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(54) Title: PAPER BASED MATERIAL, HYGIENIC PRODUCTS OF SINGLE USE MADE OF SUCH MATERIAL, AND METHOD OF PACKING OF SINGLE PRODUCTS WHICH ARE CONSUMED AS A WHOLE (57) Abstract <p>A paper based material for manufacture of single use hygienic products such as table napkins, handkerchiefs, toilet paper, and the like, bears on its surface a series of images consisting of texts (textual fragments) and/or pictures. Each image is completed in meaning and has a character which may be considered as attractive to a consumer. Various images in the series are arranged in such a way that each individual hygienic product which is made of this material bears an image unequal with the image on the other product. Images on the adjacent products may be linked to each other by a common idea or plot. The products may be packed in blocks in such a way that the images on the surfaces of the individual products in each block are unequal.</p>		

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**Paper based material, hygienic products of single use
made of such material, and a method of packing
5 of single products which are consumed as a whole**

Technical Field

This invention relates to the art of light industry and concerns to paper
10 based material intended for manufacturing of single use hygienic products, such
as table napkins and any paper pieces underlying table things, towels,
handkerchiefs, toilet paper, and the like, these products as such, and the method
of packing of some of these products.

Background Art

Paper based hygienic products of single use (table napkins, towels,
handkerchiefs, toilet paper and the like) are widely used both in home household
conditions, and in industrial sphere, in particular, at the enterprises engaged in
public service.

20 Such single use products are manufactured now of a paper based material
which is monochromatic with or without of some image. The material, used for
manufacturing of each lot of such products, is identical and homogeneous, i.e. it
has identical color, texture and picture.

The single use products which are made of such material, may be
25 consumed as a whole, as it is with napkins, or they may be consumed in parts,
i.e. gradually and as required, as it is, for example, with rolled toilet paper.

The products which are consumed in parts, such as the rolled toilet paper
or the rolled towels, have usually no picture on its surface and differ each other
only by a material quality or color.

However there are such patented products, which are patterned on the surface (the USA patent 5328565 D 21H 15/02, 1994).

It was proposed to use a toilet paper as a carrier of advertising and "mass media", for what to render on a surface of a paper an appropriate information. In the latter case toilet paper with the information put on its surface, was considered as an additional means of creation of public opinion within the framework of realization of such national campaigns, as cancer diseases or alcoholism healing, prophylactic of occupational injuries, etc. (the French application for an invention 72.07123, G 09 F 23/00, 1973).

Then, there were proposals to put on the surface of a toilet and wrapping paper, with the purposes of advertising, an information including, for example, the addresses and telephones of the manufacturers of this or that production, the titles of literary works and fragments of the text, name of films with names of the actors, time and place of various exhibitions and so on (the French application for an utility model 85.10924, G 09 F 23/00, 1988).

The single use products which are consumed in parts, such as napkins, are characterized by the large variety and can carry on a surface the various images.

The image can be a picture, or single word (more often the name of an appropriate enterprise of public catering) complemented occasionally by some items of information on this enterprise, in particular, by indication on hours of its work, or the enterprise name jointly with a picture representing its logo.

The table napkins are known carrying on the surface a repeating pattern (the USA patent 5573830, D 04 H 1/64, 1996).

Texts, vignettes, pictures, other images of decorative, educational, advertising or utilitarian nature, can be placed on a surface of napkins, as such or in various combinations (the French certificate for a utility model 71.21004, G 09 F 23/00, 1972).

Thus, images placed at now on a surface of single use hygienic products have basically advertising, and sometimes decorative character.

The purpose of placing pictures on a products surface consisted in use of these products as carriers of advertising and in dissemination of desirable
5 information or in giving to these products of the greater aesthetic attraction.

A general idea was disclosed in aforementioned French documents to consider the single use hygienic products as carriers of an information, but the questions on character, structure, layout of this information with respect to particular products were not discussed.

