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(54) **Disposable glove for cleaning pets**

(57) A disposable glove for releasing a detergent and/or anti-parasite formulation for pets and/or farm animals, which in contact with water generates foam which does not need to be subsequently rinsed. Furthermore, the dry dorsal part (17') of the glove may be used to dry the animal after washing, and after cleaning, the glove is removed by being turned inside-out so that dirt and hair remain within.

FIG.1A

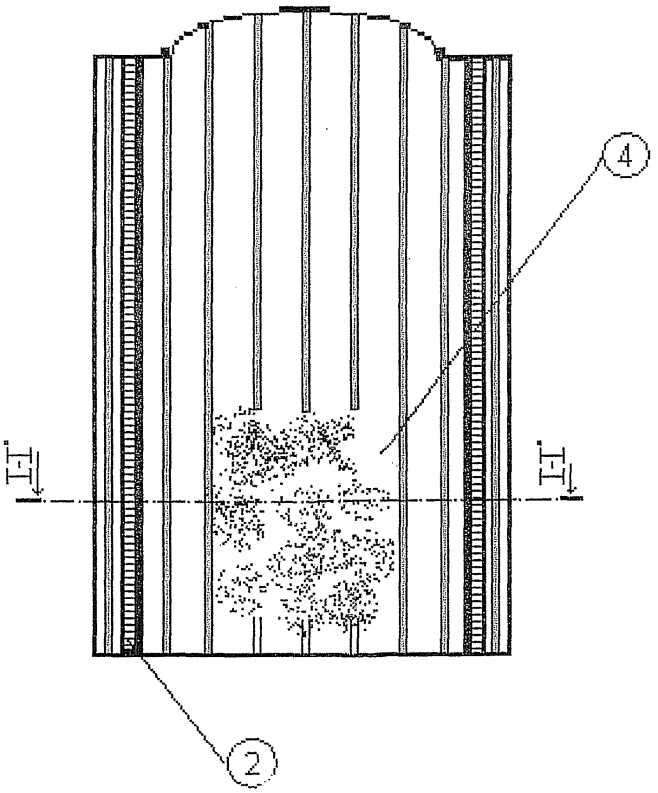

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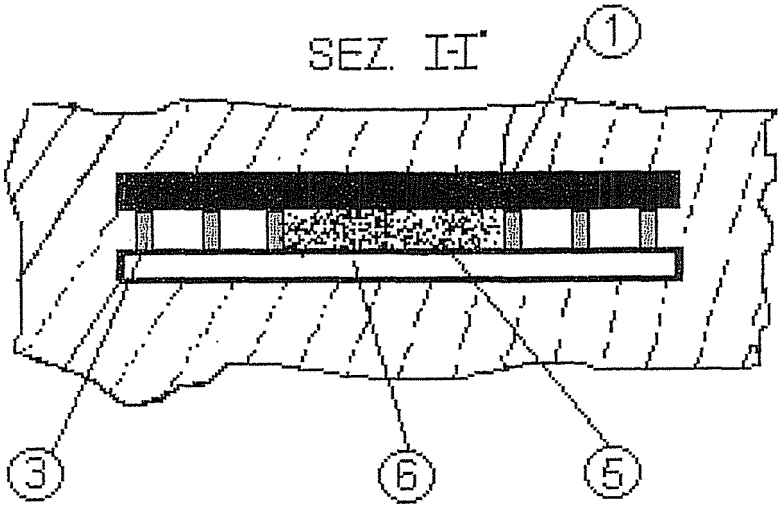
FIG. 1B



Description

FIELD OF THE INVENTION

[0001] The present invention relates to a disposable glove for cleaning pets.

BACKGROUND ART

[0002] The cleaning of pets and farm animals is indispensable not only for the animals themselves but also for the humans in contact with them, because they may be carriers of fleas, lice, etc. and even more severe infective diseases.

