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(54) Thick glove, equipped with means for facilitating the hand articulation

(57) An elastic or semi-elastic glove (1) is described, comprising an extrados surface from the hand back side and an intrados surface from the hand palm side, of a type particularly adapted in the foodstuff field, that has means (5, 6) for facilitating the hand articulation.

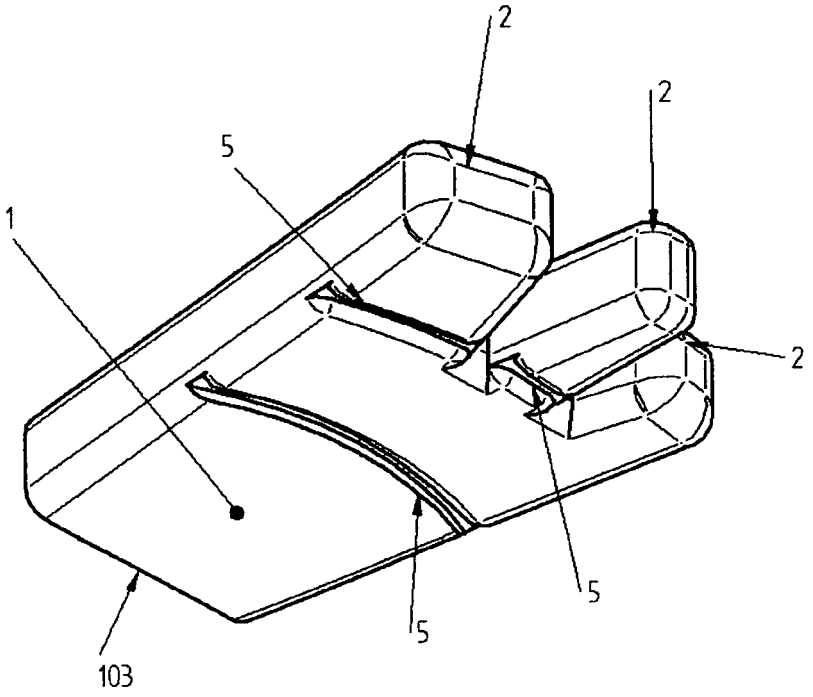

Fig. 3

EP 1 915 915 A2

Description

[0001] The present invention relates to a very thick glove, equipped with mechanical characteristics that facilitate its use. In particular, the invention is adapted to be used in the foodstuff field and for handling hot objects such as vessels for cooking foods.

[0002] The prior art deals with: gloves in general (A41D19/00: Gloves); instruments and accessories in surgery (A61B19/00: Instruments, implements or accessories for surgery or diagnosis); moulding technique (B29C41/14: Shaping by coating a mould, core or other substrate); sport accessories (A63B71: Games or sports accessories).

[0003] In the above cited categories, the glove for both hands can be found, used in a kitchen for handling objects when cooking, freezing and storing foodstuff, made of a very thick homogeneous material (about 5 millimetres), that is partially or completely elastic.

[0004] The prior art, represented by document US3148235, anticipates both the shape of the glove with three fingers and the use of an elastomer (Adiprene made by DuPont), Teflon, or silicone.

[0005] From the mechanics point of view, a glove made of very thick elastic homogeneous material is subjected to difficulties in moving the fingers of a hand, due to its high thickness and stiffness.

[0006] The solution of this problem is the object of the invention, that discloses a new glove, in particular a kitchen glove, which has slits or ribs arranged as bellows, said slits or ribs being adapted to concentrate, along their geometry, the necessary elastic hinge for rotating the glove portions, limiting or removing its uncontrolled distortion.

[0007] According to US 6,223,551, a vessel of a thermal substance capable of modifying its own status from liquid to solid by decreasing the temperature, is composed of a series of regularly-shaped cells 3, 8 shown in the drawing in Fig. 1, whose junction edges 5, 6, 10, 11 are kept flexible when the temperature changes, enabling the mutual rotation of said stiffened cells 3, 8.

