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(54) Refuse container

(57) A refuse container (1) comprises a base (2), a standing body peripheral wall (3), a cover (5) which fits with its peripheral edge (6) onto the upper edge (7) of the body peripheral wall (3) and is coupled releasably thereto by means of coupling means (8), which cover (5) is provided with at least one opening (9,10,11).

The body peripheral wall (3) and the cover peripheral wall (12) each take the general form of an upward tapering truncated cone.

The coupling means (8) are embodied such that they can clampingly hold the mouth edge of a plastic refuse bag (14).

The base (2) can be weighted by means of a weight, for instance an element of concrete, iron and/or lead.

The base (2), the body (3) and the cover (5) can be releasable and nestable with a similar base (2), body (3) and/or cover (5).

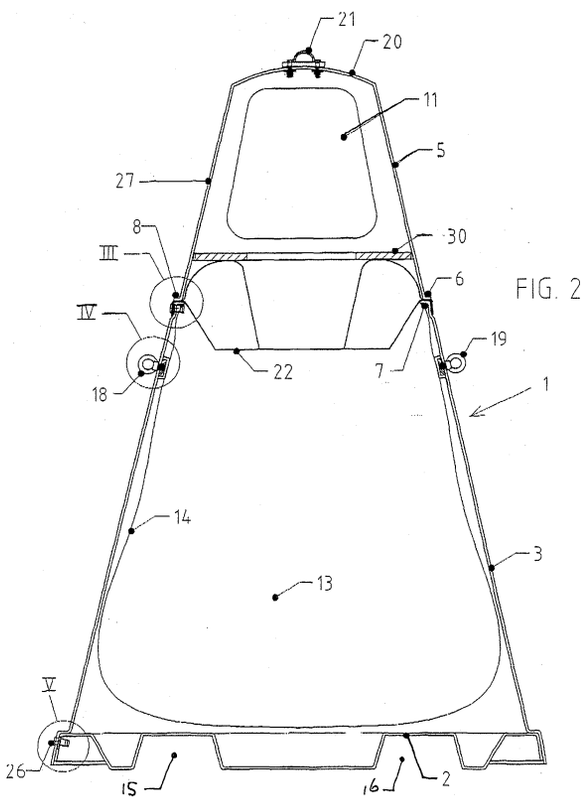

FIG. 2

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Description

[0001] The invention relates to a refuse container, comprising:

a base;
a body with a standing body peripheral wall, the lower edge of which is optionally coupled releasably to the base;
a cover which fits with its peripheral edge onto the upper edge of the body peripheral wall and is coupled releasably thereto by means of coupling means;

which cover is provided with at least one opening providing access to the space inside the container. Such a refuse container is known and in general use.

[0002] It is an object of the invention to provide a refuse container which has improved stability.

[0003] It is a further object of the invention to provide a refuse container which has an aesthetically more attractive appearance than known refuse containers.

[0004] It is a further object of the invention to provide a refuse container which is mechanically strong and thus vandal-proof.

[0005] In respect of the above stated objectives the refuse container according to the invention has the feature that the body peripheral wall takes the general form of an upward tapering truncated cone;

the cover has a cover peripheral wall and a closed upper wall, which cover peripheral wall takes the general form of an upward tapering truncated cone;

the or each opening is present in the cover peripheral wall; and

the coupling means are embodied such that they can clampingly hold the mouth edge of a plastic refuse bag, which refuse bag fits in the filled state into the bin formed by the base and the body.

[0006] An aesthetically attractive appearance is obtained with a variant in which the conicity of the body peripheral wall and that of the cover peripheral wall are substantially the same.

[0007] With a view to a relatively large contact surface area between the cover and the body, the container according to the invention can have the special feature that the cover peripheral wall is positioned a little to the inside relative to the body peripheral wall.

[0008] According to another aspect of the invention, the container has the feature that a number of, preferably three, openings are present in angularly equidistant arrangement in the cover.

