Nov. 4, 1952 R. G. BIRR ET AL 2,616,632

APPARATUS FOR DISPENSING SHEET MATERIAL IN ROLL FORM

Filed Aug. 29, 1947 3 Sheets-Sheet 1

Fig. 1.

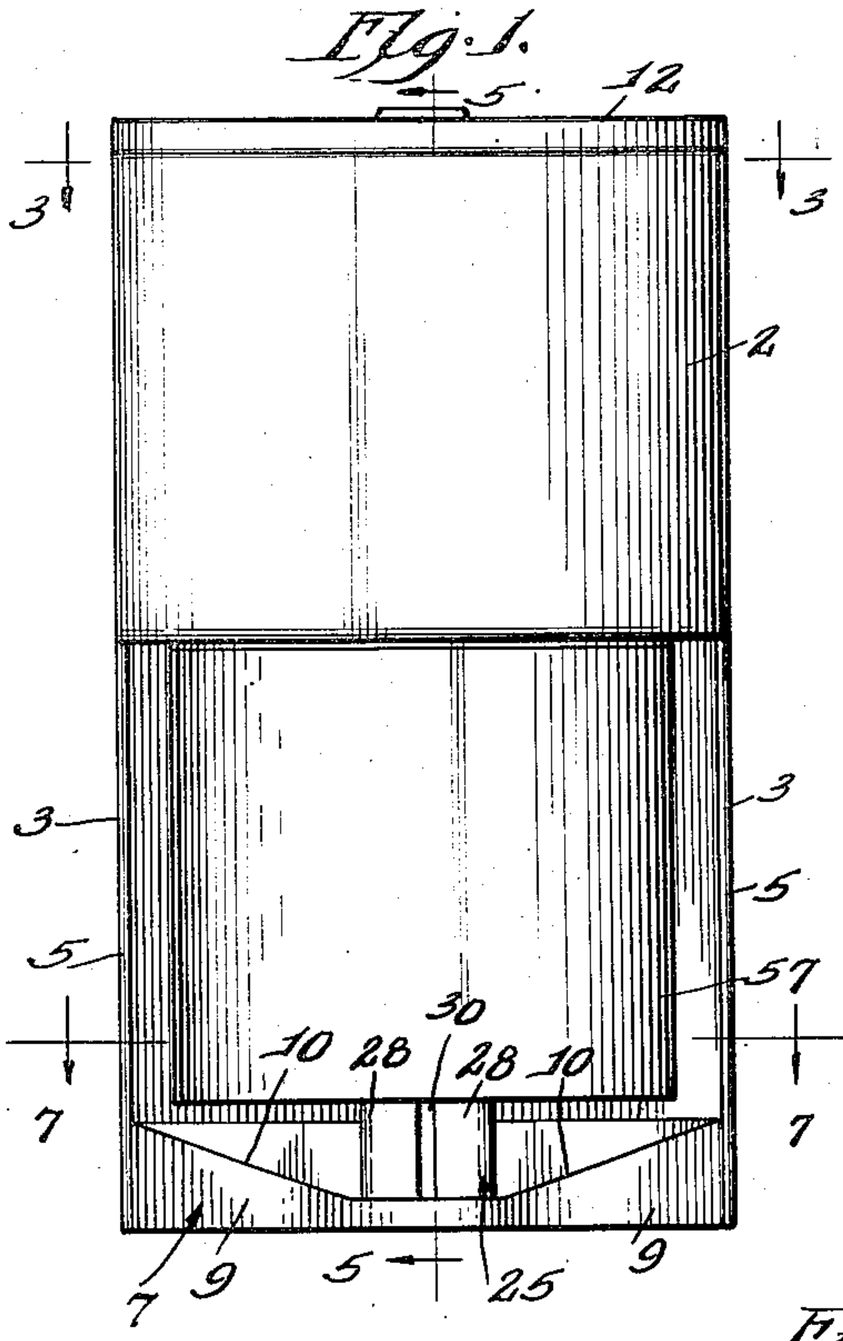


Fig. 2.

