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(54) **Traffic barrier**

(57) The traffic barrier comprises a hollow outer member, fixable to the ground, and an inner member sliding between a position retracted into the outer member and a position extracted from the outer member.

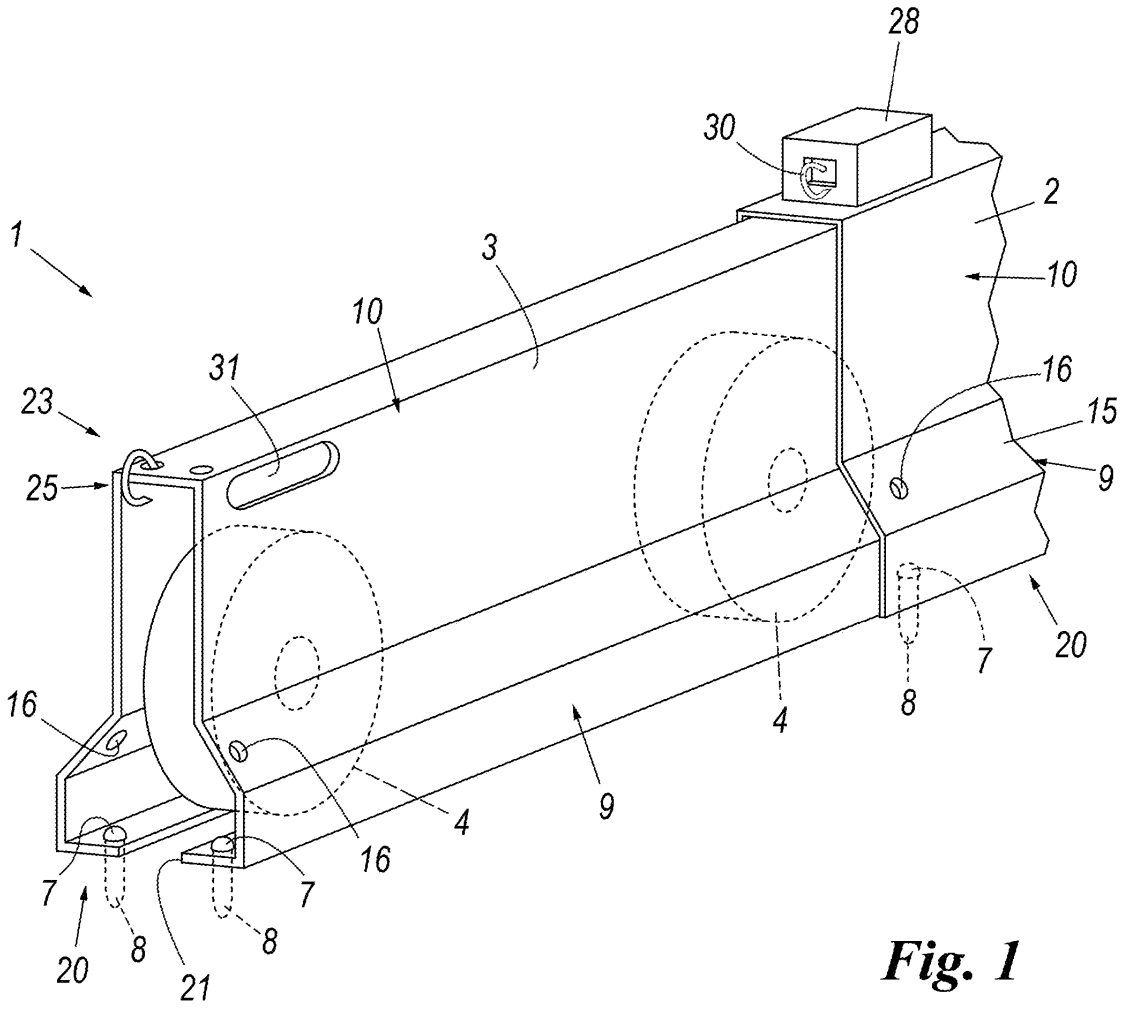

Fig. 1

EP 2 107 163 A2

Description

[0001] The present invention relates to a telescopic traffic barrier.