[0008] Starting from the above described known prior art, the flexibility function of the elastic hinge is translated to a glove, as claimed in claim 1, made of very thick elastic and homogeneous material, therefore free from additional elements, in particular of the type used in a kitchen, equipped with tubular recesses for containing the fingers of a hand, at least one surface edge of the glove being equipped with a slit or a groove that is able to perform the function of an elastic joint or elastic hinge as regards the edge of section of glove surface when moving the hand, in particular in the step of moving fingers and palm of the hand.

[0009] The glove of the invention is described in detail with reference to the enclosed drawings:

- figure 3 and figure 6: axonometric views of a glove comprising means 5 and 6 adapted to facilitate the movement of fingers and palm of a hand;
- figure 4 and figure 7: sectional views of the glove equipped with means 5 and 6 for facilitating the articulation;
- figure 5 and figure 8: plan views of the glove in the two provided embodiments.

[0010] A glove 1 is delimited by an external surface, that is smooth or equipped with protuberances or microprojections, adapted to ensure gripping the objects, and by an internal surface, that is smooth or coated with a layer of material for protecting the hand skin. The glove 1 is made of an elastic, homogeneous, very thick (about 3 - 5 mm) material and is composed of: a tubular portion 103 in which palm and back of a hand are housed; several tubular recesses 2 closed at their ends, projecting from the tubular portion 103, whose number is equal to or less than the number of fingers. A glove of the present invention has the known shapes with two, three or five tubular recesses 2.

[0011] The intrados glove surface is equipped with one or more slits 5 next to the hand articulation along palm and fingers. A variation of the invention provides, in place of the slit 5, a bellows-shaped elastic joint or elastic hinge 6 composed of several parallel slits 5 that are mutually in contact.

[0012] Both slit 5 and bellows hinge 6 can operate on the external surface or on the internal surface or on both glove surfaces.

[0013] In order to allow using the glove with both hands, also the extrados surface is equipped with a slit 5 or bellows-type hinge 6 in the same way provided for the intrados surface.

[0014] A further variation of the invention provides for realizing means 5, 6 for facilitating the hand articulation, inside the glove, thereby obtaining the advantage of keeping an external surface free from irregularities.

[0015] The glove 1 equipped with means 5, 6 for facilitating the hand articulation, is preferably made of elastic deformable material, of the type known in the foodstuff field according to directives in force. In particular, reference is made to a thermoplastic, silicone, elastomer material; namely: platinum silicone, particularly adapted for freezing at -50°C and cooking at 300°C; peroxide silicone; elastomer adapted for cooking at 300°C and freezing at -50°C.

[0016] Thermoplastic materials or elastomers, containing thermo-coloured pigments, allow making a glove 1 with elastic hinges 5, 6 that is able to point out the temperature of the environment in which the glove is immersed or the temperature of the object with which it is in contact.

[0017] Thermoplastic materials or elastomers, suitably treated in the vulcanising step (dynamic vulcanising), able to capture and keep air with the result of obtaining a light and insulating structure, allow making a glove 1 with elastic hinges 5, 6 with better insulating and lightness characteristics.

[0018] Thermoplastic materials or elastomers, worked

in plates and suitably pre-moulded and assembled with glass fabric, allow making a glove 1 with elastic hinges 5, 6 with high mechanical characteristics for resisting engraving with cutting objects.

Claims

1. Elastic or semi-elastic glove (1) comprising an extrados surface from the hand back side and an intrados surface from the hand palm side, of a type particularly adapted in the foodstuff field, **characterised in that** it has means (5, 6) for facilitating the hand articulation.

2. Glove (1) according to claim 1, **characterised in that** the intrados surface is equipped with at least one slit (5) next to the hand articulation.

3. Glove (1) according to claim 2, **characterised in that** the slit (5) operates as elastic hinge of the two sections of intrados surface of the glove joined to said slit (5).

4. Glove (1) according to claim 1, **characterised in that** the intrados surface is equipped with at least one bellows-shaped hinge (6) next to the hand articulation.

5. Glove (1) according to any one of the previous claims, **characterised in that** said means (5, 6) for facilitating the hand articulation affect the extrados surface of the glove, in addition to the intrados surface.

