a casing 1 having end walls 2 provided with inclined slots 3 which are formed in integral bosses 4 projecting on the side walls for receiving a pin or axle 5 which is projected through a rolled strip 6 of binding material as shown in Fig. 2. The purpose of the inclination of the retaining slots 3 is to urge the axle 5 against the seat or bottom of the slot to prevent the dislocation of the rolled strip 6 when assembled in position.

The casing 1 is provided with a cover portion 7 which is hinged at 8 in the manner shown. The casing and cover are slightly projected as shown to provide an outlet portion for the strip material which is conducted through a passage constituted by the end of the cover 7 and a portion 9 of the casing. The cover 7 is provided with an elongated opening 10 in alinement with the passage to make the strip, passing underneath, accessible to the operator who, by engaging it with the finger, can advance it in the passage to the outlet portion thereof. The cover is further provided with a tension device 11 comprising a spring or other resilient strap which is secured to the cover as by riveting at 12. An adjustable set screw 13 is provided in the cover which may be locked in its adjusted position by lock nuts 14 and which functions to depress the tension member 11 against a stop lug 15 which may constitute one of the connecting bolts of the side walls 2 and which is provided with a ferrule or roll 15a. A thumb lug 16 having a screw portion 17 is adapted to be screwed against the cover 7 to operate as a knob in manipulating the cover. If it is desired to adjust the tension screw 13 the lug 16 is removed by unscrewing the element 17 which renders the lock nuts and screw accessible for adjustment.

The cover at its free end is provided with

pins 20, Fig. 5, which are adapted to be engaged by latches 21, Figs. 1 and 4, which are manipulated by thumb levers 22 within the limits of the slots 23 formed in the casing 1. The latch 21 in the position shown in Figs. 1 and 4 is in engagement with the pins 20 of the cover and locks the latter in its closed position. When the thumb levers 22 are raised the latch 21 releases the pins 20 and the cover may be raised on its hinge 8.

Referring to Figs. 3, 4 and 5 of the drawings, the end of the cover 7 is provided with a severing edge 25 having a downwardly projecting tongue 26 located centrally of the passage. A spring element 27 is disposed in the passage and is secured to the casing 1 by a rivet 28 at one end to lie in the path of the paper strip 29, Fig. 4, which passes over the spring. The spring 27 is biased to normally urge the strip 29 against the tongue 26 of the severing edge so that regardless of the manner in which the strip is drawn from the passage it will always engage the underside of the tongue. The spring 27 is partially exposed in the slotted portion 10 of the cover so that when a strip has been severed at the edge 25 and it is desired to advance the strip to project it beyond the outlet, the operator inserts his finger in the slot 10 to engage the strip thereby exerting pressure against the spring 27 which displaces it away from the tongue 26 and permits the strip to move in the passage and project beyond the outlet where it is engaged and withdrawn. As the strip is withdrawn from the dispensing mechanism the spring 27, as previously explained, urges it against the tongue 26 and it is obvious that if a perforation or weak portion is provided in the strip, the latter will be ruptured by the tongue 26 when the weak portion by the act of withdrawing the strip is brought to register therewith. It is of course obvious that the tongue may be an upwardly projecting portion on a severing edge formed on the casing and that the strip may be biased against it in a suitable manner, instead of the construction herein shown.

Referring to Figs. 6 and 7 of the drawings the strip 29 is held against the spring 27 by a strap 35 as follows: The member 35 comprises a bifurcated strip of metal turned at one end to receive a pin 36, Fig. 7 by means of which it is pivotally mounted on the cover 7 or the casing 1 as may be convenient. The strap 35 by its own weight holds the paper strip 29 against the spring 27, and by projecting substantially to the edge of the spring 27 it functions to prevent the edge of the strip from curling when severed. The strip 29 is thereby held flat on spring 27 so that it may readily be advanced without interference by the tongue 26 of the severing edge 25.

