

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 1 074 475 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:

08.01.2003 Bulletin 2003/02

(51) Int Cl.7: **B65B 61/02**, B65B 7/16,
B65D 1/30

(21) Application number: **00116428.4**

(22) Date of filing: **28.07.2000**

(54) **Packing method and apparatus using multi-compartment containers**

Verfahren und Vorrichtung zum Verpacken unter Verwendung von Mehrkammerbehältern

Procédé et dispositif d'emballage utilisant des récipients à plusieurs compartiments

(84) Designated Contracting States:
DE FR GB NL

(30) Priority: **04.08.1999 JP 22125699**

(43) Date of publication of application:
07.02.2001 Bulletin 2001/06

(73) Proprietor: **Daisey Machinery Co., Ltd.**
Tsurugashima-shi, Saitama-ken 350-2217 (JP)

(72) Inventors:
• **Tazaki, Ribun, c/o Daisey Machinery Co., Ltd.**
Tsurugashima-shi, Saitama-ken (JP)

• **Nakabayashi, Kenichi,**
c/o Daisey Machin. Co., Ltd.
Tsurugashima-shi, Saitama-ken (JP)

(74) Representative: **Hering, Hartmut, Dipl.-Ing.**
Patentanwälte
Berendt, Leyh & Hering
Innere Wiener Strasse 20
81667 München (DE)

(56) References cited:
GB-A- 2 328 669 **LU-A- 39 247**

Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 1 074 475 B1

Description

[0001] The present invention relates generally to a packaging method and apparatus using a multiple packaging material for obtaining multiple packaged goods and more particularly to a packaging method and apparatus for effecting packaging such that, where the multiple packaging material has a plurality of goods filling sections connected in series via an adjacent side edge portion between each of the goods filling sections, goods to be packaged are filled in the goods filling sections of the multiple packaging material and are packaged with the multiple packaging material being covered and sealed with a sheet and each of the goods filling sections is made separable at the adjacent side edge portion (see e.g. GB-A-2328669).

[0002] As is often talked by the words "meal eating by oneself", it is a recent tendency that foods are consumed in a quantity small by small. As one example, while tofu, or bean curd, has been consumed in the unit of one piece, it is often done that tofu of one piece is consumed only in a 1/2 or 1/3 thereof at one time with the remainder being stored in a refrigerator. Thus, in order that goods may be consumed in the unit of a small package, it is done that the goods are filled to be packaged in a multiple packaging material having a plurality of small filling sections, wherein the small filling sections are connected in series via an adjacent side edge portion between each of the small filling sections so that each of the small filling sections may be separated from each other at the adjacent side edge portion.

[0003] In the packaged goods using the multiple packaging material, however, there is a problem that the adjacent small packages have to be separated by scissors or some of the small packages being sealed insufficiently, juice may come out of those small packages remaining after used and it is still a present situation that there is established no sufficient art for ensuring packaging using the multiple packaging material so as to be easily usable by consumers. Thus, a packaging art using the multiple packaging material, which enables a secure sealing and yet is usable easily, is desired.

[0004] Also, a packaging art using the multiple packaging material is desired such that an existing packaging device using the multiple packaging material may be used effectively as it is with an improvement being added so as to enable a multiple packaging to meet "meal eating by oneself".

[0005] In view of the problems in the prior art, it is an object of the present invention to provide a packaging method and apparatus using a multiple packaging material, by which multiple packaged goods may be obtained easily by effecting packaging such that, where the multiple packaging material has a plurality of goods filling sections connected in series via an adjacent side edge portion between each of the goods filling sections, goods to be packaged are filled in the goods filling sections of the multiple packaging material and are pack-

aged with the multiple packaging material being covered with a sheet and each of the goods filling sections is made separable at the adjacent side edge portion.

[0006] It is also an object of the present invention to provide a packaging method and apparatus using a multiple packaging material for effecting packaging such that a conventional multiple packaging device is used as it is and a multiple packaging is obtained with each of goods filling sections of the multiple packaging material being made separable at an adjacent side edge portion between each of the goods filling sections.