[0003] However, cleaning with traditional systems, such as for example baths or showers with the use of specific products, presents not few drawbacks. For example, this washing with water may be unpleasant for some animals, such as cats, with considerable problems for people in charge of such tasks.

[0004] Furthermore, bathing or showering a large pet (German Shepherds, Rottweilers, Dobermans, etc.) or large farm animals, such as for example horses, may be costly and difficult, while it may be even unadvisable for smaller animals and puppies because they can easily catch cold and fall ill. Furthermore, especially in the case of pets, hair which may cause obstruction of the drainage pipes must be appropriately removed from the bathtub or shower after washing.

SUMMARY OF THE INVENTION

[0005] Now, the applicant has unexpectedly found that the aforesaid problems may be solved with the disposable glove according to the present invention.

[0006] In particular, the present invention therefore relates to a disposable glove formed by a palmar part and a dorsal part for the release of a detergent and/or antiparasite powder formulation for pets and farm animals, which in contact with water is capable of generating foam, which does not need to be eliminated by rinsing, said glove being chosen between

- glove type (i) provided at least on the palmar part of an external layer of non-woven fabric joined to an internal layer of non-woven fabric or impermeable material so that the internal layer and the internal layer on the palmar part are jointed together only in defined areas so as to leave at least a gap or pocket, in which said materials are not jointed together, said pocket being adapted to contain the aforesaid solid powder detergent formulation,
- glove type (ii) made of non-woven fabric in which the non-woven fabric has incorporated the aforesaid powder formulation within said palmar part alone.

DESCRIPTION OF THE FIGURES

[0007]

Figure 1A shows a preferred embodiment of glove type (i).

Figure 1B shows a section taken along plane I-I' of the palmar part (A) of the same preferred embodiment.

Figure 2 shows a schematic drawing of a top view of the dorsal part (A') of the same preferred embodiment.

DETAILED DESCRIPTION OF THE INVENTION

[0008] This glove presents the further advantage that the dry dorsal part may be used to dry the animal after washing; furthermore, after cleaning, the glove is removed by being turned inside-out so that dirt and hair remain within.

[0009] The coupling of the internal layer with the external layer of glove type (i) may be performed by means of a heat-bonding process as described for example in patent IT1326649. However, according to a particularly preferred solution, such union is made by interposition of a layer of hot-melt glue between the internal layer of impermeable material or of non-woven fabric and the external layer of non-woven fabric. For the aforesaid purposes, any type of hot-melt glue available on the market may be used.

[0010] The hot-melt glue may be applied in the areas in which the external and the internal layer must be continuously joined forming a homogenous layer, or in a discontinuous, or discreet manner. The latter solution is preferred and more preferably such glue is applied in the form of equally distanced strips. In this way, a high absorbency embossing motive is conferred to the non-woven fabric layer.

[0011] Glove type (ii) differs from glove type (i) also in that the powder formulation is added directly to the preparation bath of the non-woven fabric.

[0012] Glove type (ii) may possibly be waterproofed on the dorsal and palmar part by means of:

I) coupling of said non-woven fabric with an impermeable material, or

II) chemical or mechanical filming process with impermeable materials made directly on the non-woven fabric.

[0013] Type (I) waterproofing may be performed by means of said heat-bonding process, as described in the previous Italian patent by the Applicant and mentioned above, by using hot-melt glue preferably with the operative methods described above or by means of ultrasounds. Preferably, the waterproofing of glove (ii) according to system (I) is obtained by interposing a layer of hot-melt glue.

[0014] For the objects of the present invention, a chemical filming process means one which consists in spray-drying a solution of filming polymer; mechanical filming process means the gripping of an impermeable film to the non-woven fabric by forming a continuous series of infinitesimal pores by punching with apparatuses already used for the production of sanitary towels and/or nappies and adapted to join an absorbing layer with an impermeable layer.

