

Aug. 10, 1943.

A. E. McNABB

2,326,547

ROAD GUARD

Filed Nov. 7, 1940

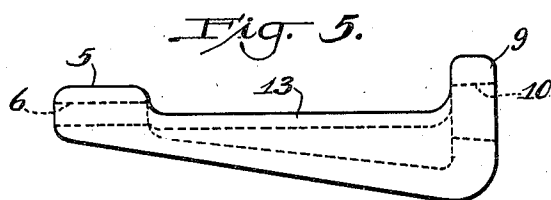
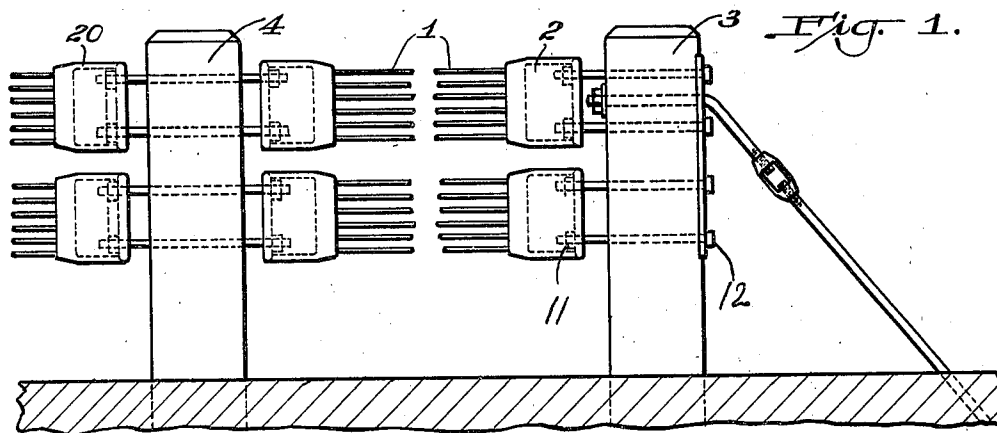


Fig. 3.

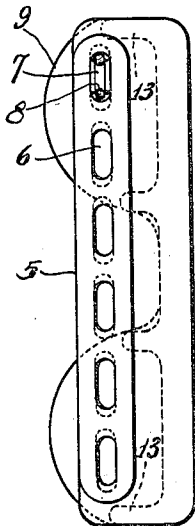


Fig. 2.

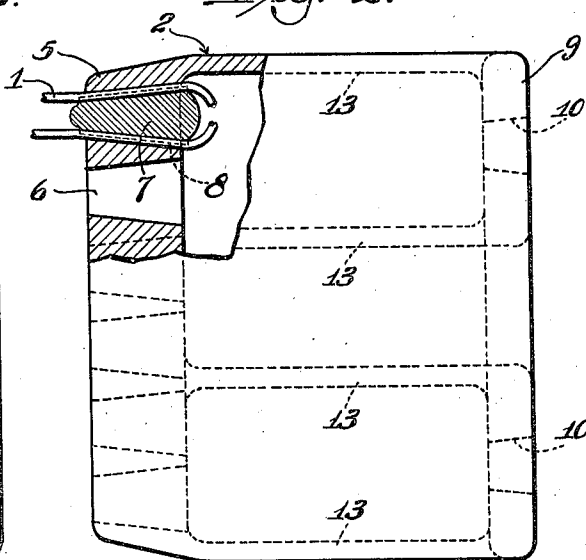
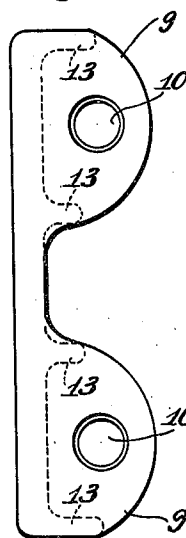


Fig. 4.



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2,326,547

ROAD GUARD

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Application November 7, 1940; Serial No. 364,655

4 Claims. (Cl. 256-13.1)

This invention relates to highway road guards and more particularly to an improved construction of wire-band road guards.

In wire-band road guards, bands of spaced, parallel wires are connected to anchors which, in turn, are anchored to or supported by posts by means of anchor rods. It has not been uncommon to connect the bands to anchors by providing the latter with openings to receive the ends of the wires which are then clamped in the openings by wedges. In some cases the ends of four or more of the parallel wires which form a band are placed in a single conical opening and clamped by a conical wedge. When this is done the ends of some of the wires are necessarily bent out of parallelism with and accordingly are longer than the others, with the result that when the wire-band is subjected to high tension, as when struck by an automobile, the wires whose ends are thus bent do not take their share of the load and the other wires are liable to break because they are proportionately overstressed. Also, due to normal variations in the diameters of wires which are intended to be of the same gage, and to the normal manufacturing irregularities of anchors and wedges, it not infrequently happens that all of four or more wires that are engaged by a single wedge are not clamped with like firmness. The consequent relative looseness of some of the wire results in the same unequal stressing of the wires of a wire-band when it is subjected to high tension, regardless of whether the wires of a band are parallel to each other from anchor to anchor.

Objects of my invention are to provide a wire-band road guard in which all of the wires of a band remain parallel from anchor to anchor, and in which the ends of all the wires are firmly and uniformly clamped to anchors, and to provide a road guard anchor which is strong and durable and to which the ends of wire-bands may be easily attached.

