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(54) Traffic control device

(57) The present invention relates to a traffic control device (1) comprising a traffic light (3), in particular a stop light (3A), in which the device (1) is provided with a mirror (5). Preferably, the mirror (5) is designed to eliminate a blind spot of a vehicle, in particular a lorry or a bus, which is situated in front of the traffic control device (1). In particular, the mirror (5) is designed to eliminate the blind spot on the side of the vehicle which is remote from the driver.

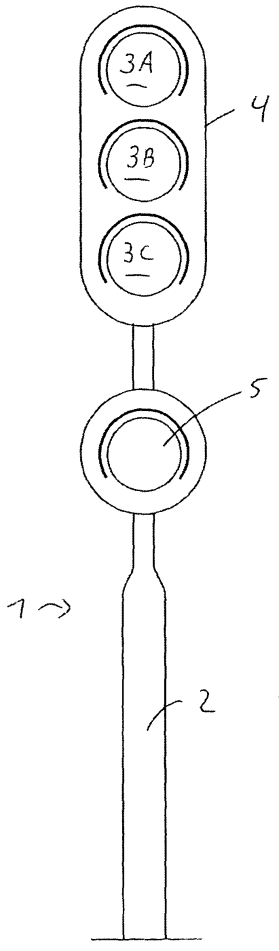

Fig.1

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Description

[0001] The present invention relates to a traffic control device comprising a traffic light, in particular at least one stop light.

[0002] In practice various traffic control devices are known.

[0003] A problem inherent to the known traffic control devices is that drivers of vehicles, in particular of buses and lorries, only have limited visibility of the areas directly next to the vehicle, the so-called "blind spots", or none at all when they are situated or at a standstill in front of a traffic control device.

[0004] This problem occurs in particular at road junctions and at other locations where traffic can turn off. Vehicles which turn off often cause dangerous situations and, unfortunately, also cause serious accidents and fatalities. Cyclists are particularly vulnerable in this respect.

[0005] In order to eliminate this problem, various countries make it compulsory for hauliers to use blind spot mirrors on transport vehicles, such as buses and lorries.

[0006] The use of video cameras on the side of the vehicle has also been proposed.

[0007] However, it has been found that the above solutions do not solve the problem sufficiently. There is thus a strong demand for new ways of eliminating blind spots for drivers of, in particular, large vehicles, such as buses and lorries.

[0008] Thus, it is an object of the present invention to reduce the above problem and to satisfy the abovementioned demand.

[0009] Furthermore, it is an object of the present invention to provide an inexpensive, alternative or additional solution to the abovementioned problem.

[0010] To this end, the present invention provides a traffic control device comprising a traffic light, in particular a red light, in which the device is provided with a mirror.

[0011] A particular advantage of the traffic control device according to the present invention is that the driver will automatically look into the mirror, since the driver is already looking at the traffic control device. The mirror is thus in the driver's field of vision.

[0012] Another advantage of the traffic control device according to the invention is the fact that it can be manufactured in a very inexpensive way. In case the traffic control device comprises a pole near the road, the mirror may simply be placed near this pole or be attached to this pole. The invention can thus also easily be used with traffic control devices which have already been installed, for example by attaching the mirror to the traffic control device in a suitable position. It is obvious that, if the traffic control device comprises a beam extending horizontally over the road, the mirror could also be attached thereto.

[0013] When the traffic control device according to the present invention is in use, a driver of a vehicle, when facing a traffic control device, will automatically also look into the mirror, as a result of which any previously unspotted road users can still be spotted.

[0014] According to a preferred embodiment of the present invention, the mirror is designed to eliminate a blind spot of a vehicle, in particular a lorry or a bus, which is situated in front of the traffic control device. More preferably, the mirror is designed to eliminate the blind spot on the side of the vehicle which is remote from the driver; in the Netherlands, this is usually the right-hand side. For it has been found that most accidents involving cyclists and vehicles turning off occur when the cyclist is in the blind spot on the right-hand side of the vehicle.

[0015] Those skilled in the art will quickly understand how the mirror has to be positioned in order to obtain the desired effect. In this case, the height of the mirror, the expected distance between the vehicle and the mirror, the radius of curvature of the mirror, etc. may inter alia be taken into account.

[0016] Although the mirror may take any suitable shape (such as, for example a convex or cylindrical shape), it is preferable if the mirror is a convex mirror, as this gives a view from various positions. Particularly advantageous results are achieved with a convex mirror having a radius of curvature between 12 - 120 cm, preferably 20 - 40 cm, more preferably 25 - 35 cm.

[0017] In addition, it is advantageous if the mirror is at least partially anti-reflective, thus reducing the risk of being blinded by for example headlights or the sun.