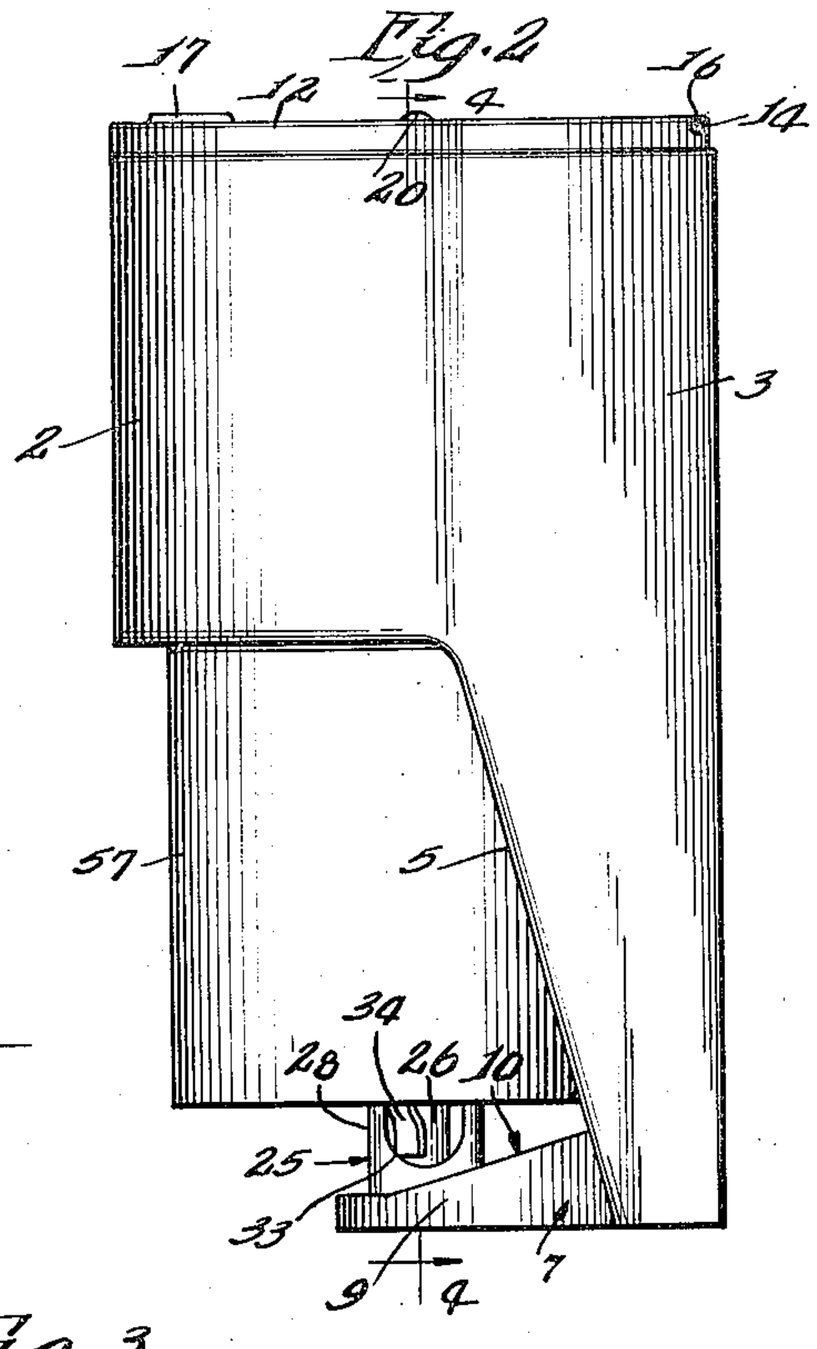


Fig. 3.

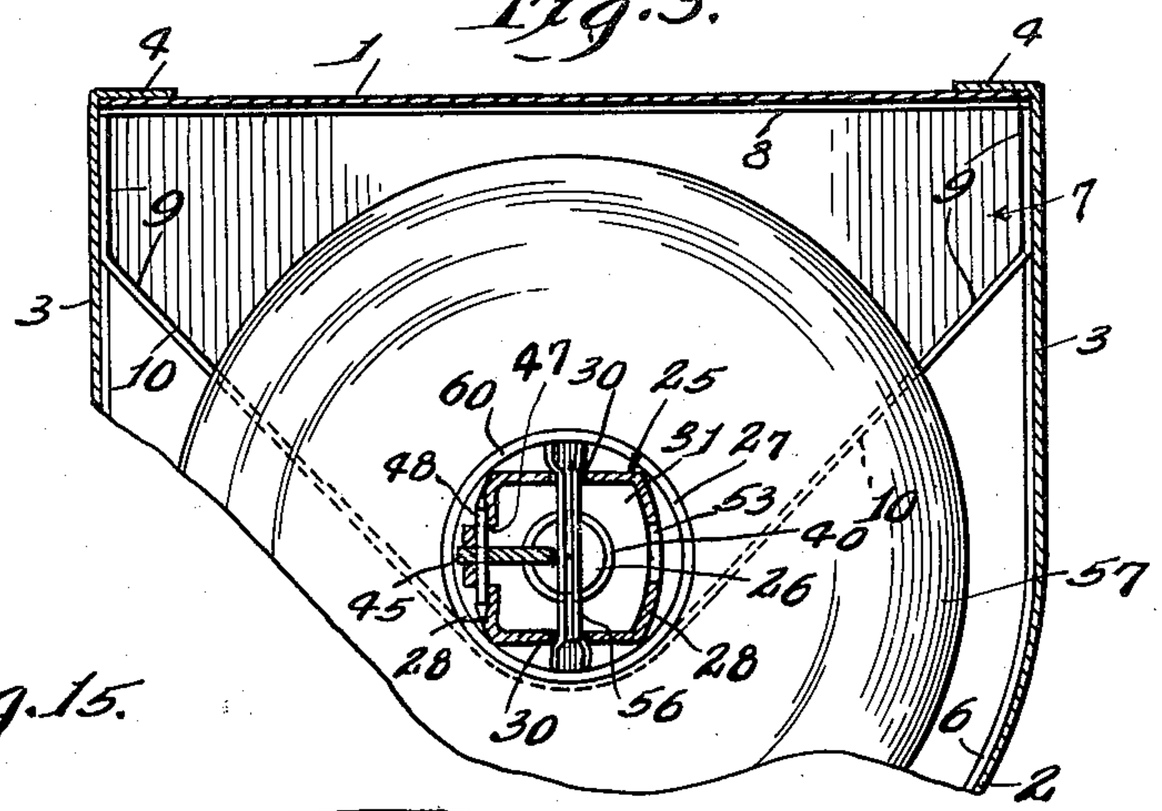
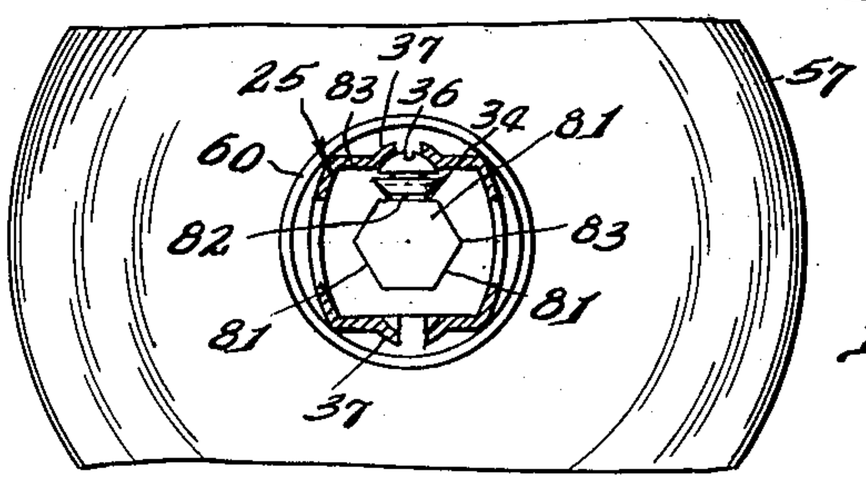


Fig. 15.



