

PAPER C: INFRINGEMENT AND VALIDITY OF SINGAPORE PATENT

**11 October 2006, Wednesday
1400 – 1800 hrs**

Maximum Time: 4 Hours (includes reading time)

Maximum Marks: 100



INTELLECTUAL PROPERTY
OFFICE OF SINGAPORE

INSTRUCTIONS TO CANDIDATES

1. This Paper consists of 14 pages, including this cover page.
2. Write your answers in English. Answers in any other language will not be marked. Answers in illegible handwriting will not be taken into consideration.
3. Only your answers and/or drawings to the question(s) written in the Answer Booklet(s) provided by the Examination Secretariat will be considered. You are to write on one side of each sheet in the Answer Booklet(s).
4. Marks are awarded more for the points selected for discussion and reasoning displayed than for conclusions reached.
5. Information provided in the question(s) may be obtained from actual situations or modified therefrom for the purpose of this examination. You should accept the facts given in the papers. Assume also that the prior art given is exhaustive.
6. Advise the client on infringement and validity of his patent and on the other questions asked by him. Your advice can be in the form of notes or a letter to the client but in either case you must provide the reasons for your advice.

To be continued

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7. The documents provided in the question are:

- (a) Document A – Letter from your Client (1 page);
- (b) Document B – Question (1 page);
- (c) Document C – Patent 5000 (3 pages of description plus claims and 1 page of drawing);
- (d) Document D – Full text of Patent application number 9000000 (1 page of description plus claim);
- (e) Document E – “Badguy bags the business” - article published 12 September 2000 (1 page of description and 1 page of drawing);
- (f) Document F – “Breather Bag” - article from 1988 (2 pages of description and 1 page of drawing).

End

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Document A – Letter from your Client (1/1)

You receive a letter from your client as follows:

- 5 Dear Patent Agent,
- In early 2000 we filed a Singapore patent application we had written ourselves, to protect our new perforated shopping bag. It is attached as patent application 9000000.
- 10 I read on a website that once the patent application had been filed we no longer had to keep the invention secret. Accordingly, we gave out copies of our patent application 9000000 at a trade fair that month. At the trade fair I noticed Harvey Badguy, the president of Badguy Inc., a US company, picking up a copy. This was clearly labelled as being a Singapore patent application and even gave the application number.
- 15 You may remember that when we showed you our patent application, you thought it was a bit amateurish, so you filed an improved patent application for us, no. 9100000, and this matured into our patent no. 5000.
- 20 Badguy Inc. launched their own version of our shopping bag in Singapore in September 2000. I attach an article, "Badguy bags the business", I saw at the time describing it. Indeed, I had the Badguy bag in mind when I made sure that our updated patent covered dimples as well as perforations.
- 25 Since 2000 Badguy's sales in Singapore have been low (only a few convenience stores here bought their bags to give out to customers), so we decided to tolerate their infringement of our patent as a cost saving measure. We felt that our company was too small to get into a dispute with a large company like Badguy Inc. But it has just come to our attention that Badguy Inc. are about to launch a campaign targeting our major customers (Singapore
- 30 supermarkets) within the next few weeks, selling bags imported from the US. This might drive us out of business within months. What can be done to prevent this?

Regards,

35 Client

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Document B – Question (1/1)

You establish that:

- 5 (i) Patent 5000 is in force with no renewal fees due.
- (ii) No corresponding patent applications were filed outside Singapore.
- (iii) The only prior art cited during the patent application procedure which led to patent 5000 was an article “Breather bag” dated 1988. It was cited in category A. You forwarded the reference to your client when it was cited, but neither you nor they
- 10 have reviewed it in detail.
- (iv) Badguy Inc. has no intellectual property rights.

Write notes to form the basis of a letter of advice to the client.

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PAPER C: INFRINGEMENT AND VALIDITY OF SINGAPORE PATENT

11 October 2006, Wednesday

1400 – 1800 hrs

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Document C – Patent 5000 (1/4)

Patent 5000

5 Filed on 12 December 2000 as Singapore patent application no. 9100000.

Granted on 12 December 2003

10 Claiming priority from Singapore patent application no. 9000000

Field of the invention

The present invention relates to plastic bags for shopping.

15 **Background of the invention**

Plastic bags have become very common in retail outlets such as supermarkets.