[0009] An attractive appearance is obtained with a variant in which the form of the or each opening in vertical side view more or less corresponds with the truncated cone shape of the cover peripheral wall, has more or less the form of an isosceles trapezium and has rounded corners.

[0010] With a view to a still further improved stability and vandal-resistance, the container can have the special feature that the base is weighted with a weight, for instance an element of concrete, iron and/or lead.

[0011] Easily transportable is a variant which has the feature that the base has on its outer surface two mutually parallel channels open to the outside in which the two prongs of a forklift truck can engage in order to lift the refuse container.

[0012] So as to ensure that, during the gradual filling of the plastic refuse bag, the air in the space between the bag and the base and the body peripheral wall can escape, the container can advantageously have the special feature that the body peripheral wall has at least one perforation, which is present in the lower zone of this wall.

[0013] A light but nevertheless mechanically very strong construction is obtained with an embodiment in which the base, the body and/or the cover are manufactured from plastic optionally reinforced with glass fibre, such as polyester, polyethylene (PE), polypropylene (PP) or ABS.

[0014] In a specific embodiment the container has the special feature that two lifting eyes situated diagonally opposite each other are placed on the outer side of the body peripheral wall.

[0015] According to a specific aspect of the invention, this latter container can have the feature that the lifting eyes are releasable.

[0016] According to yet another aspect of the invention, the container has the feature that a lifting eye is arranged in the centre of the upper wall of the cover.

[0017] The latter mentioned variants have in common that they facilitate the transportability of the container according to the invention. A very universal container is obtained with an embodiment in which said lifting and transport provisions are combined.

[0018] With a view to space-saving transport, the base and body are releasable and the container further has the special feature that the base, the body peripheral wall and the cover are nestable with respectively a similar base, body peripheral wall and cover.

[0019] With this variant a relatively large number of non-assembled containers can be transported in stacks of components and be assembled only at or in the vicinity of the final location.

[0020] According to yet another aspect of the invention, the container is characterized by an annular tray which rests on the upper edge of the body peripheral wall and is held in position by the coupling means, and which serves as flame extinguisher and is manufactured from metal, such as steel or aluminium.

[0021] In order to minimize the contact pressure between the lower edge of the cover and the mouth edge of the body and ensure easy clamping of said flame-extinguishing annular tray and the mouth edge of a plastic refuse bag, the container can have the special feature according to a final aspect of the invention that the lower surface of the lower edge of the cover and the upper

surface of the mouth edge of the body are substantially flat and mutually overlap over at least a substantial surface.

[0022] In the case where the base, the body and/or the cover are manufactured from plastic, the container can have the special feature that the base, the body and/or the cover are manufactured by injection moulding or rotation moulding.

[0023] The invention will now be elucidated with reference to the annexed drawings and an exemplary embodiment, to which the invention is not limited.

[0024] In the drawings:

Fig. 1 shows a front view of a refuse container 1;
Fig. 2 shows a vertical cross-section along the line II-II in Fig. 1.
Fig. 3 shows the detail III of Fig. 2 on enlarged scale;
Fig. 4 shows the detail IV of Fig. 2 on enlarged scale; and
Fig. 5 shows the detail V of Fig. 2 on enlarged scale.

[0025] Container 1 comprises a base 2, a body with a standing body peripheral wall 3, the lower edge 4 of which is connected to base 2. The container further comprises a cover 5 which fits with its peripheral edge 6 onto upper edge 7 of the body peripheral wall 3 and can be coupled releasably thereto by means of coupling means 8 to be described hereinbelow (see also Fig. 3). Cover 5 is provided with three openings 9, 10, 11 which are placed angularly equidistantly and which provide access to the space 13 inside the container.

[0026] Both the body peripheral wall 3 and cover peripheral wall 12 take the form of an upward tapering truncated cone.

[0027] The connection between upper edge 7 and peripheral edge 6 is embodied such that in use the mouth edge of a plastic refuse bag 14 is clamped therebetween.