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APPARATUS FOR DISPENSING SHEET MATERIAL IN ROLL FORM

Filed Aug. 29, 1947 3 Sheets-Sheet 2

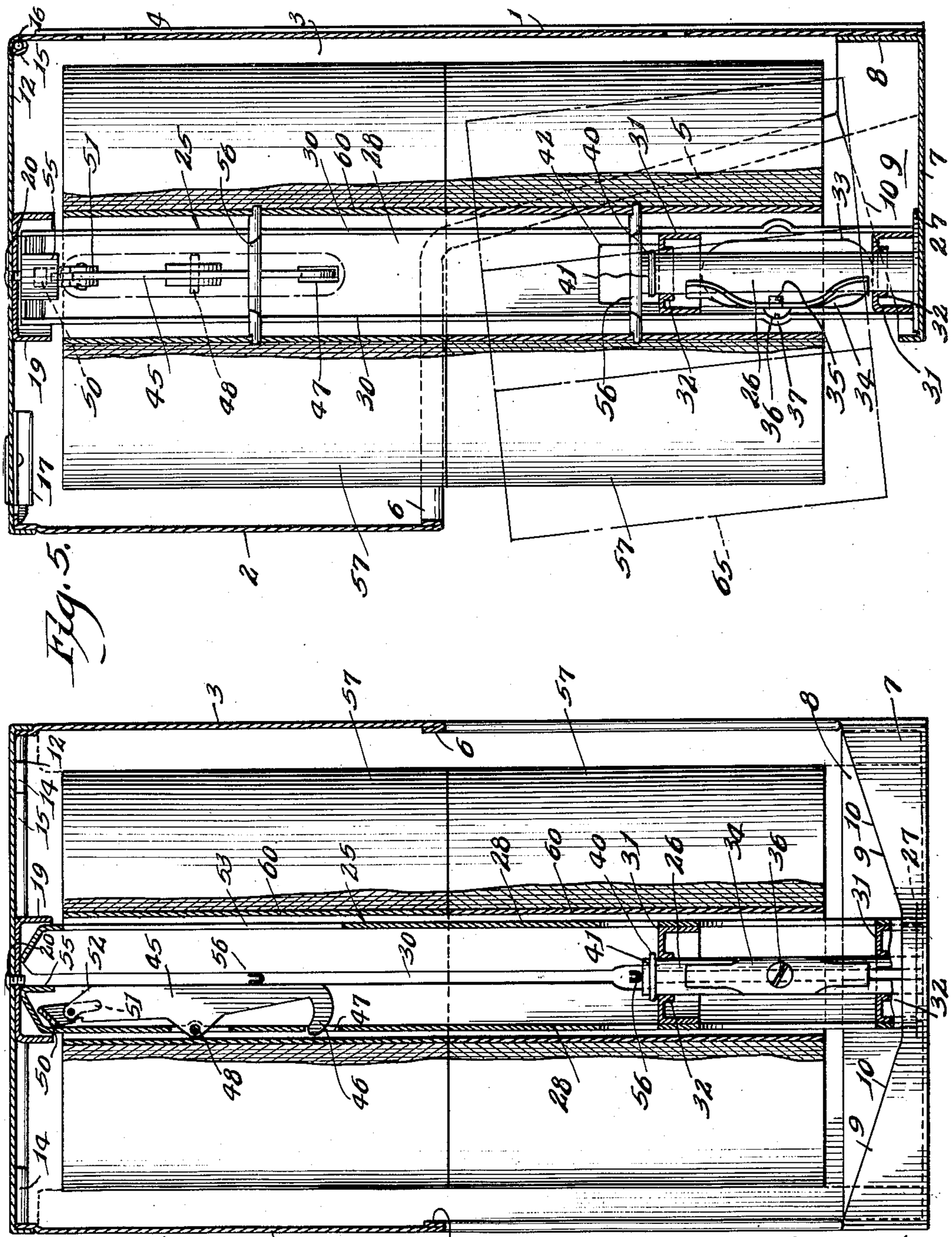


Fig. 5.

Fig. 4.