20 Some plastic bags, particularly those provided to customers by relatively expensive retail establishments, are formed of thick plastic sheets, and include handles which are yet thicker still (e.g. moulded handles fixed to the opening portion of the bag).

25 However, the plastic bags provided in other retail outlets, such as supermarkets, need to be cheaper, and are formed entirely from very thin plastic. Two generally rectangular sheets of thin plastic are joined to each other along their bottom and side edges, leaving their top edges separate. Instead of the sheets being attached to respective molded plastic handles, the sheets may include respective openings near their top edge, so that the portion of the sheets between the opening and the upper edge of the sheet functions as a handle. It is known to supply a large number of these bags folded in a box. A customer (or sales
30 assistant) removes a bag from the box when desired, and opens the bag by rubbing the upper portions of the sheets, to urge the two sheets apart.

35 Unfortunately, the two thin plastic sheets tend to adhere slightly to each other. This makes the bags fiddly to open. Accordingly, the customer or shop assistant may take some time to separate the upper portions of the sheets to open the bag. In the context of a busy supermarket, this may seriously slow down the shopping queue.

40

PAPER C: INFRINGEMENT AND VALIDITY OF SINGAPORE PATENT

11 October 2006, Wednesday

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Document C (2/4)

Summary of the invention

5 The present invention aims to address the problem above.

The invention proposes a bag having roughened areas near an opening portion thereof.

10 Brief description of the figures

An embodiment of the invention will now be described with reference to the following figures:

Fig. 1 is a perspective view of the embodiment of the invention in an open configuration;

15 Fig. 2 is an enlarged view of a portion of the embodiment; and

Fig. 3 shows a process for producing the embodiment.

Detailed description

20 Referring to Fig. 1, a first embodiment of the invention is shown, which is a plastic bag composed of two, substantially rectangular sheets 1, 2 of thin plastic. The sheets are joined along their bottom edge 3 and their two side edges 4, 5. The respective upper edges 6, 7 of the sheets 1, 2 are not joined to each other. Openings 8, 9 are formed in the upper portion of the respective sheets, so that respective regions 10, 11 of the sheets function as handles.

25

Fig. 2 is an enlarged view of a portion of the plastic sheet 2. An array of perforations 12 are formed in the plastic sheet 2 near the upper edge 7. Although not shown in the figures, plastic sheet 1 also has an array of perforations in the region 10. These perforations 12 make the surface of the sheets 1, 2 rough, thereby increasing the frictional force which a user can generate by rubbing. This makes it easier to open the bag than if the perforations 12 were not present.

30

The perforations 12 can be formed as shown in Fig. 3, which is looking in the direction marked A in Fig. 1. The two joined plastic sheets 1, 2 are laid against each other, so that the regions 10, 11 are adjacent. The regions 10, 11 are then clamped together between two metal jaws 13, 14. One jaw 13 has an array of protrusions 15, and the other jaw 14 has an

35

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11 October 2006, Wednesday

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Document C (3/4)

array of depressions 16. The protrusions 15 are in register with corresponding ones of the depressions 16. Areas of the sheets 1, 2 which are trapped between one of the protrusions 15 and the corresponding one of the depressions 16 are punched out, leaving a corresponding perforation in each of the sheets 1, 2.

Note that instead of forming perforations, the protrusions 15 and depressions 16 may be shaped such that the areas which are trapped between a protrusion 15 and a depression 16 are not actually punched out, but only deformed into a dimple. We have found that dimples alone are sufficient to give the regions 10, 11 sufficient roughness to make opening the bag easier. Unlike the perforations 12, the dimples may be elongate in the direction parallel to the upper edge 7.

15 Claims

1. Bag, areas of the bag at an opening portion having been roughened.
2. Bag according to claim 1, the roughened areas being areas with dimples.
3. Bag according to claim 1, the roughened areas being areas with perforations.
4. Bag according to claim 1, the roughened areas being at handle portions of the bag.
5. Shopping bag according to any preceding claim, in which the plastic is very thin.
6. Method of forming a shopping bag comprising:
 - joining two ultra-thin sheets of plastic to form a bag; and
 - roughening areas of the bag.

