

(12) PATENT
(19) AUSTRALIAN PATENT OFFICE

(11) Application No. AU 199666185 B2
(10) Patent No. 709905

(54) Title
wiping material dispenser apparatus with a spare roll loading device

(51)⁶ International Patent Classification(s)
A47K 010/34

(21) Application No: **199666185** (22) Application Date: **1996 .07 .17**

(87) WIPO No: **WO97/13440**

(30) Priority Data

(31) Number	(32) Date	(33) Country
95/12107	1995 .10 .10	FR

(43) Publication Date : **1997 .04 .30**

(43) Publication Journal Date : **1997 .06 .26**

(44) Accepted Journal Date : **1999 .09 .09**

(71) Applicant(s)
Maurice Granger

(72) Inventor(s)
Maurice Granger

(74) Agent/Attorney
F B RICE and CO,605 Darling Street,BALMAIN NSW 2041

(56) Related Art
FR 2703343
EP 461732
EP 158624

OPI DATE 30/04/97 APPLN. ID 66185/96
AOJP DATE 26/06/97 PCT NUMBER PCT/FR96/01110



AU9666185

DEA

S (PCT)

<p>(51) Classification internationale des brevets ⁶ : A47K 10/34</p>	<p>A1</p>	<p>(11) Numéro de publication internationale: WO 97/13440 (43) Date de publication internationale: 17 avril 1997 (17.04.97)</p>
<p>(21) Numéro de la demande internationale: PCT/FR96/01110 (22) Date de dépôt international: 17 juillet 1996 (17.07.96) (30) Données relatives à la priorité: 95/12107 10 octobre 1995 (10.10.95) FR (71)(72) Dépositaire et inventeur: GRANGER, Maurice [FR/FR]; 17, rue Marcel-Pagnol, F-42270 Saint-Priest-en-Jarez (FR). (74) Mandataires: DUPUIS, François etc.; Cabinet Laurent & Charas, 3, place de l'Hôtel-de-Ville, Boîte postale 203, F-42005 Saint-Etienne Cédex (FR).</p>	<p>(81) Etats désignés: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, brevet ARIPO (KE, LS, MW, SD, SZ, UG), brevet eurasien (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), brevet européen (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), brevet OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).</p> <p>Publiée <i>Avec rapport de recherche internationale.</i></p>	
<p>(54) Title: WIPING MATERIAL DISPENSER APPARATUS WITH A SPARE ROLL LOADING DEVICE</p>		
<p>(54) Titre: APPAREIL DISTRIBUTEUR DE MATERIAU D'ESSUYAGE AVEC DISPOSITIF DE CHARGEMENT D'UN ROULEAU DE RESERVE</p>		
<p>(57) Abstract</p>		
<p>A dispenser apparatus (1) including a loading device for sensing when an initial working roll (R1) previously positioned in a receptacle (14) is empty, so that it can be replaced with a fresh roll (R2) positioned between flanges (12). The device (1) includes first means (15, 16) positioned and fixed within the cover (3) in a position substantially opposite the point where the material web is inserted and placed on a drum (6), and second means (18) extending from the housing (2) and activated when the cover (3) is closed so that they sense when the first roll (R1) is empty and control the actuation of the first means (15, 16) to load the paper web from the so-called 'spare' roll (R2).</p>		
<p>(57) Abrégé</p> <p>L'appareil distributeur (1) comprend un dispositif de chargement ayant pour fonction de contrôler la fin de distribution du rouleau de service initial (R1) positionné préalablement dans le réceptacle (14) afin de mettre en place un nouveau rouleau (R2) positionné entre les flasques (12). Le dispositif (1) inclut des premiers moyens (15, 16) positionnés et fixés à l'intérieur du couvercle (3) dans une position sensiblement en regard de l'endroit de passage et d'introduction de la bande de matériau sur le tambour (6), et des seconds moyens (18) disposés à partir du carter (2) qui sont armés par la fermeture du couvercle (3) et sont susceptibles de contrôler la fin de déroulement du premier rouleau (R1) et de commander l'actionnement des premiers moyens (15, 16) à épuisement du premier rouleau (R1) pour charger la bande de papier en provenance du rouleau dit "de réserve" (R2).</p>		

UNIQUEMENT A TITRE D'INFORMATION

Codes utilisés pour identifier les Etats parties au PCT, sur les pages de couverture des brochures publiant des demandes internationales en vertu du PCT.

AT	Arménie	GB	Royaume-Uni	MW	Malawi
AT	Autriche	GE	Géorgie	MX	Mexique
AU	Australie	GN	Guinée	NE	Niger
BB	Barbade	GR	Grèce	NL	Pays-Bas
BE	Belgique	HU	Hongrie	NO	Norvège
BF	Burkina Faso	IE	Irlande	NZ	Nouvelle-Zélande
BG	Bulgarie	IT	Italie	PL	Pologne
BJ	Bénin	JP	Japon	PT	Portugal
BR	B Brésil	KE	Kenya	RO	Roumanie
BY	Bélarus	KG	Kirghizistan	RU	Fédération de Russie
CA	Canada	KP	République populaire démocratique de Corée	SD	Soudan
CF	République centrafricaine	KR	République de Corée	SE	Suède
CG	Congo	KZ	Kazakhstan	SG	Singapour
CH	Suisse	LJ	Liechtenstein	SI	Slovénie
CI	Côte d'Ivoire	LK	Sri Lanka	SK	Slovaquie
CM	Cameroun	LR	Libéria	SN	Sénégal
CN	Chine	LT	Lituanie	SZ	Swaziland
CS	Tchécoslovaquie	LU	Luxembourg	TD	Tchad
CZ	République tchèque	LV	Lettonie	TG	Togo
DE	Allemagne	MC	Monaco	TJ	Tadjikistan
DK	Danemark	MD	République de Moldova	TT	Trinité-et-Tobago
EE	Estonie	MG	Madagascar	UA	Ukraine
ES	Espagne	ML	Mali	UG	Ouganda
FI	Finlande	MN	Mongolie	US	Etats-Unis d'Amérique
FR	France	MR	Mauritanie	UZ	Ouzbékistan
GA	Gabon			VN	Viet Nam



- 1 -

PAPER TOWELLING DISPENSER
WITH SPARE ROLL LOADING DEVICE

5 The invention relates to the technical class
of towelling paper dispensers for hand towels,
toilet, absorbent and similar paper or soft tissue-
based products.