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APPARATUS FOR DISPENSING SHEET MATERIAL IN ROLL FORM

Filed Aug. 29, 1947 3 Sheets-Sheet 3

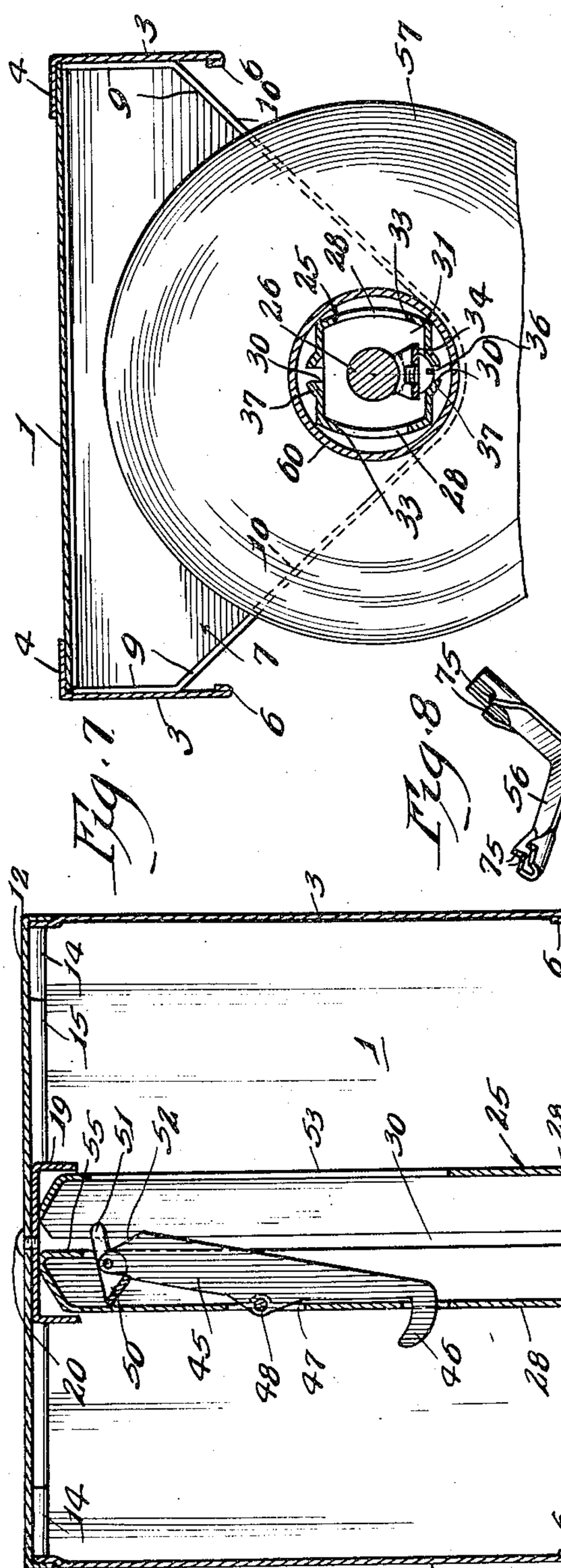


Fig. 7

Fig. 8

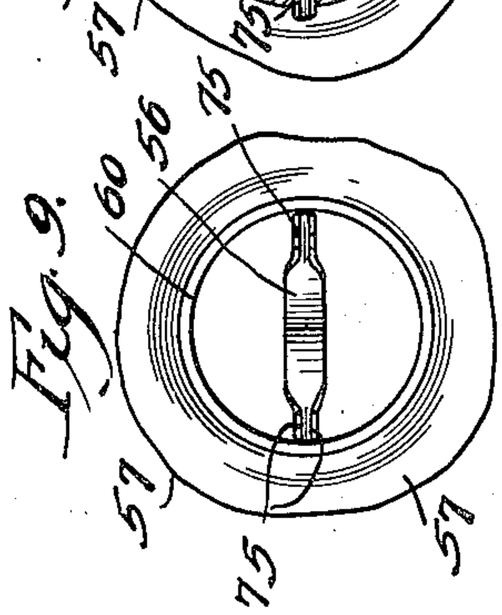


Fig. 13.

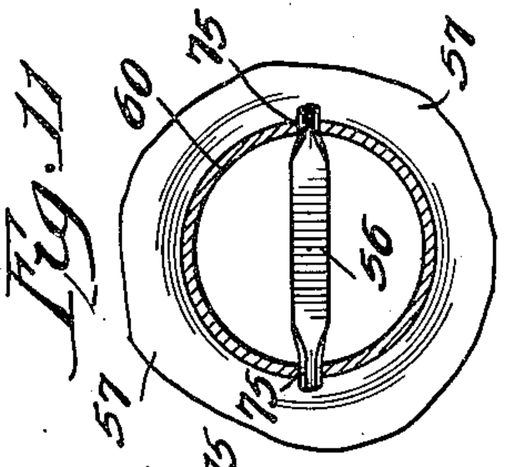


Fig. 11

Fig. 9.

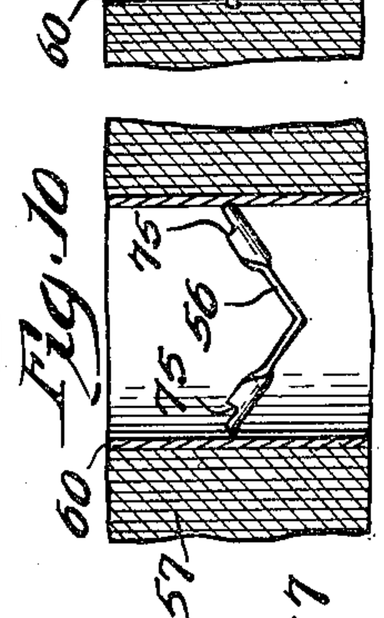


Fig. 14A

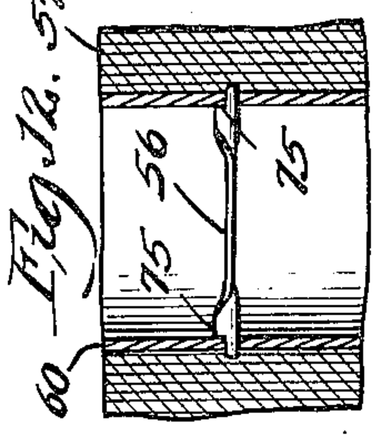


Fig. 12.

Fig. 10

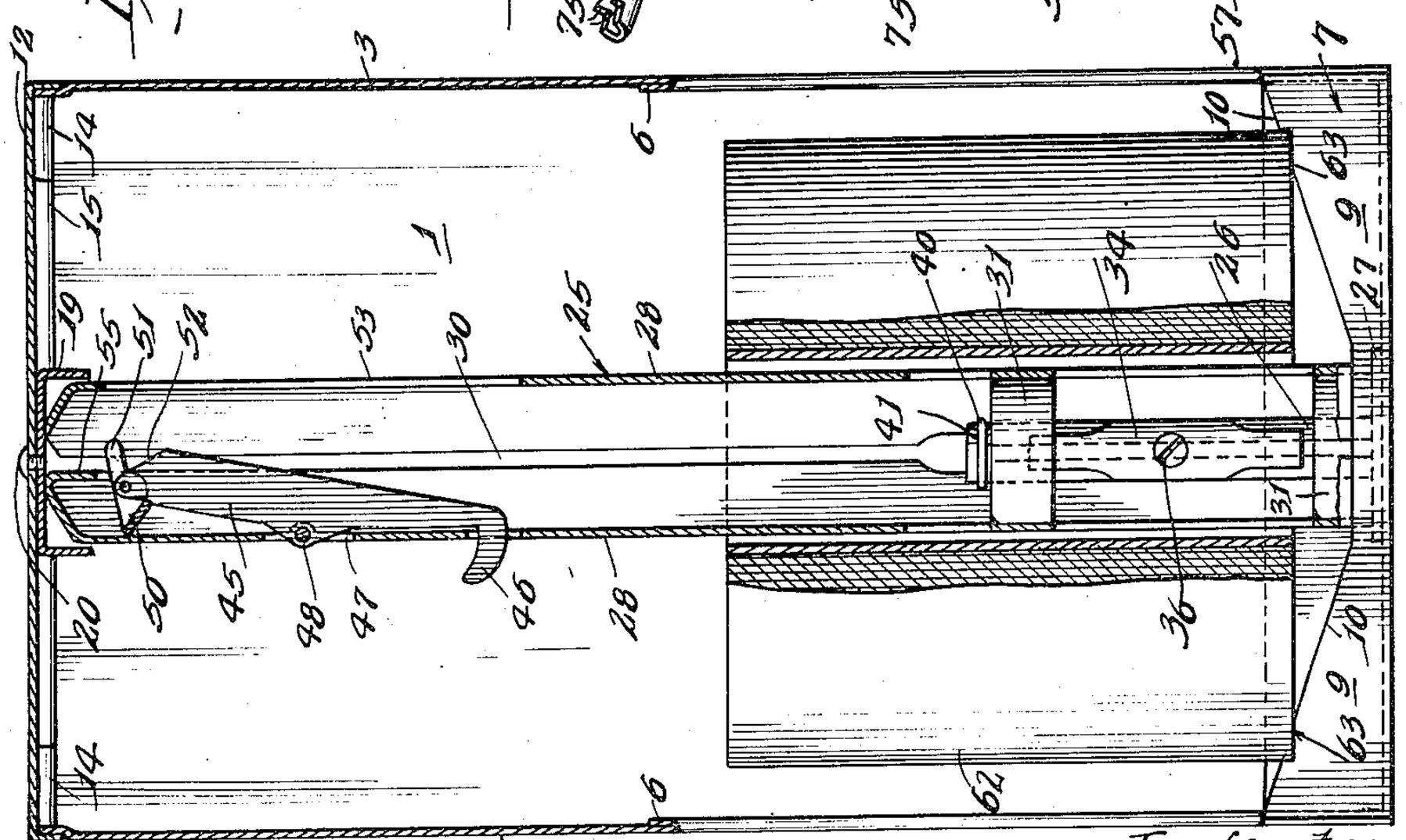


Fig. 6.