[0028] As shown in Fig. 1 and 2, the conicity of body peripheral wall 3 and that of cover 5 are substantially the same. The peripheral wall of cover 5 does however lie a little to the inside relative to body peripheral wall 3. The reason for this will be further elucidated with reference to Fig. 3.

[0029] The form of openings 9, 10 and 11 correspond in vertical side view more or less to the truncated cone shape of peripheral wall 27 of cover 5. They therefore have a more or less isosceles trapezium shape and in addition have rounded corners.

[0030] Base 2 has two mutually parallel channels 15, 16 open to the bottom, in which the prongs of a forklift truck can engage to lift refuse container 1. If desired, the base can also be weighted by a concrete mass poured therein and subsequently cured.

[0031] The body peripheral wall 4 has three perforations, all designated with 17.

[0032] Base 2, body 3 and cover 5 can be manufactured from polyester, for instance by making use of a rotomoulding process. For extra strength and impact-resistance said components can be reinforced with glass fibre.

[0033] Placed in this embodiment on the outside of body peripheral wall 3 are two lifting eyes 18, 19 located diagonally opposite each other. In this respect reference is also made to Fig. 4 to be discussed hereinbelow.

[0034] A lifting eye 21 is fixed in the centre of the closed upper wall 20 of cover 5.

[0035] Fig. 2 shows that an annular tray 22 serving as flame extinguisher rests on the upper edge 7 of body peripheral wall 3. This tray is manufactured from metal, for instance steel or aluminium. Lying on this annular tray 22 is a flat ring 30 which ensures that all refuse thrown in through refuse openings 9, 10, 11 falls into space 13. Ring 30 can consist of any suitable material, such as a plastic or metal.

[0036] Fig. 3 shows that lower edge 6 of cover 5 and mouth edge 7 of body peripheral wall 3 are both flat and mutually overlap over a substantial surface area. Fig. 3 also shows that annular tray 22 and the mouth edge of refuse bag 14 are both clamped between these edges 6 and 7. The coupling takes place by making use of three (in, the drawing only one is shown) quarter-turn clamping locks 23.

[0037] Fig. 4 shows that the two lifting eyes 18 (and 19) are arranged by means of a screw bolt 24 in a threaded hole 25 and are thus detachable. The threaded hole is formed in a thickened part 28 of body peripheral wall 3.

[0038] Fig. 5 shows that base 2 and body peripheral wall 3 are mutually connected by means of three (in the drawing only one is drawn) quarter-turn clamping locks 26.

Claims

1. Refuse container, comprising:

a base;
a body with a standing body peripheral wall, the lower edge of which is optionally coupled releasably to the base;
a cover which fits with its peripheral edge onto the upper edge of the body peripheral wall and is coupled releasably thereto by means of coupling means;
which cover is provided with at least one opening providing access to the space inside the container;

characterized in that

the body peripheral wall takes the general form of an upward tapering truncated cone;

the cover has a cover peripheral wall and a closed upper wall, which cover peripheral wall takes the general form of an upward tapering truncated

cone;

the or each opening is present in the cover peripheral wall; and

the coupling means are embodied such that they can clampingly hold the mouth edge of a plastic refuse bag, which refuse bag fits in the filled state into the bin formed by the base and the body.

2. Refuse container as claimed in claim 1,
characterized in that
the conicity of the body peripheral wall and that of the cover peripheral wall are substantially the same.

3. Refuse container as claimed in claim 2,
characterized in that
the cover peripheral wall is positioned a little to the inside relative to the body peripheral wall.

4. Refuse container as claimed in claim 1,
characterized in that
a number of, preferably three, openings are present in angularly equidistant arrangement in the cover.

5. Refuse container as claimed in claim 1,
characterized in that
the form of the or each opening in vertical side view more or less corresponds with the truncated cone shape of the cover peripheral wall, has more or less the form of an isosceles trapezium and has rounded corners.

