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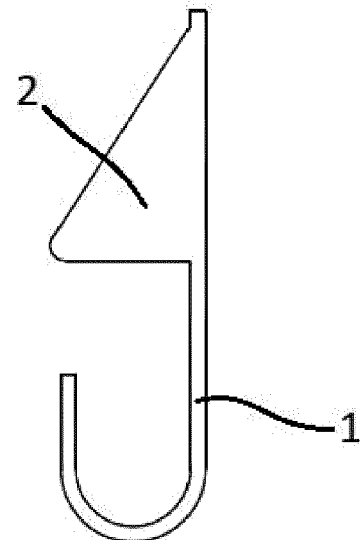
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(54) **A BUCKET HOOK WITH A SAFETY DEVICE AND A LADDER WITH SUCH A BUCKET HOOK**

(57) A bucket hook (1) comprising a safety device (2; 7) is disclosed, which safety device comprises one or more parts extending in a forward direction from a shank of the bucket hook in such a way that items approaching the bucket hook from above are forced to pass the bucket hook without being caught by it. Furthermore, a ladder (6) comprising one or more such bucket hooks (1) is disclosed.



**Fig. 1b**

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## Description

**[0001]** The present invention relates to a bucket hook with a safety device, particularly for being used with a ladder, and to a ladder with such a safety hook.

## Background of the invention

**[0002]** It is well-known to use bucket hooks of different kinds on ladders, onto which bucket hooks a painter or another professional or private workman can hang a bucket of paint or other materials while working. This allows the person on the ladder to work without using a hand for holding the bucket or the other material or climbing up and down the ladder time after time.

**[0003]** It is, however, also a well-known problem, especially with bucket hooks mounted near the top of trestle ladders, that parts of the clothing may be caught by a bucket hook, which may cause the person on the ladder to lose his/her balance and fall down from it or maybe even may cause the ladder and everything on it to overturn.

## Brief description of the invention

**[0004]** It is an object of the present invention to provide a bucket hook, which overcomes the above-mentioned disadvantages of bucket hooks known in the art.

**[0005]** The present invention relates to a bucket hook comprising a safety device, which safety device comprises one or more parts extending in a forward direction from a shank of the bucket hook in such a way that items approaching the bucket hook from above are forced to pass the bucket hook without being caught by it.

**[0006]** In an embodiment of the invention, the safety device comprises one or more parts extending in a forward direction from one or both sides of the shank of the bucket hook, which parts have inclined upper edges or surfaces forcing items moving downward along these edges or surfaces to pass in front of the bent part of the bucket hook rather than being caught by it, and wherein a gap between the forward-extending parts of the safety device and the bent part of the bucket hook allows a bucket handle or the like to enter the bent part of the bucket hook from the front thereof.

**[0007]** In an embodiment of the invention, the safety device comprises one or more parts extending in a forward direction from the top of the shank of the bucket hook, which parts have inclined upper edges or surfaces forcing items moving downward along these edges or surfaces to pass in front of the bent part of the bucket hook rather than being caught by it, and wherein a gap between the forward-extending parts of the safety device and the bent part of the bucket hook allows a bucket handle or the like to enter the bent part of the bucket hook from the front thereof.

**[0008]** Letting forward extending parts lead items around the bent part of the bucket hook is a simple but

reliable way of ensuring that items are not caught by the bucket hook by mistake.

**[0009]** In an embodiment of the invention, the safety device and the shank of the bucket hook are formed as one integrated part.

**[0010]** By forming the safety device and the shank as one integrated part, the number of parts and the production costs are reduced.

**[0011]** In an embodiment of the invention, the safety device and the shank of the bucket hook are formed as two or more separate parts.

**[0012]** Forming the safety device and the shank as two or more separate parts allows for retrofitting the safety device to an already existing bucket hook.

**[0013]** In an embodiment of the invention, the bucket hook further comprises one or more mounting holes through its shank.

**[0014]** The use of one or more mounting holes allows for mounting the bucket hook by simple means, such as one or more screws or bolts.