10 Traditional requirement to the material for manufacture of single use hygienic products irrespective of their type consists in that the applicable material should allow to have homogeneous and identical on appearance products.

By other words, each piece of a rolled toilet paper should not differ from
15 any other piece, and each table napkin should be precisely the same as any other napkin.

Such requirements are caused by traditional aspiration to uniformity and unification of appearance of the manufactured goods and to its recognition by a consumer.

20 The single use products which are consumed as a whole, are not provided for retail trade separately; there are blocks of such products incorporated by common packing, which are offered for sale, such blocks are minimal commodity unit. Such packing contains some number of individual single use products having identical appearance, including identical images on their
25 surface.

Such products with decorative images on its surfaces have more attractive quality than products without the images. However this quality diminish with time because continuous repetition of the same picture becomes habitual.

The advertising statements on a surface of single use products having no connection with the consumed product itself, may be considered as an information, which is enforceable distributed by the advertiser, in which the consumer of hygienic products can be not interested at all. From this point of view the presence on such hygienic products of advertising of extraneous goods and services will hardly raise interest of wide circle of such hygienic products potential consumers.

Brief Disclosure of Invention

10 The main task, solved by the present invention, consists in giving to paper based single use hygienic products of the greater attractiveness by placing on their surface of various in the form and contents entertaining, educational, instructive and other useful information, that should have a positive effect on emotional and psychological condition of a consumer.

15 The basic idea placed as the basis of the present invention, is to give the different appearance to homogeneous on properties and purpose products by placing on their surfaces of different images, which would be attractive to a consumer.

The aim in view is achieved by manufacturing the aforementioned single use products of hygienic purposes from a paper based material which bears on the surface different images.

The character of images layout on a surface of this material should be those to allow to form products of different configuration, in particular, rolled up tapes, or rectangular pieces of predetermined length and width.

25 Appropriate hygienic products can be manufactured of this material in such a way that the surface of each individual product being a minimal commodity unit, has different images.

If necessary, individual hygienic products which are not provided for retail trade separately, are united in blocks, each of which being placed in separate

packing, makes a minimal commodity unit, so that the images on a surface of individual products in each such block of products were different.

The «image» is understood above and below as any sign making texts (textual fragments) or picture which is placed on the appropriate surface.

5 The notion «image» may include the texts and figures simultaneously.

The texts can contain an attractive information of educational, entertaining, instructive, training or other character, which can attract consumers by causing positive emotions.

10 In particular, proverbs, sayings, aphorisms may be cited, interesting facts and observations may be indicated, advice may be given, wishes and parting words may be expressed.

For example, pictures may be puzzle ones, rebuses, chess tasks and etudes, or conundrums, which may be augmented also by patterns, ornaments, vignettes and others decorative and artistic products of fine art, and similar
15 images.

If products are united in blocks, its surfaces should be preferably decorated by images which are linked each other by common subjects, or ideas, or by some other way.

The blocks of individual products should be formed so that the images on
20 separate products were unequal. In framework of this invention «inequality» should be understood in that sense, which is disclosed in this description of the invention.

The images on a surface of rolled products can represent a series of pictures, connected by a common plot, for example, it may be scenes from
25 popular cartoons.

The subjects of the images on a surface of a material, should be periodically updated, that the probability of repeated purchase by the consumer of goods with the images and plots, already known for him, was minimized.

It should be understood within the limits of this invention, that the requirement of «inequality of pictures» will be satisfied in the event that at least one image on each standard unit of a material surface, or on a surface of each individual product representing minimal commodity unit, or on a surface of at least one of products in the block of products representing minimal commodity unit, should not repeat.

Here and below the «minimal commodity unit» means that minimal commodity unit which is normally used in retail trade.

The minimal commodity unit can be an individual product, for example, the toilet paper roll, or a block of individual products, for example, the pack of table napkins.

Thus, the «inequality of images» means the lack of complete coincidence of the corresponding images, though separate elements of the images can coincide.