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UNITED STATES PATENT OFFICE

2,616,632

APPARATUS FOR DISPENSING SHEET MATERIAL IN ROLL FORM

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Application August 29, 1947, Serial No. 771,216

18 Claims. (Cl. 242—55.3)

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This invention relates to improvements in devices for dispensing material in roll form, and has among its objects to provide means for preventing the dispensing of unauthorized material, that is for preventing dispensing unless the supply roll is equipped with some means which can cooperate with some means in the cabinet for allowing the roll to be moved to a proper dispensing position. An object is also to prevent the dispensing of inferior material.

Where paper in roll form is used, and particularly where it is supplied free of charge. It is desirable to prevent waste of paper. An important object herein is to provide a cabinet adapted to dispense paper only of a certain high quality, and to prevent the use of paper of inferior quality, and to prevent waste of the paper. In order to force the use of a certain quality of paper, means is provided to prevent the dispensing of any roll of the supply material or to prevent its movement to a position at which it can be dispensed, unless said roll is equipped with a device which co-acts with a device in the cabinet to permit such introduction and positioning.

Another object of the invention is to provide a rotatable mounting means for a roll or rolls of supply material, and another object is to provide means adjustable for frictionally retarding the rotation of said mounting means in varying degrees conformably to the tensile strength of the paper. The proper quality of paper has a certain tensile strength, and in some supply paper the lengths of the paper are defined by perforations. Therefore, to control the rate of withdrawal and thus prevent waste, means is provided which yieldably resists roll rotation due to pull on the paper. The amount of yieldably resistance required depends upon the quality of the paper and depends on the rate of pulling which is to be permitted. If after the retarding means is set, an attempt is made to dispense the paper by pulling it out too quickly it will break or it will tear off along perforations which define a single length.

The invention herein is applicable to the same general type of cabinet shown in our co-pending application for Method And Means For Dispensing Material In Roll Form, Serial No. 642,498, filed January 21, 1946, now Patent No. 2,553.389, dated May 15, 1951. Although the invention herein is applicable to the type of cabinet shown in the aforesaid pending application, yet some phases of the invention herein are applicable to other types of cabinets.

Further objects of the invention are to provide improved cabinet structure; to provide means for preventing the dispensing of an unauthorized supply roll; to provide a new and

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simplified form of cabinet; to provide cabinets of varying heights which will house two or more supply rolls placed end to end with their axes in vertical alignment; to provide means adjustable in varying degrees, for frictionally and yieldably resisting withdrawal of the material of the supply roll conformably to the tensile strength of the supply material; to provide a simplified form of upright spindle as means for holding a supply roll in dispensing position; to provide a spindle structure which can be made by simple assembly of parts which are formable by stamping and punching operations; to provide a three-piece cabinet of which the pieces are stamped and formed of sheet material; to provide a cabinet in which dispensing can only occur when a tubular supply roll is held with its axis in upright position; to provide a roll as an article of manufacture having a crossbar secured within its core; and to provide a method for applying the cross bar.

Objects, features and advantages of the invention will appear in the description of the drawings, and in said drawings:

Fig. 1 is a front elevation of the cabinet of this invention, with an authorized supply roll in position to be dispensed, and with a second authorized supply roll resting on the upper end of the lower supply roll;

Fig. 2 is a side elevation of Fig. 1;

Fig. 3 is a horizontal section taken substantially on line 3—3 of Fig. 1, and passing through the upper part of the spindle;

Fig. 4 is a vertical section taken approximately on line 4—4 of Fig. 2;

Fig. 5 is a vertical section taken on line 5—5 of Fig. 1;

Fig. 6 is a vertical section on the same line as Fig. 4 showing the trippable preventing means in initial position, and showing the position of an unauthorized supply roll in engagement with the means for preventing rotation of such a roll;

Fig. 7 is a plan section taken approximately on line 7—7 of Fig. 1;

Fig. 8 is a perspective view of the crossbar bent to shorten it and permit its introduction into the core;

Figs. 9 and 10 show the crossbar positioned within the core, to be straightened;

Figs. 11 and 12 show the bar after straightening;

Figs. 13 and 14 show the bar bent upon itself to reinforce and stiffen it; and

Fig. 15 is similar to Fig. 7 and shows means for automatically intermittently varying the degree of yieldable resistance to rotation of the supply roll, during dispensing.

Now referring to the drawings: The cabinet

casing is constructed of sheet metal and, with the exception of a top cover, is composed of only three pieces. The first piece forms the back section 1. This section 1 has near its top a keyhole slot (see Fig. 5) adapted to fit over a projection on a wall as a hanger for supporting the cabinet. The back also has a pair of openings (only one shown) through which fastening devices may be inserted to secure the back against swinging.

The second piece provides a front 2 and sidewalls 3 for the cabinet. The front 2 of this second piece is of semi-cylindrical configuration and it extends downwardly from the top only a distance which is equal to about half of the total height of the cabinet. The sides 3 are rearward parallel extensions from this semi-cylindrical front wall. Each side 3 has a vertical flange 4 engaging with the rear surface of the back element 1 throughout its entire vertical height. These flanges are secured by spot welding. The front edges 5 of the lower portions of the sides slant downwardly and rearwardly as best shown in Fig. 2. At the lower edge of the cylindrical wall and along the edge 5 the metal is turned as at 6 to give a smooth finish.

