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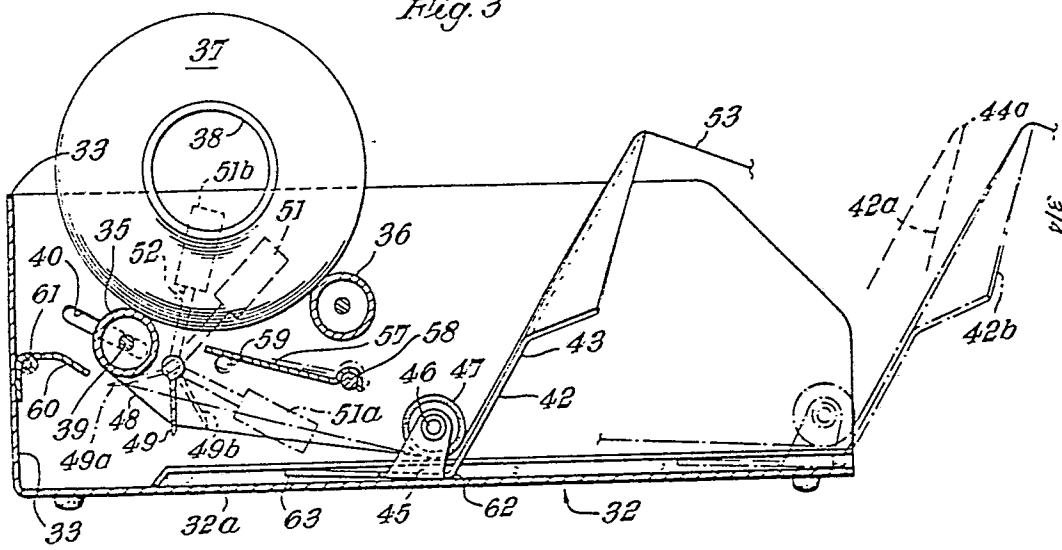
(54) **Apparatus for dispensing material.**

(57) This invention relates to apparatus for dispensing wrapping material such as cling film from a roll (37) of such material. The material to be dispensed is guided along a path defined by two rollers (35 and 47) between which is arranged a toothed perforating blade (49). The blade is pivotally mounted and biased into a position in which the teeth just protrude into said path and engage the material (48) to be dispensed. When the material is moved along the path, it rotates the perforating blade into a position in which the teeth protrude further into the path, thus perforating the material. Continued movement of the material causes continued rotation of the blade until the teeth are withdrawn from the path (49b). The apparatus also includes a severing device (44) to enable sheets of material to be removed at the perforations.

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Fig. 3



APPARATUS FOR DISPENSING MATERIAL:

This invention relates to apparatus for dispensing material and, in particular, to apparatus for dispensing sheets of wrapping material from a roll thereof. More particularly though not exclusively this wrapping material may be "cling film" which is used for the wrapping of sandwiches and the like in the home and in commercial premises.

A simple form of apparatus for dispensing sheets of wrapping material comprises a mounting core, on which a roll of continuous cling film web is mounted, and a serrated cutting edge spaced away from the roll such that, when the required length of cling film has been drawn through the apparatus, that length can be separated from the roll by stretching over the serrated edge and then tearing it off. Such apparatus is unsatisfactory in that the tearing action tends to draw the web towards one end of the serrated edge and results in sections of the web overlapping to cause the web to stick to itself. Also, the dispensing apparatus makes no provision for predetermined lengths of cling film to be torn off other than by the judgement of the eye of the user.

The present applicant has proposed in his British Patent 1 535 724 improved apparatus with which the above disadvantages can be overcome, but the apparatus employs a cam arrangement to cause a perforating blade to be displaced into a position in which the blade edge projects radially outwardly through a slit in the circumferential surface of a rotating drum so as to form a transverse line of perforations across the web of cling film. By drawing more of the cling film from the roll, the line of perforations can be positioned across a severing device so that the end sheet can be detached from the remainder of the roll by stretching the line of perforations across the severing device. This dispensing apparatus is effective in use, but it would be desirable to obviate the need for a cam arrangement, in order to reduce manufacturing costs of the apparatus while keeping the number of moving parts to an absolute minimum.

According to the present invention there is provided apparatus for dispensing sheets from a continuous web of material, said apparatus comprising guide means for guiding the web at two locations spaced apart lengthwise of a conveying path for the web, and a toothed perforating blade, between said two locations, adjacent to, and extending transversely of the conveying path, characterised in that, the blade is mounted for pivoting about a longitudinal axis thereof offset from its perforating edge and is biased about that longitudinal axis in a given direction relative to the conveying path so that, when the apparatus is inoperative, the blade, under its bias, adopts a position in which the tips of its teeth extend through said path a first predetermined distance, and in that, as the web is drawn through the guide means in the opposite direction to said given direction, the blade is rotated by the web about said longitudinal axis to cause the teeth thereof to extend through said path a distance which is greater than said first predetermined distance, whereby the web is tightened across the teeth to cause the same to perforate the web.

In one arrangement, a biasing weight is secured to the blade in a different angular position from said blade about said longitudinal axis so that the biasing of the blade is caused by the gravitational force acting on the biasing weight.

Preferably the apparatus further includes a severing device which is so arranged that, in use, on continuing to draw the web through the guide means, the line of perforations travels past the guide means positioned downstream relative to the perforating blade and can be positioned over the severing device, to enable the end sheet of the web to be separat

from the web. If desired, there may be provided second and third guide means in the conveying path which are so positioned that the web passes from the first-mentioned guide means to the second guide means and from there to the third guide means before passing to the severing device, the mounting position of the second guide means being adjustable relative to the mounting position of the first-mentioned and third guide means so as to enable the length of the conveying path between the location of the perforating blade and the location of the severing device to be adjusted.