**[0015]** In an embodiment of the invention, one or more parts of the bucket hook is produced from a metal.

**[0016]** The use of metal allows for simple and cost-effective production of bucket hooks with high strength.

**[0017]** In an aspect of the invention, it relates to a ladder comprising one or more bucket hooks as described above.

## The drawings

**[0018]** In the following, a few exemplary embodiments of the invention are described in further detail with reference to the figures, of which

Fig. 1a illustrates a piece of metal to be bent to form a bucket hook according to a first embodiment of the invention,

Fig. 1b is a side view of a bucket hook formed by the piece of metal in Fig. 1a,

Fig. 1c is a front view of a bucket hook formed by the piece of metal in Fig. 1a,

Fig. 2 shows a ladder comprising a bucket hook as the one shown in Figs. 1b and 1c,

Fig. 3a illustrates a piece of metal to be bent to form a safety device of a bucket hook according to a second embodiment of the invention,

Fig. 3b is a side view of a safety device formed by the piece of metal in Fig. 3a, and

Fig. 4 shows a ladder comprising a bucket hook with a safety device as the one shown in Figs. 3b.

## Detailed description of the invention

**[0019]** Fig. 1a illustrates a piece of metal, which can be bent to form a bucket hook 1 according to a first embodiment of the invention. The bent part of the bucket hook 1 is formed by making a soft bending of approximately 180° along the first bending line 4. For most purposes, a bending diameter of between 12 mm and 20 mm, such as 15 mm, will be appropriate.

**[0020]** By bending the piece of metal approximately 90° along the two second bending lines 5, two side-mounted and forward-extending parts 2 of the safety device in the form of triangular flanges can be obtained. Thus, this embodiment of the bucket hook 1 is formed from on single part.

**[0021]** Figs. 1b and 1c are a side view and a front view, respectively, of a bucket hook 1 formed from the piece of metal shown in Fig. 1a. The inclining upper edges of the side-mounted parts 2 of the safety device are seen clearly in Fig. 1b. If an item approaches the bucket hook 1 from above, these upper edges force it in a forward direction and prevent it from being caught by the bucket hook 1. At the same time, the gap between the side-mounted parts 2 of the safety device and the tip of the bucket hook 1 allows a person to hang something from the bucket hook 1 by entering it from the front thereof.

**[0022]** Typically, a bucket hook 1 according to the invention will have a width of between 15 mm and 25 mm, such as 18 mm, and a height of between 50 mm and 80 mm, such as 70 mm.

**[0023]** Figs. 1a and 1c further illustrate how the bucket hook 1 can be provided with a mounting hole 3 through its shank allowing it to be easily mounted onto, for instance, a ladder or a wall. For most purposes, a diameter of the mounting hole 3 of between 4 mm and 6 mm will be appropriate.

**[0024]** Fig. 2 shows the top of a ladder 6 comprising a bucket hook 1 as the one shown in Figs. 1a-1c.

**[0025]** Fig. 3a illustrates a piece of metal, which can be bent to form a safety device part 7 of a bucket hook 1 according to a second embodiment of the invention. The safety device according to this embodiment is obtained by making a soft 180° bending along the third bending line 8 with a radius of approximately 8 mm and by making a bending of approximately 30° along the fourth bending line 9. Fig. 3b is a side view of the safety device part 7 obtained by bending the piece of metal in Fig. 3a like described. Fig. 3a further illustrates how the safety device part 7 in this embodiment is provided with a mounting hole 3, typically with a diameter of about 10 mm.

**[0026]** Fig. 4 shows the top of a ladder 6 comprising a bucket hook 1 with a safety device as the one shown in Figs. 3a and 3b. In this embodiment, the safety device part 7 and the rest of the bucket hook 1 are formed as two separate parts, which means that the safety device part 7 may be retrofitted to a ladder 6 already having a bucket hook 1 without such a safety device.

**[0027]** Fig. 4 shows how an item approaching the bucket hook 1 from above will be forced in a forward direction by the safety device part 7 and, thus, be prevented from being caught by the bucket hook 1. At the same time, the gap between the top-mounted part 7 of the safety device and the tip of the bucket hook 1 allows a person to hang something from the bucket hook 1 by entering it from the front thereof.