[0002] In particular hereinafter a reference to traffic barriers used on toll roads will be made, however it is clear that such traffic barriers can be used on any roads, even without tolls.

[0003] As it is known, currently when it is necessary arranging a traffic barrier between the opposite lanes of a road the so-called jersey barriers are used, constituted by cement blocks having shaped profile which are fixed therebetween and/or to the ground.

[0004] Alternatively bands in metallic sheet are used supported by special supports, such as typically guardrails or similar ones.

[0005] However, as it is clear, both used barriers are fixed and they are installed firmly fixed to the ground.

[0006] However, on several occasions it is necessary to allow the passage between one lane and the other one even in the roads wherein these traffic barriers are provided; one could think, for example, to the accidents' case to allow assisting the victims or to the road works' case to allow making the traffic to flow out onto the lanes which are not interrupted, etc.

[0007] To this purpose, traditionally the traffic barriers are interrupted at fixed intervals; practically, when they are installed some free spaces are left.

[0008] Since the passage through such spaces is forbidden in normal situations, they are properly signalled by means of road signs and, above all, by means of chains or plastic posts closing the opening, painted with white and red strips.

[0009] However, it is clear that such openings constitute a member of huge danger as in case of accidents a vehicle can skid and invade the opposite lane, as already happened, with huge danger for car drivers. In some cases these openings are even closed by fixed metallic members by making useless the purpose thereof.

[0010] The technical task the present invention proposes is then to implement a traffic barrier allowing to eliminate the complained technical drawbacks.

[0011] Within this technical task, an object of the invention is to implement a traffic barrier guaranteeing the maximum safety to the car drivers and which, in particular, has no areas wherein there is a high risk that a vehicle in difficulty or due to an accident invades the opposite lane and, when it is needed, a safety space could be opened.

[0012] The technical task, as well as these and other objects, according to the present invention are reached by implementing a traffic barrier according to claim 1.

[0013] Other features of the present invention will be further defined in the subsequent claims.

[0014] Additional features and advantages of the invention will be better evident from the description of a preferred, but not exclusive embodiment of the traffic barrier according to the invention, illustrated by way of example in the enclosed claims, wherein:

Figure 1 shows a perspective view of a portion of the barrier according to the present invention;

Figure 2 shows a perspective view of a portion of an outer member of the barrier of figure 1; and

Figure 3 shows a side lifted view of two barriers according to the invention associated and opposed therebetween to close and/or open spaces of huge sizes.

[0015] By referring to the mentioned figures, the traffic barrier of telescopic type designated as a whole with the reference number 1 is shown.

[0016] The traffic barrier 1 comprises a hollow outer member 2 fixable to the ground, and an inner member 3, hollow too and slidable between a position retracted inside the inner member 2 and a position extracted from the outer member 2.

[0017] The outer member 2 and the inner member 3 are both implemented by means of folded sheet having a length of up to 16 metres or more, typically 12 metres, preferably made of steel, for example with a thickness of 6, 8, 10 millimetres or more.

[0018] Conveniently, the inner member 3 has wheels 4 able to help the motion thereof; they are made of a metal, such as steel and, in case, they are coated with teflon, or similar.

[0019] Furthermore, the outer member 2 has first means for hooking to the ground including holes 7 implemented in the sheet of the outer member 2 and posts 8 which can be inserted into the holes and driven into the ground to lock the outer member.

[0020] Analogously, the inner member 3 too has first means for hooking to the ground including the holes 7 implemented in the sheet of the inner member 3 and the posts 8 which can be inserted into the holes and driven into the ground to lock the inner member once extracted, wherein it is believed to be necessary; figure 1 shows the posts 8 inserted into the holes 7.