PAPER C: INFRINGEMENT AND VALIDITY OF SINGAPORE PATENT
11 October 2006, Wednesday
1400 – 1800 hrs

Maximum Time: 4 Hours (includes reading time)

Maximum Marks: 100

Document C (4/4)

Figs. of Patent 5000

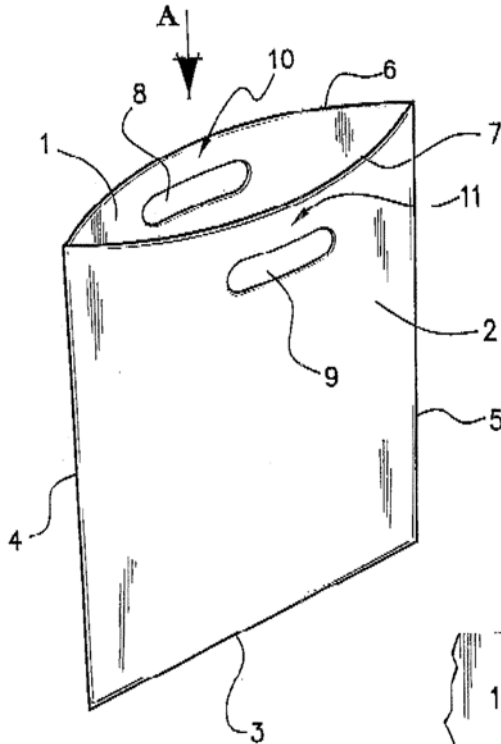


Fig. 1

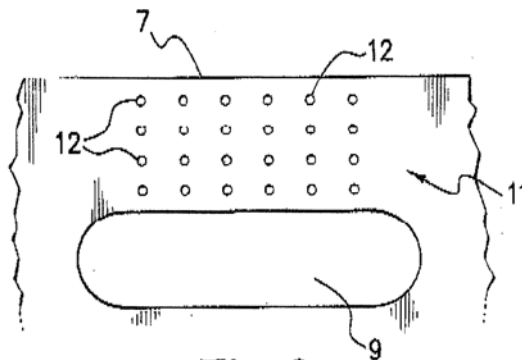


Fig. 2

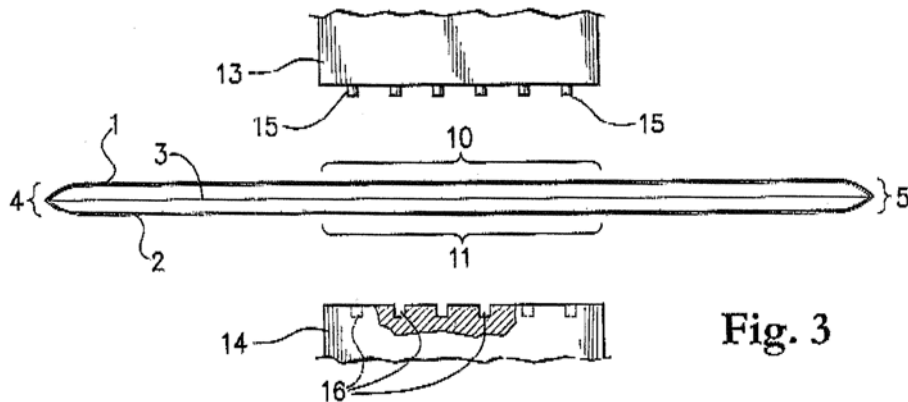


Fig. 3

PAPER C: INFRINGEMENT AND VALIDITY OF SINGAPORE PATENT
11 October 2006, Wednesday
1400 – 1800 hrs

Maximum Time: 4 Hours (includes reading time)

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Document D – Full text of Patent application number 9000000 (1/1)

Full text of Patent application number 9000000 (filed on 12 January 2000)

- 5 This invention is to provide a bag which is roughened at its top. This enables users to open the bag easily.

The bag can be a standard plastic bag, of the kind having handles at the top. The easiest way to make the plastic bag rough is by forming it from two plastic sheets with perforations,
10 e.g. in the handle parts of the sheets.

We claim:

1. A plastic bag with perforations near the top.

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(no figures are included in the application)

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11 October 2006, Wednesday

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Document E - Badguy bags the business (1/2)

"Badguy bags the business" (article published 12 September 2000)

- 5 Badguy Inc, the US plastic shopping bag manufacturer has announced a new product in its range.