**[0028]** It should be noted that the scope of the invention as described in the claims is not restricted to bucket hooks 1 with integrated side-mounted parts 2 or separate top-mounted parts 7 as shown in the drawings and described above as all forms of safety devices according to the invention may be formed as either integrated or separate parts.

## List of reference numbers

### [0029]

1. Bucket hook
2. Side-mounted safety device part
3. Mounting hole
4. First bending line
5. Second bending line
6. Ladder
7. Top-mounted safety device part
8. Third bending line
9. Fourth bending line

## Claims

1. A bucket hook (1) comprising a safety device (2; 7), which safety device comprises one or more parts extending in a forward direction from a shank of the bucket hook in such a way that items approaching the bucket hook from above are forced to pass the bucket hook without being caught by it, wherein the safety device comprises one or more parts (2) extending in a forward direction from one or both sides of the shank of the bucket hook and/or one or more parts (7) extending in a forward direction from the top of the shank of the bucket hook, which parts (2; 7) have inclined upper edges or surfaces forcing items moving downward along these edges or surfaces to pass in front of the bent part of the bucket hook rather than being caught by it, and wherein a gap between the forward-extending parts of the safety device and the bent part of the bucket hook allows a bucket handle or the like to enter the bent part of the bucket hook from the front thereof.
2. The bucket hook according to claim 1, wherein the safety device and the shank of the bucket hook are formed as one integrated part.
3. The bucket hook according to claim 1, wherein the

safety device and the shank of the bucket hook are formed as two or more separate parts.

4. The bucket hook according to any of the preceding claims further comprising one or more mounting holes through its shank. 5
5. The bucket hook according to any of the preceding claims, wherein one or more parts of the bucket hook is produced from a metal. 10
6. A ladder (6) comprising one or more bucket hooks (1) according to any of the preceding claims. 15

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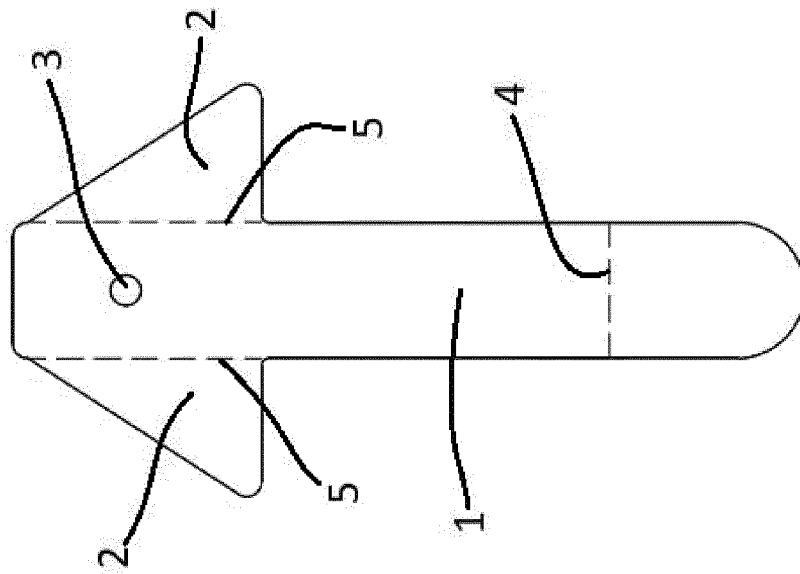