[0021] As shown in the figures, both the outer member 2 and the inner member 3 have an enlarged lower portion 9, having a substantially hexagonal profile, and a substantially rectangular upper portion 10; practically such profile reproduces the outer shape of the jersey-type barriers therewith the barrier according to the invention must cooperate.

[0022] On this matter, a wall 15 directed upwards the enlarged portion 9 of the outer member 2 and of the inner member 3 has openings 16 aligned with the holes 7; the posts 8 can pass through these openings 16 when they are inserted into the holes 7 and driven into the ground.

[0023] Furthermore, a lower side 20 of the inner member 3 and of the outer member 2 has a longitudinal opening 21.

[0024] The inner member 3, at its own end 23 farest from the respective outer member 2, when it is at least partially extracted, has second hooking means 25 able

to lock it in the position extracted from the outer member 2.

[0025] Such second hooking means 25 comprises a hole and/or a hook; figure 1 shows a preferred embodiment including both a hole and a hook.

[0026] Furthermore, the outer member 2 bears a winch 28 equipped with rope 29 at the end thereof a hook 30 is placed.

[0027] Figures 1 and 2 show a winch 28 placed on the side of the outer member 2 therefrom the inner member 3 comes out, on the contrary figure 3 shows a winch placed on the side of the outer member 2 which is associated to a jersey; of course it can be also placed in intermediate position between the two extreme positions.

[0028] The rope 29, by means of the hook 30, can be constrained to the second hooks 25 of the inner member, so as to help the re-introduction of the inner member 3 into the outer member 2.

[0029] The inner member 3 has also handles or recesses 31 to help grasping the inner member 3 itself, in order to make it to slide with respect to the outer member 2. For this reason the winch can also be optional, for example in case of a helpable flat situation.

[0030] Advantageously, an upper wall 33 of the outer member 2 has cavities 35 able to contain the posts 8 of the inner member 3 when they are not inserted into the ground, that is when the inner member is retracted.

[0031] Preferably, the traffic barrier according to the invention is associated to a second traffic barrier of the same type, with faced and mutually constrained inner members 3.

[0032] This allows implementing spaces which can be kept closed and, in case of need, they can be opened having very large size; for example, the size can also be about 32 metres and it can be closed again by means of two inner members, each one of about 16 metres.

[0033] The operation of the traffic barrier according to the invention appears clear from what described and illustrated above and, in particular, substantially is the following one.

[0034] The barrier is typically installed together with other jersey barriers. It can be connected thereto as the jersey blocks are therebetween by means of using the holes 36 at the base.

[0035] On this matter in a road (for example a highway) a traffic barrier is set up by means of jersey barriers.

[0036] The jerseys are interrupted at the area wherein one wants to create a passage.

[0037] For example, one wants to leave a passage of limited sizes; hereinafter one will assume that both the inner member and the outer member are long up to about 16 metres; therefore, the jerseys are installed by leaving a space of about 32 metres.

[0038] The outer member is installed at such space, aligned with the jerseys and fixed by means of the posts 8 and the inner member is placed inside thereof, rested on the wheels 4.

[0039] The extraction of the inner member 3 from the outer member 2 can be performed in a simple way by acting by means of the handles 31, whereas the re-introduction can be performed by fixing the hook 30 of the winch 28 to the second hooking means 25 and, then, by pulling.

[0040] In a different example, two traffic barriers according to the invention can be installed; in this case, for example, a space of 64 metres is left in the jerseys.

[0041] The two outer members 2 and the mutually faced two inner members 3 (figure 3) are applied in such space.

[0042] In this case the extraction of an inner member 3a from the outer member thereof 2a can be performed by constraining the hook 30 of the winch 28b placed onto the outer member 2b to the second hooking means 25 of the inner member 3a and, then, by pulling (of course, in the same way the inner member 3b can be extracted with the winch 28a).

[0043] The introduction of the inner member 3a into the outer member thereof 2a can be performed by constraining the hook 30 of the winch 28a placed onto the outer member 2a to the second hooking means 25 of the same inner member 3a and, then, by pulling (of course, in the same way the inner member 3b can be introduced with the winch 28b).