10 The invention relates to the same class when
the dispenser is automatic or semi-automatic and uses
pull-out flat, unfolded or folded paper band.

15 This type of equipment and dispensing
apparatus is known to possess a spare roll that is
installed in the dispenser before the service roll is
depleted. Such spare rolls consist of paper wound
onto a cardboard or other core and are horizontally
installed in the dispenser.

20 Without engaging into a detailed description
of possible dispenser component shapes, suffice it to
say that this type of apparatus usually takes the
shape of a U-shaped casing with a hinged, frontal lid
that may be temporarily locked using a key, a latch
25 or some similar device.

The lower part of the casing is arranged to be
fitted crosswise with a drum that is equipped with a
cutting device of suitable form that, when actuated,
30 will penetrate into and cut the bands of material
into the lengths desired.

A first roll, commonly called the service
roll, is placed over the drum between support flanges
35 that may or may not be articulated but are
sufficiently flexible to receive and retain the roll.



A hold-down element fitted over the drum in the same axis between the sidewalls is pressed onto the drum. The paper band from the service roll is passed between the hold-down element and the drum in order to be guided by it, leaving the dispenser by its bottom part through a slit, at which point it may be seized by the user and pulled out.

It is easy to see that the diameter of the service paper roll in this type of dispenser is to be inspected regularly to see whether it is time to install the reserve roll.

Applicant has designed rod-operated transfer mechanisms for moving the spare roll from its position over the service roll into the dispensing position, replacing the latter when depleted. Such mechanisms, though reliable, remain complex and costly to manufacture.

According to the prior art, there is also the possibility of using counter-rotating pinion pairs to place the spare roll into operation. Such mechanisms are likewise costly and not practical to install.



Summary of the Invention

The present invention is a towelling paper dispenser for hand towels, toilet paper, absorbent paper and similar products, whether automatic or semi-automatic and using pull-out, unfolded or folded paper band
 5 comprising a casing with a hinged, frontal cover, said casing having two support flanges perpendicular to a back wall of the casing, with a drum and an integral cutting device being installed transversely in a bottom part of the casing between the support flanges, said drum being rotated by paper
 10 traction and a separate hold-down element fitted over the drum for holding paper on the drum, the hold-down element being held in place between the flanges of the casing, the lower part of the casing being slotted for the paper band to pass through, a paper roll being held in place between upper flanges, and a receptacle being provided in a rear bottom portion of the dispenser,

characterised in that the dispenser includes a loading system designed
 15 to test for depletion of a service roll previously received in the receptacle so as to switch to a so-called "reserve" or spare roll located between the upper flanges,

and in that the loading system includes a primary device mounted
 inside the frontal cover in a position substantially facing the paper band as it
 20 passes and is run onto the drum to be cut, and a secondary device, complementary to the primary device, mounted onto the dispenser casing, said secondary device being cocked by closing of the cover so as to test for depletion of the first roll, in which case the secondary device causes the primary device on the cover to feed the band of paper from the reserve roll
 25 onto the drum.

In one embodiment, when the nearly-depleted service roll in the
 receptacle is in the dispensing position with the paper band placed on the
 drum and ready to be cut, the band is stretched and constitutes a guard area
 adjacent to a profiled plate placed cross-wise behind the drum, said guard
 30 band under certain conditions being in a position to cooperate with the secondary device of the loading system.

An advantage of at least some embodiments of the invention is that a simple system is provided which may be cheap to manufacture and may make loading spare rolls easy.



3A

A further advantage of at least some embodiments of the invention is that a solution is provided which may be applied to automatic and semi-automatic dispensers of folded and non-folded paper.

2000000000



These and other features will become apparent from the following description.

Embodiments of the present invention are described, merely by way of example, in the accompanying drawings in which:

Figure 1 is a cross-sectional view of the dispenser with open cover and a fresh service roll, offering a schematic view of the main components and the invention.

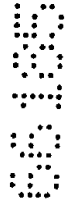


Figure 2 is a partial, large-scale view of one of the loading devices mounted onto the cover. According to this view, the device referred to is shown along a line indicated by the arrow F1 of figure 1.

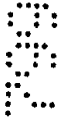


Figure 3 is a partial plane view of the cover-mounted device shown in figure 2 shown at rest.



Figure 4 is similar to figure 1 but shown with the cover closed and locked with the paper from the service roll in the loading position.

Figure 5 is a cross-sectional top view along the line A-A of figure 4.

Figure 6 is similar to figure 1 with open cover and the first or service roll moved into the





- 5 -

bottom rear section of the dispenser, ready to be unrolled to the end and with a fresh spare roll being installed by the serviceman to replace the first service roll.

5

Figure 7, complementary to figure 6, shows the dispenser with its cover closed but the paper band of the fresh roll is not now in the loading position.

10

Figure 8 is a cross-sectional top view along the line B-B of figure 7.

15

Figure 9 is similar to figure 7 but with the paper from the fresh roll in the loading position.

Figure 10 is a partial cross-sectional top view along line C-C of figure 9.

20

Figure 11 is a partial, large-scale exploded view of the loading system.

25

Figure 12 is a perspective view of an alternative embodiment of the hold-down element designed to press down on the paper from the top roll for loading.

30

Figure 13 is a cross-sectional view along the line B-B of figure 12.

In order that the present invention may more readily be understood, the following description is given, merely by way of example, reference being made to the accompanying drawings.

35

The towelling paper dispenser is identified in its entirety by reference number 1. The apparatus is





- 6 -

designed for the automatic or semi-automatic dispensing of hand towels, toilet paper, absorbent paper and similar paper of any material. The dispenser may be laid out as disclosed in the various
5 patents in the name of applicant to dispense flat, i.e. non-folded, or folded paper.

The dispenser shown comprises a casing (2) made of a plastic or other material and a hinged
10 cover (3) of a similar material. The casing has two outer sidewalls (2a - 2b) and two support flanges (4 - 5) perpendicular to the casing backwall and clicked in place or mounted in another, suitable manner onto the casing bottom. Within the casing and mounted
15 crosswise between the flanges there is a drum (6) with an integral cutting device (7) which may, solely by way of example, operate as disclosed in French patent N° 2.332.215.

The drum (6) may be of any suitable design. It is rotated by traction when the user pulls on the paper band, thus actuating an eccentric crank (8) controlled by a spring (9) hooked to one of the casing supports (4).
25

A separate hold-down element (10), positioned over and pressing down crosswise and in the same axial plane on the drum is fitted in the two notches (4a - 5a) provided in the flanges (4 - 5) for the
30 purpose.