[0007] In order to attain the mentioned objects, the present invention provides the following packaging method:

[0008] A packaging method using a multiple packaging material for obtaining multiple packaged goods by effecting packaging such that, where the multiple packaging material has a plurality of goods filling sections connected in series via an adjacent side edge portion between each of the goods filling sections, goods to be packaged are filled in the goods filling sections of the multiple packaging material and are packaged with the multiple packaging material being covered and sealed with a sheet and each of the goods filling sections is made separable at the adjacent side edge portion, characterized in comprising steps of;

sealing an overlapped portion of an outer peripheral edge portion of the multiple packaging material and the sheet;

then sealing the adjacent side edge portion of the multiple packaging material with the sheet; and cutting the sheet on the adjacent side edge portion as well as forming a scratched portion for separation in the adjacent side edge portion.

[0009] Thereby, when the multiple packaging material is bent at the adjacent side edge portion, each of the goods filling sections, as sealed, may be separated easily.

[0010] The packaging method of the present invention, as mentioned above, may be readily realized only by using a conventional multiple packaging device which effects packaging by sealing an outer peripheral edge portion of the multiple packaging material with a sheet and providing downstream thereof a device for sealing the adjacent side edge portion of the multiple packaging material with the sheet and for cutting the sheet on the adjacent side edge portion and scratching the adjacent side edge portion.

[0011] Also, in order to attain the mentioned objects, the present invention provides the following packaging apparatus:

[0012] A packaging apparatus using a multiple packaging material, comprising: a multiple packaging portion for effecting packaging such that, where the multiple packaging material has a plurality of goods filling sections connected in series via an adjacent side edge por-

tion between each of the goods filling sections, goods to be packaged are filled in the goods filling sections of the multiple packaging material and are packaged with the multiple packaging material being covered and sealed with a sheet, characterized in that in said multiple packaging portion an overlapped portion of an outer peripheral edge portion of the multiple packaging material and the sheet are sealed; and further characterized by comprising a longitudinal sealing portion for sealing an overlapped portion of the adjacent side edge portion of the multiple packaging material, which has come out of the multiple packaging portion, and the sheet; and a cutting and scratching portion for cutting said sheet on said adjacent side edge portion and forming a scratched portion in the adjacent side edge portion.

[0013] Also, in the packaging apparatus of the present invention, if the longitudinal sealing portion and the scratching portion for performing the sealing and scratching of the adjacent side edge portion are constructed changeable for a single packaging material and a multiple packaging material, it will be preferable as a packaging apparatus changeable for the conventional packaging using the single packaging material and the packaging using the multiple packaging material can be obtained.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] Fig. 1 is a side view showing an entire construction of a packaging apparatus of an embodiment of the present invention.

[0015] Fig. 2 is a cross sectional view taken on line II-II of Fig. 1 and seen in the arrow direction.

[0016] Fig. 3 is an explanatory view showing steps A to D for effecting packaging in the packaging apparatus of Fig. 1, wherein case (a) uses a single packaging material, case (b) uses a twin packaging material and case (c) uses a triple packaging material.

[0017] Herebelow, the present invention will be described based on an embodiment as illustrated. Fig. 1 is a side view showing an entire construction of a packaging apparatus of the embodiment of the present invention and Fig. 2 is a cross sectional view taken on line II-II of Fig. 1 and seen in the arrow direction. In Figs. 1 and 2, numeral 1 designates a multiple packaging device and numeral 2 designates a longitudinal sealing/scratching device. The multiple packaging device 1 may be such an ordinary multiple packaging device as is conventionally used and comprises a multiple packaging material supply portion 11, a goods filling portion 12, a letter printing portion 13 for printing letters on a sheet which is used for covering the multiple packaging material, a sealing portion 14 for sealing an overlapped portion of the sheet placed on the multiple packaging material and an outer peripheral edge portion of the multiple packaging material and a control portion 15. Numeral 16 designates a master roll of the sheet.