The third piece or bottom 7 of the cabinet has a rear flange 8, which is secured to the front surface of the back element 1, and the bottom has side flanges 9 which are disposed to be forwardly convergent as shown in Figs. 3 and 7, and which are continuous with a curved portion which lies at the extreme front. The vertical heights of these side flanges decrease as they converge forwardly so that there are provided downwardly forwardly slanting upwardly faced edges 10 sometimes referred to herein as drag-edges. These edges are adapted to act as friction drag means engageable by the bottom end of an unauthorized supply roll, under certain conditions to be mentioned hereinafter.

The cabinet is provided with a top cover 12 which can be opened for top loading. The cover is hinged at the rear of the back 1. For this purpose the back is provided with two short upper terminal rolled portions 14 and the lid is provided with an elongated rolled portion 15. A suitable pintle 16 traverses the rolled portions as best shown in Figs. 2 and 6. The lid has a marginal downturned flange which fits the front and side walls as shown. The lid is also provided with a lock 17 the bolt of which engages a flange formed by overturning the top periphery of the semi-cylindrical portion at the front 2 as best shown in Fig. 5. Centrally of the lid there is provided a cylindrical cup 19 opening downwardly and suitably secured by means of a screw 20 as shown. This cup as shown in Figs. 4, 5, and 6 is adapted to engage over the upper end of an upright spindle on which the supply rolls are supported for storage and dispensing.

A very important part of this invention is the spindle and the means thereon and therebelow for preventing any unauthorized supply roll from assuming a position which will permit unimpeded dispensing. The principle underlying this phase of the invention, is to prevent any unauthorized roll from arriving at a position at which it can be dispensed, if the roll is not equipped with a suitable stopping and/or tripping device, adapted to trip a stop on an element which supports the roll. The idea is to allow a "standard" supply roll to arrive at dispensing position but to prevent the arrival of a substitute non-standard roll at that position.

As best shown in Fig. 5 this spindle is generally designated 25 and is supported for rotation on a post 26 which is rigidly non-rotatably secured to the bottom 7 of the cabinet in the upright position shown. Its axis is coaxial with the axis of generation of the semi-cylindrical wall 2. Rotatable about this shaft is a washer 27 which may be of bronze, and the lower end of the spindle 25 rests on this washer which in turn rests on the bottom 6, and the spindle and the washer can rotate.

The structure of the spindle is a feature of the invention. The spindle 25 is formed to provide diametrically related slots 30; to provide for its rotative action upon the post; to provide a trippable latch and detent arrangement; and to provide means for obtaining yieldable resistance to its rotation on the post.

The spindle is composed of two halves 28, each given a form somewhat like that of a channel iron and these channels are then attached to the outer sides of two rectangular thimbles 31 arranged in the lower part of the spindle. These thimbles are formed in the flat by stamping, and are then bent to provide flanges to which the channels are connected as by spot welding, and in such spaced relation as to provide the diametrically related slots, 30. These thimbles are arranged in vertically spaced relation near the bottom of the spindle and each has a cylindrical bearing flange 32 which is rotatably engaged with the post. This spindle is thus constructed by elements, all of which can be made by punching and stamping and it will be further noted that a rigid structure is provided by the means herein shown, and that a very effective bearing is provided which maintains the spindle in upright position without any lateral play.

The walls of the channels are cut out as at 33 to permit the introduction or removal of a resilient bowed member 34 which is part of the means for adjusting and varying the frictional relations between the spindle and the post. A screw 35 is threaded into this bowed member and has a slotted head 36 which is received by a socket 37 of either channel. The head abuts the channel, and when the screw is turned the degree of pressure on member 34 can be varied, to correspondingly vary the frictional resistance against which the spindle must be turned.

This means by which the frictional resistance to the rotation of the spindle can be adjusted in relation to the quality of the paper used or to be used, is an important feature. The good quality paper to be used herein must have a certain tensile strength. The tension adjusting means is therefore manipulated to apply a proper amount of frictional resistance to the rotation of the spindle by the roll. The adjustment can be so made as to save paper, and is so related to the degree of tensile strength of the paper, that if an attempt is made to withdraw paper too quickly the paper will prematurely break. The slowing down of the withdrawal rate saves considerable paper.

Simple removal of the spindle 25 from the post 26 is prevented by means of a split spring ring 40 fitting in a circumferential groove 41 of the post 26. The spring is applied through opening 42 in one of the channels.

Arranged in the upper part of the tubular spindle 25 is a device which in its functional aspect constitutes means for preventing movement of an unauthorized supply roll downwardly on the spindle to a point at which it can be dispensed through the dispensing opening. This opening

is defined by the semi-cylindrical bottom edge of the front wall 2, and by the bottom 7, see Fig. 2.

This preventing means comprises a lever 45 having a hook like projection 46 passing through a slot 47 and pivotally held by a pin 48 which passes through punched out bearing depressions in one of the channel members, 28.

The projection 46 normally or initially occupies the position shown in Fig. 6, and the upper end of the lever 45 lies across a plane connecting the slots 30, so that a bar riding in the slots will engage that upper end and cam it to the position of Fig. 4 to withdraw the hook 46.

The upper end of the lever has pivoted thereto a detent adapted to prevent accidental movement of the lever 45 from its position of Fig. 6 and to prevent movement of an unauthorized supply roll downwardly on the spindle to dispensing position. This detent comprises a piece of sheet metal bent upon itself to a somewhat U-shaped form, the U-end 50 being the heavier so that gravity action causes the detent to automatically assume the position shown in Fig. 6. In this position the arm 51 of the detent lies across a plane connecting the slots and unless a supply roll is equipped with means for tripping this detent and bringing the lever to the position of Fig. 4, the hook 46 remains in preventing position. The upper end of the upper arm of the lever has a camming surface 52 engageable by the downwardly travelling bar of an authorized supply roll. In order that, the lever 45 may be applied or removed, after the channels have been spot welded to the thimbles, an elongated opening 53 is provided in one of the channels. This opening is of such a size that after the pivot pin 48 is removed, the lever with its detent can be withdrawn therethrough.

Moreover, another advantage of the angular arrangement of the said drag producing means is that if an attempt is made to cover the edges with a smooth plate, the cover element will be disposed at an angle to the bottom end of the supply roll or the roll will assume such an angle that friction will be generated to resist rotation of the roll for dispensing.