The paper binder strip shown in Fig. 2 is printed on one side with legends designating the amount of bank notes contained in a given bundle, and its other side is provided with gummed portions which are spaced to correspond with the printed matter shown in Fig. 2, and as it is necessary to have the printed matter appear on the same portion of the binder when it is applied to a bundle, it is essential to sever the strip at or near the gummed portion so that when the severed strip is joined by moistening the gummed end the printing will appear uniformly on all bundles so joined. Accordingly I have provided slits 30 at the edge of the gummed portion of the strip and the slit, when the strip passes underneath the tongue 26, will be engaged by the latter to prevent its further withdrawal from the dispenser. This will of itself effect a severing of the strip in alignment with the slit 30 or it will abruptly stop the movement of the strip which indicates to the user that the point of severance has been reached, and by a suitable upward movement of the strip it will be severed at its proper place. I prefer to use a slit instead of perforations or other means of weakening the strip since thereby no material need be punched out in the printing and gumming machine which would clog up the latter and retard the speed of manufacture. The operation of the dispensing and severing device is briefly as follows:

The roll of strip material shown in Fig. 2 is assembled in the casing by dispensing the pin 5 in the slot 6 of the side walls thereof and the free end of the strip is laced between the tension member 11 and the pin 15 of the casing and drawn through the passage constituted by the casing portion 9 and cover 7 to project through the outlet. The cover 7 is then closed by depressing the pin 22 to lock the latch 21 with the pins 20. The strip is then withdrawn from the dispensing device which will have been previously set by the adjusting screw 13 to provide a suitable tension on the strip by the spring element 11 and as the strip is withdrawn from the passage the spring 27 yieldingly urges it against the tongue 26 which when the slit 30, if the strip registers therewith, projects through the strip which is severed on the edge 25 at the slit portion. The operator then advances the edge of the strip through the elongated opening 10 in the cover which depresses the spring 77 and permits the strip to clear the tongue 26 until it again projects out of the casing.

In the use of the dispensing mechanism for binding strips for bank notes, it is sometimes desirable to have a plurality of rolls printed with different denominations available in a convenient space. For this reason

I have provided for the journalling of the roll pins 5 in the side walls of the casing to make the latter interchangeable and to adapt them for mounting between a single set of end brackets, in the manner of mounting a single unit as shown in Fig. 3. In prior devices of this nature, a single rod has been projected through all of the supporting wall members to engage the respective rolls contained therein, and this necessitates the disturbance of all of the rolls for the renewal of any one of the rolled strips.

It is evident from the foregoing description of this invention that the dispensing and severing device for rolled strip material illustrated and described herein comprises a simple and efficient means for dispensing and severing the same and particularly provides for the severing of the strips at predetermined lengths, and in accordance with the location of the printed and gummed portions of the strip member.

Although I have described a specific embodiment of my invention it will be obvious to those skilled in the art that various modifications may be made in the details of construction and in the arrangement of the several cooperating parts without departing from the principles herein set forth.

I claim herein as my invention:

1. A dispensing and severing device for strip material comprising a casing for receiving a rolled strip and having a passage for said strip, a severing edge provided at the outer end of said passage having a tongue for engaging perforated portions of said strip at predetermined intervals and means for pressing the strip against said tongue to effect engagement of the latter with the strip.

2. A dispensing and severing device for strip material comprising a casing for receiving a rolled strip and having a passage for said strip, said casing being further provided with a slotted opening in alinement with the passage to furnish access to the strip lying therein, a severing edge provided at the outer end of said passage having a tongue for engaging slitted portions of the strip, and a spring element normally biased to engage the strip and urge the same against said tongue.

3. A dispensing and severing device for strip material comprising a casing for receiving a rolled strip and having a passage for said strip, said casing being further provided with a slotted opening in alinement with the passage to furnish access to the strip lying therein, a severing edge provided at the outer end of said passage having a tongue for engaging slitted portions of the strip, and a spring element normally biased to engage the strip and urge the same against said tongue, said spring element being disposed in a manner to be displaced when the strip is engaged through the slot by the operator.

4. A dispensing and severing device for strip material comprising a casing having inclined slots formed on the side walls thereof for rotatably journalling a pin projecting through a rolled strip and having a passage for said strip, a cover hinged to said casing, the free end of which forms a guide wall of said passage and has an opening in alinement therewith, a severing edge provided with a projecting tongue formed on said cover at the outer end of the passage for engaging slitted portions of the strip, and a spring element disposed in said passage which is biased to normally urge the strip against the severing edge of said cover.

5. A dispensing and severing device as set forth in claim 4 in which the cover is locked in its closed position.

6. A dispensing and severing device for strip material comprising a casing having inclined slots formed on the side walls thereof for rotatably journalling a pin projecting through a rolled strip and having a passage for said strip, a cover hinged to said casing, the free end of which forming a guide wall of said passage and having an opening in alinement therewith, a severing edge provided with a projecting tongue formed on said cover at the outer end of the passage for engaging slitted portions of the strip, a spring element disposed in said passage which is biased to normally urge the strip against the severing edge of said cover, and means for holding the strip against the full length of said spring element.

In testimony whereof, I have hereunto set my hand.

ALONZO P. INGRAM.