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(54) Air-guiding device for a motorcycle

(57) An air-guiding device for a motorcycle mounted in a front cap (3) of a motorcycle which has an air inlet (4) defined in the front cap (3) and has a heat sink (10) mounted in the front cap (3) and in the lateral of the air inlets (4). A fan (20) mounted on a side of the heat sink (10). A cap (30) mounted in the rear side of the heat sink (10) and having an air outlet (31) defined in a lower end thereof and an opening (32) defined in a front end thereof to cover the heat sink (10). Hence, with the assistance of the fan (20), the temperature in the front cap (3) can be lowered and the heat air can flow out of the air outlet (31) to avoid the damage of the meter.

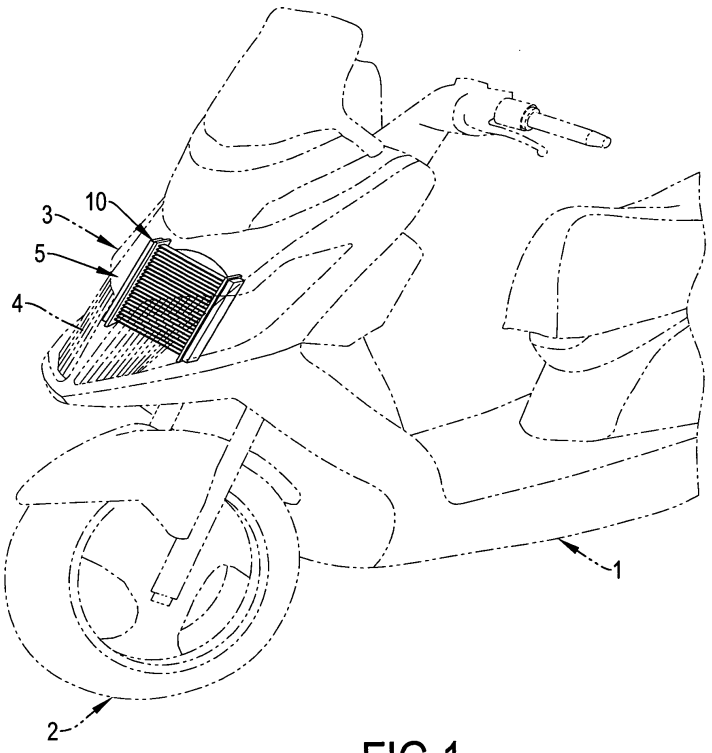

FIG.1

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Description

1. Field of the Invention

[0001] The present invention relates to an air-guiding device of a motorcycle, and more particularly to an air-guiding device with a function of heat sink.

2. Description of the Related Art

[0002] A first conventional air-guiding device of a motorcycle has a front cap, an air outlet defined in a front side of the front cap, two air outlets respectively defined in two rear sides of the front cap. A heat sink and a fan are respectively mounted inside the front cap. When the outer air flows into the front cap through the air inlet, the high temperature of the engine can be lowered by the outer air through the fan and the heat sink.

[0003] However, because the first conventional air-guiding device cannot be guided the air out of the air outlets easily, the air with high temperature will rise in the front cap to damage the meter and the headlight of the front cap.

[0004] A second conventional air-guiding device of a motorcycle comprises a frame, a water tank mounted in a front end of the frame, an upper fairing mounted on the water tank, a lower fairing mounted under the water tank, and a lower plane mounted on a rear end of the water tank to form an air outlet. An air-guiding cap is connected to the upper fairing and the lower plate so that the outer air flows in through the water tank to be guided to the lower fairing and the lower plate to flow out through the air outlet.

[0005] However, the second conventional air-guiding device of the motorcycle has many parts for inconvenient assembly and with a high cost.

[0006] Therefore, the invention provides an air-guiding device for a motorcycle to mitigate or obviate the aforementioned problems.

[0007] The main objective of the present invention is to provide an air-guiding device for a motorcycle with a function of heat sink.