In one construction, a clearing bar, extending parallel to the perforating blade, is pivotally biased about the longitudinal axis of the bar into a position in which it holds the web clear of the perforating blade when the apparatus is inoperative, such that on starting to draw the web through the apparatus the clearing bar pivots against its bias to allow the web to be tightened across the perforating blade but on releasing the web after having drawn a fresh length of web through the dispensing apparatus, the clearing bar, under the effect of its bias, clears the web from the perforating blade to prevent the perforating blade from perforating the web while the perforating blade is returning to its over-centre position.

Some types of wrapping material are relatively inextensible along the length of the web, whereas other types can easily be stretched along their length. When wrapping material of the latter type is to be used in a dispenser, care must be taken to design the dispenser in such a way that stretching of the material does not prevent the perforating blade from carrying out its function. For this purpose it has been found that, if the perforating blade is placed very near to the upstream location of the first guide means, stretching of the material will not adversely

affect the operation of the perforating blade. Normally the first guide means will include a first roller at the upstream one of said two locations. In this case, in a preferred embodiment of the invention, the longitudinal axis about which the perforating blade is pivotable is located parallel to the axis of rotation of the first roller, and is so close to the first roller that the pivoting of the perforating blade in said given direction is limited by contact between the blade and said first roller.

In the particular embodiment referred to, the roll of material to be dispensed may be supported on two rollers, one of which is said first roller.

It has previously been stated that one means of adjusting the length of the conveying path is to provide second and third guide means, the mounting position of the second guide means being adjustable. However, in another embodiment of the invention, the adjustment of the length of the conveying path is obtained by making the position of the severing device itself adjustable. For this purpose, the severing device may be located on, or form part of, a slide which travels in guides on a base plate forming part of the dispenser. In this case, the second roller, which forms part of the guide means, is preferably mounted on the slide so that its position is adjustable with that of the severing device.

For a better understanding of the invention and to show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying diagrammatic drawings, in which:-

Figure 1 is a side view partly in section of one form of apparatus in accordance with the invention;

Figure 2 is a side view of a part of apparatus in accordance with the invention illustrating a modification of the embodiment shown in Figure 1;

Figure 3 is a view, corresponding to that of Figure 1, but showing a second embodiment of the invention;

Figure 4 is a plan view of the apparatus illustrated in Figure 3;

Figure 5 is a front view partly in section of a part of the apparatus illustrated in Figures 3 and 4;

Figure 6 shows a part of a perforating blade for any of the embodiments illustrated; and

Figure 7 shows a line of perforations as produced by a blade as illustrated in Figure 6.

Referring to Figure 1, there is shown dispensing apparatus 1 comprising an open-topped, box-like, structure 2 having a base 2a, a front wall 2b, a rear wall 2c and side walls 2d. Extending across the width of the structure 2 between the side walls 2d are a succession of rotatably mounted rollers 3 to 6, and a roll 7 of cling-film plastic material in the form of a continuous web wound onto a drum 8 is supported, in the back portion of the box-like structure 2, on a rotatable shaft 28. Cheeks (not shown) are provided at each end of the drum 8 to maintain the drum concentric with the shaft 28. The web of cling film leaving the roll 7 is passed (as indicated by reference numeral 9) around and under the roller 3, across to and under the roller 4, up and over the roller 5, down and under the roller 6 and finally upwardly and over a severing device 10 on the top edge of an upper section 2e of the front wall 2b, the severing device consisting of a rectangular sheet projecting horizontally

from the section 2e and having its two free corners angled downwardly slightly. The rollers 3 to 6 serve to guide the web 9 along a conveying path leading from the roll 7 to the severing device 10. The upper section 2e is pivotally mounted on the front wall 2b to pivot about a horizontal axis 29.

Positioned between the rollers 3 and 4 is a perforating device 11 which comprises essentially a perforating blade 12, itself having a plurality of perforating teeth 13 (Figure 6), carried on a shaft 14 extending across the width of the structure 2 and pivotally supported by the side walls 2d. The perforating device is biased about the shaft axis such that, when the apparatus is inoperative, the perforating blade 12 will adopt a position rotated about 30° in an anti-clockwise direction compared with the position in which it is shown in Figure 1. In the arrangement illustrated, a gravity-bias is provided by means of a weight 15 in the form of a radially extending rod secured to the shaft 14 near one end, the weight 15, in the inoperative position of the apparatus, resting on a stop (not shown).

A horizontal platform 16 within the box-like structure 2, is arranged at a small spacing above the base 2a. The platform 16 performs a safety function, in that it prevents as far as possible, a user from moving his hands into a position below the perforating blade 12, the platform being formed with a central opening 27 which is just sufficiently large to allow the film 9 to pass from the roller 3 to the roller 4 under the perforating device 11 without contacting the platform 16. For added safety, a stop 17 on one of the side walls 2d limits the upward movement of the weight 15 so that for all possible angular positions of the perforating blade 12 about the axis of the shaft 14, the tips of the knives 13 will always be pointing in a generally downward direction. In a modification, instead of by means of the weight 15, the perforating blade can be biased about the pivot axis of the shaft 14 by means

As already mentioned, the upper section 2e of the front wall 2b is pivotally mounted and a rod or a length of cord 21 connects an upper point on the front wall section 2e with an operating arm 22 of a wing-type wire spring brake 23 which is fitted around one end of the mounting core bearing shaft 28, the other arm 24 of the wire spring being secured to an anchor point 25 on the box-like structure 2.