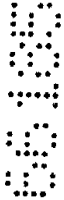
The bottom part of the casing is provided with a horizontal slit (11) through which the paper band is passed out of the dispenser for the user to
35 seize.



Roll (R1) is retained by the pivoting flanges (12) which are provided with studs (13) designed to snap into the core of the roll under consideration.

5 These various parts and devices having been identified, we shall now identify and describe an embodiment of a loading device according to the present invention.

This device is designed to be operated when the service roll (R1) is nearly depleted, i.e., in comparison with its initial diameter there remain
 10 only a few lengths of paper to be dispensed. At this point, the nearly depleted roll has to be moved by the serviceman and placed in the bottom and rear part of the dispenser arranged to act as a receptacle (14) as shown for example in figure 6. Another roll, called a reserve roll (R2) is now installed.



15 The loading system tests whether the service roll (R1) is depleted and initiates the loading stage of the fresh roll (R2).



20 The loading system comprises a primary device mounted on the inside of the cover (3), substantially facing the gap (e1) between the drum and the hold-down element (10) where the paper band passes and is introduced, and a secondary, complementary device on the dispenser casing. The latter device is designed to detect the depletion of roll (R1) and to actuate the primary device inside
 25 the cover.





- 8 -

The cover is fitted with a horizontal, oblong, movable tab (15) along its length, which is a sliding fit between the two parallel lugs (16) fixed to the cover and a linking bar (16a). The tab is free to protrude beyond the lugs (16) where the cover angles inward. Indeed, the tab is located near one of the inside ends of the cover to face the complementary mechanisms mounted onto the casing. One end of the tab end is heel-shaped (15a) and will be actuated as explained hereunder. The end (15c) opposite the heel can move toward the area where the paper band from the reserve roll is fed between the drum and the hold-down element.

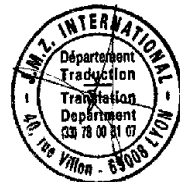
The tab has a protrusion (15b) that, when moved to face the central part of the drum to facilitate loading, will fit into a groove provided for the purpose.

The casing, with the exception of the main components described previously, is laid out as follows.

Across the casing and between the backwall (1a) and the drum there is fitted a curvilinear, profiled plate (17) substantially matching the curve of the drum and leaving a gap (e2) for the paper band to pass while being pulled out through the lower part of the casing.

Said plate is provided with a hole (17a) near one of its sides for the passage of a probe (18).

Said plate (17) closes off the spent roll (R1) area or receptacle on the bottom of the casing while





- 9 -

acting as a guide for the paper from said roll. The area acting as a receptacle for the spent roll (14) is advantageously laid out with, reckoned from the flanges (4 - 5), protruding tabs for retaining purposes with disc-shaped ends (19a) to partially penetrate the core of roll R1. The lower part of the casing bottom is provided with inwardly protruding, flexible tabs (20) designed to rest on said roll (R1) providing, together with the discs (19a) referred to above, a braking action when the paper band is pulled out, allowing the paper to be separated from the core.

The secondary mechanism operates as follows. Probe (18) is mounted onto a hinged lever (21) that moves alongside the support flange. The lever has an oblong slot (21a) near its front end in which runs a stud (22) fixed to the flange (4). The lever can move backwards when rebounding on pushing means (23) which, in practice, is the inwardly sloping section of the cover (3). Said lever (21) is pulled back by a spring (24), one end of which (24a) is attached to the crank (8) actuating the drum, the other end being attached to a fixed point (25) on the rear of the lever. Said spring (24), advantageously, rotates the drum.

The rear (21b) of the lever is arranged to receive a horizontal pad (26) provided with an oblong slot (26a) in which runs a pin (27) for the test probe (18) to pivot on. Said pin (27) is axially and vertically placed in a support (28) formed at the end of the probe (18). The support (28) pivots on the pins (29 - 30) in the profiled parallel tabs (31 - 32) on the flange (4) against a second pull-back





- 10 -

spring (33), one end of which is attached to the rear of a fixed point (33b) of the support flange (4). The test probe (18) thus pivots and traverses a profiled hole (4a) in the facing flange (4), approaching as it does the cross-plate (17) behind the drum and traversing it in certain stages of operation to approach the drum when the lever (21) is actuated as will be shown hereinafter.

10 The support (28) described previously is an oblong part and the pins, or one end of the same through-pin, which is fastened to the lever, the other end being attached to the secondary pull-back spring, is/are located at the rightmost side. The lever, when actuated, will swing the support (28) through a circular arc, causing the test probe to pivot radially by more than 90°.

20 In addition and along the exterior of the flanges (4), there is a slide (34), which is a strip with two oblong slots (34a) through which pass the pins (35) mounted onto the flanges (4) to guide the slide and act as a stroke limiter. The rear end of the slide (34b) is a hook (34c) facing the test probe as it swings full-circle. Said slide is substantially horizontal, whereas its front (34c) is located substantially such as to face the movable tab on the cover. Said slide is provided with a notch (34d) for a stop pin (36) to limit the travel of said slide.

30 In addition, and according to the invention, there is a supplementary plate (37) in the front part of the dispenser designed, as will become clear hereinafter, to guide the first band of paper from the reserve roll (R2) into its preliminary position.





- 11 -

Said plate (37) is clicked in place (37a) between the side flanges (4 - 5) of the casing.

5 The general principle of operation of the dispenser and that of the loading system in particular will be discussed hereinafter, reference being made to the accompanying drawings, it being understood that the structural elements of the cutting device cylinder may vary.

10

Looking at figures 1 through 3, it can be seen that the dispenser contains a service roll (R1), whose paper band unrolls down to the matching plate (37) in the frontal part of the apparatus.

15

When the cover is closed (figure 4 and 5), its bottom part (23), angling inwards and adjacent to the opening, will exert an increasing pressure on the lever (21) in the casing. The lever is thus pushed
20 backward, causing the hinged test probe (18) to pivot and substantially enter into the slot provided in the cross-plate of the casing behind the drum. The test probe, which is free to move, simultaneously pushes the slide forward along the length of the flange (4).
25 The movement thus generated will in turn cause the slide front end to push the heel of the cover tab. This causes the tab to rotate and its opposite end will load the paper band located in front of the front plate of the apparatus between the drum and the
30 hold-down element. The drum is set into motion in a known manner by actuating a knob (38) located at the opposite end of the drum shaft and will, with no difficulty, cause a length of paper matching the circumference of the drum to be transported a single
35 turn before it is severed by the cutting device in a known manner.





