March 12, 1940. G. A. GLEASON ET AL 2,193,689

BRACKET FOR MOUNTING GUARDRAILS

Filed April 16, 1937 2 Sheets-Sheet 1

Fig. 1.

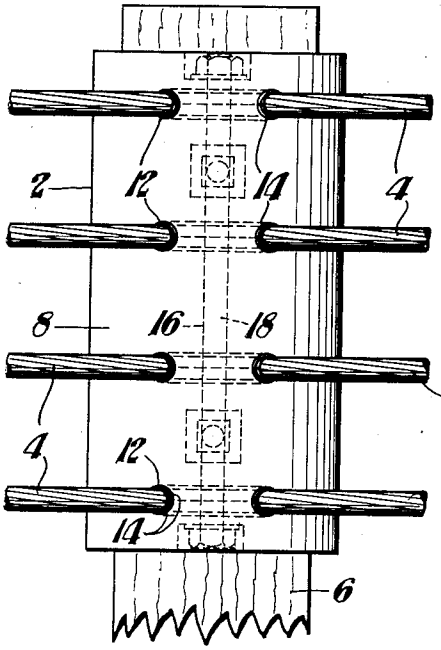


Fig. 2.

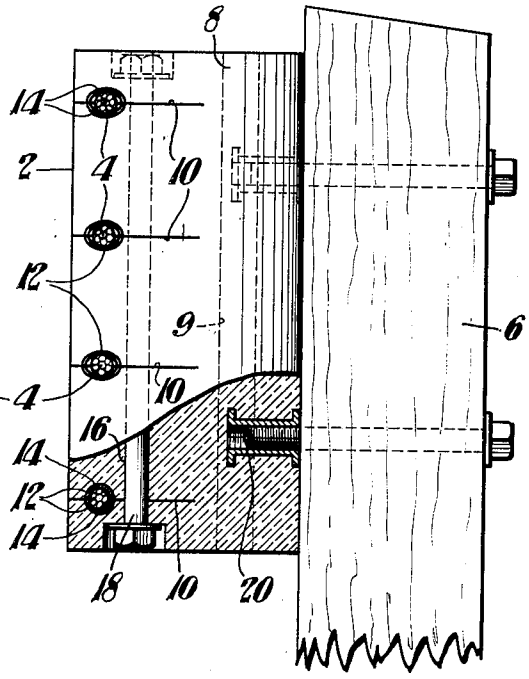


Fig. 4.

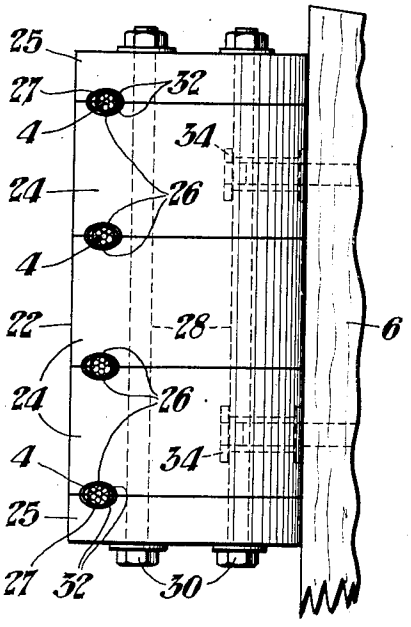
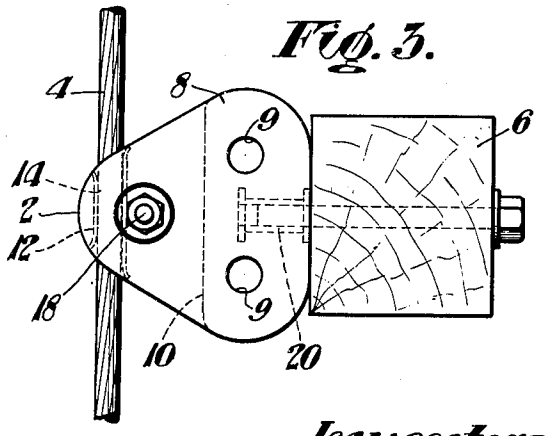


Fig. 3.