The dispensing apparatus operates as follows. In the inoperative position, the perforating blade 11 rests in a position in which the tips of the perforating knives 13 merely rest lightly against the length of film between the rollers 3 and 4; the web 9 is unperforated. When the user takes the free end of the web 9 resting on the severing device 10 and starts to draw a fresh length of web from the roll 7, initially the web 9 is tightened across the tips of the perforating teeth 13 which accordingly penetrate the web. As the length of web continues to be drawn from the roll 7, the motion of the web between the rollers 3 and 4 causes the perforating blade 12 to pivot against its bias in an anti-clockwise direction as seen ^{in Figure 1,} successively causing the teeth 13 to penetrate the web to the maximum extent to form a line of perforations across the width of the web as illustrated at 31 in Figure 7. With still further motion of the web, the perforating knives, as the blade 12 pivots further, are drawn from the slit-like perforations 31 which they have formed in the web and then merely press lightly on the web as it runs beneath the tips of the teeth 13. The user continues to draw a length of cling film from the roll 7 until the line of perforations, formed in the manner just described and having travelled around the rollers 4, 5 and 6, eventually arrives at the severing edge of the severing device 10. The operator then separates the end sheet of the web from the remainder merely by pulling the end sheet downwardly across the severing edge. Because

of the line of perforations 31, the end sheet will readily separate from the remainder of the web without any tendency whatsoever for the web to be drawn to one side of the severing device and to overlap with, and thereby adhere to, itself. Upon separation of the end sheet, the biasing force acting on the perforating blade 12 causes it to pivot back into its rest position, and in so doing the free edge of the web on the severing device 10 is drawn back slightly away from the severing edge. Given that the rollers 4 to 6 are freely mounted, that only a relatively light "adhesion" exists between the edge of the cling film and the severing device 10, and that the biasing force due to the weight 15 is relatively small, the tips of the teeth do not penetrate the cling film at all during the return pivoting of the perforating blade 12.

When the dispensing apparatus is inoperative, the spring brake 23 holds the roll 7 stationary. As the user starts to draw a fresh length of cling film from the dispensing apparatus, initially the front wall section 2b' starts to pivot forwardly, and this action is transmitted, by way of the rod or cord 21, to the operating arm 22 so as to start releasing the braking action of the wire spring 23 on the shaft of the mounting core 26. However, the arrangement of the spring brake 23 is such that its braking action is not released sufficiently to allow the roll 7 to rotate, until a line of perforations has been formed in the web by the perforating device 11. Sufficient friction is provided in the bearing supporting the mounting core shaft to ensure that the web remains taut along conveying path even when the friction brake 22 is released. When the end sheet has been separated from the web, the wire spring 22 will spring back into its braking position, at the same time returning the front wall section 2b' to its upright position.

Thus, after the end sheet has been separated from the web, the roll 7 will remain motionless throughout the time that the perforating blade is pivoting back into its rest position.

It is to be understood that, whatever the size of the roll 7, sufficient drag force will act on the roll 7 such that each time a fresh length of cling film is drawn from the apparatus, penetration of the perforating knives into the web to form a line of the perforations is guaranteed.

It will be appreciated that when the dispensing apparatus is used in the manner described, it will dispense sheets having a predetermined length, this length corresponding to the conveying path length from the perforating device 11 to the severing edge of the severing device 10. In accordance with one way of varying this predetermined length, the mounting position of the roller 5 is adjustable (e.g. vertically) relative to the mounting position of the rollers 4, 6, such adjustment being provided by arranging for the end bearings of the roller 5 to be clamped, by means of wing nuts, at any desired position in vertically extending slots 20 formed in the side walls 2d.

Figure 2 shows a modification in which a clearing bar 38 is provided to ensure that the web 9 cannot be perforated when the perforating blade 12 is pivoting back into its over-centre position after a sheet has been separated from the web. This clearing bar can be in the form of a length of wire bent into the shape of a U having short arms and a comparatively long bridging section, the free ends of the arms being bent into respective circular loops which are fitted loosely around the ends of the rod 14 so that the clearing bar adopts a generally downward position as shown in Figure 2.

In any convenient manner, such as by means of springs, the clearing bar is biased about the axis of the rod 14 in an anti-clockwise direction and it can pivot between end angular positions defined by stops or the like. In the inoperative position of the dispensing apparatus shown in Figure 2, the clearing bar 18 is positioned such that it keeps the length of film between the roller 3 and the clearing bar just clear of the tips of the blade 12. When the user starts to draw a new length of cling film from the dispensing apparatus, initially the moving film causes the clearing bar 38 to pivot against this bias so that the film can then become tightened across the tips of the perforating knives 13. The dispensing operation is then completed in the manner described above with reference to Figure 1. Upon separating the end sheet from the rest of the web, the clearing bar 38 pivots back into the position shown in Figure 2 under its biasing force more quickly than the perforating blade 12 returns to its rest position. Thus it is impossible for the perforating blade under its return action to penetrate the cling film.

In another development, means can be provided for holding the perforating device in an inoperative position in which the perforating blade 12 is kept clear of the web of cling film. Such means can take the form, for example, of a clamping hand wheel, positioned outside the box-like structure 2, for clamping one end of the shaft 14.