[0015] For the objects of the prevent invention, the word "glove" means an object intended to receive a hand, such as for example a glove with the shape of the five fingers of a hand, a glove presenting a single housing for the five fingers or two separate housings, usually one of the thumb and for the other four fingers.

[0016] According to a preferred embodiment, the glove according to the present invention presents a single housing for the five fingers.

[0017] For the objects of the present invention, the palmar part of the glove is the part of the glove in which the palm of the hand is accommodated, while the dorsal part is the part of the glove in which the back of the hand is accommodated.

[0018] A preferred embodiment of glove type (i) is a glove constituted in the palmar part and in the dorsal part by an impermeable internal layer and at least in the palmar part is coupled to an external non-woven fabric layer.

[0019] A particularly advantageous embodiment of such type features that also the dorsal part is provided with an external layer of non-woven fabric.

[0020] In this case as well, the palmar and dorsal part do not present identical length but on the contrary the palmar part is longer and ends with a central protrusion while the second ends with central recess, this allowing the user to easily open and easily accommodate the hand, and after washing and drying the animal, easy removal of the same.

[0021] In particular, in glove type (i) according to the present invention, the longest part is also the one provided with a pocket in which the formulation in the form of detergent and/or anti-parasite powder is accommodated. This to protect as far as possible the user's hand from the detergent substances, foams, etc., possible polluting or infecting substances.

[0022] The solid powder formulation preferably consists of detergent powders chosen from the class consisting of ionic type surfactants (such as for example soaps), possibly associated to non-ionic type surfactants for animal use capable of generating foam in contact with water but which however do not require subsequent rinsing, preferably a physiological pH (5.5) formulation is therefore employed which does not alter the balance of the animal's skin. Even more preferably, a formulation containing from 4 to 8% of sodium sulphate, from 4 to 8% of sodium bicarbonate, from 30 to 50% of sodium laurylsulfate, from 15 to 25% of corn flour, from 1 to 5% of boric acid and 15 to 30% of alkyl taurates. Even more preferably, said formulation comprises 5.9% of sodium sulphate, 5.9% of sodium bicarbonate, 40% of sodium laurylsulfate, 25% of corn flour and 20% of alkyl taurates.

[0023] Non-woven fabric for the objects of the present invention means a non-woven fabric or also paper, of the natural or artificial type. Preferably, a non-woven fabric containing from 50 to 100% by weight of viscose and from 0 to 50% of polyester is used, even more preferably, a non-woven fabric consisting of 100% of viscose is used.

[0024] The impermeable material possibly used is in general an impermeable polymeric material which may also be transpiring by easily eliminating sweat from the skin but not allowing liquid passing through.

[0025] For ecological reasons, such impermeable material may possibly also be biodegradable or water-soluble, where water-soluble means a material which is decomposed in water after a certain time, generally from 30 minutes to 4 hours. According to a particularly preferred embodiment, it is a polyethylene film.

[0026] Figure 1A shows a preferred embodiment of glove type (i) in which the internal layer is impermeable and joined to the external non-woven fabric layer by interposition of a layer of hot-melt glue.

[0027] In particular, figure 1 shows a schematic drawing of a top view of the palmar part (A) of such preferred embodiment.

[0028] Figure 2 shows a schematic drawing of a top view of the dorsal part (A') of the same preferred embodiment.

[0029] Figure 1B shows a section taken along plane I-I' of the palmar part (A) of the same preferred embodiment.

[0030] In these figures, (1) indicates the external layer of non-woven fabric, (2) indicates the bonding joining respectively the palmar part (A) to the dorsal part (A'), (3) indicates the strips of hot-melt glue which confer the embossed effect to the non-woven fabric, (4) indicates the pocket or gap which contains the detergent (5), (6) indicates the internal layer of impermeable material.

[0031] In particular, figure (2) clearly shows the opening of glove (7), delimited by the protrusion of palmar part (A) underneath and the recess of dorsal part (A') and the internal layer of impermeable material (6).