[0018] On the other hand, the longitudinal sealing/

scratching device 2 comprises a longitudinal sealing portion 21, a scratching portion 22 and a control portion 23. The longitudinal sealing portion 21 comprises a roll seal device having a roll-shaped sealer. By this roll-shaped sealer, the sheet and an adjacent side edge portion between each of goods filling sections of the multiple packaging material are pinched together upward and downward so that an overlapped portion of the sheet and the adjacent side edge portion of the multiple packaging material are sealed.

[0019] The scratching portion 22 comprises cutters 25, 26, which abut on upper and lower surfaces of the adjacent side edge portion of the multiple packaging material so sealed with the sheet at the longitudinal sealing portion 21. Of the cutters 25, 26 so abutting on the adjacent side edge portion, the cutter 25 on the upper side cuts the sheet on the adjacent side edge portion and, at the same time, scratches the upper surface of the adjacent side edge portion. Also, the cutter 26 on the lower side is arranged so as to scratch the lower surface of the adjacent side edge portion at the position corresponding to the scratched portion of the upper surface of the adjacent side edge portion.

[0020] The packaging apparatus of Figs. 1 and 2 so constructed as mentioned above is operated as follows:

[0021] Firstly, in the multiple packaging device 1, the multiple packaging material is supplied, one piece by one piece, onto a carrying conveyor (not shown) from the multiple packaging supply portion 11 to be conveyed to the left hand direction in Fig. 1. When the multiple packaging material comes to the goods filling portion 12, goods to be packaged are filled in the goods filling sections of the multiple packaging material.

[0022] The multiple packaging material so filled with the goods is covered with the sheet, on which predetermined letters have been printed at the letter printing portion 13, so that the outer peripheral edge portion of the multiple packaging material and the sheet placed thereon are sealed together by melting at the sealing portion 14.

[0023] Fig. 3 is an explanatory view showing steps A to D for effecting packaging in the present packaging apparatus, wherein case (a) uses a single packaging material 30, case (b) uses a twin packaging material 40 and case (c) uses a triple packaging material 50. In Fig. 3, packaging steps in the multiple packaging device 1 are shown as a flow from step A to step B.

[0024] While the packaging material 30, 40, 50 coming out of the multiple packaging device 1 is sealed with the sheet placed thereon at the outer peripheral edge portion 31, 41, 51 thereof (black bold portions of step B of Fig. 3), in case of the multiple packaging materials of cases (b) and (c), the multiple packaging material is not sealed yet with the sheet at the adjacent side edge portion 42, 52, 53 between each of the goods filling sections.

[0025] The multiple packaging material coming out of the multiple packaging device 1 in the mentioned state

enters the longitudinal sealing/scratching device 2. In this case, when the multiple packaging material is carried into the longitudinal sealing/scratching device 2 from the multiple packaging device 1, the multiple packaging material is guided at its outer peripheral edges on both sides by a guide 24.

[0026] Then, the multiple packaging material enters the longitudinal sealing portion 21 of the longitudinal sealing/scratching device 2 to be pinched together with the sheet upward and downward at the adjacent side edge portion 42, 52, 53 by the roll seal device so that the adjacent side edge portion 42, 52, 53 is sealed with the sheet placed thereon.

[0027] The mentioned state is shown in step C of Fig. 3 (black bold portions).

[0028] The multiple packaging material coming out of the longitudinal sealing portion 21 is then carried to the scratching portion 22. In the scratching portion 22, the cutters 25, 26 abut on the upper and lower surfaces of the adjacent side edge portion 42, 52, 53 of the multiple packaging material so that the cutter 25 on the upper side cuts the sheet which seals the adjacent side edge portion 42, 52, 53 and, at the same time, scratches the upper surface of the adjacent side edge portion 42, 52, 53. On the other hand, the cutter 26 on the lower side scratches the lower surface of the adjacent side edge portion 42, 52, 53 at the position corresponding to the scratched portion 43, 54, 55 of the upper surface of the adjacent side edge portion 42, 52, 53.

[0029] Thus, when the multiple packaging material comes out of the longitudinal sealing/scratching device 2, the adjacent side edge portion 42, 52, 53 has the scratched portion 43, 54, 55 on the upper and lower surfaces thereof and the sheet covering the upper surface of the multiple packaging material is cut at the position of the scratched portion 43, 54, 55. The state of the multiple packaging material when it comes out of the longitudinal sealing/scratching device 2 is shown in step D of Fig. 3.