The embodiment of the invention illustrated in Figures 3 and 4 is intended for use with wrapping material which is liable to stretch. For this purpose, as previously mentioned, the perforating blade is located as near as possible to the guide means so as to reduce to a minimum the length of material between the blade and the guide means.

The dispenser again comprises an open-topped, box-like, structure 32 having a base 32a, a rear wall 33, and side walls 34. Extending across the width of the structure 32 between the side walls 34 are a pair of rotatably mounted rollers 35 and 36 designed to support a roll 37 of cling film plastics material in the form of a continuous web wound on to a drum 38. The roller 35 is mounted on a shaft 39 which is located in slots 40 in the side walls 34. This enables the spacing between the rollers 35 and 36 to be adjusted in order to accommodate rolls 37 of different diameters.

Flanges 41 are provided on the side walls 34 of the structure 32 and serve to retain and guide a slide 42. This slide includes two projecting edges which engage in the flanges 41, and a base portion extending between these two edges. The slide also includes a front portion 43 which terminates in a severing edge 44. As can be seen particularly from Figure 4, the severing edge is shaped so that it has a maximum height in the centre, and is inclined downwardly towards each side. The slide also includes a pair of trunions 45 which serve to support a shaft 46 on which is rotatably mounted a roller 47. This roller is preferably coated with polytetrafluoroethylene to prevent the wrapping material from adhering to it.

It will be understood that the slide 42 is capable of tipping about a fulcrum along the radiused edge 62. When the free end of the film is pulled by the operator, the slide will tend to rotate about this fulcrum in a clockwise direction as seen in Figure 3, and this will cause the free end 63 of the slide to engage with the top of the flanges 41, and thereby prevent movement of the slide.

The web of material leaving the roll 37 is passed (as indicated by reference 48) around and under the roller 35, around and under the roller 47, and upwardly and over the severing edge 44. It will be understood that the rollers 35 and 47 serve to guide the web 48 along a conveying path leading from the roll 37 to the severing edge 44.

Positioned between the rollers 35 and 47 is a perforating device which includes a perforating blade 49 having a plurality of perforating teeth similar to those shown at 13 in Figure 6. The blade 49 is carried on a shaft 50 extending across the width of the structure 32, and pivotally supported by the side walls 34. The perforating device is biased about the shaft axis by means of a weight 51 so that it tends to rotate in a clockwise direction as seen in Figure 3. The rest position of the blade is shown at 49a, and the rest position of the weight is shown at 51a. It will be seen that, in this position, the blade 49a is actually resting against the periphery of the roller 35. The opposite limit position of the blade is shown at 49b, and the opposite position of the weight is shown at 51b. It will be seen that, in this position, further anticlockwise rotation of the assembly is prevented by a stop 52.

The operation of the dispensing apparatus illustrated in Figures 3 and 4 is generally similar to that of the apparatus illustrated in Figure 1. As already stated, in the inoperative position, the perforating blade 49 rests in the position 49a in which the tips of the teeth 13 rest against the length of the film coming off the roller 35. When the user takes the free end of the web 53 resting on the severing edge 44 and starts to draw a fresh length of web from the roll 37, the web is tightened across the tips of the perforating teeth 13 which, accordingly, penetrate the web. As the length of web continues to be drawn from the roll, the motion of the web between the rollers 35 and 47 causes the perforating blade 49 to rotate in an anticlockwise direction as seen in Figure 3. This causes the teeth 13 to penetrate the web until the roots 54 (Figure 6) abut against the web. This situation will occur when the blade is in the position shown in full lines in Figure 3. With still further motion of the web, the blade pivots into the position 49b, and the teeth are withdrawn from the perforations 31 which they have formed in the web. The user continues to draw the web until the said line of perforations arrives at the severing edge 44. The operator then separates the end sheet of the web from the remainder by pulling the end sheet downwardly across the severing edge.

In most applications it is required that the user should be able to tear off a substantially square sheet of material. Thus, assuming, for example, that the roll 37 is a 25cm wide roll of cling film, the slide 42 will be adjusted into the position shown in full lines in Figure 3.

In this instance the total path length from the position of the blade shown at 49a to the severing edge 44 will be 25cm. A 25cm roll of cling film is illustrated in Figure 4 in full lines at 37. The chain-dotted lines 37a in Figure 4 indicate a 38cm roll of cling film and, if it is required to draw rectangular sheets off a roll of this size, the slide 42 will be moved into the position indicated in Figure 3 at 42a. In this instance the length of the path from 49a to 44a will be 38cm. The maximum extent to which the slide can be withdrawn in the particular embodiment illustrated is 40cm, and the position of the slide for this path length is shown at 42b.

If it is desired to obtain rectangular sheets from a roll of material even less than 25cm wide, the slide 42 can, of course, be moved even nearer to the perforating blade than the position shown in full lines in Figure 3. Similarly, if it is desired to obtain sheets having a longer length than 40cm, the slide can be moved further away from the perforating blade than the position shown at 42b. In this case, the radiused edge 62 will rest on the surface on which the apparatus is being used, and not on the base 32a of the apparatus. However, the free end 63 should still be retained under the flanges 41.

To ensure that the teeth of the perforating blade enter the web when the web is pulled by the user, it is desirable that means should be provided to hinder rotation of the roll 37. For this purpose a brake 55 is provided on the shaft of the roller 35. This brake is controlled by an arm 56 which rotates with the blade 49 and the weight 51. When the weight 51 is in the rest position indicated at 51a, the brake is applied so that, when the operator first pulls on the free end of the

web, there is appreciable resistance to rotation of the roll 37. This resistance is not sufficient to completely prevent rotation of the roll, but merely provides sufficient load to ensure that the teeth penetrate the web. As soon as the weight is rotated anticlockwise from the position 51a, the brake is released and the roll 37 is allowed to rotate freely.