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BRACKET FOR MOUNTING GUARDRAILS

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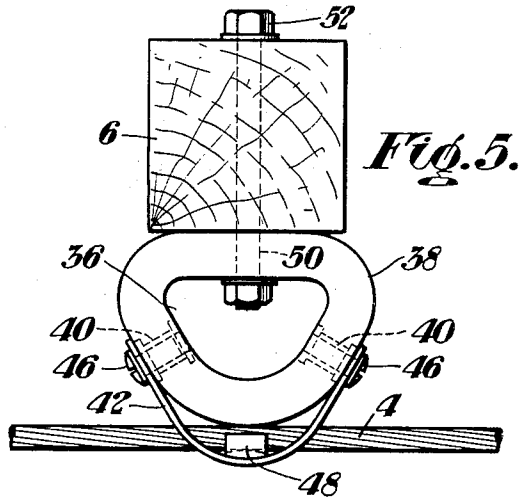


Fig. 5.

Fig. 6.

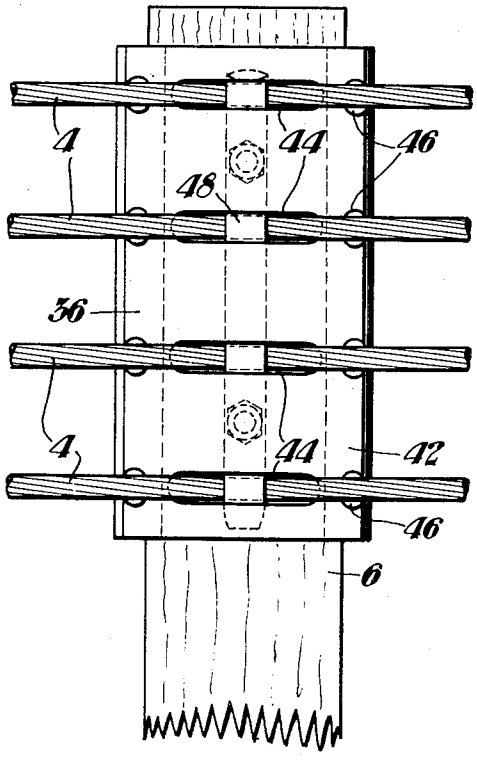
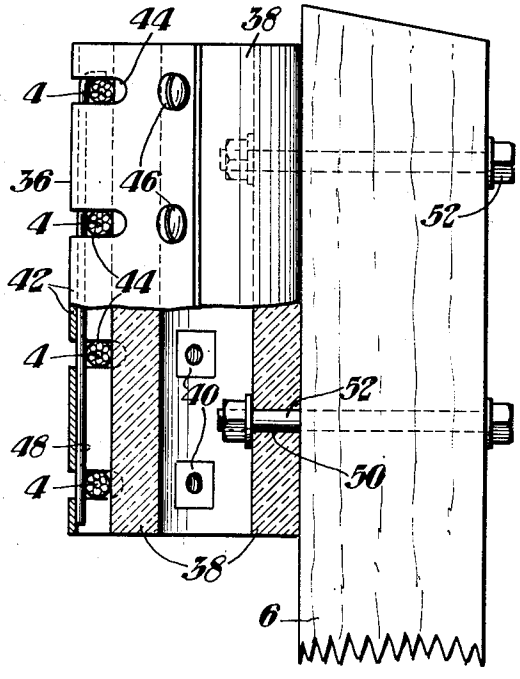


Fig. 7.



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2,193,689

BRACKET FOR MOUNTING GUARDRAILS

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Application April 16, 1937, Serial No. 137,340

7 Claims. (Cl. 248—66)

This invention relates to road guards and, more particularly, to a bracket for mounting guardrails on their supports.

