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J. PEKAR

PROTECTIVE RAILINGS

Filed June 17, 1941

Serial No.
398,440

2 Sheets-Sheet 1

Fig.4.

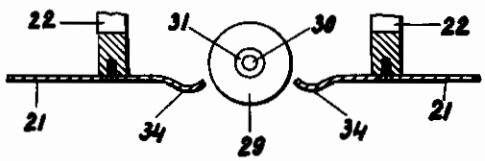


Fig.1.

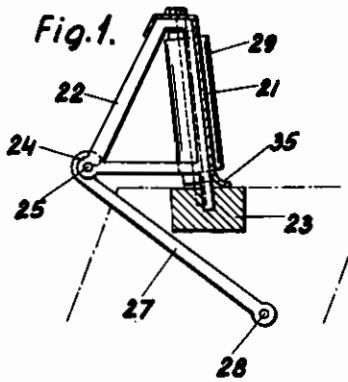


Fig.2.

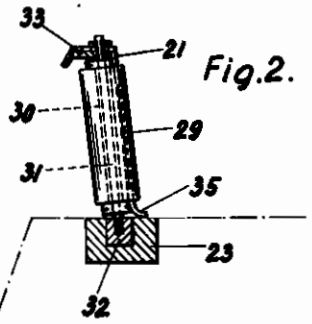
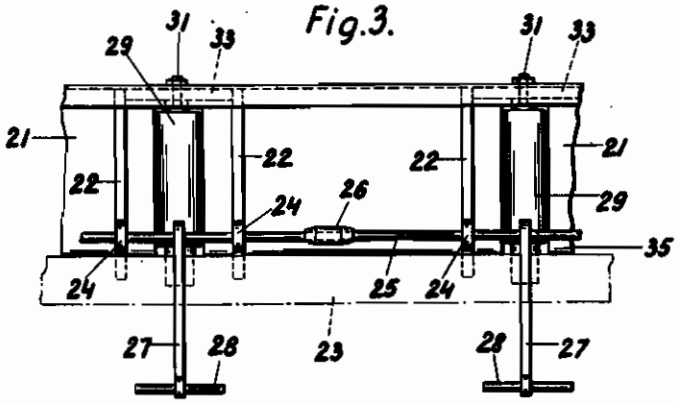


Fig.3.



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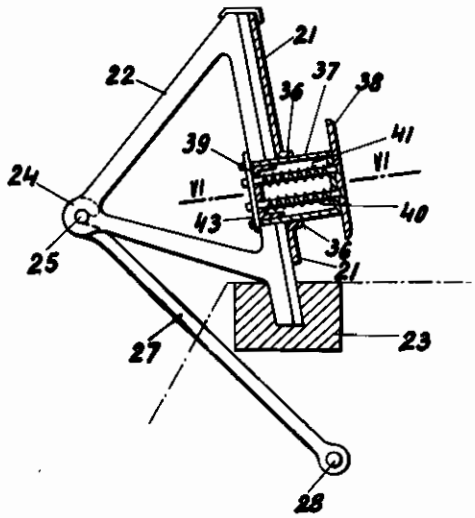

Fig.5.

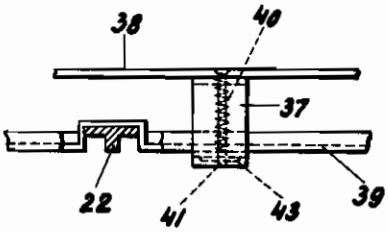

Fig.6.

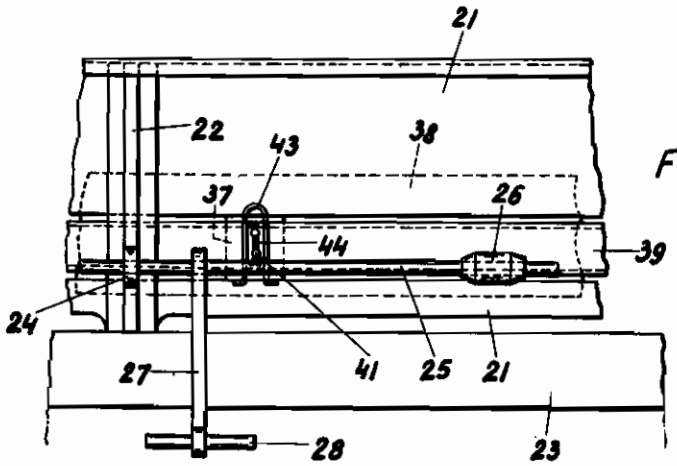

Fig.7.