- 12 -

The dispenser remains in this state until the paper roll needs replacement and a serviceman realizes that the service roll (R1) is depleted. A fresh service roll (R2) will then have to be installed.

It is clear from figure 6 and the drawings following it that, when the serviceman opens the cover, the lever (21) and the slide will be freed, moving the test probe into its initial, drawn-back position. The serviceman places spent roll (R1) in the receptacle in the rear of the dispenser. The roll core will be retained by the disc-type tabs on the flanges (4 - 5) of the casing. Paper roll R1, under the circumstances, will nevertheless continue to supply the drum and its associated cutting device. Between the drum pressure and contact area and the hold-down element and the nearly spent service roll R1 in the receptacle there now appears a paper band B1 that is run behind the cross-plate of the casing, closing off the slot therein. The serviceman places a fresh roll of paper between the flanges and the upper studs of the dispenser, pulling the end of the paper band in front of the front plate of the apparatus (figure 6).

The next step, shown in figures 7 and 8, is to close the cover. This causes a similar backward translation of the lever (21), causing the test probe (18) to pivot anew. In this situation, the paper band from the nearly spent roll (R1) acts as a guard (E), limiting motion and preventing the test probe from entering the slot of the plate. The paper band is tightened by the pressure exerted by the drum and the hold-down element on the one hand and by the braking





- 13 -

effect imparted by the shape of the receptacle containing roll R1 on the other. Under the circumstances, the test probe, which has been prevented from pivoting completely because of the retaining action of the guard referred to previously, cannot touch and push the slide. The slide, therefore, cannot act upon the loading tab on the cover and paper can only be withdrawn from the first roll.

10

Looking at figures 9 and 10, it can be seen that when roll R1 is fully spent, the guard disappears with the last length of paper and the test probe is freed for want of counter-pressure. The probe now penetrates the hole provided in the cross-plate and, pivoting completely, pushes the slide forward, which touches the cover tab. The latter, moved by the heel, will be positioned in the gap between the drum and the hold-down element, causing the paper from the following roll to be moved in position, and the cycle can start anew.

Figures 12 and 13 show an alternative embodiment of the devices allowing the paper from the top reserve roll to be loaded. In this case, the front plate top edge (37) is recessed (37b) for a rectangular plate (39) to pass and swing. Said plate is placed and hinged on a base (40) which is part of plate (37). In this configuration cover tab (15), when actuated, will cause plate (37) to press down on the drum, it being understood that the paper band will have been loaded, as is shown in figure 13, between the plate and the drum. The arrangement improves performance and provides better distribution of tab pressure. The base (40), in addition, will locate the paper band.





- 14 -

The benefits of the invention are clear, especially as regards the simplified installation of dispenser component parts and loading device. The loading device, as has been shown, is operable
5 regardless of automatic or semi-automatic paper dispensing mode and irrespective of whether the paper is folded or not. In the latter case a cross bar is mounted as disclosed in applicant's previous patents.

10

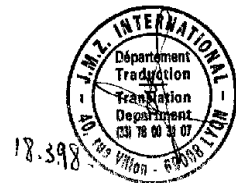
15

20

25

30

35



THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. Towelling paper dispenser for hand towels, toilet paper, absorbent paper and similar products, whether automatic or semi-automatic and using pull-out, unfolded or folded paper band comprising a casing with a hinged, frontal cover, said casing having two support flanges perpendicular to a back wall of the casing, with a drum and an integral cutting device being installed transversely in a bottom part of the casing between the support flanges, said drum being rotated by paper traction and a separate hold-down element fitted over the drum for holding paper on the drum, the hold-down element being held in place between the flanges of the casing, the lower part of the casing being slotted for the paper band to pass through, a paper roll being held in place between upper flanges, and a receptacle being provided in a rear bottom portion of the dispenser,

characterised in that the dispenser includes a loading system designed to test for depletion of a service roll previously received in the receptacle so as to switch to a so-called "reserve" or spare roll located between the upper flanges,

and in that the loading system includes a primary device mounted inside the frontal cover in a position substantially facing the paper band as it passes and is run onto the drum to be cut, and a secondary device, complementary to the primary device, mounted onto the dispenser casing, said secondary device being cocked by closing of the cover so as to test for depletion of the first roll, in which case the secondary device causes the primary device on the cover to feed the band of paper from the reserve roll onto the drum.

2. Towelling dispenser as claimed in claim 1, characterised in that when the service roll is nearly depleted of paper and is in the receptacle in a dispensing position with the paper band placed on the drum ready to be cut, the paper band is stretched and provides a guard area adjacent to a profiled cross-plate placed transversely behind the drum, said paper band being positionable to cooperate with the secondary device of the loading system.

3. Towelling dispenser as claimed in claim 2, characterised in that said cross-plate is provided with a hole for the secondary loading device to at least partially pass through.

4. Towelling dispenser as claimed in claim 2, characterised in that the receptacle receiving the nearly-depleted service roll is provided with braking



devices which cooperate with the roll to generate a braking counter-pressure when the paper band is pulled out.

5. Towelling dispenser as claimed in any one of claims 1, 2, or 3, characterised in that the primary device mounted onto the cover includes a horizontal, oblong, movable tab along a length of the primary device, pivoting between parallel lugs fixed to the cover, said tab being free to protrude with a heel-shaped end beyond the lugs, an end opposite the heel-shaped end being capable of pivoting toward an area in which a paper band from the reserve roll is fed between the drum and the hold-down element.
6. Towelling dispenser as claimed in claim 5, characterised in that the tab has a protrusion which, when moved, faces a central part of the drum to facilitate loading of paper onto the drum.
7. Towelling dispenser as claimed in any one of claims 1 through 6, when combined with claims 2, 3, and 5, characterised in that said secondary device is mounted onto the casing next to a first of the support flanges and comprises an articulated pivoting test probe located behind the drum and the profiled cross-plate, said secondary device being articulated and pivoting on the first support flange and being movable by a profiled lever which can be pushed backward by a pushing device, the pushing device being formed by a part of the frontal cover, said test probe being in a retracted position toward the first support flange when the cover is open, and perpendicular or substantially perpendicular to the first support flange and passing through the hole in the cross-plate when the cover is closed,
- and further characterised in that along the first support flange there is a substantially horizontal sliding member which is moved by the test probe such that the sliding member presses against the movable tab of the primary loading device, the sliding member being moved by the test probe when the test probe is neither hindered nor blocked by a paper band from the service roll located in the receptacle and when the test probe passes through the hole in the cross-plate.
8. Towelling dispenser as claimed in claim 7, characterised in the said profiled lever is pulled backwards by a spring, one end of which is attached to a fixed point on a rear portion of the profiled lever, the other end of the spring being attached to a crank for providing drum rotation.
9. Towelling dispenser as claimed in claim 8, characterised in that the rear portion of the profiled lever is arranged to receive a horizontal pad



provided with a hole in which runs a hinge pin traversing a support part integral to or separately mounted on the test probe, said support part pivoting on a fixed part formed on the first support flange.