[0018] Advantageous results are also obtained if the mirror is provided with means preventing condensation, in particular an anti-condensation film. It is also possible to use an internal heat source or other suitable means, for example, instead of anti-condensation film.

[0019] According to a particular preferred embodiment according to the invention, the traffic control device comprises a (generally red) stop light, the mirror being incorporated in a casing containing traffic lights. In this case, the mirror may be incorporated as the fourth element below a set of traffic lights comprising for example three colours (red - amber - green). This has the effect that the driver, while waiting in front of a red traffic light, is as it were forced to also look into the mirror and will thus spot any road users located in the blind spot.

[0020] As an alternative, the mirror can also be positioned separately below the red traffic light or other traffic lights.

[0021] According to another aspect, the present invention relates to the use of the traffic control device for eliminating a blind spot of a vehicle situated in front of the traffic control device, in particular a lorry. In particular, the traffic control device comprises a red light. More preferably, the traffic control device is situated near a road junction.

[0022] The invention will be explained in more detail below with reference to a diagrammatic, non-limiting drawing, in which:

Fig. 1 shows a diagrammatic front view of a traffic control device according to the invention; and

Fig. 2 shows a diagrammatic front view of an alter-

native embodiment of the traffic control device according to the present invention.

[0023] Similar parts are denoted by identical reference numerals.

[0024] Fig. 1 shows a traffic control device 1 which comprises a stop light 3A as traffic light 3. The stop light 3A comprises, as usual, a red trafic light. The traffic control device 1 comprises a pole 2, near the top end of which a casing 4 containing three traffic lights 3 (3A - red; 3B — amber; 3C - green) is mounted. In addition, the traffic control device 1 comprises a convex mirror 5 which is mounted below the traffic lights 3. If desired, the traffic control device 1 may comprise more than one mirror 5 which may be placed on or near the pole 2, for example at various heights.

[0025] The mirror 5 is preferably positioned in such a manner that it is able to eliminate a blind spot of a vehicle (not shown), in particular a lorry or a bus, which is situated in front of the traffic control device 1. Preferably, the mirror 5 is positioned in such a manner that it is able to eliminate the blind spot on the side of the vehicle which is remote from the driver (i.e. the right-hand side), thus increasing the field of vision of the driver.

[0026] Fig. 2 shows an alternative embodiment of the traffic control device 1, in which the mirror 5 is incorporated in the casing 4 containing traffic lights 3.

[0027] When the traffic control device 1 according to Figs. 1 and 2 is in use, the driver of a vehicle who faces the traffic control device 1 will automatically also look into the mirror(s) 5 and thus receive more information with regard to the road users located in the blind spot of the vehicle. This information may be used, for example, when the vehicle turns off.

[0028] Those skilled in the art will quickly understand that the invention can be varied in a large number of ways without departing from the scope of the invention.

Claims

1. Traffic control device (1) comprising a traffic light (3), in particular at least one stop light (3A), in which the device (1) is provided with a mirror (5).

2. Traffic control device (1) according to claim 1, in which the mirror (5) is designed to eliminate a blind spot of a vehicle, in particular a lorry or a bus, which is situated in front of the traffic control device (1).

3. Traffic control device (1) according to claim 2, in which the mirror (5) is designed to eliminate the blind spot on the side of the vehicle which is remote from the driver.

4. Traffic control device (1) according to one of the preceding claims, in which the mirror (5) is a convex mirror.

5. Traffic control device (1) according to claim 4, in which the convex mirror (5) has a radius of curvature of between 12 - 120 cm, preferably 20 - 40 cm, more preferably 25 - 35 cm.

6. Traffic control device (1) according to one of the preceding claims, in which the mirror (5) is at least partially anti-reflective.

7. Traffic control device (1) according to one of the preceding claims, in which the mirror (5) is provided with means preventing condensation, in particular an anti-condensation film.

8. Traffic control device (1) according to one of the preceding claims, in which the device (1) comprises at least one stop light (3A) as traffic light (3).

9. Traffic control device (1) according to claim 8, in which the device comprises a casing (4) containing traffic lights (3), including a red light (3A), into which casing (4) the mirror (5) is incorporated.

10. Traffic control device (1) according to claim 8 or 9, in which the mirror (5) is positioned below the red light (3A).

11. Use of the traffic control device (1) according to one of the preceding claims, for eliminating a blind spot of a vehicle which is situated in front of the traffic control device (1), in particular a lorry.

12. Use according to claim 11, in which the traffic control device (1) comprises a stop light (3A).

13. Use according to claim 11 or 12, in which the traffic control device (1) is situated near a road junction or turn-off.