Claims

1. A disposable glove formed by a palmar part (A) and a dorsal part (A') for releasing a detergent and/or anti-parasite formulation in powder for pets and farm animals, which, on contact with water, is capable of generating foam, which does not require subsequent rinsing, chosen between

   • glove type (i) provided at least on the palmar part with an external layer of non-woven fabric (1) joined to an internal layer of non-woven fabric or impermeable material (6) so that the internal layer and the internal layer on the palmar part

are jointed together only in defined areas so as to leave at least a gap or pocket (4), in which said materials are not jointed together, said pocket being adapted to contain the aforesaid powder formulation (5),

• glove type (ii) made of non-woven fabric in which the non-woven fabric has incorporated the aforesaid powder formula within said palmar part alone.

2. A disposable glove according to claim 1, **characterised in that** the glove type (ii) is waterproofed by means of:

I) coupling of said non-woven fabric with an impermeable material, or

II) chemical or mechanical filming process with an impermeable material made directly on the non-woven fabric.

3. A disposable glove of type (i) according to claim 1, or of type (ii) waterproofed with the system (I) according to claim 2, **characterised in that** the impermeable material is joined to the non-woven fabric by interposing a layer (3) of hot-melt glue between the internal layer (6) and an external layer.

4. A disposable glove according to claim 3, **characterised in that** said hot-melt glue is applied in the zones in which the impermeable material and the non-woven fabric must be joined in a discontinuous manner.

5. A glove according to claim 4, **characterised in that** said hot-melt glue is applied in the form of equally distanced strips (3).

6. A glove according to claim 1, 3-5 of type (i) constituted in the palmar part and in the dorsal part by an impermeable internal layer and at least in the palmar part is coupled to an external non-woven fabric layer.

7. A glove according to claim 6, **characterised in that** also the dorsal part is provided with the external layer of non-woven fabric.

8. A glove according to claim 7, **characterised in that** the palmar part is longer than the dorsal part.

9. A glove according to claim 8, **characterised in that** the palmar part centrally ends with a protrusion, while the dorsal part centrally ends with a recess.

10. A glove according to any one of the claims 1-9, **characterised in that** it presents a single accommodation for the five fingers.

11. A glove according to any of the claims 1-10, **characterised in that** the solid powder formulation consists of ionic type surfactants, possibly associated to non-ionic type surfactants for animal use.

12. A glove according to claim 11, **characterised in that** the pH of said formulation is physiological.

13. A glove according to claim 12, **characterised in that** it contains from 4 to 8% of sodium sulphate, from 4 to 8% of sodium bicarbonate, from 30 to 50% of sodium laurylsulfate, from 15 to 25% of corn flour, from 1 to 5% of boric acid and 15 to 30% of alkyl taurates.

14. A glove according to claim 13, **characterised in that** said formulation contains: 5.9% of sodium sulphate, 5.9% of sodium bicarbonate, 40% of sodium laurylsulfate, 25% of corn flour and 20% of alkyl taurates.

15. A glove according to claims 1-14, **characterised in that** the non-woven fabric preferably contains from 0 to 50% by weight of polyester and from 50 to 100% by weight of viscose.

16. A glove according to claim 14, **characterised in that** it consists of 100% viscose.

17. A glove according to claims 1-16, **characterised in that** the impermeable material possibly present is an impermeable polymeric material which may possibly also be transpiring.

18. A glove according to claim 17, **characterised in that** said material is either biodegradable or water-soluble.

19. A glove according to any of the claims 17 and 18, **characterised in that** said impermeable material is a polyethylene film.