[0030] In the longitudinal sealing/scratching device 2, both the roll seal device of the longitudinal sealing portion 21 and the cutters of the scratching portion 22 are constructed changeable to meet the single packaging material, twin packaging material and triple packaging material, as the case may be, as shown by arrows in Fig. 2 so that the present packaging apparatus may be operated for any of the single packaging material and the multiple packaging material.

[0031] In case the single packaging material is used, it only passes through the longitudinal sealing/scratching device 2. It is to be noted that in Fig. 1, numeral 27 designates a guide, by which the multiple packaging material, after completed of the packaging, is guided at its outer peripheral edges on both sides to be discharged and numeral 28 designates a washing nozzle for washing the multiple packaging material, after completed of the packaging.

[0032] As mentioned above, in the multiple packaged

goods coming out of the multiple packaging device 1 and the longitudinal sealing/scratching device 2, the packaging has the sheet cut at the adjacent side edge portion 42, 52, 53 between each of the goods filling sections as well as has the scratched portion 43, 54, 55 formed in the same adjacent side edge portion, so that the multiple packaged goods are easily separable when the multiple packaging material is bent at the scratched portion 43, 54, 55.

[0033] It is to be noted that although constructions of the packaging material carrying device, the sealer, etc. are not shown concretely in the embodiment as described above, those of the conventional packaging apparatus may be employed appropriately therefor.

[0034] While the invention has been described based on the embodiment as illustrated, the invention is not limited to the particular construction and arrangement thereof but, needless to mention, may be added with various modified forms thereof.

[0035] For example, while in the longitudinal sealing/scratching device 2 of the mentioned embodiment, the sealing of the adjacent side edge portion of the multiple packaging material and the sheet placed thereon is first done at the longitudinal sealing portion 21 and then the cutting of the sheet on the adjacent side edge portion and the scratching of the adjacent side edge portion are done at the scratching portion 22, the longitudinal sealing and the sheet cutting/scratching at the adjacent side edge portion may be done at the same time.

[0036] Also, while in the mentioned embodiment, the packaging apparatus which may use the single, twin and triple packaging materials is shown, the apparatus may be of a multiple packaging material exclusive type using a twin or more packaging material or may be applied to a case to effect packaging using a multiple packaging material of quadruple or more. In this case, the longitudinal sealing portion and the scratching portion are changed to meet the multiple packaging material.

[0037] Also, while in the mentioned embodiment, both the upper and lower surfaces of the adjacent side edge portion are scratched at the scratching portion 22, the construction of the scratching portion 22 may be such as to scratch either one of the upper and lower surfaces, as the case may be.

Claims

1. A packaging method using a multiple packaging material (40, 50) for obtaining multiple packaged goods by effecting packaging such that, where said multiple packaging material has a plurality of goods filling sections connected in series via an adjacent side edge portion (42, 52, 53) between each of said goods filling sections, goods to be packaged are filled in said goods filling sections of the multiple packaging material and are packaged with said multiple packaging material being covered and

sealed with a sheet and each of said goods filling sections is made separable at said adjacent side edge portion (42, 52, 53), **characterized in** comprising steps of:

sealing an overlapped portion of an outer peripheral edge portion (41, 51) of said multiple packaging material (40, 50) and said sheet; then sealing said adjacent side edge portion (42, 52, 53) of the multiple packaging material (40, 50) with said sheet; and cutting said sheet on said adjacent side edge portion (42, 52, 53) as well as forming a scratched portion (43, 54, 55) for separation in said adjacent side edge portion (42, 52, 53).