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ALIEN PROPERTY CUSTODIAN

PROTECTIVE RAILINGS

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vested in the Alien Property Custodian

Application filed June 17, 1941

This invention relates to a protective railing for dangerous road sections.

Railings of the usual type comprising a structure formed of stone uprights connected by iron or concrete beams are unsatisfactory, particularly in case of accidents involving motor vehicles, and it frequently happens that both the uprights and the beams are turned over and fail to prevent such vehicles from being thrown from the road.

It is the object of the invention to provide a protective railing which will keep a motor vehicle on the road in case of accident and afford the added advantage of pushing back the vehicle without overturning or otherwise damaging it.

The feature of the invention resides in arranging along the dangerous part of a road a strong sheet iron wall supported by triangular beams which possess projecting front members having extended portions embedded in a concrete foundation and the rear portion of which has a head member through which a steel bar passes which is held in position by suitable supports sunk into the road bed.

The steel bars passing through the heads of the beams are provided with screws to form a unitary structure with the beams and supports extending into the road foundation the ends of which are fitted with cross bars to increase their hold in the ground and to keep the beams steady even after repeated shocks.

The railing according to the invention is further provided with repelling means for the vehicle, preferably comprising rubber rollers disposed at some distance from one another between every two beams. Each roller is rotatably mounted on a shaft which passes through the upper stiffening of the sheet metal wall and the lower part of which is positioned in a bearing in the concrete foundation. At the points where the rubber roller projects to the extent of about one-third of its width the sheet iron wall is interrupted, and the ends of the gaps have a slight outward bulge gradually passing toward the side so as to prevent excessive stressing of the rubber roller by impacts. In this way, shocks directed toward the rubber roller are deadened, since a vehicle moving on the wall face is prepared for hitting the rubber roller which then repels it.

Repulsion of the vehicle may also be effected by striking a repelling plate being elastically displaceably arranged in the lower portion of the sheet metal wall. The plate is supported by bows moving on an angle iron secured to the beams, and in the space between the bows and the angle iron springs are provided and mounted on firm pins of the plate, which pass loosely through openings in the rear of the angle iron where they are suitably secured.

One form of the invention showing two modifications of the repelling means is illustrated by way of example in the accompanying drawings, in which

Figure 1 is a side view of a portion of a protective railing according to the invention fitted with a rubber roller;

Fig. 2, a side view of the rubber roller;

Fig. 3, a rear view of the general arrangement;

Fig. 4, a detail view;

Fig. 5, a side view, partly in section, of a railing provided with a repelling plate;

Fig. 6, a section on the line VI—VI, of Fig. 5; and

Fig. 7, a rear view of the general arrangement.

A sheet iron wall 21 is secured to triangular beams whose projecting front portions are sunk into a concrete foundation 23. Through heads 24 of the beams 22 passes a steel bar 25 secured by screws 26 and held in position by supports 27 whose ends are embedded in the ground and fitted with cross bars 28 for greater stability.

In the construction shown in Figs. 1 to 4 rubber rollers 29 are arranged in spaced relation to one another on a tube 30 through which a shaft 31 passes whose lower end is disposed in a bearing 32 and the upper end of which passes through a stiffening 33 of the wall 21. At the points 34 where it is interrupted by the rollers 29 the wall 21 has a slight outward bulge, and the lower edge 35 of the wall faces the ground like a channel so as to impart to the wheel of a vehicle striking it the repelling direction.

In the embodiment shown in Figs. 5 to 7 the wall 21 is provided in its lower portion with an opening which with its reinforced and projecting edges 36 forms a guide for the straps 37 which support a repelling plate 38. An angle iron 39 extending along the entire railing connects all beams 22 and serves also as support for springs 40 pushed over pins 41 of the plate 38, which pass through the center of the strap 37.

The strap 37 on the angle member 36 is protected against coming out on the back by a through pin 43 which penetrates both arms of the strap 37 and is supported by the rear wall of the angle iron 39. The pins 41 are interconnected by a through pin 44, also supported by the rear wall of the angle member 39.

The spring arrangements are provided along the entire railing at optional distances from one another.

The advantages afforded by the invention consist not only in keeping a vehicle on, or pushing it into, the road but chiefly in permitting the installation of the railing in closest proximity to the border of the road, so that the useful area of the latter is not reduced.

When a vehicle strikes a repelling plate 38, the plate is forced back until it impinges upon the projecting edges 36 of the wall 21. As the next spring device is not compressed, however, the vehicle sliding along the wall 21 after the collision will move in a direction corresponding to that of the road.

The invention is not limited to the construction shown and described, but may be varied in many ways without exceeding its scope.

JAN PEKAR.