The degree of images inequality on a material and/or products surface can be different; it depends on the aim which ought to be achieved.

In most cases the degree of images inequality on a material and/or products surface should be such, that the texts and/or figures on each individual product, made of this material, being minimal commodity unit, or on each block of single products representing minimal commodity unit, should not repeat.

However it is allowable in some cases, and sometimes even desirable, that the separate images on a surface of the proposed material, and accordingly, on a surface of products, mainly such as the separate texts, should be periodically repeated. In particular, such character of the pictures is advisable, if the aim is a training.

In framework of this invention the «single use product» means equally an individual product consumed in parts such as the roll of a toilet paper, as well as an individual product consumed as a whole such as the individual napkin, and the «block of single use products» means some number of individual single use

products incorporated by common packing and representing a minimal commodity unit such as the pack of napkins.

The «single use product consumed in parts» means a minimal commodity unit, which may be consumed gradually, i.e. the part by part.

5 The «single use product consumed as a whole» means a product consumed unitary and as a whole, at one moment; it can be included in a block of similar products and may not to be the minimal commodity unit itself.

According to this invention the aim of increase of consumer's demand on single use hygienic products and improve of competitiveness of such products
10 has to be achieved by above described means which were not used earlier.

Detailed Disclosure of Invention

The paper based single use hygienic products are manufactured of a material bearing on the surface the unequal images.

15 This material should have such form and such character of an arrangement of the images, which would allow to make of it products of a different configuration bearing on the surface the integral images.

The material bearing preferably such images as not repeating texts should be used for manufacturing of single use products such as table napkins, which
20 minimal commodity unit is the pack including some number of individual articles.

The images on a surface of separate products making a block of single use individual products which are consumed as a whole, should be made unequal in any case.

25 The «text» means an independent image of readable information occupying at least a part of a surface of a material or a product.

The material bearing preferably such images as not repeating pictures should be used for manufacturing of single use products which are consumed in

parts, such as rolled toilet paper, which minimal commodity unit is the individual product.

The «figures» means all independent images, except for textual, occupying at least a part of a surface of a material or a product.

5 Both texts and figures represent thus the images completed in meaning, which contents and form can attract attention and interest of a consumer.

It is understood in the limits of this invention, that the requirement of «inequality of the images» is satisfied equally under the following conditions:

- at least one image on each standard unit of a surface of a material, on a
10 surface of each individual product representing minimal commodity unit, or on a surface of at least one of products in the block of products representing minimal commodity unit, does not repeat;

- the image on a surface of each standard unit of a material, on a surface of each individual product representing minimal commodity unit, or on a surface
15 of each product in the block of products representing minimal commodity unit, does not repeat.

The degree of inequality of the images on a surface of an initial material should be preferably such, that:

- the images which are not repeating on any other product in the given
20 block would be presented on each product making the block of single use homogeneous products which are consumed as a whole, the block being a minimal commodity unit;

- the images which are not repeating would be presented on each individual single use product which is consumed in parts, being minimal
25 commodity unit.

So, for example, it is desirable, that in a pack of table napkins the textual fragments on a surface of all napkins would be different.

So, for example, it is desirable, that in a roll of a toilet paper all pictures would be different.

The textual fragment can contain an attractive information of educational, entertaining, instructive, training, and/or other character, which causes the consumer's positive emotions.

In particular, proverbs, sayings, aphorisms, short poems, fragments of poems and prose can be provided, interesting facts and observations can be reported, advises can be given, wishes and parting words can be expressed, and other useful and interesting information can be placed.

For example, figures may be puzzle ones, rebuses, chess tasks and etudes, or conundrums, which may be augmented also by ornaments, vignettes, patterns, and others decorative and artistic products of fine art.

In particular, they can be the images of various automobile models, breeds of trees, architectural monuments and other.

That variant is optimum, when the images on surfaces of single use products, making minimal commodity unit, or the image on a surface of an individual product which is spent in parts, are linked by a common idea, a common plot, common subjects, or other in a similar way.