6. Refuse container as claimed in claim 1,
characterized in that
the base is weighted with a weight, for instance an element of concrete, iron and/or lead.

7. Refuse container as claimed in claim 1,
characterized in that
the base has on its outer surface two mutually parallel channels open to the outside in which the two prongs of a forklift truck can engage in order to lift the refuse container.

8. Refuse container as claimed in claim 1,
characterized in that
the body peripheral wall has at least one perforation, which is present in the lower zone of said wall.

9. Refuse container as claimed in claim 1,
characterized in that
the base, the body and/or the cover are manufactured from plastic optionally reinforced with glass fibre, such as polyester, polyethylene (PE), polypropylene (PP) or ABS.

10. Refuse container as claimed in claim 1,
characterized in that
two lifting eyes lying diagonally opposite each other are placed on the outer side of the body peripheral wall.

11. Refuse container as claimed in claim 10,
characterized in that
the lifting eyes are releasable.

12. Refuse container as claimed in claim 1,
characterized in that
a lifting eye is arranged in the centre of the upper wall of the cover.

13. Refuse container as claimed in claim 1,
characterized in that
the base, the body peripheral wall and the cover are nestable with respectively a similar base, body peripheral wall and cover.

14. Refuse container as claimed in claim 1,
characterized by
an annular tray which rests on the upper edge of the body peripheral wall and is held in position by the coupling means, and which serves as flame extinguisher and is manufactured from metal, such as steel or aluminium.

15. Refuse container as claimed in claim 1,
characterized in that
the lower surface of the lower edge of the cover and the upper surface of the mouth edge of the body are substantially flat and mutually overlap over at least a substantial surface.

16. Refuse container as claimed in claim 9,
characterized in that
the base, the body and/or the cover are manufactured by injection moulding or rotation moulding.