Fig. 1a

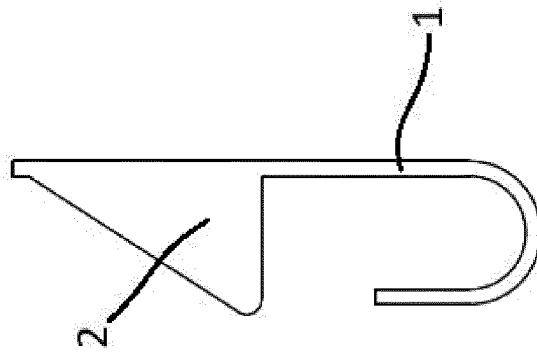


Fig. 1b

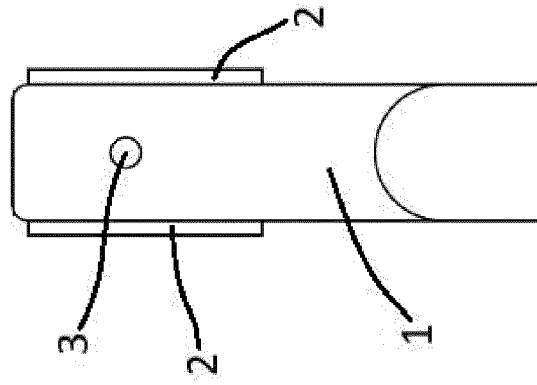


Fig. 1c

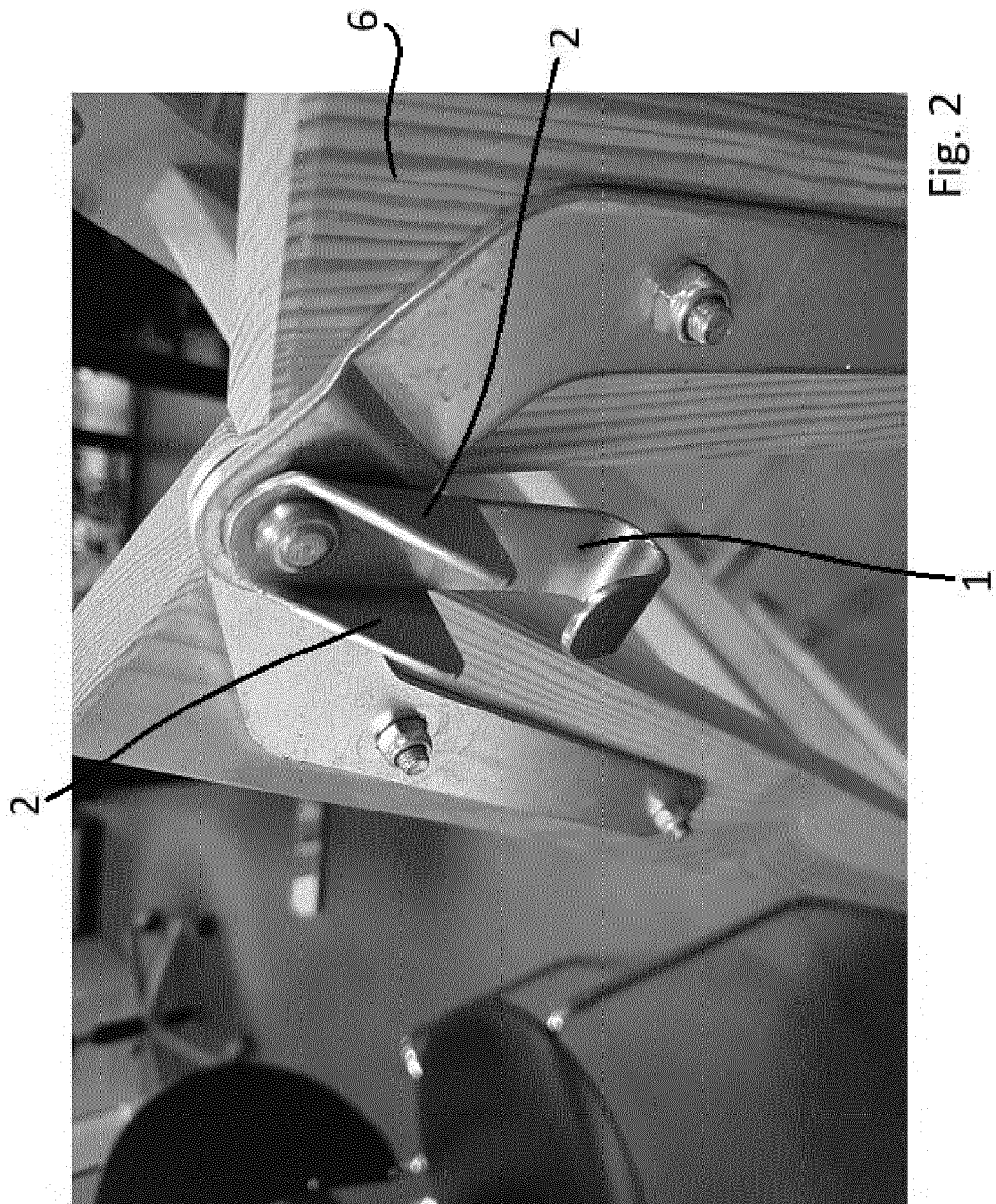


Fig. 2

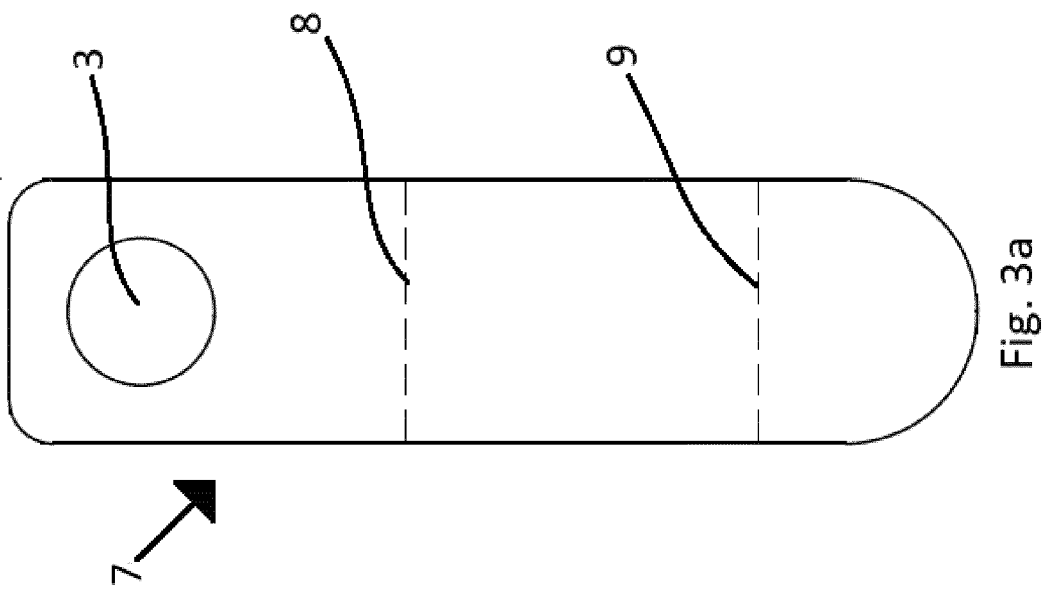


Fig. 3a

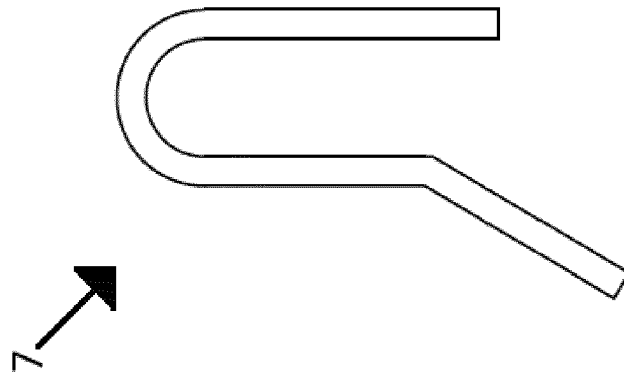


Fig. 3b

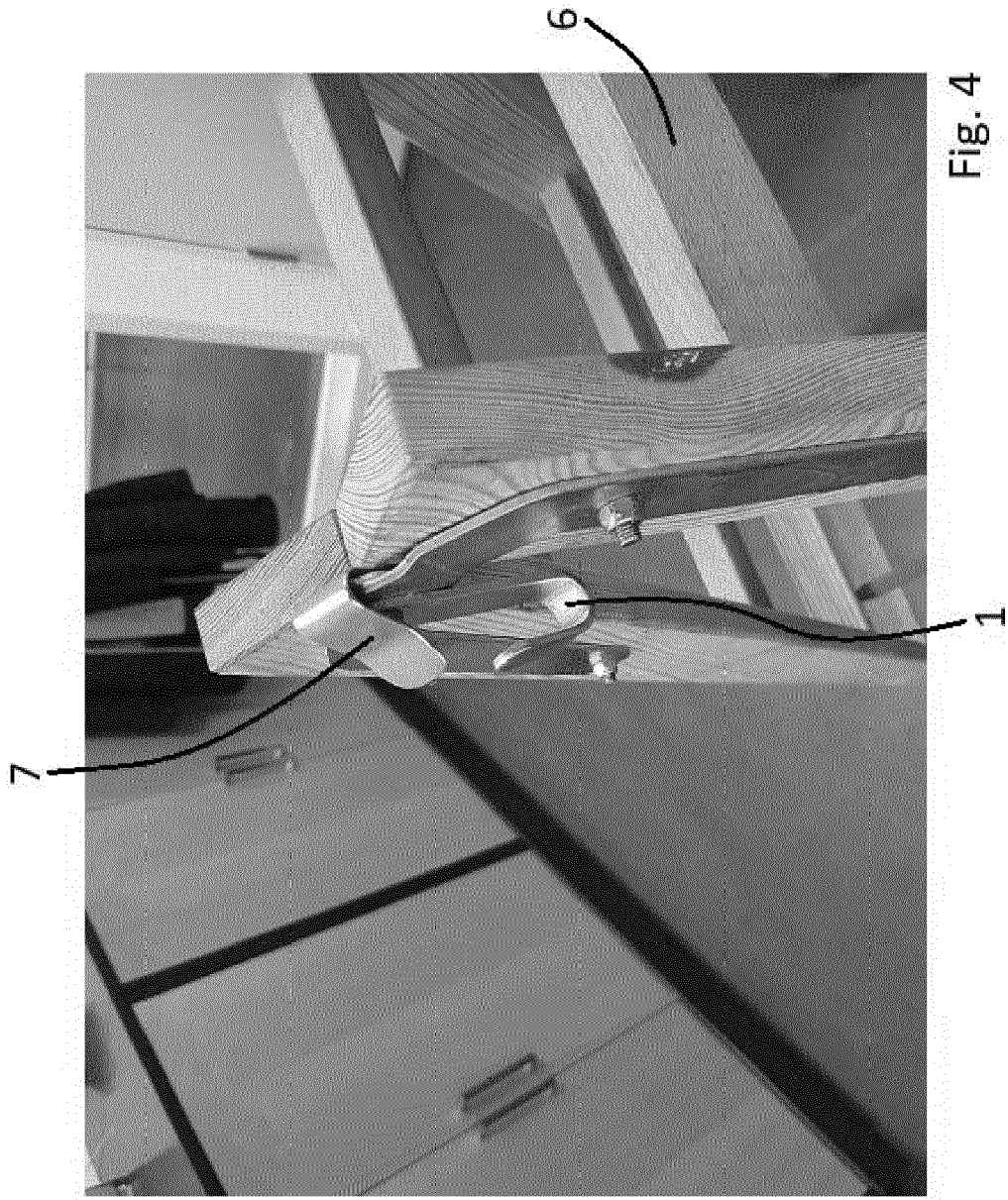


Fig. 4





## EUROPEAN SEARCH REPORT

Application Number  
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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                           |                                                 |                                         |
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| Place of search<br>The Hague                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                           | Date of completion of the search<br>6 June 2019 | Examiner<br>Bauer, Josef                |
| CATEGORY OF CITED DOCUMENTS<br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |                                                                                           |                                                 |                                         |

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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