At the top of that channel on which the lever 45 is mounted there is a downturned element 55 45 at the top of the spindle which performs two functions. First it prevents the weighted or heavier end 50 of the detent from overswinging in such a manner as to bring its weighted end to the wrong side of its pivot. Its second function is, to be engaged by the weighted end of the detent, as the upper arm of the lever moves by gravity in clockwise direction to assume its initial position, to positively cause the detent to be swung in counter-clockwise direction to the detent position of Fig. 6. These movements to initial position, occur as soon as the lever 45 is released, as when a crossbar 56 of either authorized supply roll 57 moves downwardly from a position whereat it engages the lever as in Fig. 4. When the lever 45 is released its top arm swings in clockwise direction to assume the initial position of Fig. 6. It is to be noted that the manner of placing the pivot of the lever at one side thereof and the shaping of the lever obtains this automatic gravity action to the said initial position. The inner edge of the lever 45, assumes a position substantially parallel with one side of slot 30, when brought to the tripped or permitting position of Fig. 4.

The authorized supply roll 57 having a core 60 has the diametrically placed bar 56, and said roll thus equipped is claimed as an article of manufacture adapted for use for tripping a device equivalent to the trippable device heretofore described, and as a stop for limiting downward movement of the supply roll at the proper position in relation to the dispensing opening. This bar engages the top of the post 26 as shown in Figs. 4 and 5, to limit an authorized supply roll at a position and in a condition for unimpeded dispensing action in relation to the dispensing opening. An unauthorized supply roll is indicated at 62 in Fig. 6. Since this roll has no means to engage the top of the post 26 to limit its downward movement, its lower periphery has engaged the drag edges 10 at two points 63, and when an attempt is made to pull the paper out, the paper will break because of the resisting action of the edges 10 on the roll.

The crossbar 56 limits the supply roll at a position whereat its upper end lies at a level slightly below the lower edge of the semi-cylindrical wall 2 of the cabinet as shown in Figs. 1, 2 and 5. The lower end of the roll is raised so that it will not contact with the forwardly and slanting drag edges 10 of the bottom 7. In Fig. 4 the cabinet is shown loaded with two rolls under which conditions the cross bar 56 of the upper roll holds the lever 45 in the position shown. The bar 56 when engaged with the slots 30, causes the spindle to rotate as the material is pulled off of the supply roll. Varying resistance to such rotation is obtained by adjustment of the bowed member 34 in a manner heretofore described.

The arrangement of the drag edges is such that a two-point peripheral drag engagement is had for the unauthorized supply roll, whatever its diameter may be. If it has a smaller diameter than that shown, then the two point peripheral drag engagement occurs forwardly and at a lower level.

If a person should remove the spindle 25 and attempt to support an unauthorized supply roll by means of the post 26 only, the attempt would be unsuccessful because the supply roll would assume a tilted position like that shown by dot and dash lines at 65 in Fig. 5. This would occur because of the difference in the diameter of the post and of the core. In this case also the periphery of the unauthorized supply roll will engage at two points with the drag edges.

The paper core around which the paper is wrapped is provided with a diametrically disposed bar adapted to trip a device, which when untripped would prevent proper placement of the supply roll in a position to be dispensed. A feature of this invention, in addition to an article of manufacture as supply roll having a crossbar in its core, is the method for introducing said crossbar and rigidly attaching it within the core in diametric relation.

Referring to Figures 8 to 14. The crossbar 56, after being stamped, is bent at its ends into a somewhat U-shaped form to stiffen the ends. The extreme outer portions of the ends are sharpened so that their entry into and through the wall of the core will be facilitated. These ends are also provided with stop shoulders 75 which are adapted to abut the inner surface of the core to provide means by which the degree of traversal of the core by the ends will always be the same, because neither end can penetrate any farther than the distance defined by its stop shoulder.

In practice the method comprises, bending the bar as shown in Fig. 8, then introducing the bent bar to the position shown in Figs. 9 and 10, then straightening the bar to the position of Figs. 11

and 12 to cause its ends to be fixed in the core, and then bending the middle portion of the bar to a U-shaped configuration as shown in Figs. 13 and 14 to stiffen it. In practice the bar is so disposed that its surfaces A and B (Fig. 14) both lie at the same distance from the corresponding end of the supply roll, so that no matter which end of the roll is first introduced over the spindle, the bar **56** when it has engaged the upper end of the post **26**, will always be so positioned as to hold the supply roll in proper relation to the dispensing opening, and at a level above the drag edges **10** so that the roll is free for rotation.

Another and important object of this invention, see Fig. 15, is to provide means which will positively prevent the user from pulling out long lengths of the material, by a slow steady pull. This procedure is easier of accomplishment when the diameter of the roll is largest. The present device causes the paper to tear off along the perforations which define a length of it. Heretofore there has been described means for frictionally resisting the rotation of the spindle, as rotated by pulling on the paper, and the tension adjustment of this means in part accomplishes the object above mentioned. However, when a new supply roll is at first put in the cabinet less pulling tension is required to rotate the roll because of leverage advantage due to its larger diameter. It is as though pulling action were applied at the outer end of a long lever arm. However, as the diameter of the supply roll decreases, as dispensing precedes, a greater pull or tension on the paper is required, and under these conditions with a given setting of the friction varying means the paper will generally unfailingly tear off along the perforations, because greater pull is required when it is applied to a shorter lever arm. These perforations have not been shown, but their employment is common.

Therefore, in order to assure this tear off when the roll is large, we provided means which will automatically intermittently vary the degree of resistance to pulling, during pulling. This automatic variation results in a jerky action, to be explained, and occurs for all diameters of the roll as dispensing proceeds.

The means for accomplishing the above purpose is shown only in Fig. 15, but said means is adapted for and intended to be used in conjunction with the structures previously described.

To this end a post **81** takes the place of post **26** and has the cross sectional configuration of a regular polygon, having in this instance six facets **81**. The ends **82** of the spring bow **34** are adapted in this instance to flatly engage the facets, as shown. When during pulling on the paper these ends **82** ride over the longitudinal ridges **83** formed by the intersection of the facets, greater resistance to withdrawal occurs, and the paper will unfailingly separate along a perforated line. The action is jerky, because the degree of resistance to withdrawal intermittently varies, as rotation of the roll continues during dispensing.

We claim as our invention:

1. A dispensing cabinet having, a spindle adapted to receive a tubular supply roll for holding said roll in dispensing position, and means on the spindle automatically movable to a position to prevent reception of the supply roll on the spindle but adapted to be moved by means attached to a supply roll to permit such supply roll reception.