5 10. Towelling dispenser as claimed in claim 9, characterised in that the sliding member is guided as it moves on the first support flange by retaining devices and stroke limiters, a rear end of said sliding member being a hook for catching the test probe,

and in that a front of the sliding member is suitable for acting on the heel-shaped end of the movable tab.

10 11. Towelling dispenser as claimed in any one of claims 1 through 10, characterised in that the dispenser further includes a front plate in a front part of the dispenser, the front plate being suitable for guiding the band of paper from the reserve roll into a preliminary position, said plate being clicked in place between the two support flanges.



15 12. Towelling dispenser as claimed in claim 11, characterised in that a top edge of the front plate is recessed and has a base for positioning and hinging a paper guide, said guide being actuated and pushed by the movable tab, mounted onto the cover, to load the paper band.



20 13. Towelling dispenser substantially as hereinbefore described with reference to Figures 1 to 11 of the accompanying drawings.

14. Towelling dispenser substantially as hereinbefore described with reference to Figures 12 to 13 of the accompanying drawings.



Dated this seventh day of July 1999

MAURICE GRANGER
Patent Attorneys for the Applicant:

F B RICE & CO





97/13440

1/10

PCT/FR96/01110

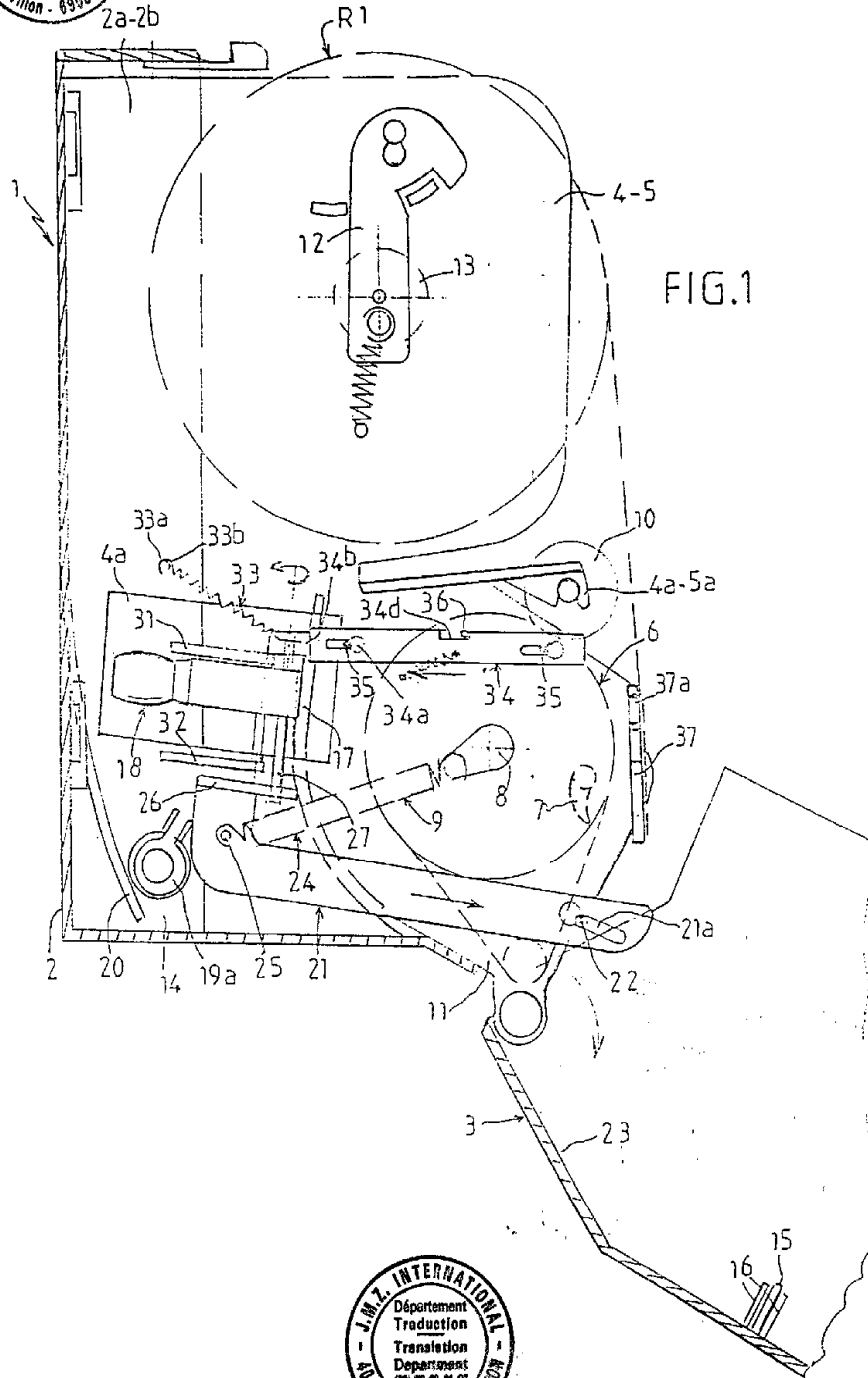


FIG.5

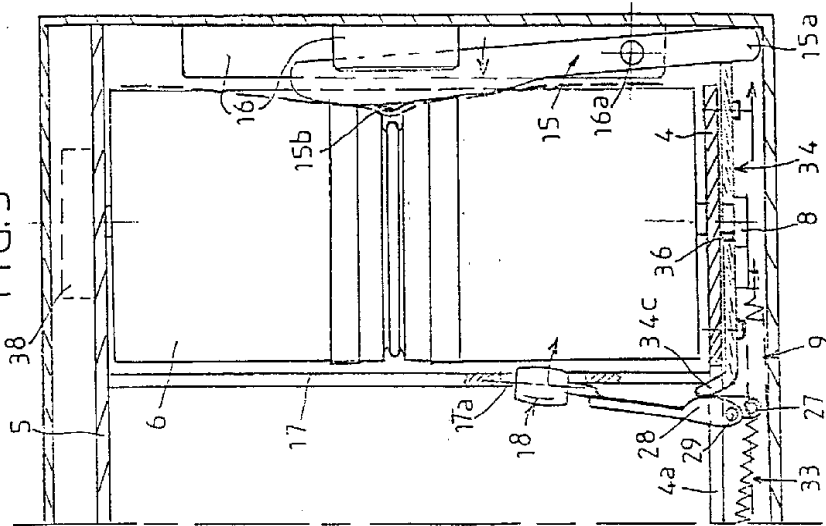


FIG.3

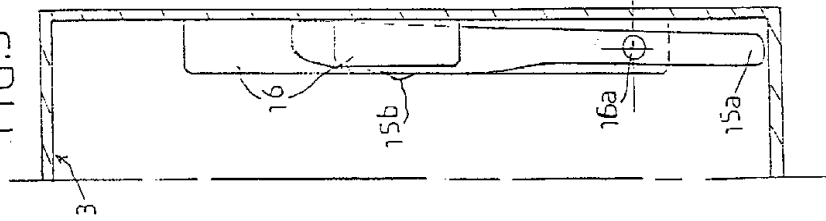
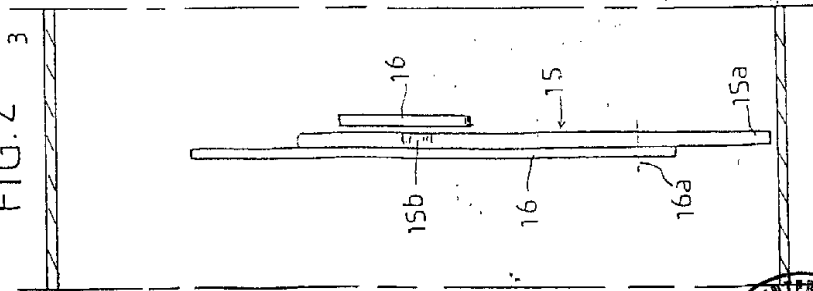