[0044] Of course, modifications and variants, apart from the ones already described, are possible as well as, for example, the wheels 4 can slide on tracks.

[0045] In this case the tracks are preferably embedded into the ground and they are constituted by a metallic (steel) profile.

[0046] Furthermore, the inner and outer members can have any length, even lower or higher than 16 metres.

[0047] Practically, the used materials, as well as the sizes thereof, could be anyone according to the needs and the state of art.

Claims

1. Telescopic traffic barrier (1), **characterized by** comprising a hollow outer member (2) which can be fixed to the ground and an inner member (3) sliding from a position retracted into said outer member and a position extracted from said outer member.

2. Barrier according to claim 1, **characterized in that** said outer member and said inner member are made by means of folded sheet.

3. Barrier according to one or more of the preceding claims, **characterized in that** said inner member has wheels (4) able to help the motion thereof.

4. Barrier according to one or more of the preceding claims, **characterized by** comprising tracks thereon the wheels (4) can slide.

5. Barrier according to one or more of the preceding claims, **characterized in that** said outer member and said inner member have first means (8, 7) for hooking to the ground.

6. Barrier according to one or more of the preceding claims, **characterized in that** said first hooking means of said outer member and said inner member comprise holes (7) made in the sheet of said outer member and said inner member and posts (8) which can be inserted into said holes and driven into the ground.

7. Barrier according to one or more of the preceding claims, **characterized in that** said outer member and said inner member have an enlarged lower portion having a substantially hexagonal profile and a substantially rectangular upper portion.

8. Barrier according to one or more of the preceding claims, **characterized in that** a wall faced upwards said enlarged portion of said outer member and said inner member has openings (16) aligned with said holes, said posts being able to pass through said openings.

9. Barrier according to one or more of the preceding claims, **characterized in that** a lower side of said inner member and of said outer member has a longitudinal opening.

10. Barrier according to one or more of the preceding claims, **characterized in that** said inner member, at its own end farest from the respective outer member when it is at least partially extracted, has second hooking means (25) able to lock it in a position extracted from said outer member.

11. Barrier according to one or more of the preceding claims, **characterized in that** said outer member bears a winch (28) equipped with rope (29) which can be constrained to second hooking means of the inner member.

12. Barrier according to one or more of the preceding claims, **characterized in that** it has handles (31) or recesses to help grasping the inner member for the extraction-introduction sliding.

13. Barrier according to one or more of the preceding claims, **characterized in that** an upper wall of said outer member has cavities (35) able to contain said posts when the inner member is not extracted.

14. Barrier according to one or more of the preceding claims, **characterized by** being associated to a second traffic barrier of the same type, with its own faced and mutually constrainable inner members.