So, for example, a series of pictures on a roll of a toilet paper can be linked by some common developing plot, when each subsequent picture develops the previous one, and as a whole comprises any entertaining plot or represents a fragment of a popular cartoon.

The figures on a surface of a roll of a paper should be positioned on a distance corresponding to the proposed portions of paper consumption.

In some cases the identical images on a surface of a material and certain products can be periodically repeated.

In particular, if the images have character of textual fragments and/or of pictures and their contents is those, that it has a training character, for example, when the image consists of foreign words and its translation on the mother tongue, the periodic recurrence of the identical images is directed on consolidation of previous information and is desirable.

Generally, the degree of non-repeatability of the images depends on prospective purpose and kind of products; it should be those to minimize the probability to fall into some consumer's hands of products with the identical images.

5 The highest degree of non-repeatability of the images should be observed at manufacturing products intended for household use, i.e. within the limits of one family.

If the products of single purpose are intended not for household use, but they are manufactured, for example, for public catering system, and bear the
10 appropriate images (according to the form or contents), the appropriate requirements to non-repeatability of the images can be reduced to such degree to minimize the probability to fall into some consumer's hands of identical single use products.

The material intended for manufacturing of single use products of any
15 sort, as well as the products themselves, can contain both textual fragments and pictures.

The images on a surface of the claimed material can be executed by any printing method (including computer and photo printing), stamping, or by any other appropriate way.

20 In any case, the material, which is applied for manufacturing of single use products, should be periodically updated to reduce to a minimum the probability of repeated purchase by one and the same consumer of products with the images, known for him.

With the same purpose, the different sets of products made of a material,
25 the images on which surface differ on subjects, can be marked differentially.

The images on a surface of a material, raising attractiveness of products which are made from this material, can be complemented, if desirable, by the images of other character, for example, by advertising images.

The essence of this proposal is illustrated by the following examples which have, however, no limiting character.

Example 1.

5 Color unequal images, such as unequal ornaments and riddles, were deposited by the method of photo printing on a surface of a paper cloth meeting to the table napkin quality requirements.

The degree of dissimilarity of the images deposited on a surface was such, that on a standard unit of a surface there were 20 different images.

10 The layout of the images on a surface was such, that enables to cut each standard unit of the material into 20 parts corresponding to the size of a table napkin, each of which beard the complete image.

In the process of manufacture of the material the printing matrix was replaced by 5 times, and the images reproduced by all matrixes, do not coincide
15 with each other.

As a result, the parties of the material were obtained, which allow to form packs of table napkins by 100 pieces each with none-repeating images deposited on the surfaces of individual napkins.

20 Example 2.

The paper based material in the form of a continuous tape was used for manufacturing a toilet paper.

The color pictures which were consecutive stages from a Disney cartoon were disposed on a surface of a material through each 10-20 cm. The set of
25 pictures placed on a surface of the material, made the completed fragment of the cartoon.

The tape of the material was cut on parts each containing a complete fragment of the cartoon, was turned off in a roll so that the beginning of a series

of pictures was occurred on the external side of the roll, the roll was packed to be the ready product.

Example 3.

5 The paper napkins were manufactured from the initial paper material having an external surface, on which the textual fragments were deposited consisting in proverbs and sayings about winter and also in winter signs. Any of such fragments on the material surface did not repeat.

10 An arrangement of textual fragments on the paper material was those, that after cutting the material on parts corresponding to the required sizes of napkins, one textual fragment shall be deposited on each napkin.

The napkins, each of which bore on a surface not repeating textual fragment, were folded and packed into stacks.

15 Example 4.

The paper napkins, intended for clients service in restaurant, were manufactured from a paper material, on which surface the restaurant's logo in the kind of a picture in combination with a textual fragment containing a parting words and a congratulation on New Year was deposited.