FIG.2





97/13440

PCT/FR96/01110

3/10

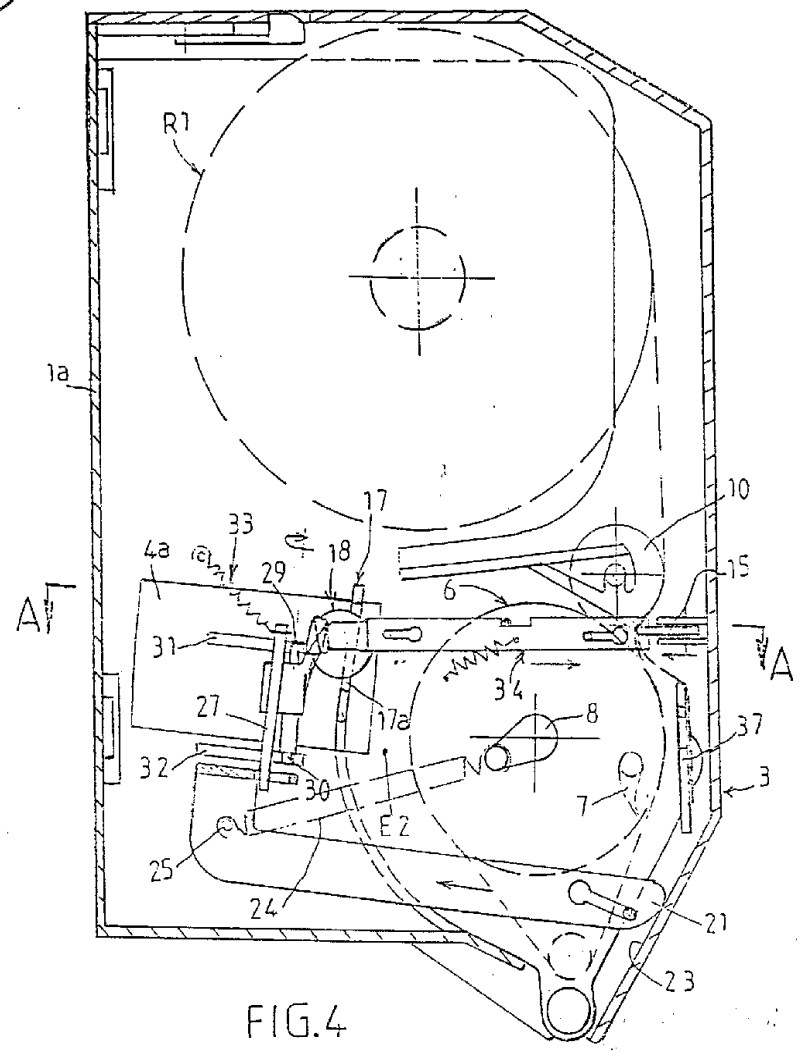


FIG. 4



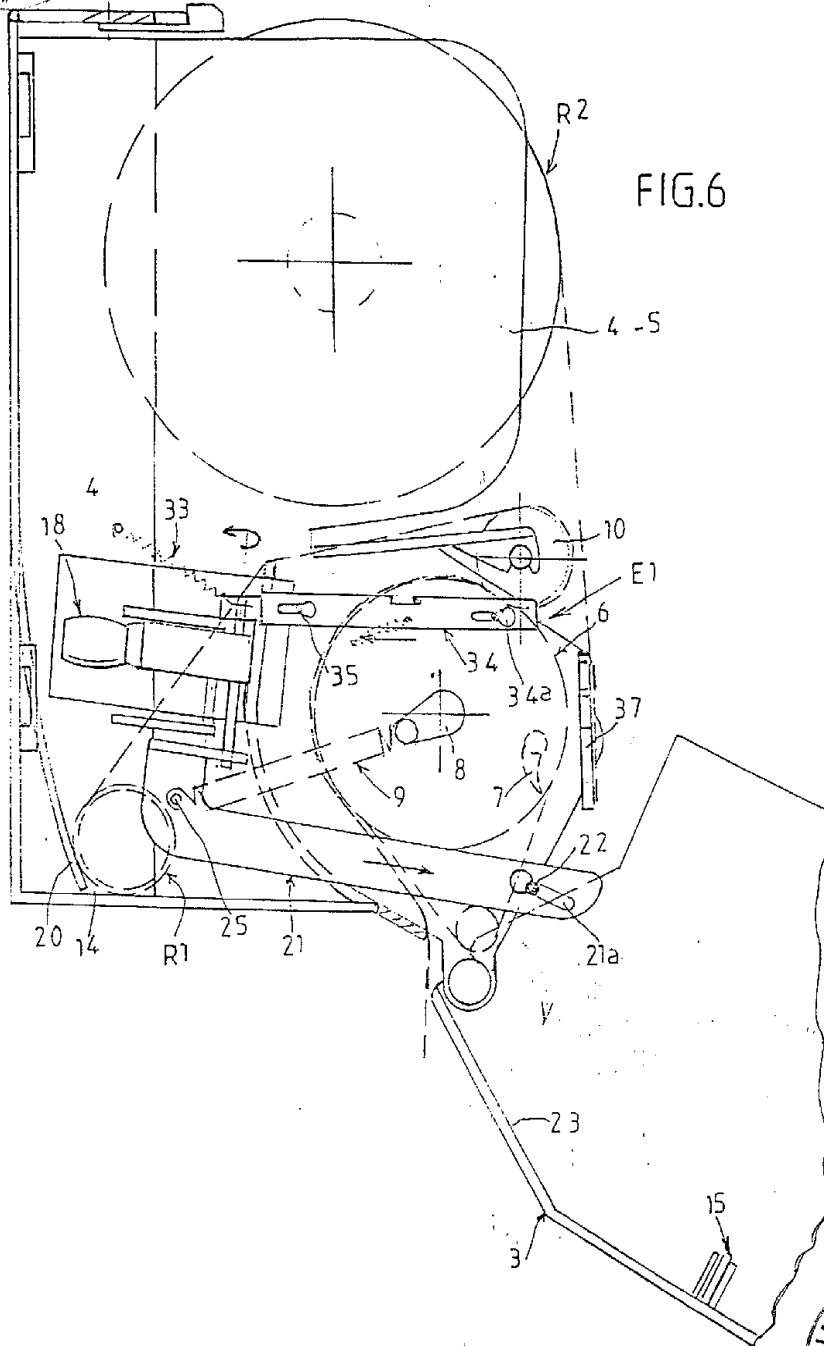


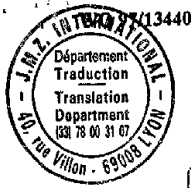
13440

4/10

PCT/FR96/01110