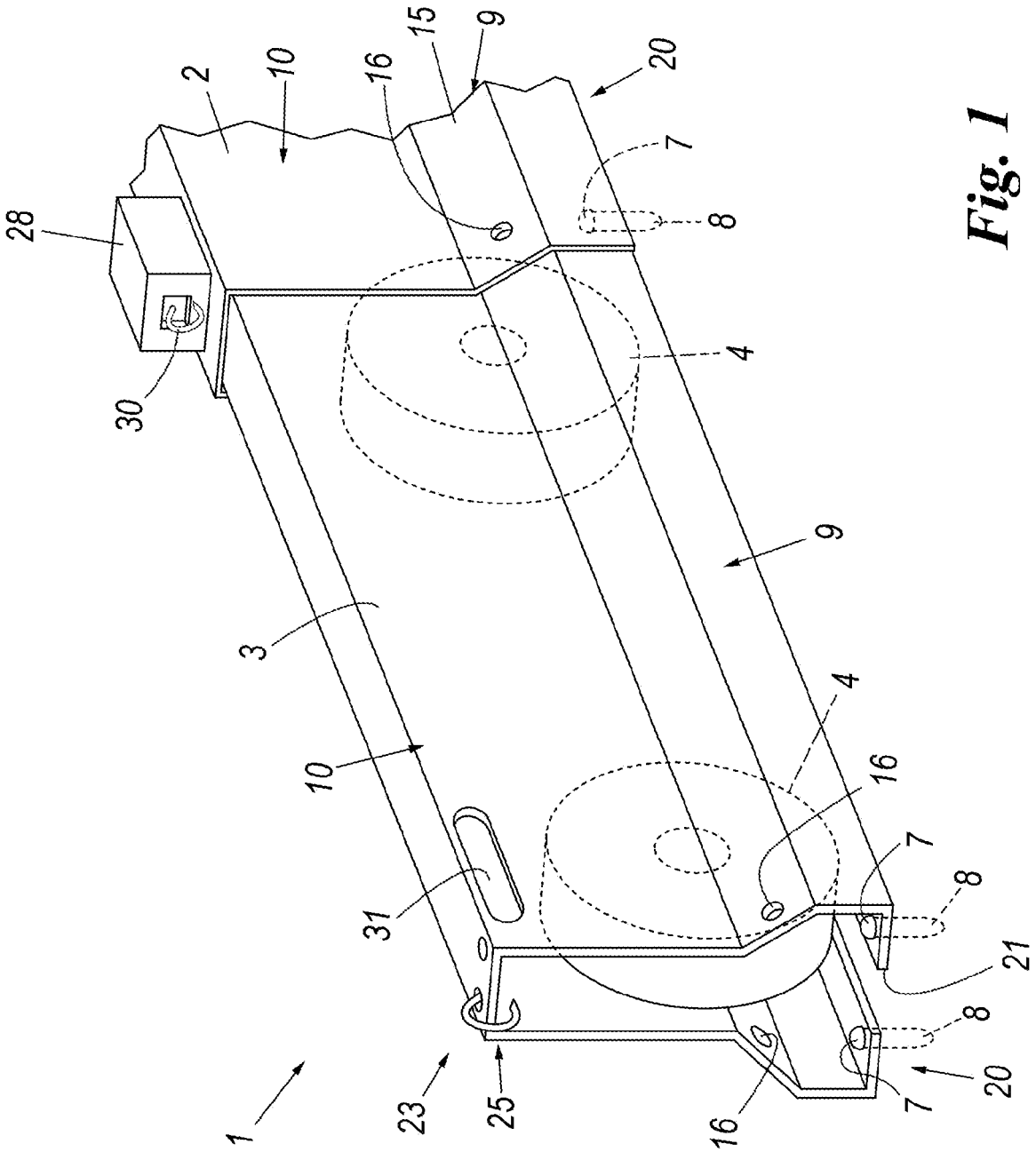

Fig. 1

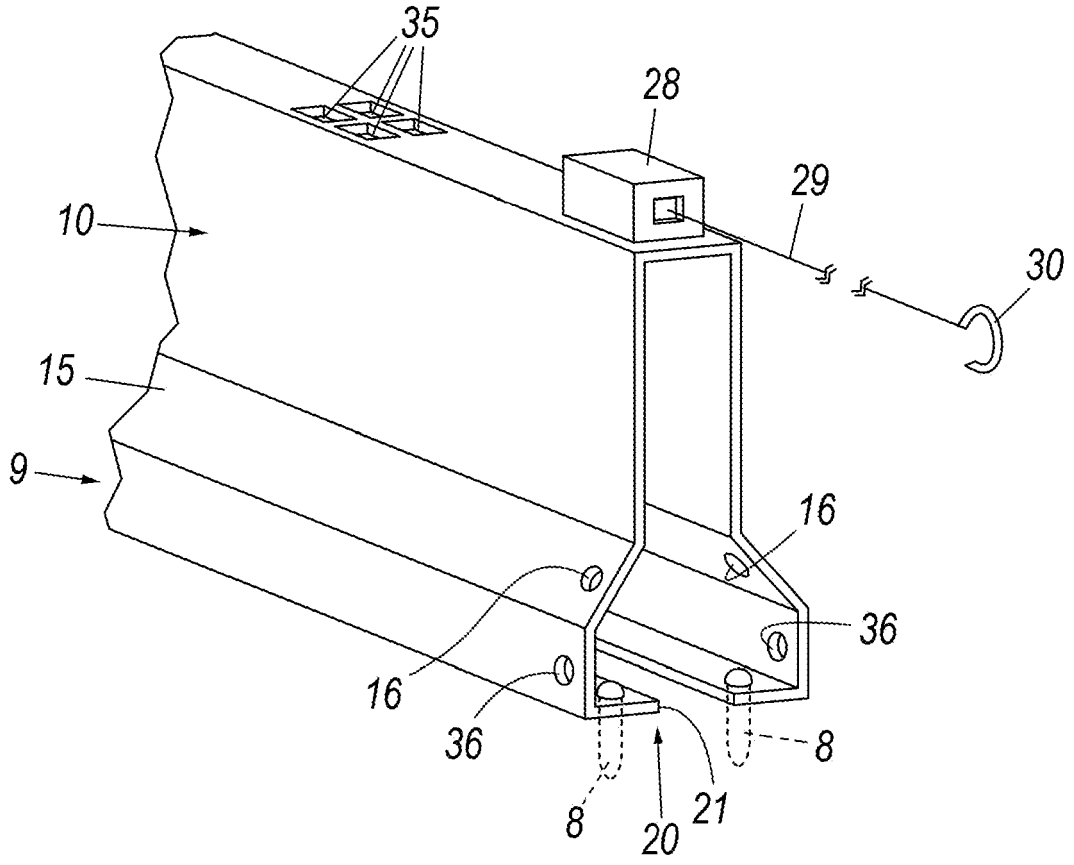