The bag is produced using a sheet 20 of ultra-thin plastic, unrolled from a roll 19 as shown in Fig. 1 and moved in the direction shown by the arrow. Corrugations are formed in part of the sheet 20 by vacuum forming using a mould 21. The sheet is heated and sucked against the top surface of the mould 21. Part of the top surface of the mould 21 has a corrugated surface 22, which so that the sheet is deformed to produce a corresponding corrugated area of the sheet. The sheet is then cut into the profile 24 shown in Fig. 2. The corrugated area is indicated as area 23. Two such sheets are brought into juxtaposed positions with their corrugated areas 23 in register, and their side and bottom edges 25, 27, 29 are fused together to form a bag, as shown in Fig. 3.

Harvey Badguy, CEO and sole inventor of the bag, was quoted as saying "the corrugations make the bag rough near the top. Shoppers can easily open the bag by rubbing the corrugations between their forefinger and thumb."

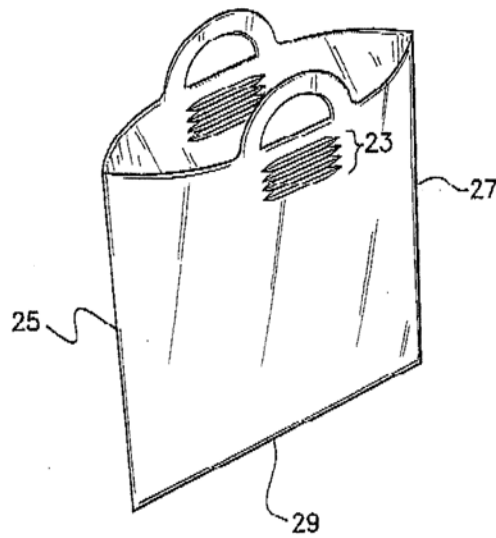
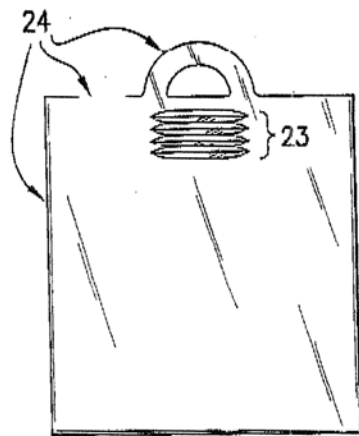
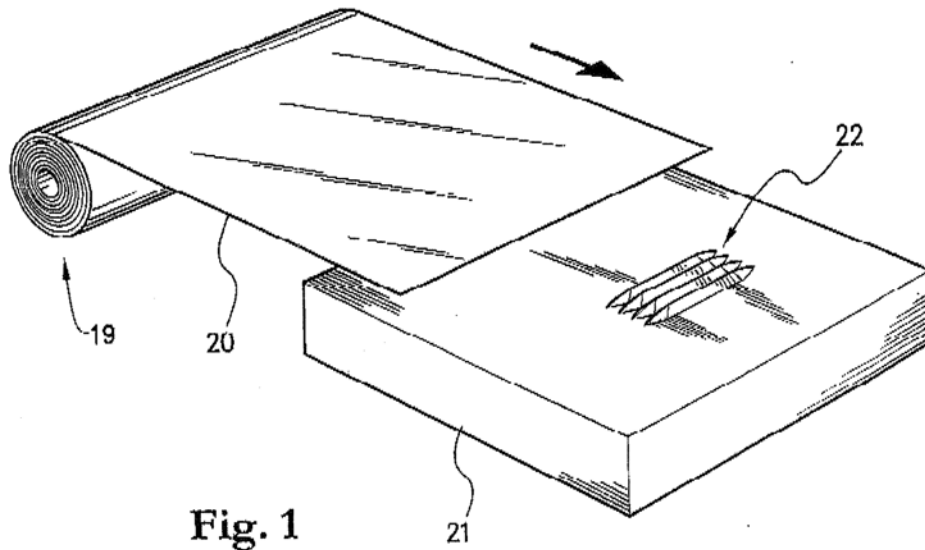
PAPER C: INFRINGEMENT AND VALIDITY OF SINGAPORE PATENT
11 October 2006, Wednesday
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Document E (2/2)

Figs. of Badguy bags the business



PAPER C: INFRINGEMENT AND VALIDITY OF SINGAPORE PATENT

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Document F - Breather Bag (1/3)

"Breather Bag" (article from 1988)

5 In the operating room environment, it is important to prevent cross-contamination between the patient and other personnel. With the increased advent of readily communicable and fatal diseases such as AIDS, the use of protective gloves has become essential.