6. Glove (1) according to any one of the previous claims, **characterised in that** said means (5, 6) for facilitating the hand articulation are made inside the glove (1) keeping the external surface of the glove free from irregularities.

7. Glove (1) according to any one of the previous claims, **characterised in that** it is made of thermoplastic material.

8. Glove (1) according to any one of the previous claims 1 to 6, **characterised in that** it is made of silicone or platinum silicone or peroxide silicone.

9. Glove (1) according to any one of the previous claims 1 to 6, **characterised in that** it is made of elastomer material.

10. Glove (1) according to any one of the previous claims, **characterised in that** it is made of elastic material adapted for cooking at 300°C and for freezing at -50°C.

11. Glove (1) according to any one of the previous claims, **characterised in that** thermo-colouring pigments, adapted to point out the temperature of the environment in which they are immersed or to point out the temperature of the material with which they are in contact, compose the basic material.

12. Glove (1) according to claim 7 or 11, **characterised in that** it is adapted to be subjected to a dynamic vulcanising treatment of a type capable of capturing and keeping air, obtaining a light and insulating structure.

13. Glove (1) according to any one of the previous claims, **characterised in that** it is adapted to be made by joining it with glass fabric, obtaining a material with high mechanical characteristics of resistance to engraving with cutting objects.

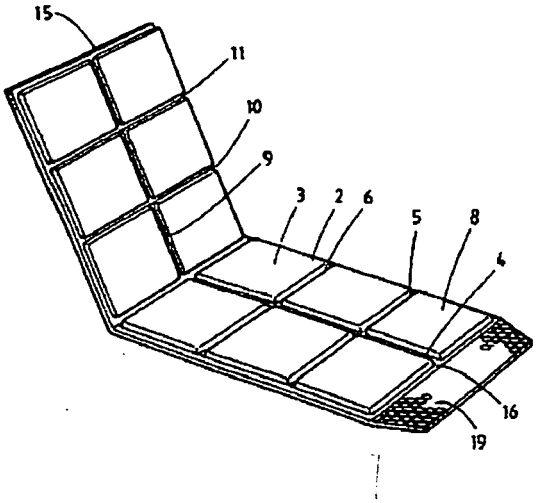

Fig. 1

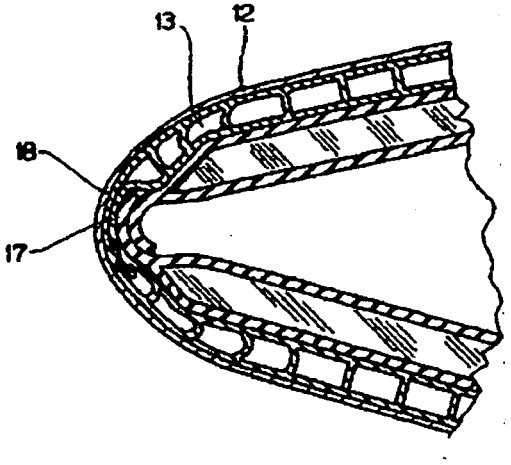

Fig. 2

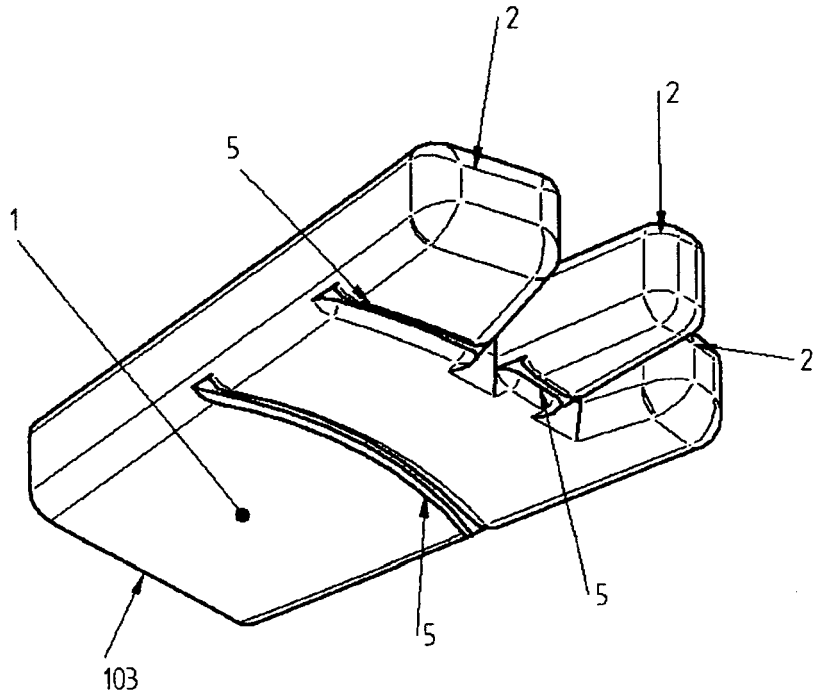

Fig. 3

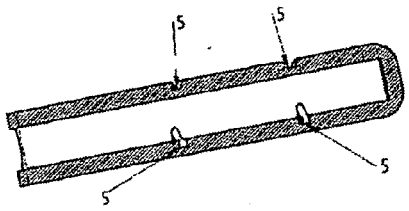

Fig. 4

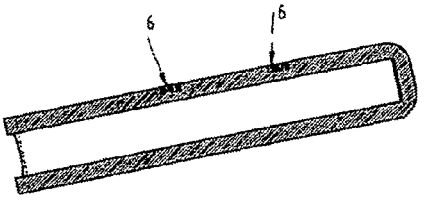

Fig. 7

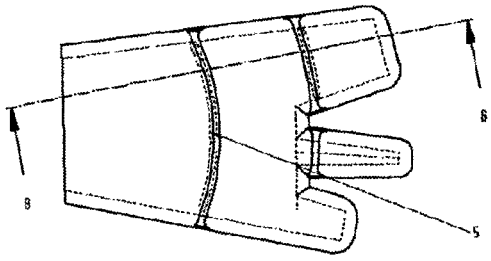

Fig. 5

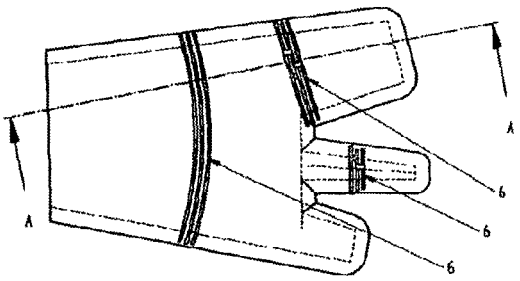

Fig. 8

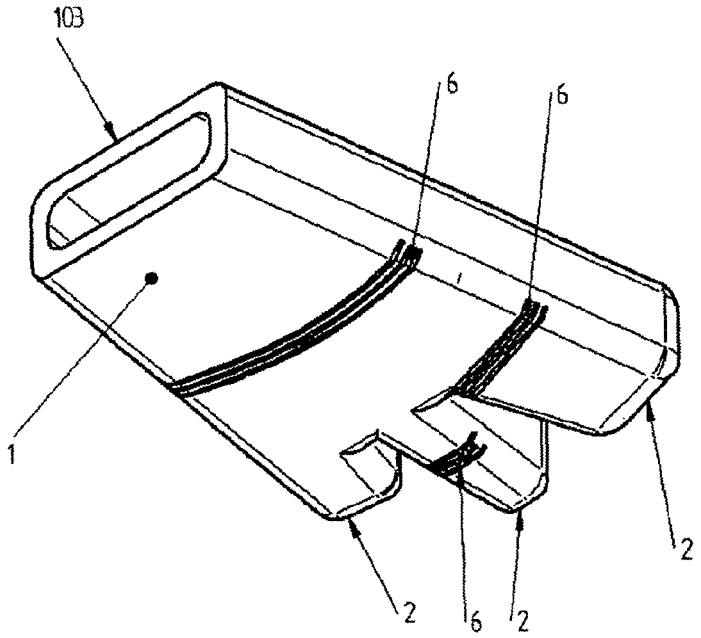

Fig. 6

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 3148235 A **[0004]**
- US 6223551 B **[0007]**