20 The identical images on the initial material were repeated three times.

The material was cut on parts corresponding to the required sizes of napkins in such a manner that one image was deposited on each napkin. The napkins were folded and packed into stacks by 100 pieces each.

25 Taking into account, that for one visiting a client can use 3-4 napkins, the probability that the napkins with the identical images will be obtained by the same client, is insignificant.

Example 5.

Single use handkerchiefs were manufactured from the paper based material of different lots. The handkerchiefs of required sizes were made from this material.

5 The images on a surface of a material were located so that after folding of a handkerchief four times this image appeared on the external side of the folded product.

These images were playful figures accompanying with kind wishes and advises.

10 The blocks of 20 products were formed of such individual products so that the images on surfaces of individual products in each block of products did not repeat.

The products were oriented in each block by such a way, that after opening a common packing, the image on the handkerchief surface will
15 immediately come to sight of a consumer.

The routine approach to drafting the external appearance of paper based single use hygienic products consists in aspiration to unification and uniformity of all individual products of one purpose.

However this aspiration is justified at manufacturing of durable enough
20 products, when the lost individual subject from group of individual subjects (for example, tea cup from service) can be restored by purchase of the same new. But application of this principle to drafting of single use products may be explained by a respect to traditions only.

This invention provides for, as a basis, the essentially different approach
25 to drafting of external appearance of single use products - providing for individual products by attributes, which are individual and inherent to each particular product, these attributes being characterized not only and not so much by external image, but also internal semantic contents.

and to attract attention of a consumer of paper based single use hygienic products, as the consumer gets not only those goods, which he requires, but also receives each time a new and interesting information; it raises competitiveness of such goods.

5 The proposed material and the products which are made from it, are intended basically for household use by all members of one family; in these conditions the information of educational, entertaining, instructive, training and other attractive character, which is presented on a surface of products is perceived easily and unconstrained, especial by children, because it does not
10 require special efforts for its reception.

Besides the natural inquisitiveness will induce children to use single napkins, towels and handkerchiefs more often, unobtrusive imparting them hygienic skills.

15 The usage by such single hygienic products not in home conditions, for example, its offer to a consumer at an enterprise of public catering is capable to increase mood and to adjust the consumer on good feeling.

WHAT IS CLAIMED IS:

5 1. A paper based material bearing on its surface images and intended for manufacturing of single use hygienic products,
characterized in that

the images on the surface of the material represent a series of unequal texts (textual fragments), completed in meaning, and/or a series of unequal
10 pictures, completed in meaning, linked each other by a common content, a common idea, or in a similar way, and arrangement of the images on the material surface is those, that allows to make of this material the individual products with the integral images on its surface, and the degree of inequality of the images is those, that at least one image on each standard unit of the material
15 surface, or on the surface of each individual product made of this material, or on the surface of one individual product included in each block of individual products, representing the minimal commodity unit, does not repeat.

2. The material according to claim 1, wherein the texts (textual fragments)
20 and/or pictures on its surface have an educational, entertaining, instructive, training, or other character, attractive to a consumer.

3. The material according to claim 1, wherein each subsequent picture develops the contents of a previous one, and in common they illustrate the
25 uniform completed plot.

4. The material according to claim 1, wherein the identical images on each standard unit of the material surface, or on the surface of each single product, made of this material, or on the surface of each individual product which is

included in each block of individual products, representing the minimal commodity unit, does not repeat.

5. The material according to claim 4, wherein the texts (textual fragments) and/or pictures have an educational, entertaining, or instructive character.

5

6. The material according to claim 1, wherein the identical images on each standard unit of the material surface, or on the surface of each individual product, made of this material, or on the surfaces of individual products which are included in each block of individual products, representing the minimal commodity unit, are periodically repeated.

10

7. The material according to claim 6, wherein the texts (textual fragments) and/or pictures have training character.

15

8. A single use hygienic product in the form of a roll, which is consumed in parts, characterized in that it bears unequal images on a surface, and the degree of inequality of the images is those, that at least one image does not repeat.