10 A potential problem exists with the use of a breather bag attached to a breathing machine such as, for example, an anesthetic machine. The anesthetic machine combines oxygen for breathing with an appropriate anesthetic for maintaining the unconscious state of the patient. On such a machine, there is a circuit comprising a plurality of tubes for the passage of mixed gases from a source to the patient. Typically, a breather bag is attached to the circuit to hang freely in a vertical orientation. The breather bag provides a supplemental supply of gas
15 to allow the anaesthetist manual control over patient ventilation. The bag has a 1-3 liter volume.

The breather bag is constructed of an elastomeric material such as latex capable of being inflated and deflated repeatedly. The exterior surface of the breather bag is smooth-
20 surfaced as a result of the latex "dip" method of manufacture. The latex "dip" method requires the use of a mandrel having the shape of the product to be formed. The mandrel is dipped into a liquid supply of latex which collects on the mandrel to form the product. The mandrel is then removed along with the product formed thereon to cure or harden.

25 A new form of breather bag 10 shown in Fig. 1 is now proposed. The bag 10 has a neck portion 11 and a flexible portion 14. The exterior surface of the flexible portion 14 of the bag 10 is roughened for ease of gripping by an anaesthetist. When the gloves of the anaesthetist are wet, the gloves tend to cause slippage when attempting to squeeze a bag as known in the prior art. Due to the present invention, the roughened exterior surface
30 greatly reduces this likelihood of slippage.

PAPER C: INFRINGEMENT AND VALIDITY OF SINGAPORE PATENT

11 October 2006, Wednesday

1400 – 1800 hrs

Maximum Time: 4 Hours (includes reading time)

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Document F (2/3)

5 The formation of the bag is as follows. The bags 10 are first formed by dipping mandrels into a liquid form of the material from which the bag 10 is formed such as, for example, latex, as is well-known in the art. The mandrels are then removed from the liquid latex by any appropriate means and prior to the curing or hardening of the liquid latex the mandrels are dipped into a tank.

10 The tank contains a roughening agent such as an acid solution. The roughening agent causes the exterior surface of the bags 10 to become pitted, and thereby roughened.

15 The bags 10 are then removed from the tank, allowed to fully cure and are removed from the mandrels. A coupling device 12 with a roughened outer surface is connected to the neck portion 11 for coupling the bag 10 to a breathing machine.

PAPER C: INFRINGEMENT AND VALIDITY OF SINGAPORE PATENT
11 October 2006, Wednesday
1400 – 1800 hrs

Maximum Time: 4 Hours (includes reading time)

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Document F (3/3)

Fig. of "Breather Bag"

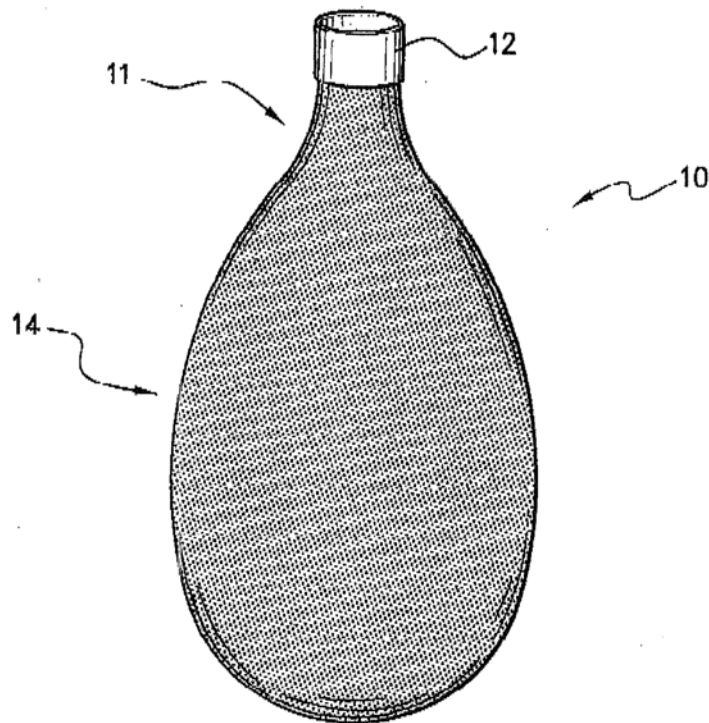


Fig. 1