In order to protect the operator, guards are provided to limit the extent to which the fingers can be inserted into the apparatus. A front guard 57 is removably fitted on a cross rod 58, and rests on supports 59. In addition, a rear guard 60 is hingedly mounted on supports 61 fitted to the side walls 34. It will be seen that these two guards cover the blade 49 in all its positions so as to prevent accidental contact with it.

It will be seen from Figure 4 that a small gap 65 is left between the back wall 33 and each of the side walls 34. The purpose of this gap is to assist in initially passing the end of the web from the roll 37 through the apparatus. Normally a length of the material will be drawn off the roll and will be bundled together to form a relatively rigid rod. This rod of material can then be pushed through the gap on one side of the rear wall under the guard 60 and beneath the perforating blade 49 until it protrudes far enough below the guard 58 to enable it to be pulled forward and inserted under the roller 47.

It is to be understood that features of the embodiment illustrated in Figure 1 may be combined with features of the embodiment illustrated in Figure 3 and vice-versa. Further, it is to be understood that, if dispensing apparatus in accordance with the invention is to be used only with one size of roll, it is unnecessary to provide either the path length adjusting means shown in Figure 1, or the path length adjusting means shown in Figure 3. Thus, in the Figure 3 embodiment, for example, the slide 42 could be omitted, and the severing edge 44 could be provided directly on the upper edge of the front wall of the structure 32.

It will be seen from Figure 4 that the upper edge of the rear wall 33 is serrated so that, if desired, the apparatus may be used as a non-perforating dispenser. For this purpose, the material is merely drawn from the bottom of the roll 37 and, when the required length has been pulled off, that length can be separated from the roll by stretching it over the serrated edge and then tearing it off as in the simple form of the apparatus referred to at the beginning of this Specification.

CLAIMS:

1. Apparatus for dispensing sheets from a continuous web of material, said apparatus comprising guide means for guiding the web at two locations spaced apart lengthwise of a conveying path for the web, and a toothed perforating blade, between said two locations, adjacent to, and extending transversely of the conveying path, characterised in that, the blade is mounted for pivoting about a longitudinal axis thereof offset from its perforating edge and is biased about that longitudinal axis in a given direction relative to the conveying path so that, when the apparatus is inoperative, the blade, under its bias, adopts a position in which the tips of its teeth extend through said path a first predetermined distance, and in that, as the web is drawn through the guide means in the opposite direction to said given direction, the blade is rotated by the web about said longitudinal axis to cause the teeth thereof to extend through said path a distance which is greater than said first predetermined distance, whereby the web is tightened across the teeth to cause the same to perforate the web.
2. Apparatus as claimed in Claim 1, characterised in that a biasing weight is secured to the blade in a different angular position from said blade about said longitudinal axis so that the biasing of the blade is caused by gravitational force acting on the biasing weight.
3. Apparatus as claimed in Claim 1 or Claim 2, characterised in that it further includes a severing device which is so arranged that, in use, on continuing to draw the web through the guide means, the line of perforations travels past the guide means positioned downstream relative to the perforating blade, and can be positioned over the severing device to enable the end sheet of the web to be separated from the web.

4. Apparatus as claimed in any of the preceding Claims, characterised in that second and third guide means are provided in the conveying path, said second and third guide means being so positioned that the web passes from the first-mentioned guide means to the second guide means, and from the second guide means to the third guide means before passing to the severing device.

5. Apparatus as claimed in Claim 4, characterised in that the mounting position of the second guide means is adjustable relative to the mounting position of the first-mentioned and third guide means so as to enable the length of the conveying path between the location of the perforating blade and the location of the severing device to be adjusted.

6. Apparatus as claimed in Claim 4, characterised in that a clearing bar extending parallel to the perforating blade is pivotally biased about the longitudinal axis of the bar into a position in which it holds the web clear of the perforating blade when the apparatus is inoperative, whereby, when the web is drawn through the apparatus, the clearing bar pivots against its bias to allow the web to be tightened across the perforating blade but, when the web is released, the clearing bar, under the effect of its bias, clears the web from the perforating blade to prevent the perforating blade from perforating the web while the perforating blade is returning to its rest position.

7. Apparatus as claimed in Claim 1, characterised in that the first guide means comprise a first roller at the upstream one of said two locations, and in that the perforating blade is located so close to said first roller that it is capable of pivoting into contact with said first roller.

8. Apparatus as claimed in Claim 7, characterised in that the roll of material to be dispensed is supported on two rollers, one of which is said first roller.

9. Apparatus as claimed in Claim 1, or Claim 7 or Claim 8, characterised in that the severing device is located on, or forms part of, a slide which travels in guides on a base plate forming part of the apparatus.