FIG.6





PCT/FR96/01110

5/10

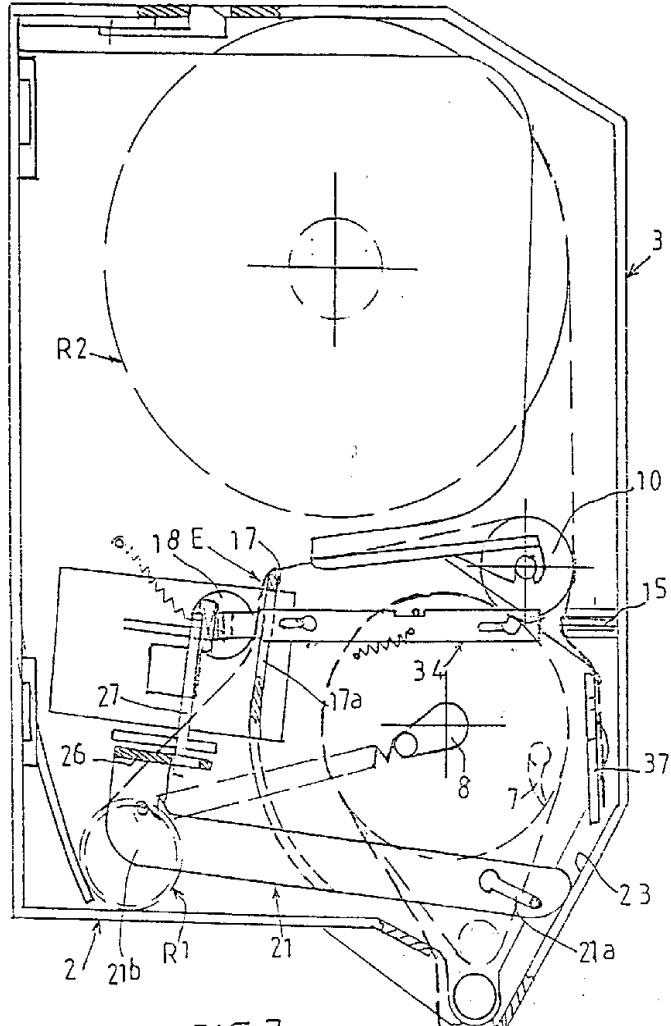
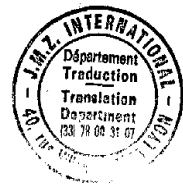


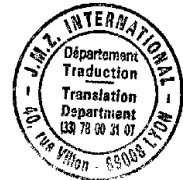
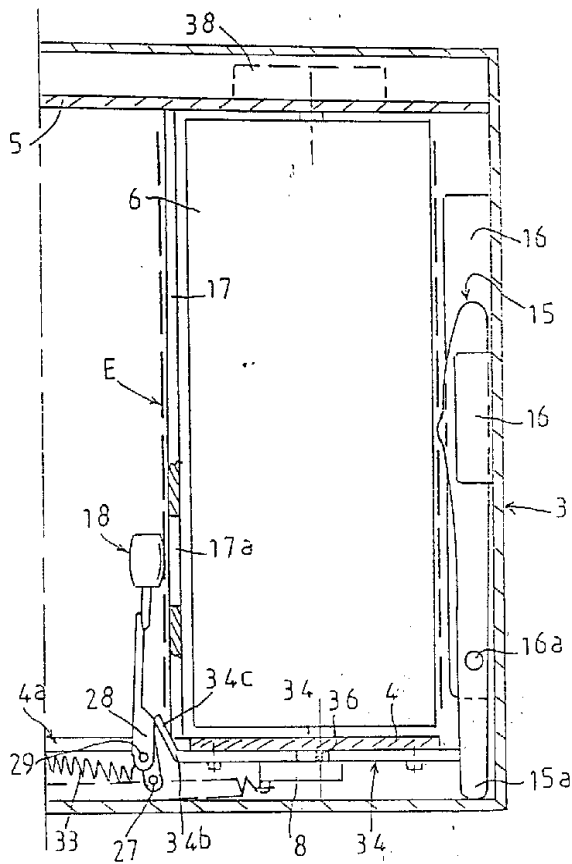
FIG.7





