May 7, 1929. J. W. MEAKER 1,711,898

ROAD GUARD FENCE

Filed Dec. 28, 1925

Fig. 1

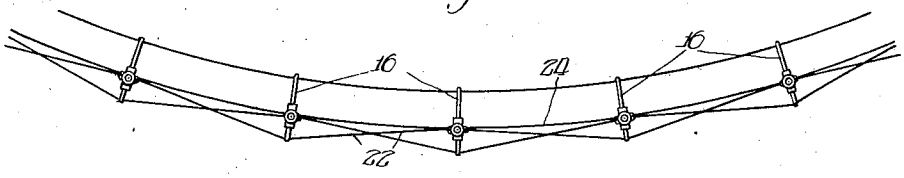


Fig. 2

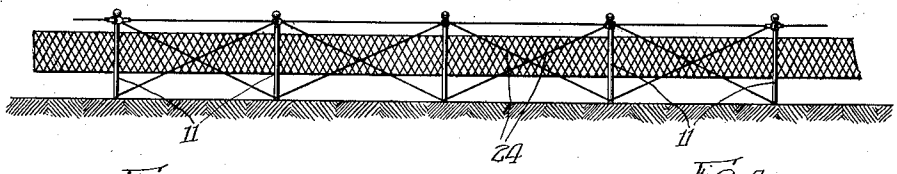


Fig. 3

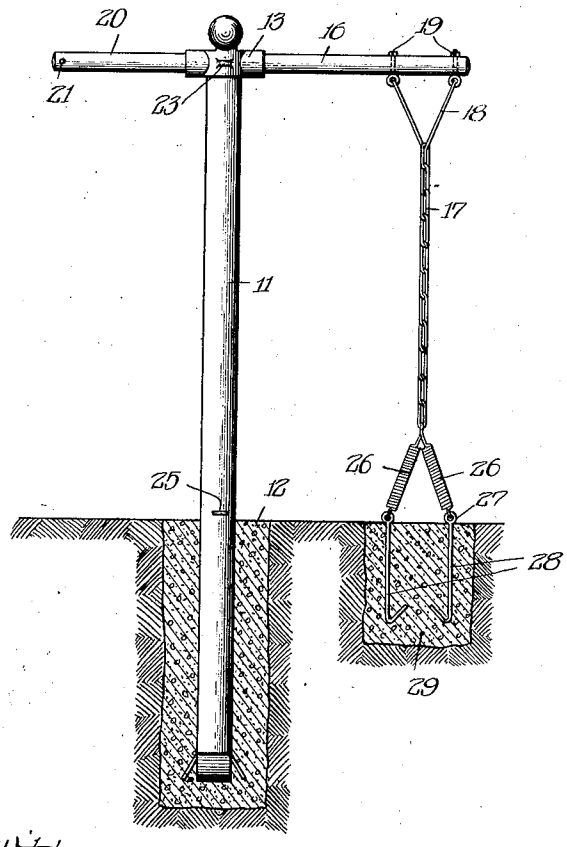


Fig. 4

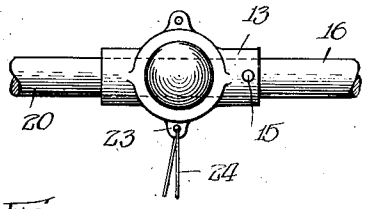


Fig. 5.

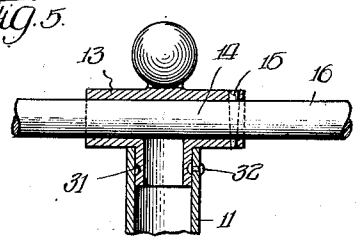
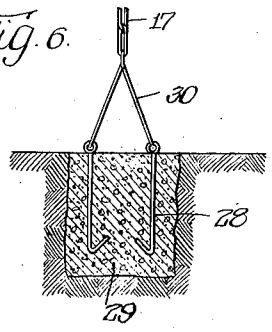


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOHN W. MEAKER, OF EVANSTON, ILLINOIS.

ROAD-GUARD FENCE.

Application filed December 28, 1925. Serial No. 78,056.

This invention relates to a new and improved road guard and more particularly to a road guard fence comprising wire fabric held spaced from the supporting posts.

It has become customary to provide road guard fences upon state highways, both at turns and adjacent narrow bridges and at other dangerous points along the road. These fences have been constructed of a variety of materials. Those formed of wooden posts and longitudinally extending planks are ineffective fences, as a rapidly moving machine will readily crash through the planks. Other fences have been constructed of heavy posts with steel cables stretched tightly between them. These fences are effective in preventing the vehicle leaving the roadway, but stop it so suddenly as to cause damage to the vehicle and often to hurl the occupants from the vehicle and cause serious injury to them. The narrow points of contact of the cables with the vehicle seriously damage the latter.

It is an object of the present invention to provide new and improved guard fences adapted to efficiently stop vehicles and to retain them upon the highway.

It is a further object to provide a fence of this character which will interpose a yielding resistance to the impact of the vehicle.

It is an additional object to provide a fence in which the contact by the vehicle engaging the fence with rigid fence supporting members is reduced to a minimum.

Other and further objects will appear as the description proceeds.

Figure 1 is a plan view of a section of a fence constructed according to my invention;

Figure 2 is an elevation of the same section of fence;

Figure 3 is a cross section on an enlarged scale showing the method of supporting the fence;

Figure 4 is a plan view of a cross arm securing member;

Figure 5 is a vertical section of the cross arm securing member, and

Figure 6 is a view showing an alternative construction for securing the lower edge of the fabric.