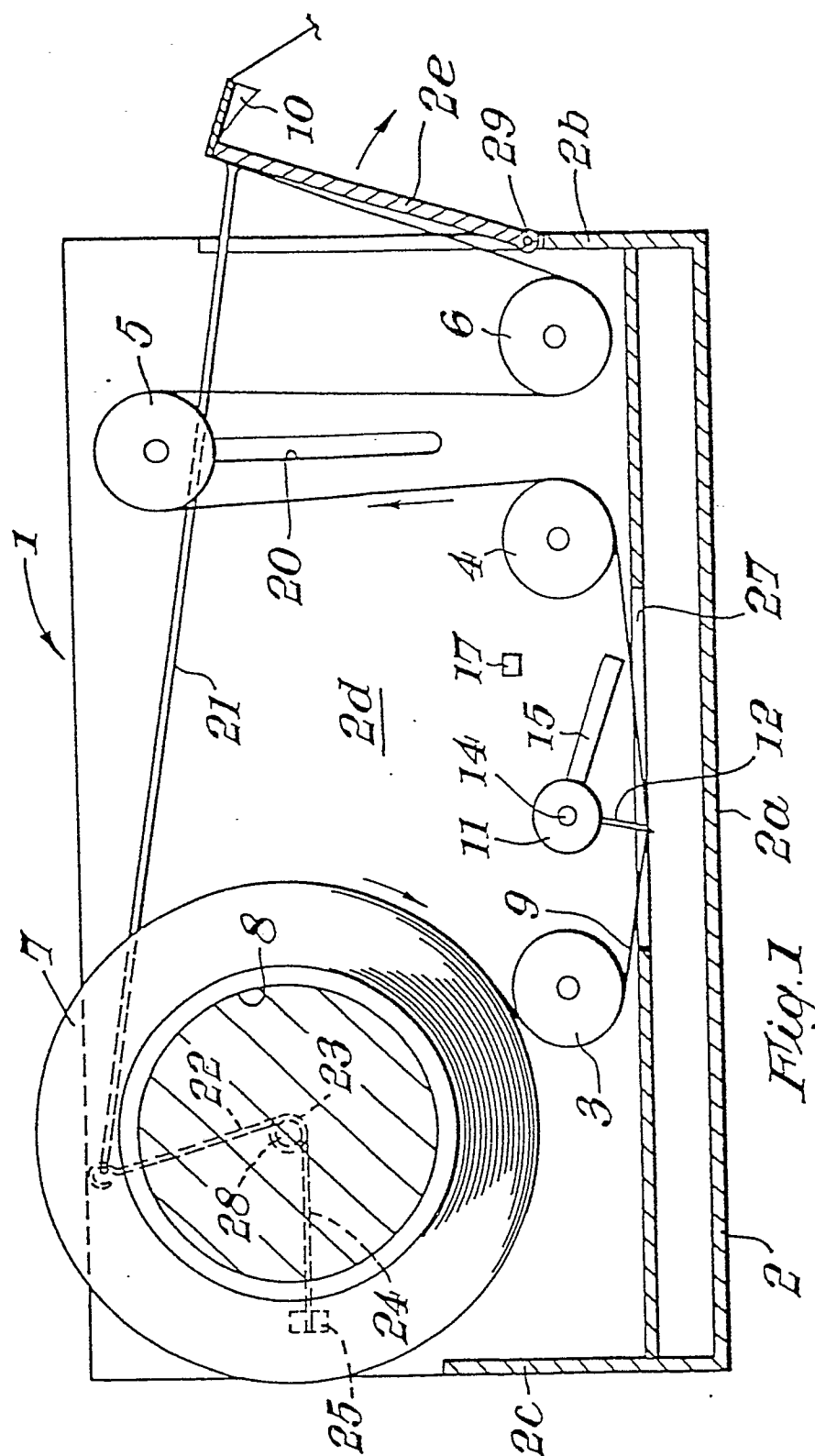
10. Apparatus as claimed in Claim 9, characterised in that the guide means includes a second roller mounted on said slide so that its position is adjustable with that of the severing device.

11. Apparatus as claimed in Claim 3, characterised in that the severing device is provided on a portion of a wall of the apparatus which is pivotally mounted, and in which said wall portion is connected to means for applying braking force to the roll of material to be dispensed, said braking means being operative when the apparatus is inoperative, and being released when the wall portion is pivotted by the material being drawn out of the apparatus.

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12. Apparatus as claimed in Claim 1, characterised in that means for hindering rotation of the roll of material to be dispensed are released when the perforating blade is rotated from its rest position.