20

9. A single use hygienic product in the form of a roll, which is consumed in parts, characterized in that it bears unequal images on a surface, and the degree of inequality of the images is those, that any image does not repeat.

25

10. The single use hygienic product according to any of claims 8-9, wherein the images represent a series of unequal texts (textual fragments), completed in meaning, and/or a series of unequal pictures, completed in

meaning, and linked each other by a common contents, a common idea, or in a similar way.

11. The single use hygienic product according to any of claims 8-10,
5 wherein the texts (textual fragments) and/or pictures on its surface have an educational, entertaining, instructive, training, or other character, attractive to a consumer.

12. The single use hygienic product according to claim 10, wherein the
10 images represent a series of the unequal pictures, completed in meaning, from which everyone subsequent develops the contents of the previous one, and in common they illustrate the completed plot.

13. A single use hygienic product, which is consumed as a whole,
15 characterized in that

it bears on a surface an image such as a text (textual fragment), completed in meaning, and/or a picture, completed in meaning, having an educational, entertaining, instructive, training, or other character, attractive to a consumer.

20 14. A method of packing of single use hygienic products, which are consumed as a whole, bearing images on its surfaces, and do not act in retail trade separately, but are united in blocks of homogeneous products, each of which is placed in separate packing,

characterized in that

25 the blocks of products are formed in such a way, that the images on the surfaces of individual products in each block were unequal, thus the degree of inequality of the images is those, that at least on the surface of one individual product included in the block of individual products representing minimal commodity unit, the image does not repeat.

15. The method of packing according to claim 14, wherein the degree of inequality of the images on the surface of individual products in each block is those, that any image does not repeat.

INTERNATIONAL SEARCH REPORT

Inter. onal Application No

PCT/RU 99/00050

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 D21H27/02 A47K10/16 B31D1/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 D21H A47K B31D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 225 131 A (GOSSELIN CLAUDE) 8 November 1974 see the whole document ---	1,2,4-6, 8-11,13
X	US 5 300 347 A (UNDERHILL KIMBERLY K ET AL) 5 April 1994 see column 3, line 36 - line 63 ---	1,2,4-6, 13
X	DE 21 23 662 A (FELDMÜHLE ANLAGEN- UND PRODUKTIONSGESELLSCHAFT) 30 November 1972 see page 4 - page 7; figure 3 ---	1,2,4-6
X	US 5 328 565 A (RASCH DAVID M ET AL) 12 July 1994 cited in the application see the whole document --- -/--	13



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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INTERNATIONAL SEARCH REPORT

Intern. Patent Application No

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 2 388 516 A (CELATOSE SA) 24 November 1978 see figure 1 ----	13
A	EP 0 553 449 A (HOBEMA MASCHF HERMANN) 4 August 1993 see the whole document ----	14
P,X	EP 0 893 242 A (FORT JAMES FRANCE) 27 January 1999 see the whole document ----	14
A	US 4 339 088 A (NIEDERMEYER WILLIAM P) 13 July 1982 -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inter. Appl. No.

PCT/RU 99/00050

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR 2225131 A	08-11-1974	NONE	
US 5300347 A	05-04-1994	AU 658975 B AU 3313593 A CA 2089912 A EP 0565838 A MX 9300991 A ZA 9300620 A	04-05-1995 02-09-1993 27-08-1993 20-10-1993 01-09-1993 30-08-1993
DE 2123662 A	30-11-1972	NONE	
US 5328565 A	12-07-1994	US 5431786 A CA 2069193 A,C MX 9203048 A	11-07-1995 20-12-1992 31-08-1994
FR 2388516 A	24-11-1978	NONE	
EP 0553449 A	04-08-1993	DE 4202254 A	29-07-1993
EP 0893242 A	27-01-1999	FR 2766125 A	22-01-1999
US 4339088 A	13-07-1982	NONE	