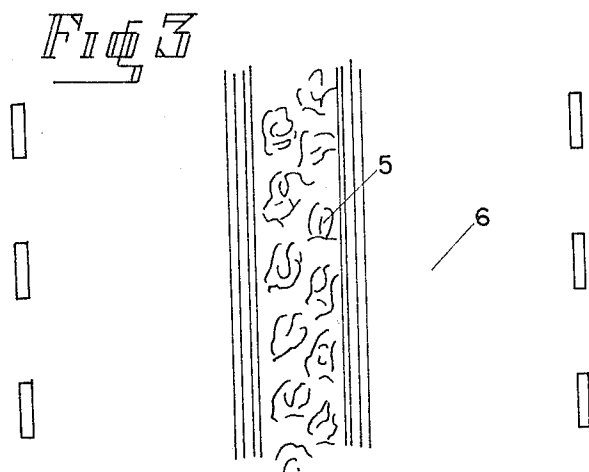
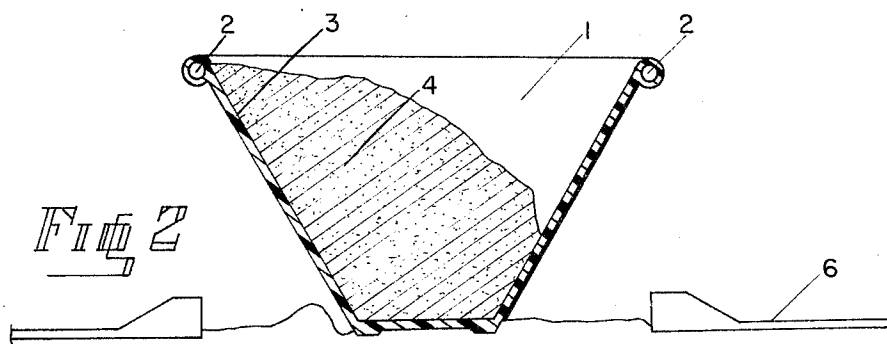
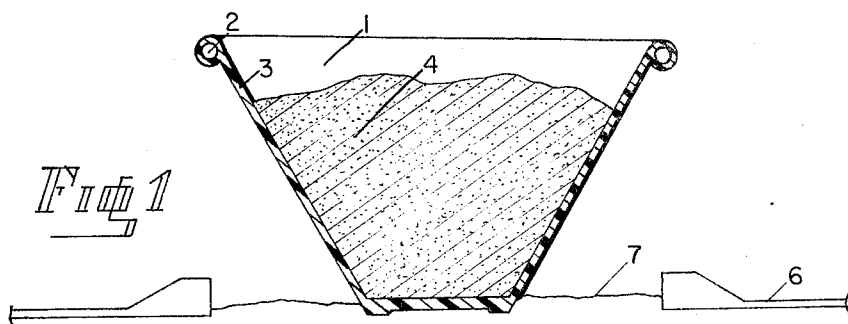


HIGHWAY GUARD

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## 3,288,440 HIGHWAY GUARD

Laurens Maria Hendrikus Schimmelpenninck and Petrus Franciscus Maria Sanders, both of Prinsengracht 287, Amsterdam, Netherlands

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7 Claims. (Cl. 256—13.1)

The present invention relates to a highway guard, particularly adapted to separate adjacent traffic lanes or to be employed at the side of the highway.

Similar generally known highway guards are found in various designs such as wire fencing or corrugated profiles anchored to posts, which are aimed to prevent vehicles, which for whatever reason are not driven correctly, from running off the roadway.

In case of collision with the known guards the energy of motion delivered to the guard is for the main part carried back to the colliding vehicle so that the latter is thrown back into the roadway, there causing great danger for the remaining traffic.

The remainder of the energy of motion is used for damaging or smashing up the guards.

Vehicles crashing into the known guards are received by the latter with insufficient yielding through which, as a rule, serious damage to the vehicle and the guard and injury to the occupants of the colliding vehicle arises.

In case of running into an anchoring post the latter mostly is broken off while also in running into wire fencing spread between two anchoring posts, the vehicle is received with a very intense retardation to be thrown back into the riding track out of control.