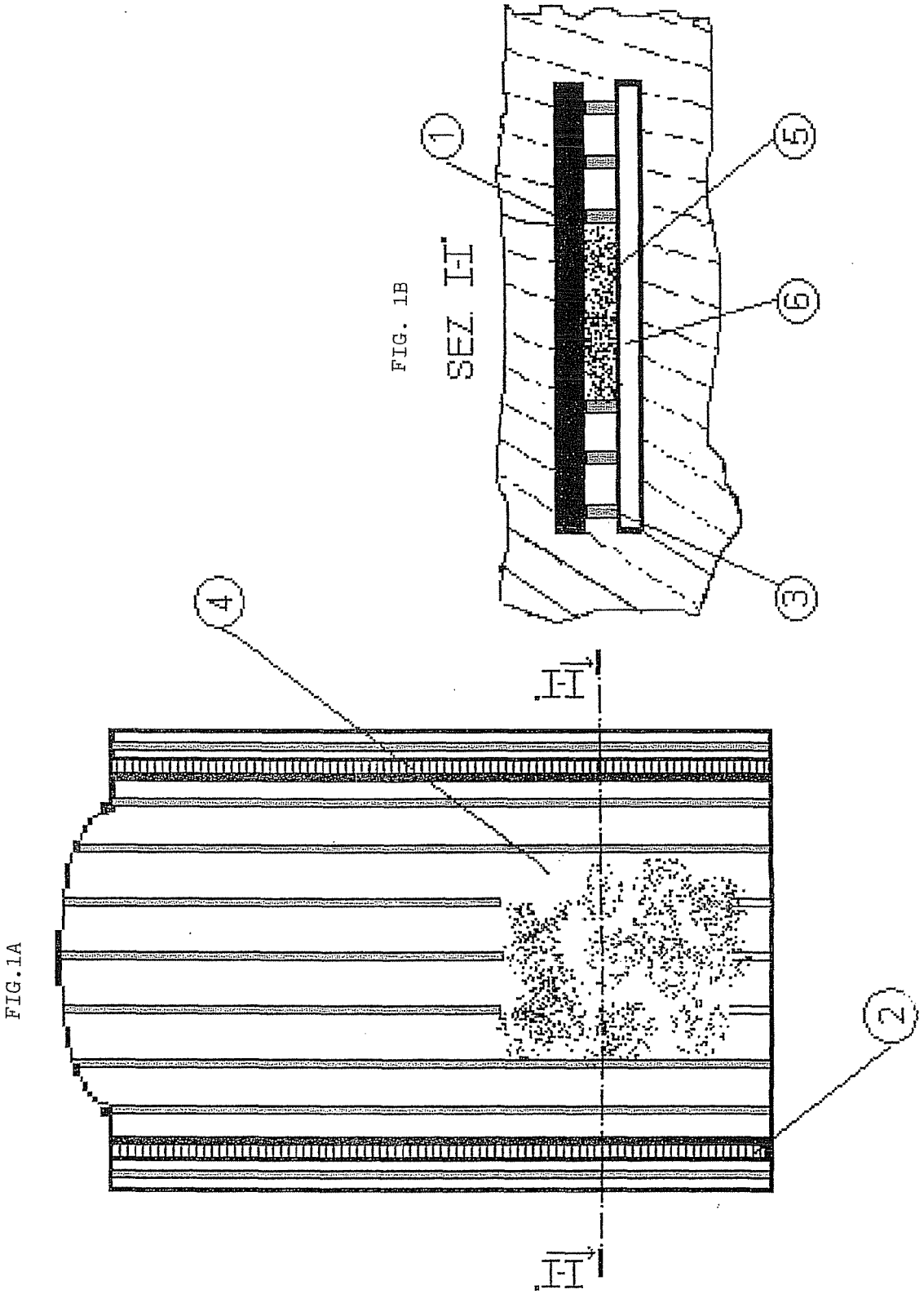


FIG.1A
FIG. 1B
SEZ. I-I'
1
2
3
4
5
6
I
I
I
I