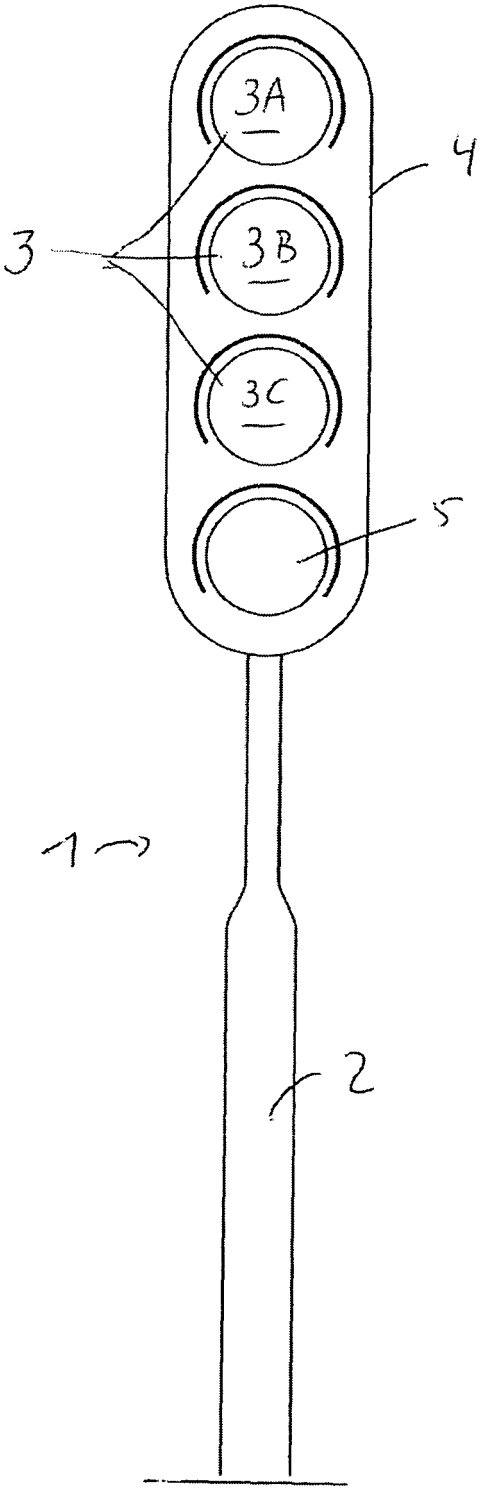

Fig. 2

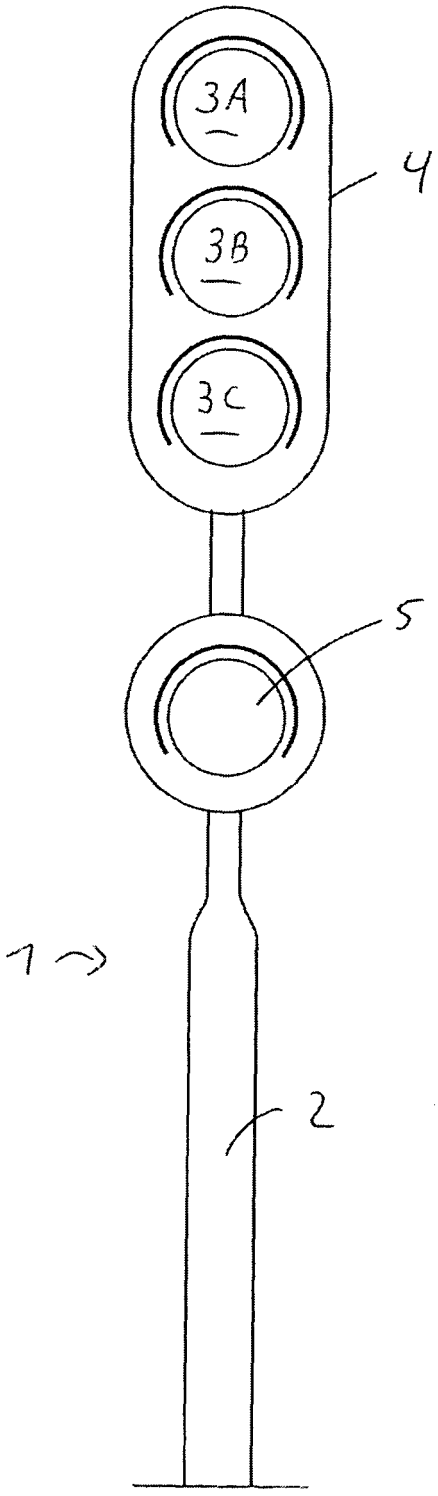

Fig. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 05 07 7045

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TECHNICAL FIELDS SEARCHED (IPC)

E01F
G08B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	2 December 2005	Créchet, P

CATEGORY OF CITED DOCUMENTS

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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