2. A packaging apparatus using a multiple packaging material, comprising: a multiple packaging portion (1) for effecting packaging such that, where said multiple packaging material (40, 50) has a plurality of goods filling sections connected in series via an adjacent side edge portion (42, 52, 53) between each of said goods filling sections, goods to be packaged are filled in said goods filling sections of the multiple packaging material (40, 50) and are packaged with said multiple packaging material (40, 50) being covered and sealed with a sheet, **characterized in that** in said multiple packaging portion (1) an overlapped portion of an outer peripheral edge portion (41, 51) of said multiple packaging material (40, 50) and said sheet are sealed; and further **characterized by** comprising a longitudinal sealing portion (21) for sealing an overlapped portion of said adjacent side edge portion (42, 52, 53) of the multiple packaging material (40, 50), which has come out of said multiple packaging portion (1), and said sheet; and a cutting and scratching portion (22) for cutting said sheet on said adjacent side edge portion (42, 52, 53) and forming a scratched portion (43, 54, 55) in said adjacent side edge portion (42, 52, 53).

3. A packaging apparatus using a multiple packaging material as claimed in Claim 2, **characterized in that** said longitudinal sealing portion (21) and said cutting and scratching portion (22) are constructed changeable for a single packaging material and a multiple packaging material.

4. A packaging apparatus using a multiple packaging material as claimed in Claim 2 or 3, **characterized in that** said longitudinal sealing portion (21) and said cutting and scratching portion (22) are provided both at a same position.

Patentansprüche

1. Verfahren zum Verpacken unter Einsatz eines Materials (40, 50) für eine Mehrzahl von Einzelverpackungen zur Bereitstellung einer Mehrzahl von abgepackten Waren, bei dem das Verpacken derart durchgeführt wird, daß dann, wenn das Material für eine Mehrzahl von Einzelverpackungen eine Mehrzahl von Warenbefüllungsabschnitten hat, diese hintereinander geschaltet an einem angrenzenden Randabschnitt (42, 52, 53) zwischen den jeweiligen Warenbefüllungsabschnitten angeordnet sind, die Waren über die Warenbefüllungsabschnitte des Materials in eine Mehrzahl von Einzelverpackungen eingefüllt werden und mit dem Material für eine Mehrzahl von Einzelverpackungen durch Abdecken und dichtes Verschließen mit einer Folie verpackt werden, und jeder Warenbefüllungsabschnitt von dem angrenzenden Seitenrandabschnitt (42, 52, 53) ablösbar ist, **dadurch gekennzeichnet, daß** das Verfahren die folgenden Schritte aufweist:

dichtes Verschließen eines überlappenden Abschnitts eines äußeren Umfangsrandabschnitts (41, 51) des Materials (40, 50) für eine Mehrzahl von Einzelverpackungen mit der Folie;

anschließendes dichtes Abschließen des angrenzenden Seitenrandabschnitts (42, 52, 53) des Materials (40, 50) für die Mehrzahl von Einzelverpackungen mit der Folie; und

Durchtrennen der Folie an dem angrenzenden Seitenrandabschnitt (42, 52, 53) sowie Ausbilden eines Einreißabschnitts (43, 54, 55) zum Ablösen an dem benachbarten Seitenrandabschnitt (42, 52, 53).

2. Vorrichtung zum Verpacken unter Einsatz eines Materials für eine Mehrzahl von Einzelverpackungen, welche folgendes aufweist: Eine Mehrzahl von Verpackungsabschnitten (1) zur Durchführung einer Verpackung in einer solchen Weise, daß dann, wenn das Material (40, 50) für eine Mehrzahl von Einzelverpackungen eine Mehrzahl von Warenbefüllungsabschnitten hat, diese in Reihe geschaltet an einem angrenzenden Seitenrandabschnitt (42, 52, 53) zwischen den jeweiligen Warenbefüllungsabschnitten angeordnet sind, zu verpackende Waren in die Warenbefüllungsabschnitte des Materials (40, 50) für eine Mehrzahl von Einzelverpackungen eingefüllt werden, und die Verpackung mit dem Material (40, 50) für eine Mehrzahl von Einzelverpackungen dadurch erfolgt, daß eine Folie zur Abdeckung und zum dichten Abschluß vorgesehen wird, **dadurch gekennzeichnet, daß** ein überlappender Abschnitt eines äußeren Umfangsrandabschnitts (41, 51) des Materials (40, 50) für eine Mehrzahl von Einzelverpackungen und die Folie dicht ver-