6/10

FIG.8





7/10

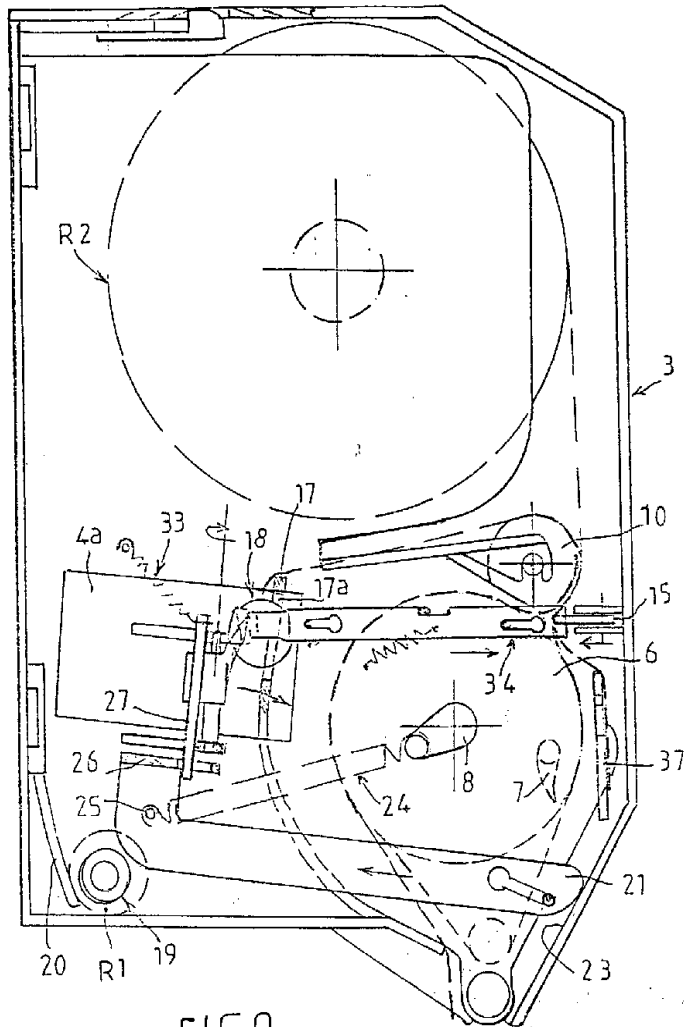


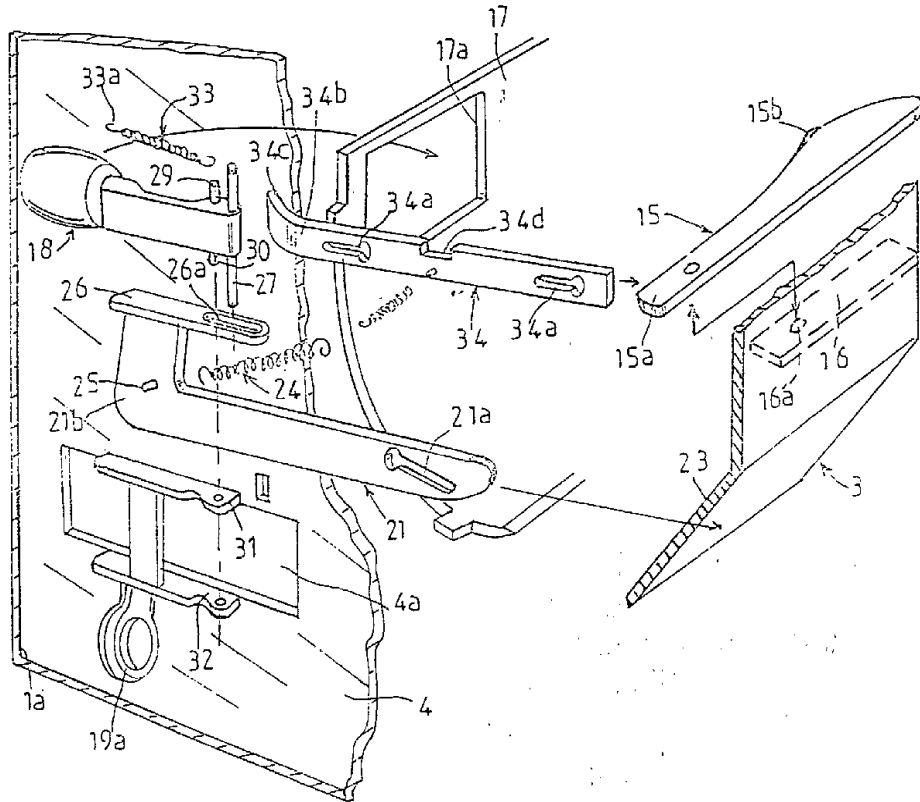
FIG.9





9/10

FIG. 11





10/10

FIG.12

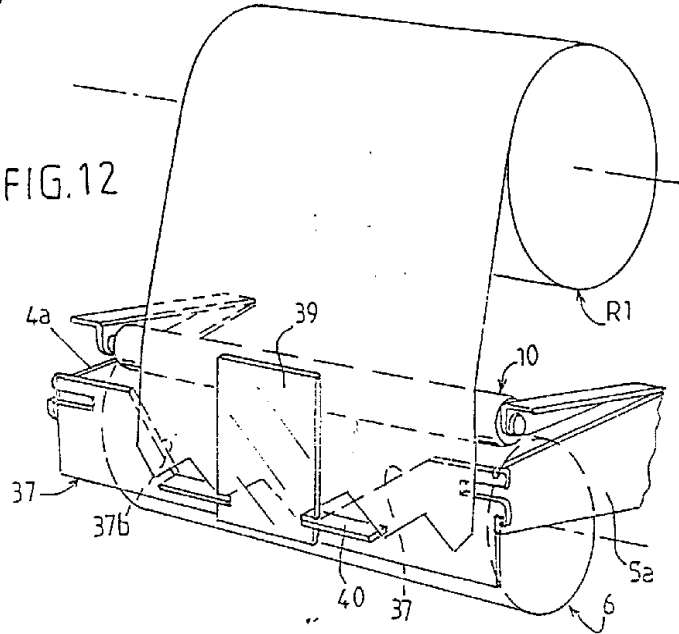


FIG.13