[0008] Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

IN THE DRAWINGS

[0009]

Fig. 1 is a perspective view of a first preferred embodiment of an air-guiding device for a motorcycle in accordance with the present invention in a motorcycle;

Fig. 2 is an exploded perspective view of the air-guiding device for a motorcycle in Fig. 1;

Fig. 3 is a side view of the air-guiding device for a motorcycle in Fig. 1 in a motorcycle; and

Fig. 4 is a side view of a second preferred embodiment of an air-guiding device for a motorcycle in accordance with the present invention in a motorcycle.

[0010] With reference to Fig. 1, a motorcycle has a front wheel (2), a front cap (3) mounted on the front wheel (2), multiple air inlets (4) defined in the front cap (3).

[0011] With further reference to Figs. 2 and 3, a first preferred embodiment of an air-guiding device for a motorcycle (5) has a heat sink (10) mounted in the front cap (3) and in the lateral of the air inlets (4), a fan (20) and a cap (30).

[0012] The heat sink (10) has two water tanks (11) mounted in two sides of the heat sink (10), and multiple evenly-spaced fins (12) mounted between the water tanks (11). The heat sink (10) is connected to a water circulation system of the motorcycle and thereby hot water flows into the water tanks (11) and the fins (12) increase the heat radiating areas.

[0013] The fan (20) is mounted in a rear side of the heat sink (10) and faces the fins (12).

[0014] The cap (30) is mounted in the rear side of the heat sink (10) and has an air outlet (31) defined in a lower end of the cap (30) and an opening (32) defined in a front end of the cap (30) to cover an upper end of the heat sink (10). The width of the cap (30) is equal to that of the fins (12). The cap (30) can be fixed to the heat sink (10) or the fan (20) or the heat sink (10).

[0015] With reference to Fig. 4, a second preferred embodiment of an air-guiding device of a motorcycle is similar to the first preferred embodiment except that a cover (40) is mounted in a front end of the heat sink (10) and insert into the air inlet (4) so that the air flowing through the front cap (3) can be guided to the heat sink (10).

[0016] With reference to Fig. 3, the heat sink (10) is connected to a water circulation system of the motorcycle and thereby hot water flows into the water tanks (11). Additionally, the outer air flows through the air inlets (4) into the heat sink (10). With the assistance of the fan (20), the temperature in the front cap (3) can be lowered and the hot air can flow out of the air outlet (31) to avoid the damage of the meter or the headlight.

[0017] It is to be understood, however, that even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only. Changes may be made in details, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

Claims

1. An air-guiding device for a motorcycle comprising:

a heat sink (10);
a fan (20) mounted on a side of the heat sink (10); and
a cap (30) mounted in a rear side of the heat sink (10) and having an air outlet (31) defined in a lower end of the cap (30) and an opening (32) defined in a front end of the cap (30) to cover an upper end of the heat sink (10).

2. The air-guiding device for a motorcycle as claimed in claim 1, wherein the fan (20) is mounted in a front side of the heat sink (10).

3. The air-guiding device for a motorcycle as claimed in claim 1, wherein the fan (20) is mounted in the rear side of the heat sink (10) between the heat sink (10) and the cap (30).

4. The air-guiding device for a motorcycle as claimed in 1, wherein
the heat sink (10) has two water tanks (11) mounted in two sides of the heat sink (10), and multiple evenly-spaced fins (12) mounted between the water tanks (11); and
the fan (20) faces the fin (12).

5. The air-guiding device for a motorcycle as claimed in 1, wherein a width of the cap (30) is equal to a width of each fin (12).

6. The air-guiding device for a motorcycle as claimed in 1 further comprising a cover (40) mounted in the front side of the heat sink (10).