geschlossen ist; und ferner **dadurch gekennzeichnet, daß** ein Längsdichtungsabschnitt (21) zum dichten Abschließen eines überlappenden Abschnitts des angrenzenden Seitenrandabschnittes (42, 52, 53) des Materials (40, 50) für eine Mehrzahl von Einzelverpackungen vorgesehen ist, welcher aus dem Abschnitt (1) für eine Mehrzahl von Verpackungen an der Folie entstanden ist; und ein Durchtrenn- und Einreißabschnitt (22) zum Durchtrennen der Folie an dem benachbarten Seitenrandabschnitt (42, 52, 53) und zur Bildung eines Einreißabschnittes (43, 54, 55) an dem benachbarten Seitenrandabschnitt (42, 52, 53) vorgesehen ist.

3. Vorrichtung zum Verpacken unter Einsatz eines Materials für eine Mehrzahl von Einzelverpackungen nach Anspruch 2, **dadurch gekennzeichnet, daß** der Längsdichtungsabschnitt (21) und der Durchtrenn- und Einreißabschnitt (22) derart ausgelegt sind, daß sie für eine Einzelverpackung und eine Mehrzahl von Verpackungen unterschiedlich angeordnet sind.
4. Vorrichtung zum Verpacken unter Einsatz eines Materials für eine Mehrzahl von Einzelverpackungen nach Anspruch 2 oder 3, **dadurch gekennzeichnet, daß** der Längsdichtungsabschnitt (21) und der Durchtrenn- und Einreißabschnitt (22) an ein und derselben Position vorgesehen sind.

Revendications

1. Procédé d'emballage utilisant un matériau d'emballage multiple (40, 50) pour obtenir des marchandises emballées multiples en effectuant l'emballage de telle sorte que, lorsque ledit matériau d'emballage multiple a une pluralité de sections de remplissage de marchandises connectées en séries via une portion de bordure latérale adjacente (42, 52, 53) entre chacune desdites sections de remplissage de marchandises, les marchandises devant être emballées sont remplies dans lesdites sections de remplissage de marchandises du matériau d'emballage multiple et sont emballées, ledit matériau d'emballage multiple étant couvert et fermé de manière étanche avec une feuille et chacune desdites sections de remplissage de marchandises est rendue séparable au niveau de ladite portion de bordure latérale adjacente (42, 52, 53), **caractérisé par** les étapes consistant à :

fermer de manière étanche une portion de chevauchement d'une portion de bordure périphérique externe (41, 51) dudit matériau d'emballage multiple (40, 50) et de ladite feuille ;
fermer ensuite de manière étanche ladite por-

tion de bordure latérale adjacente (42, 52, 53) du matériau d'emballage multiple (40, 50) avec ladite feuille; et
couper ladite feuille sur ladite portion de bordure latérale adjacente (42, 52, 53) ainsi que former une portion rugueuse (43, 54, 55) en vue d'une séparation dans ladite portion de bordure latérale adjacente (42, 52, 53).

2. Appareil d'emballage utilisant un matériau d'emballage multiple, comprenant: une portion d'emballage multiple (1) pour effectuer l'emballage de telle sorte que, lorsque ledit matériau d'emballage multiple (40, 50) a une pluralité de sections de remplissage de marchandises connectées en séries via une portion de bordure latérale adjacente (42, 52, 53) entre chacune desdites sections de remplissage de marchandises, les marchandises devant être emballées sont remplies dans lesdites sections de remplissage de marchandises du matériau d'emballage multiple (40, 50) et sont emballées, ledit matériau d'emballage multiple (40, 50) étant couvert et fermé de manière étanche avec une feuille, et **caractérisé en ce que**, dans ladite portion d'emballage multiple (1), une portion de chevauchement d'une portion de bordure périphérique externe (41, 51) dudit matériau d'emballage multiple (40, 50) et de ladite feuille sont fermées de manière étanche ; et caractérisé également **en ce qu'il** comprend une portion d'étanchéité longitudinale (21) pour fermer de manière étanche une portion de chevauchement de ladite portion de bordure latérale adjacente (42, 52, 53) du matériau d'emballage multiple (40, 50), qui est sortie de ladite portion d'emballage multiple (1), et de ladite feuille; et une portion coupante et rugueuse (22) pour couper ladite feuille sur ladite portion de bordure latérale adjacente (42, 52, 53) et former une portion rugueuse (43, 54, 55) dans ladite portion de bordure latérale adjacente (42, 52, 53).