The fence is supported upon a plurality of posts 11 which are preferably tubular metal posts set in concrete 12. These posts carry upon their upper ends the cross arm receiving members 13 into which are fitted the cross arms 14 secured in place by a pin or rivet 15 as best shown in Figure 5. The fence supporting arms of the cross arm members are connected to the fence fabric 17 by the links 18 which latter are held to the arm by bolts 19.

The opposite arm 20 of the cross arm serves as a point of connection at 21 for the horizontal guys 22 shown in Figure 1. The guys extend diagonally and their opposite ends are connected to the eyes 23 formed on the members 13. The eyes 23 are also connected by the guys 24 which extend in the vertical plane as shown in Figure 2, their lower points of connection to the posts 11 being the eyes 25 secured to the post adjacent the ground.

In Figure 3, the wire fabric 17 is connected at its lower edge by springs 26 to the eyes 27 which are formed upon the members 28 imbedded in the concrete 29. In the form of construction shown in Figure 6, the links 30 are substituted for the springs 26. The members 13 may be provided with the circumferential recess 31 and thereby retained upon the upper ends of the posts 11 by means of the set screws 32.

The fabric 17 is preferably what is known as chain link wire fabric which is composed of interwoven or interlinked vertically extending wires, the wires being bent in a zigzag manner and interlaced. This form of fabric has no horizontally extending wires and, therefore, is capable of considerable lengthwise or longitudinal stretch without danger of rupturing or breaking any of the wires. This stretch is yieldingly resisted by all of the wires which are sufficiently rigid so as to resist deformation.

In the use of the fence, it will be installed substantially as shown in the drawings and may be placed either along straight stretches of road or upon either concave or convex curves. The fabric anchored to the cross arm and to the ground is maintained in the desired relation to the road and held spaced from the posts. Any machine striking the fence under road conditions will almost invariably hit it at a glancing angle. The resilience of the fence fabric will give and yieldingly take up the blow and retain the machine upon the roadway. The taking up of the blow will be sufficiently gradual, so as to minimize danger of occupants being hurled from the machine.

While the guys maintain the cross arms at right angles to the fence fabric, the cross

arms will rotate sufficiently upon the fence post, so as not to present immovable objects to a machine striking the fence. The fabric is sufficiently spaced from the post so that it will not be forced back against the post except under abnormal circumstances. In such case, the momentum of the vehicle will have been materially lessened before contact with the post may be reached.

The fence is formed of a standard type of fabric and of readily procurable post and cross arm members. It may be cheaply constructed and will have a low maintenance cost. The fence may be painted white with black stripes, or all white, both of which are customary in such guard fences, and the fabric is sufficiently closely woven of large wire, so that it presents enough surface to be readily visible at night, especially when viewed from an angle as is normally the case in road use.

I have illustrated one preferred form of my invention by way of example, but I contemplate such modifications and changes as come within the spirit and scope of the appended claims.

I claim:

1. A guard fence or the like comprising a line of spaced posts, a wire fabric fencing, outwardly extending arms carried by the posts, means for securing the fabric to the arms, and means for securing the lower edge of the fabric to the ground at points spaced from the line of posts and independently thereof.

2. A guard fence or the like comprising spaced posts, a wire fabric fencing, arms carried by the posts, said arms being movable about a vertical axis, means connecting adjacent posts and arms to maintain them in fixed relation, means securing the fabric to the arms at points spaced from the posts, and additional securing means for the fabric.

3. A guard fence or the like comprising spaced posts, a wire fabric fencing, arms carried by the posts, means connecting adjacent posts and arms to maintain them in fixed relation, means for securing the fabric to the arms at points spaced from the posts, and means for yieldingly connecting the fabric to the ground.

4. A guard fence or the like comprising spaced posts, a wire fabric fencing, arms carried by the posts extending in opposite directions from the posts, said arms being movable about the axis of the post, means securing the fabric to the arms extending in one direction, additional securing means for the fabric, and bracing means connecting the portions of the arms extending in the opposite direction.

5. A guard fence or the like comprising spaced posts, a wire fabric fencing, arms carried by the posts extending in opposite directions from the posts, means for securing the fabric to the arms extending in one direction, bracing means connecting the portions of the arms extending in the opposite direction, and resilient means for securing the lower portion of the fabric to the ground.

6. A guard fence or the like comprising spaced posts, a wire fabric fencing, cross arms pivotally carried by the upper portions of the posts, said arms being pivoted upon vertical axes, means for connecting the upper edge of the fabric to one end of the cross arms, securing means for the other edge of the fabric, and bracing means connecting the other end of the cross arms with cross arms of adjacent posts.

7. A guard fence or the like comprising spaced posts, a wire fabric fencing, cross arms pivotally carried by the upper portions of the posts to swing in a horizontal plane, means for connecting the upper edge of the fabric to one end of the cross arms, additional securing means for the fabric, and bracing means connected with the other end of the cross arms, said bracing means extending along the line of the fence.

8. A guard fence or the like comprising spaced posts, a chain link wire fabric, arms pivotally carried by the upper portions of the posts to swing in a horizontal plane, bracing means connecting adjacent posts and arms to limit said swinging movement, means for securing the fabric to said arms, and additional securing means for said fabric.

Signed at Chicago, Illinois, this 24th day of December, 1925.

JOHN W. MEAKER.