Ever since road guards were first used along highways, vehicles have repeatedly collided with them. These vehicles must be stopped or turned aside by the road guard with the smallest possible injury to them, their occupants and the road guards. Attempts have been made to solve this problem by mounting the guardrails in such a manner that they gradually absorb the force of the collision. Heretofore, however, the problem has not been satisfactorily solved.

One of the objects of the present invention is to secure guardrails to their supports by novel brackets which are inexpensively maintained in a usable condition.

The above and further objects will be made apparent by referring to the following description and the accompanying drawings, in which:

Figure 1 is an elevation of a device of the invention;

Figure 2 is a side elevation, partly in section, of the device of Figure 1;

Figure 3 is a plan of the device of Figure 2;

Figure 4 is a side elevation of a modification of the device of Figure 1;

Figure 5 is a plan of a further modification of the device of Figure 1;

Figure 6 is an elevation of the device of Figure 5; and

Figure 7 is a side elevation, partly in elevation, of the device of Figure 5.

Referring more particularly to the drawings, the numeral 2 indicates generally a bracket which mounts a plurality of guardrails 4 on a support 6. The guardrails 4 may be made from a wire rope, a cable or a strand, as desired. The bracket 2 includes a rubber block 8, which is elastically deformable in all directions but which offers considerable resistance while being deformed. The rubber block 8 is substantially triangular in cross-section and may be made solid, although we have shown holes 9 therein to reduce the volume of rubber required and to increase the elastic deformability of the block. Of course, the rubber block 8 is made of such composition that it offers considerable resistance to shocks or blows upon the guardrails 4 but still retains its elasticity and springs back to its original shape when the distorting force is removed from the guardrails 4. The rubber block funtions to snub the guardrails 4 and effect a relatively gradual shock absorption upon a collision of a moving object therewith. Another feature of the rubber block 8 over known types of brackets is that it is elastically deformable in every direction. While we have described a rubber block, we do not wish to be limited thereto as the block can be made of any material that has characteristics similar to rubber.

A plurality of slits 10 are cut in the rubber block 8 and apertures 12 are formed in the surfaces of the rubber block exposed by the slits 10. The slits 10 permit the rubber block 8 to be pulled apart an amount sufficient that the guardrails 4 may be inserted in the apertures 12. In some cases, the apertures 12 should be lined with split sleeves 14 which are molded in the rubber block 8 and protect the guardrails 4 from any injurious effect of the ingredients present in the rubber block.

In order to positively hold the guardrails 4 in the rubber block 8, a hole 16 is cut through the rubber block 8 adjacent the apertures 12 substantially perpendicular to the slits 10. A bolt 18, or a similar device, is received in the hole 16 and can be tightened on the rubber block to retain the guardrails 4 in the apertures 12.

Threaded bushings 20 may be molded in the rear portion of the rubber block 8 for engaging with means on the support 6 to positively secure the rubber block thereto.

Another improved bracket 22 is represented in Figure 4 of the drawings. The bracket 22 is composed of a plurality of rubber blocks 24 and 25 which have the same characteristics as the rubber block 8. The rubber blocks 24 are provided with recesses 26 in the top and bottom thereof, while the rubber blocks 25 are provided with recesses 27 in either the top or bottom thereof, depending upon their position in the bracket 22. The recesses serve to position the guardrails 4 in the bracket 22. The recesses 26 and 27 are designed to meet when the rubber blocks 24 and 25 are assembled into the bracket 22.

The rubber blocks 24 and 25 are provided with holes 28 which align when the rubber blocks are placed together. Then means, such as bolts 30, are placed through the holes 28 and tightened to hold the guardrails 4 in the recesses 26 and 27 and to hold the bracket 22 together. The recesses 26 and 27 may be lined with split sleeves 32 if desired, and threaded bushings 34 are molded in a plurality of the rubber blocks 24 and 25. By providing a plurality of individual rubber blocks and building up the bracket 22 in this manner, the bracket can easily be adapted to receive 2, 3, 4 or more guardrails therein.