3. Appareil d'emballage utilisant un matériau d'emballage multiple selon la revendication 2, **caractérisé en ce que** ladite portion d'étanchéité longitudinale (21) et ladite portion coupante et rugueuse (22) sont construites interchangeables entre un matériau d'emballage unique et un matériau d'emballage multiple.

4. Appareil d'emballage utilisant un matériau d'emballage multiple selon la revendication 2 ou 3, **caractérisé en ce que** ladite portion d'étanchéité longitudinale (21) et ladite portion coupante et rugueuse (22) sont prévues toutes les deux en un même endroit.

Fig. 1

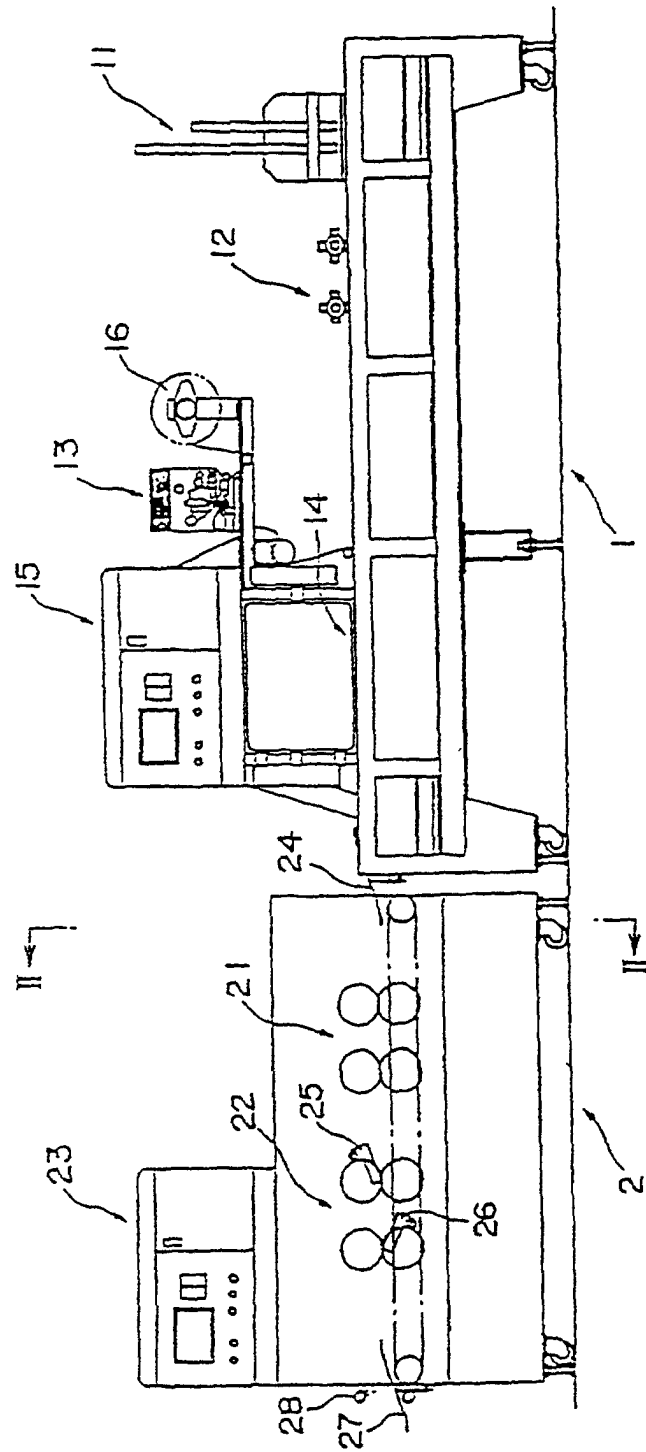


Fig. 2