Fig. 2

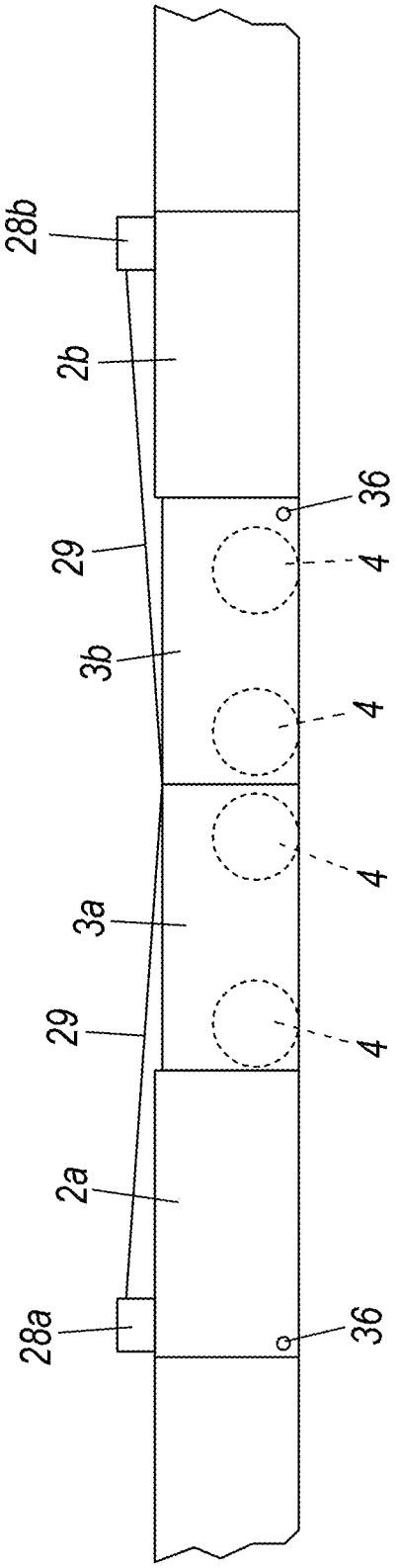

Fig. 3