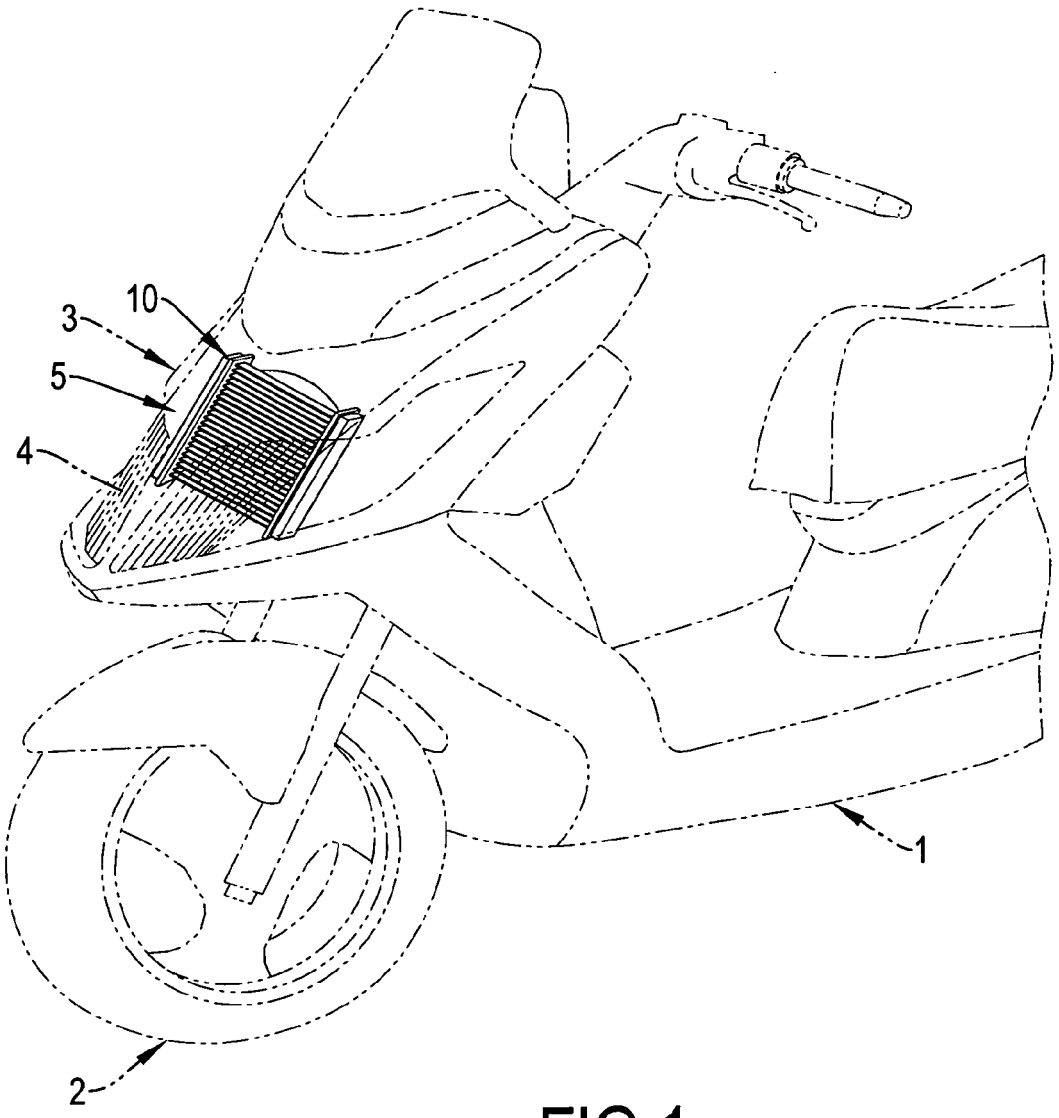

FIG.1

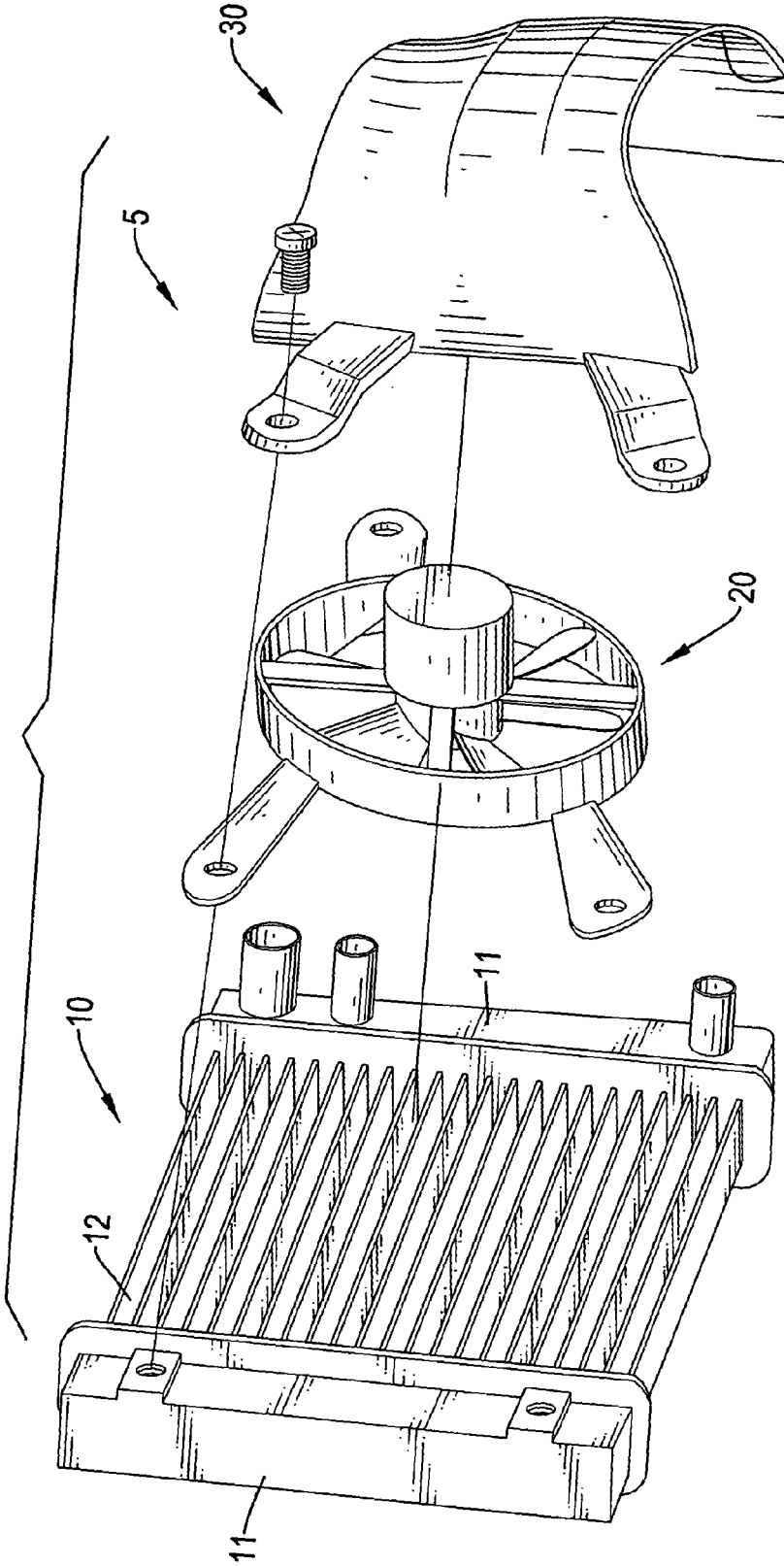

FIG.2

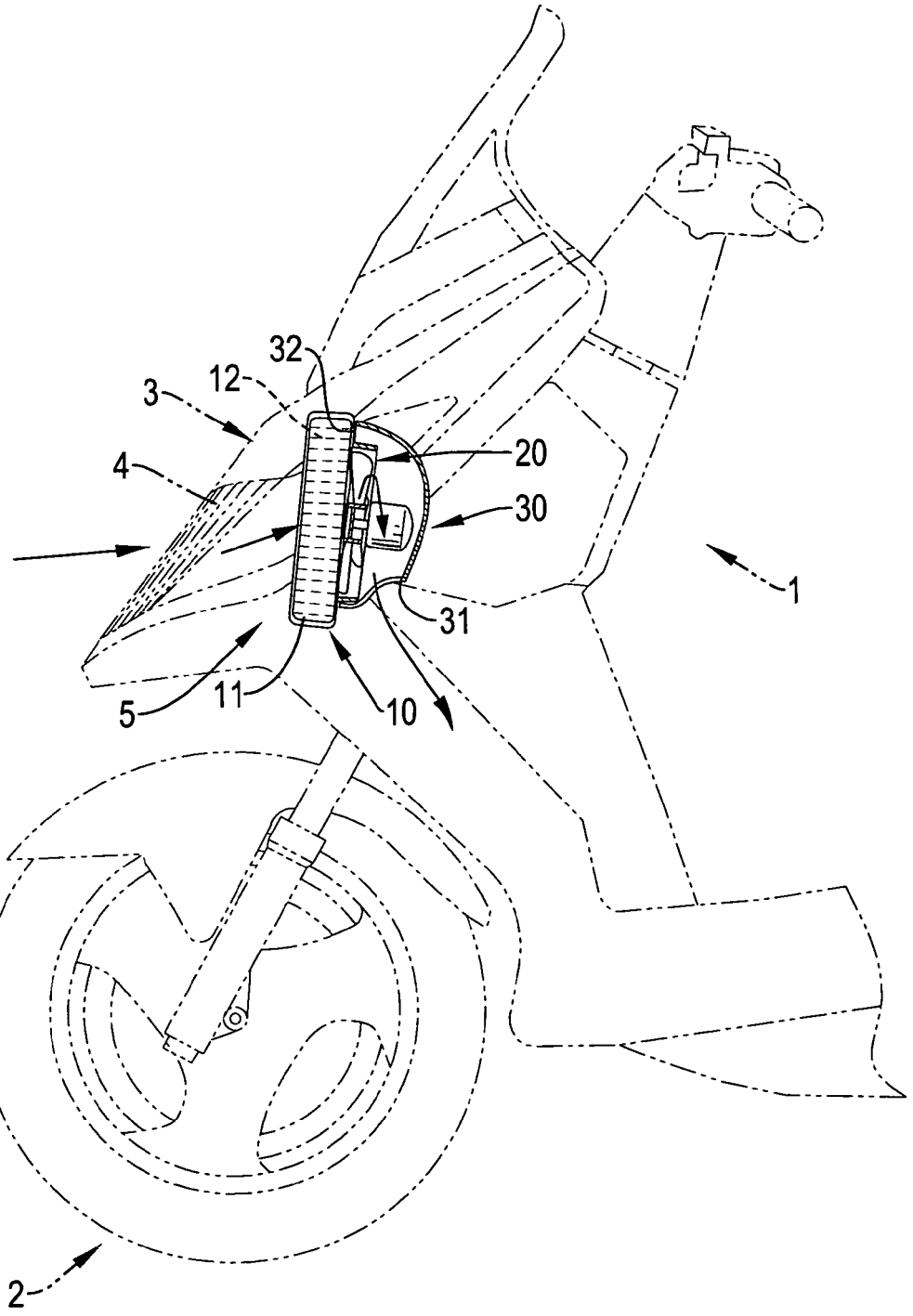