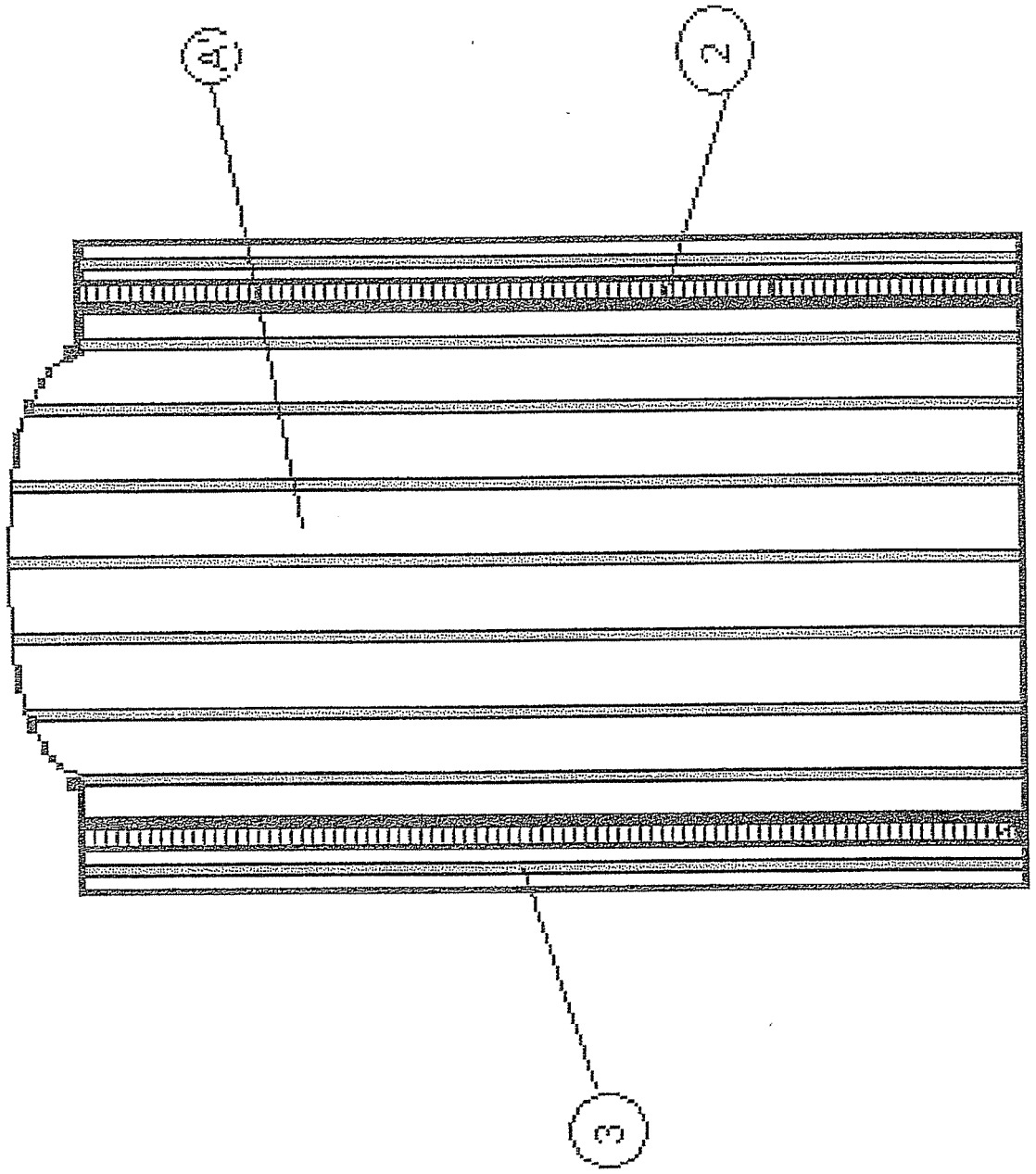


FIG. 2

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- IT 1326649 **[0009]**