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Fig. 2

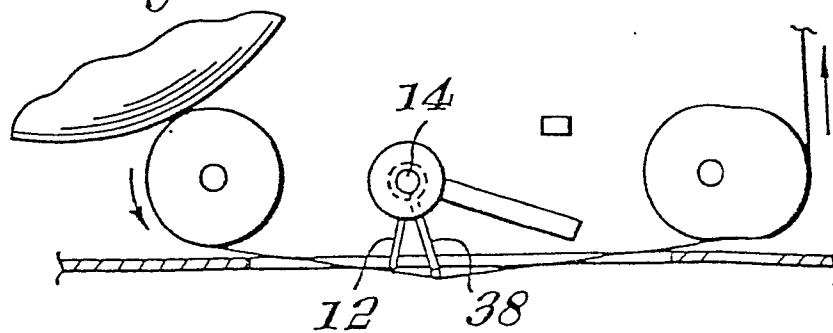


Fig. 5

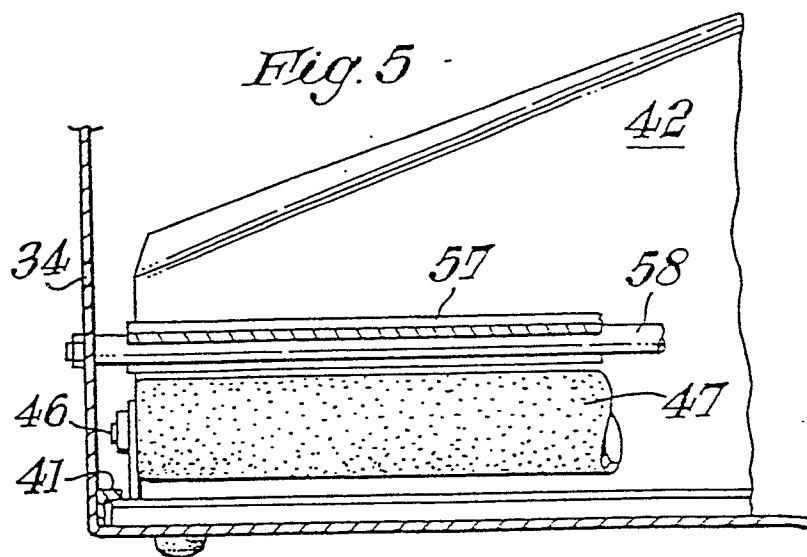


Fig. 6

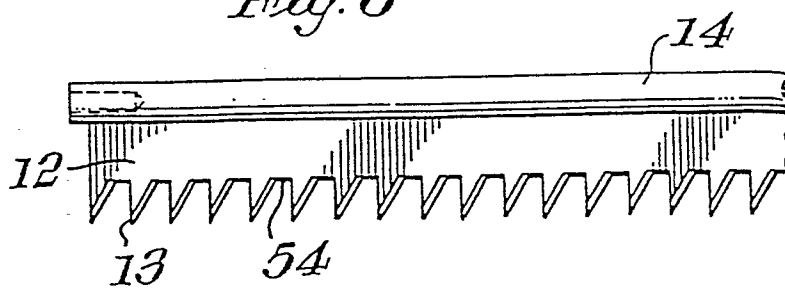


Fig. 7

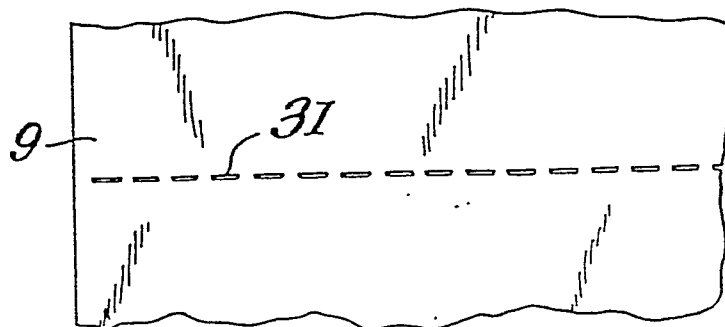
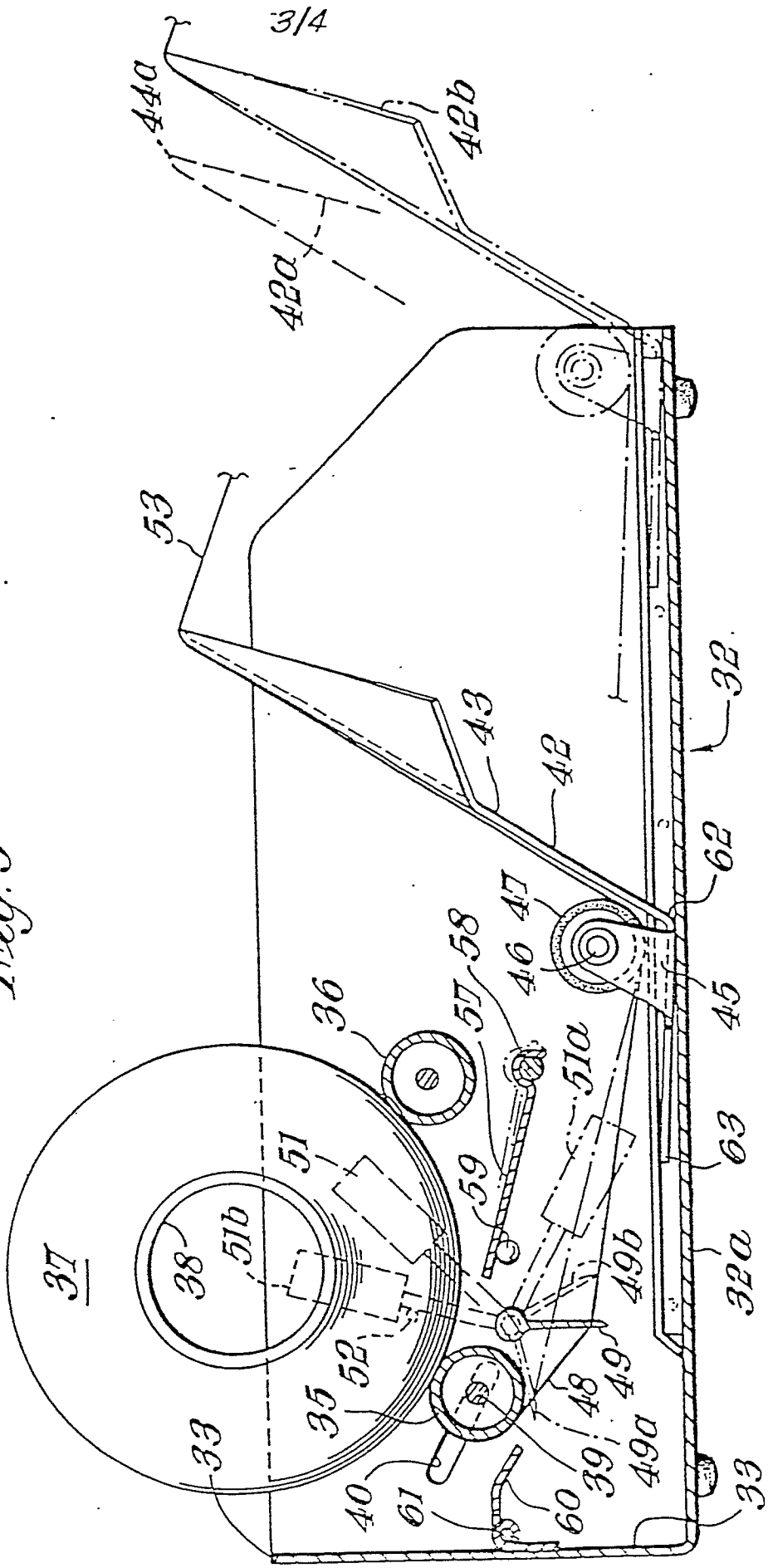
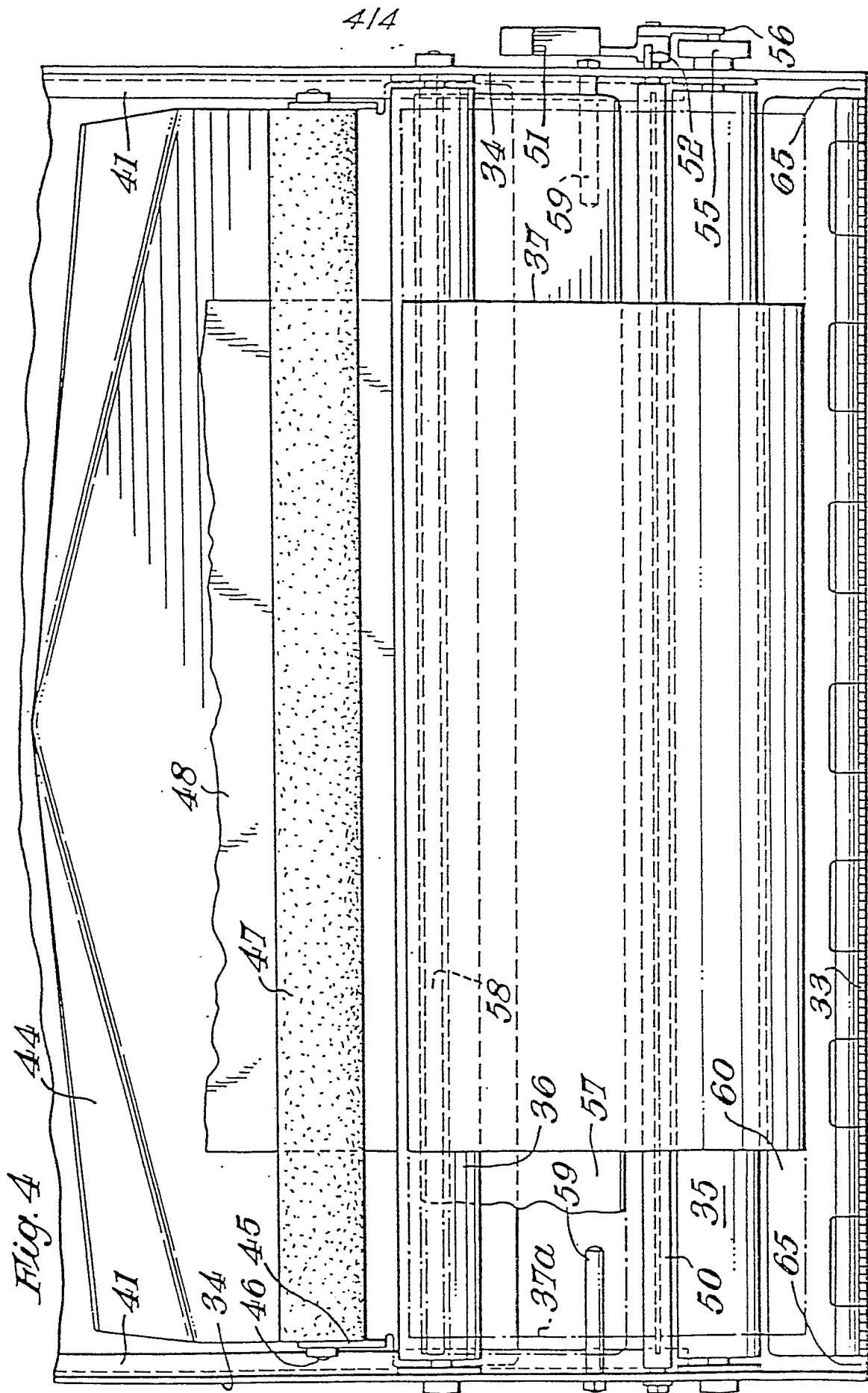


Fig. 3





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European Patent
Office

EUROPEAN SEARCH REPORT

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Application number

EP 81301008.9

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	<u>US - A - 4 188 844</u> (DE LUCA) --	7	B 65 B 61/12 B 65 H 35/10
D	<u>GB - A - 1 535 724</u> (LETT) ---		
A	<u>US - A - 3 156 391</u> (WICKSALL) ----	8	
			TECHNICAL FIELDS SEARCHED (Int. Cl.)
			A 47 K 10/00 B 65 B 41/00 B 65 B 61/00 B 65 H 35/00
			CATEGORY OF CITED DOCUMENTS
			X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
			&: member of the same patent family. corresponding document
X The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 02-06-1981	Examiner MELZER