FIG.3

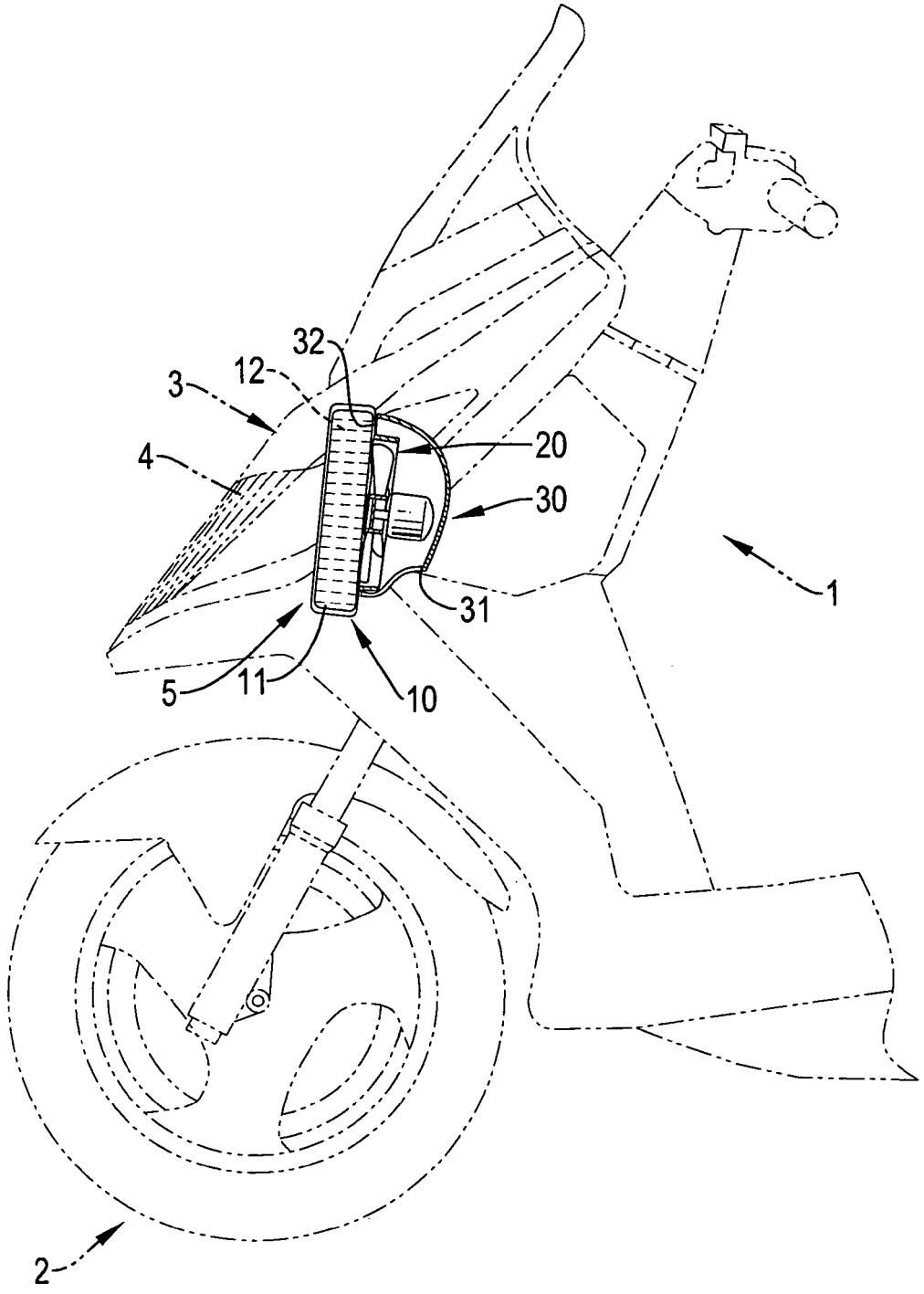

FIG.4

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EUROPEAN SEARCH REPORT

Application Number
EP 06 02 4889

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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	7 May 2007	Grunfeld, Michael

CATEGORY OF CITED DOCUMENTS

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