It is an object of the present invention to provide a highway guard which, when being struck, is not or only insignificantly damaged and further can destroy the energy of motion of the colliding vehicle and/or carry away this energy remotely from the colliding vehicle.

According to a feature of the invention the highway guard comprises at least one, preferably resiliently deflectable partition wall extending along the roadway and to the side of which away from the roadway, a damping medium, more particularly a sand mass has been applied so that in running a vehicle into this deflectable partition wall the energy of motion of the colliding vehicle is absorbed by the internal friction of the shifting sand mass.

According to another feature of the invention the partition wall forms part of a reservoir which encloses at least partly the damping medium.

This reservoir may be variously shaped such as tube shaped or case shaped.

Very suitably the reservoir is, according to a feature of the invented highway guard, a gutter shaped reservoir in which the damping medium, particularly the sand mass has been applied.

According to another feature of the invention, the highway guard has not or only slightly been anchored to the ground so that during a collision the energy of motion of the colliding vehicle is annihilated by the shifting of the guard over the ground.

Preferably the highway guard extends along the roadway as substantially uninterrupted gutter.

To ensure a strong joining of the guard the rims of the gutter have been provided with a cable.

According to an embodiment of the invention the partition wall extending along the roadway forms with the latter a sharp angle of preferably 30° up to 60° so that the upper rim of the partition wall is moved upwardly in case the wall is deflected by a colliding vehicle.

For braking a vehicle colliding with the guard at least

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one protruding rim has been arranged along the gutter such that a wheel driven over this rim and having deflected the gutter side wall may be jammed between this protruding rim and the gutter.

To limit the danger of ignition at a collision at least the partition wall consists of a non-metallic and non-stony material and preferably of a reinforced synthetic material.

The invention will now be described further by way of example with reference to the accompanying drawings in which:

FIG. 1 is a cross section of the invented highway guard.

FIG. 2 is a section of the guard having endured a collision of the right side.

FIG. 3 is a top view of the guard.

As is shown in the drawings the highway guard according to this example of the invention consists of a gutter shaped reservoir 1 made from reinforced polyester resin and enclosing at the upper rims the glass-fibre-cables 2.

Between the resiliently deflectable partition walls 3 a sand mass 4 has been applied which, in this case, has been provided with a planting 5.

The highway guard has been placed between the riding tracks 6 on the berm 7.

FIG. 2 shows the situation after a collision from the right side and whereby the sand mass was shifted by the right partition wall and possibly thrown out of the gutter.

As is shown in the drawing the reservoir thereby has been shifted and possibly toppled over which toppling over may have been neutralized by the cables 2 and the adjoining portions of the highway guard.

What is claimed is:

1. An energy absorbing roadway guard rail extending along a substantial portion of a roadway comprising an open trough which rests loosely on the ground and which is capable of being shifted away from the roadway by the impact of a vehicle leaving the roadway, at least the wall of the trough on the roadway side being resiliently deflectable, and a mass of loose aggregate in the trough which absorbs the kinetic energy of the vehicle when a portion of the trough is shifted by such an impact.

2. An energy absorbing roadway guard rail according to claim 1 wherein the wall of the trough on the roadway side is inclined toward the roadway and forms with the surface of the roadway an angle of at least 30°.

3. An energy absorbing roadway guard rail extending along a substantial portion of a roadway comprising a base which rests loosely on the ground, a resiliently deflectable partition wall supported by the base, and a mass of loose aggregate resting against the side of the partition wall away from the roadway, any portion of the guard rail, including the base, deflectable partition wall and mass of aggregate, which is struck by a vehicle leaving the roadway being capable of being shifted away from the roadway by the impact to cause the kinetic energy of the vehicle to be absorbed by the internal friction in the aggregate.

4. An energy absorbing roadway guard rail according to claim 3 wherein the partition wall is inclined toward the roadway and forms with the surface of the roadway an angle of at least 30°.

5. An energy absorbing roadway guard rail according to claim 3 which comprises a rim that extends along the roadway facing the partition wall, and is spaced close enough to the partition wall so that a wheel which has deflected the partition wall will be jammed between the rim and the partition wall.

6. An energy absorbing roadway guard rail according to claim 3 wherein a cable is secured along the upper edge of the partition wall.

7. An energy absorbing roadway guard rail according to claim 6 wherein the partition wall consists of a reinforced plastic.

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