2. A dispensing cabinet having, a spindle along which a tubular supply roll can move to dispensing position, and means on the spindle automatically movable to a position to prevent such movement of the supply roll but adapted to be moved by means attached within a supply roll intermediately of its ends to permit such movement of said supply roll.

3. A cabinet having a dispensing opening and having an upright spindle, trippable means on said spindle adapted to normally prevent motion of a supply roll therealong to a position whereat the material of said roll can be dispensed through said opening, said trippable means being adapted to be moved to non-preventing position only by tripping means within a supply roll in diametrical relation thereto, to permit such movement of such a roll to said dispensing position.

4. A cabinet having a dispensing opening, and having a rotatable upright spindle having diametrically related slots, trippable means on said spindle adapted to normally prevent motion of a supply roll therealong to a position whereat the material of said roll can be dispensed through the opening, said trippable means being adapted to be moved only by tripping means within a supply roll which rides within said slots, to permit such movement of the supply roll to said dispensing position.

5. A cabinet having a dispensing opening and having an upright member, an upright spindle rotatable on said member, trippable means on said spindle adapted to normally prevent motion of a supply roll therealong to a position whereat the material of said roll can be dispensed through the opening, said trippable means being adapted to be moved only by tripping means on a supply roll, to permit such movement of the supply roll to said dispensing position, said means on the supply roll being adapted to engage said member to limit downward motion of said supply roll at said dispensing position, and means on the cabinet adapted to be engaged by and frictionally resist rotation of any supply roll which does not have said tripping and limiting means.

6. A cabinet having a dispensing opening, and having an upright spindle and limiting means on the spindle adapted to be engaged by means on a supply roll to limit the supply roll at a position whereat the material of said roll can be dispensed through the opening, and means against which the lower end of a supply roll will drag if said roll is not provided with the aforesaid limiting means.

7. A cabinet for dispensing supply material in roll form, having a dispensing opening and a spindle, trippable means on the spindle initially disposed to prevent movement of a supply roll along the spindle to a position at which said roll can be dispensed through the opening, said means being further adapted to be moved to a non-preventing position only by a roll equipped with suitable tripping means and as such a roll moves along the spindle.

8. A cabinet having, a dispensing opening, a member fixed in upright relation in the cabinet, a spindle rotatable on the said member and having, slots, and a tubular supply roll of material having a crossbar adapted to enter the slots to allow the roll to be slid to a position at which the crossbar engages the member to limit the supply roll at a position from which material on it can be dispensed through the opening.

9. A cabinet having, a dispensing opening, an upright spindle rotatable in the cabinet, and means adjustable to frictionally resist rotation of the spindle, said spindle having slots, and a

tubular supply roll of material having a crossbar adapted to enter the slots to allow the roll to move to a position at which its material can be dispensed through said opening.

10. A cabinet having a dispensing opening, an upright spindle for receiving a supply roll and supporting it in dispensing relation to said dispensing opening, means providing friction drag-edges, stop means on the spindle adapted to be engaged by stop means on a supply roll for holding the bottom of said roll out of contact with said drag-edges, but in dispensing relation to said opening whereby any supply roll not having stop means will fall to engage the drag-edges.

11. A dispensing cabinet composed of, a one-piece back, a single piece providing front and sides, and a one-piece bottom, means securing the sides to the back, means securing the bottom to the back and sides, the upper forward portion of the piece which provides the front and sides having a semi-cylindrical wall having its lower edge spaced a substantial distance upwardly from said bottom, and a spindle rising from said bottom and having its long axis coaxial with the axis of generation of the semi-cylindrical wall.

12. A spindle composed of two channel members, upper and lower spacing thimbles within and rigidly connecting with said channel members in a manner to provide two parallel diametrically related slots which extend lengthwise of the spindle, each thimble having an opening and said openings being axially aligned lengthwise of the spindle to provide bearings whereby the spindle can be rotatively supported on a post.

13. A tubular spindle having two parallel diametrically related slots which extend lengthwise of the spindle, bearings within the spindle by which said spindle can be rotatively supported on a post, said spindle having pivoted within it a lever weighted to fall to an initial position in which its upper arm lies across a plane which passes through the slots, said lever having a stop which projects at the outside of the spindle when the said upper end of the lever is in said initial position and which is withdrawn when the upper arm is moved out of said plane, trippable means at the upper end of the lever adapted to hold it against movement from its initial position but adapted to be tripped by a member on a supply roll when travelling in said slots to allow movement of said lever away from said initial position, said trippable means being adapted to automatically assume a position to hold said lever in said initial position, and the upper end of said lever having a camming surface engageable by said member on a supply roll to move the lever out of the plane of the slots and withdraw said projection.

14. A dispensing cabinet having therein means adapted to be engaged by the end of a supply roll to resist rotation of the roll, an upright spindle adapted to receive and rotatably support a plurality of supply rolls in superposed end-to-end relation above said means, said cabinet having a dispensing opening only permitting dispensing of the material of the lowermost roll after the bottom end of said roll has reached a predetermined limit position in upwardly spaced relation to said first mentioned means on the supply roll and on the spindle.

15. A dispensing cabinet having therein a tubular spindle having diametrically related slots, means mounting the spindle for rotation, including a post and bearings in the spindle rotatable about the post, means on the spindle automatically movable to a position to prevent reception of a supply roll on the spindle but adapted to be moved by means attached to a supply roll and moving in said slots to permit such supply roll reception, and in which movement of the roll is limited by engagement of said attached means with said post.

16. A dispensing cabinet having therein an upright tubular spindle and means mounting it for rotation, said spindle having diametrically related slots extending in an axial direction, and a tubular supply roll of sheet material having therein a bar traversing said slots and adapted to rotate said spindle when said sheet material is pulled, and adjustable means within said spindle for yieldably resisting spindle rotation.

17. A dispensing cabinet having therein an upright spindle comprising two half sections disposed to define diametrically related slots and secured together by bearing thimbles, and a fixed post on which said thimbles rotate.

18. A dispensing cabinet having therein an upright tubular spindle having diametrically related slots extending in an axial direction, a fixed post extending into said spindle and means rotatably mounting the spindle on the post, a resilient member frictionally engaged with the post, a screw threaded into the member and having a slotted head accessible through one of the spindle slots for turning the screw to vary the tension of the member, said spindle having a depression into which said head fits to condition the member for rotation with the spindle.

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