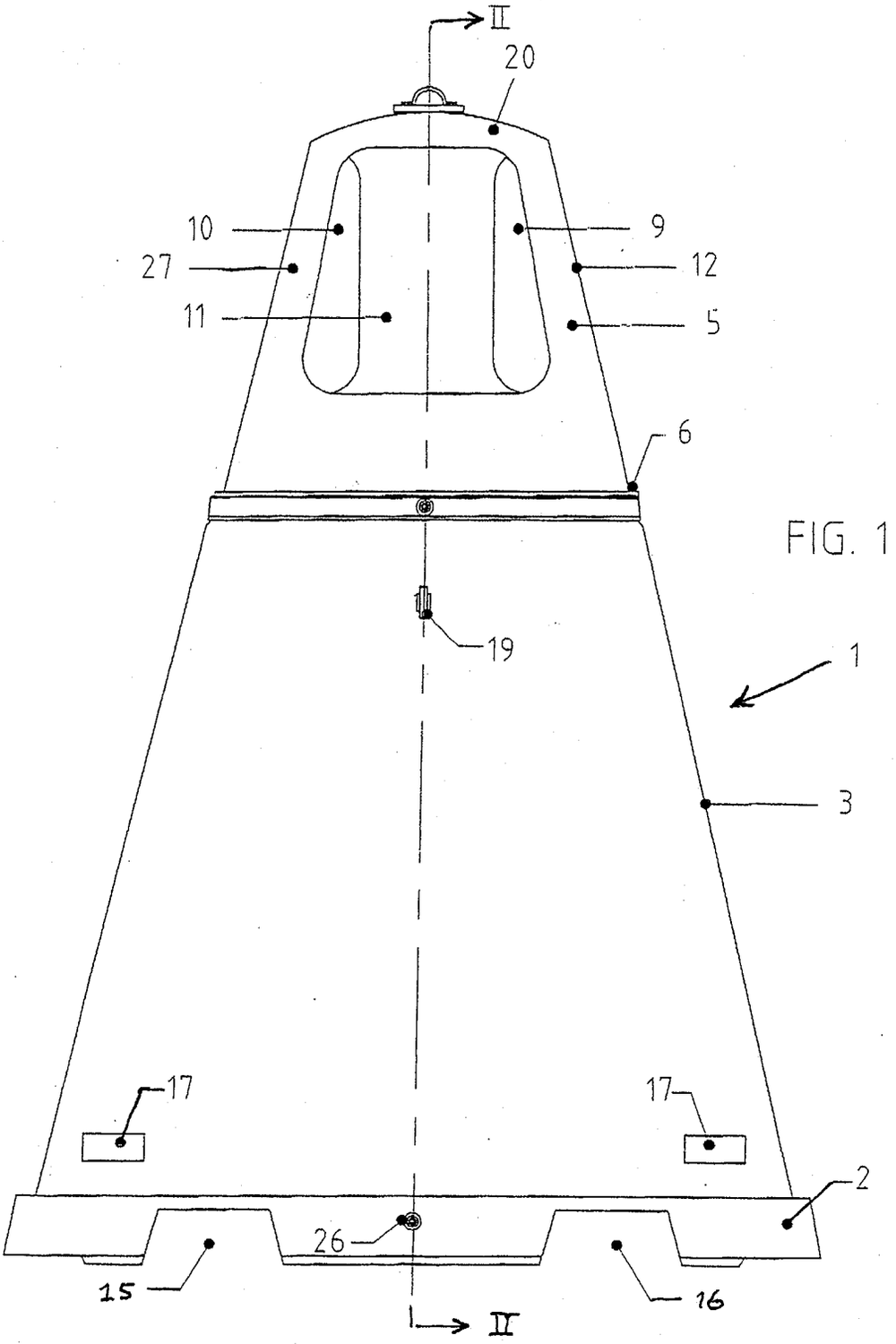

FIG. 1

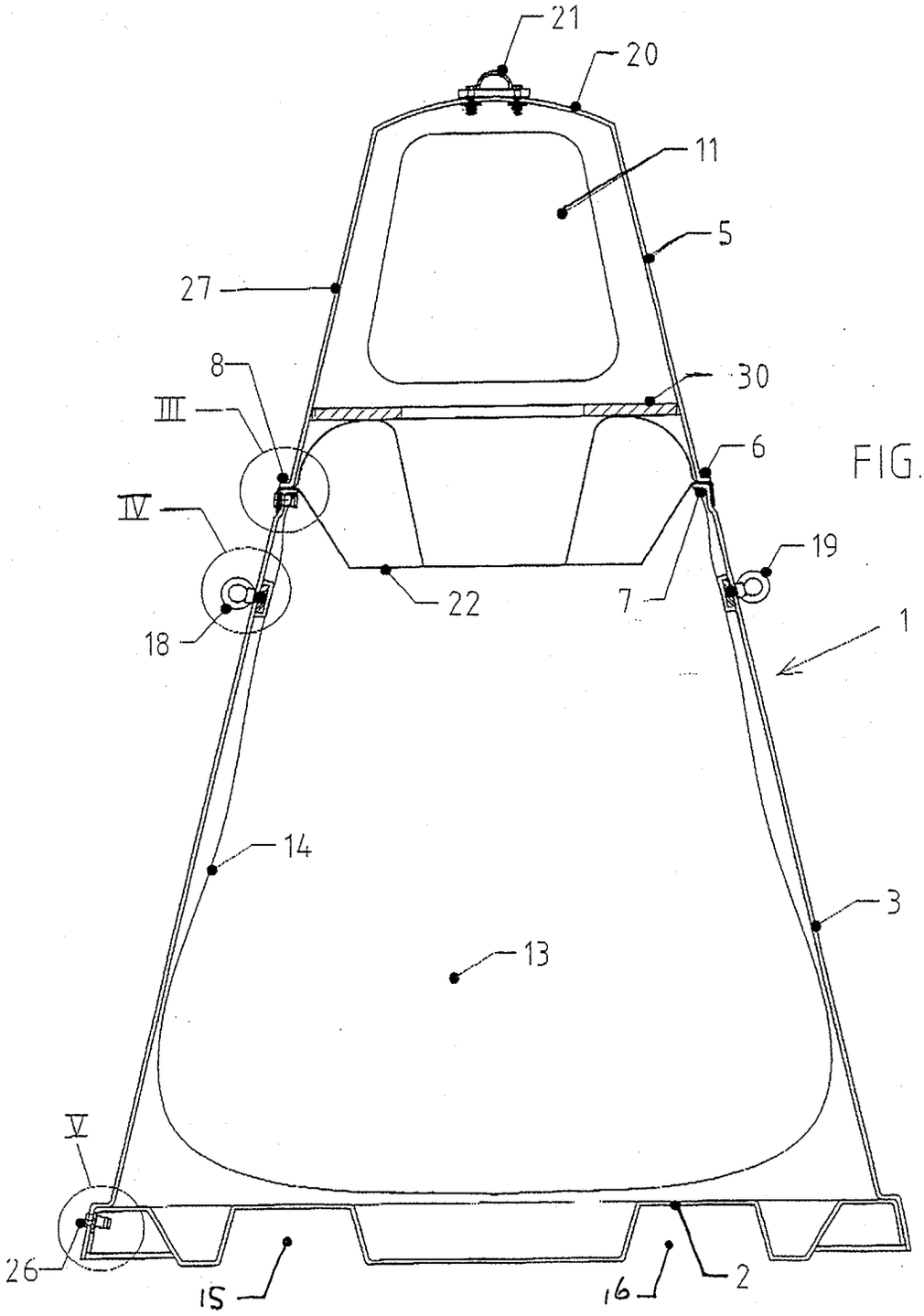

FIG. 2

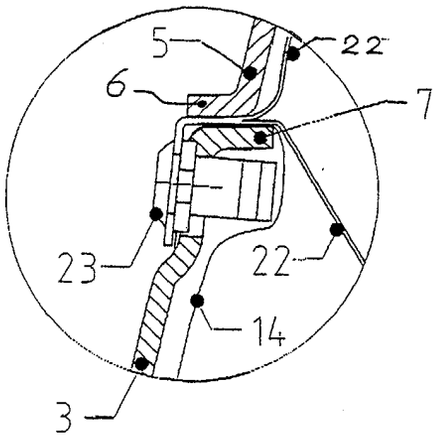

FIG. 3

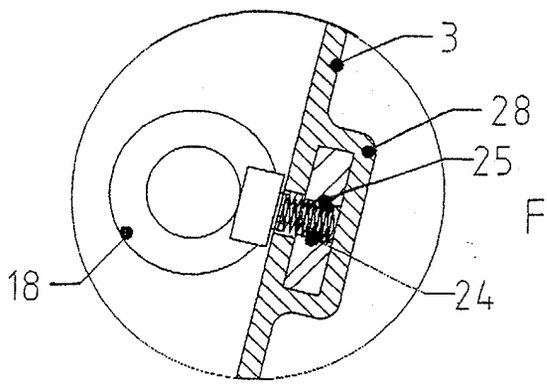

FIG. 4

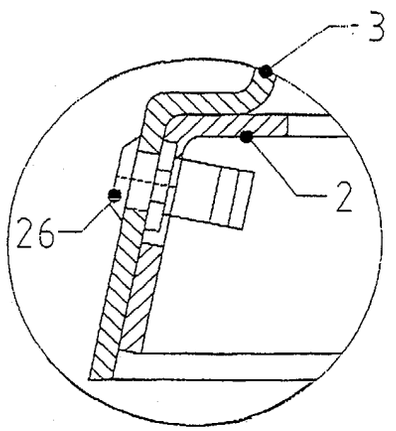

FIG. 5

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EUROPEAN SEARCH REPORT

Application Number
EP 04 07 5937

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	14 September 2004	Smolders, R

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