In Figures 5, 6 and 7 of the drawings, we have

shown a bracket 36 which is adapted to elastically position the guardrails 4. The bracket 36 includes a rubber block 38 which may be hollow and which has a plurality of flanged, threaded bushings 40 molded therein. A substantially V-shaped metal plate 42 having a plurality of parallel slots 44 is carried by the rubber block with the apex of the metal plate extending therefrom. Means, such as bolts 46, engage with the bushings 40 to positively secure the metal plate 42 to the rubber block 38. The guardrails 4 are received in the slots 44 and are held therein by a pin 48, or other suitable means, which prevents the guardrails from moving from the slots 44. The rubber block 38 has holes 50 through the rear portion thereof and bolts 52 pass therethrough to secure the bracket 36 to the support 6.

Each of the brackets which we have illustrated in the drawings and described in the above specification is capable of snubbing repeated impacts, shocks or blows on the guardrails 4. The elastic nature of the material forming the brackets adapts them to receive repeated blows without being injured in any manner. As the expense involved in repairing ordinary road guards after a vehicle has collided therewith is usually a considerable item, the fact that our novel brackets ordinarily will not require any repair work thereon after a collision makes them highly desirable for use in mounting road guards. As examples of such changes, the rubber compound may be substituted by compressed cork, mastic or asphalt base compositions or fiber compositions such as that commercially known as "Celotex." However, rubber or rubber compounds are considered preferable.

While we have shown and described several modifications of our novel bracket, it will be appreciated that we do not wish to be limited exactly thereto, since various modifications may be made without departing from the scope of the invention as defined by the following claims.

We claim:

1. A bracket for a road guard including an elastically deformable block having a plurality of slits therein, said slits being adapted to receive guardrails, and means associated with said block for retaining said guardrails therein.

2. A bracket for a road guard including an elastically deformable block having a plurality of slits therein, split sleeves molded in said slits and adapted to receive guardrails, means carried by said block for facilitating the anchoring thereof, and means associated with said block for retaining said guardrails therein.

3. A bracket for a road guard including a plurality of stiff resilient blocks adapted to position guardrails therebetween, and means associated with said blocks for securing said blocks together and retaining said guardrails therebetween.

4. A bracket for a road guard including a rubber block, a substantially V-shaped metal plate having a plurality of parallel slots therein secured to said rubber block, said slots being adapted to receive guardrails therein, and means for positively holding said guardrails in said slots.

5. A bracket for a road guard including a rubber block, a plurality of threaded bushings molded in said rubber block, a substantially V-shaped metal plate having a plurality of parallel slots therein, said slots being adapted to receive guardrails therein, means for engaging with said bushings and securing said metal plate to said rubber block, and means for positively holding said guardrails in said slots.

6. A bracket for mounting a guardrail offset from a road guard post, said bracket being made of material having the physical characteristics of elastic rubber compound and being shaped to afford a sufficient thickness of said material for elastic deformation when the guardrail mounted thereby is struck by colliding traffic to provide the elasticity necessary to maintain the guardrail offset from the road guard post during the collision.

7. A bracket for mounting a guardrail offset from a road guard post, said bracket being made of material having the physical characteristics of elastic rubber compound and being shaped to afford a sufficient thickness of said material for elastic deformation when the guardrail mounted thereby is struck by colliding traffic to provide the elasticity necessary to maintain the guardrail offset from the road guard post during collision, said bracket having a triangular cross-section with a solid corner for mounting the guardrail and said corner having at least one horizontal opening for the reception of a guardrail element, said bracket functioning to snub said element against longitudinal travel through said opening when said element is tensioned and said bracket is deformed by collision stresses.

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