Generally, the objects of the invention are accomplished by providing an anchor plate with a plurality of openings so positioned that each will receive the ends of a pair of adjacent wires in their parallel arrangement, and providing a wedge to clamp the ends of each pair of wires in each opening.

My invention is illustrated in the accompanying drawing in which Fig. 1 shows in elevation a portion of a wire-band road guard embodying the invention; Fig. 2 a plan of one of the anchor plates illustrated in Fig. 1 with a section cut away to show the engagement of the ends of band

wires; and Fig. 3 a left end view, Fig. 4 a right end view, and Fig. 5 a side view of the anchor plate, as seen in Fig. 2.

The invention will be further explained and better understood by reference to the drawing. The ends of a band of spaced, parallel wires are connected to anchor plates 2 which, in turn, are either attached to end posts 3 or are supported by intermediate posts 4 by suitable rods. Plate 2 is provided at one end with a boss 5 having a plurality of wire-receiving openings 6; the side walls of which converge towards the wire-receiving edge of the plate. Each of these openings is adapted to receive the ends of a pair of adjacent spaced parallel wires of band 1.

An important feature of this invention lies in the spacing of openings 6 and in the manner in which the ends of the wires are clamped in the openings. These openings are so spaced as to receive the wires in their parallel position, due to which the wires are of uniform length from anchor to anchor. A wedge 7 is provided for each opening, the opposite sides of which wedge engage only a pair of the wires and clamp that pair in the opening provided for them. When a wedge is so driven into an opening that the opposite sides of the wedge engage only a pair of wires extending through the opening, the wedge adjusts its position between the wires so as to clamp the two wires with like firmness regardless of the normal variations in the diameters of wires which are intended to be of the same gage, or the normal manufacturing irregularities of anchors and wedges. There are no loosely engaged wires, and consequently no unequal stressing of them due to slippage in the openings when a load is applied to the band. Thus the spacing of openings 6 and the engagement of only two wires between a wedge 7 and the walls of an opening produce an anchor which firmly and uniformly clamps the ends of all the wires of a wire band.

The tendency of the wires to pull through the openings and thus break their connections to the plate may be further resisted by bending the ends of the wires projecting through and beyond the opening around the wedge, as shown in Fig. 2. Although, except for the described convergence, the openings 6 may be formed according to choice, I prefer to make them flat instead of round. The wedges 7 conform to the shape of the openings except that, as shown in Fig. 2, the wedges may contain grooves 8 to receive the wires.

The other end of plate 2 is provided with lugs

9 having eyes 10 through which extend anchor rods, both ends of which are threaded. Nuts 11 engage one end of the anchor rods and securely connect the plate 2 to the rods. The anchor rods either pass through posts 3 and are secured against longitudinal movement to the left (Fig. 1) by heads 12 or extend through intermediate posts 4 and engage a succeeding anchor plate 20, as shown in Fig. 1, in the manner described above for securing the anchor rods to anchor plates. The number of anchor rods used depends on the width of the wire band. The purpose of using more than one anchor rod for a single plate is to maintain the wire band in a vertical plane.

As strengthening elements, anchor plate 2 is provided with ribs 13 which extend longitudinally from the lugs 9 to the bosses 5. The ribs lie in interspaced relation with the converging openings 6 to permit the bending of the projecting ends of the wires around the wedge. Also, to additionally strengthen the anchor plate, the axes of wire-receiving openings 6 and anchor bolt eyes 10 lie in a common plane.

According to the provisions of the patent statutes, I have explained the principle and construction of my invention, and have illustrated and described what I now consider to represent its best embodiment. However, I desire to have it understood that, within the scope of the appended claims the invention may be practiced otherwise than as specifically illustrated and described.

I claim:

1. In a road guard, the combination of a band comprising a plurality of spaced parallel wires, an anchor comprising a plate provided at one end with a boss having a plurality of wire-receiving openings the side walls of each of which converge towards the edge of said plate, the ends of a pair of adjacent wires of said band being positioned in each of said openings in contact with the opposite sides thereof, a wedge binding said wires in each opening, said openings being spaced and formed to receive said wires in their parallel position, the opposite end of said plate provided with lugs having eyes to receive anchor rods, and a plurality of strengthening ribs on said plate extending longitudinally thereof from said lugs to said boss and lying in interspaced relation with the openings of said boss.

2. In a road guard, the combination of a band comprising a plurality of spaced parallel wires, an anchor comprising a plate provided at one

end with a boss having a plurality of wire-receiving openings the side walls of each of which converge towards the edge of said plate, the ends of a pair of adjacent wires of said band being positioned in each of said openings in contact with the opposite sides thereof, a wedge binding said wires in each opening, said openings being spaced and formed to receive said wires in their parallel position, the opposite end of said plate being provided with lugs having eyes to receive anchor rods, the axes of said eyes lying in a common plane with the axes of the openings of the boss, and a plurality of strengthening ribs on said plate extending longitudinally thereof from said lugs to said boss and lying in interspaced relation with the openings of said boss.

3. In a road guard, the combination of a flat band comprising a plurality of laterally spaced parallel wires, an anchor comprising a plate provided at one end with a boss having a plurality of wire-receiving openings lying in the plane of said band the side walls of each of which openings converge towards the edge of said plate, the ends of a pair of adjacent wires of said band being positioned in each of said openings in contact with the opposite sides thereof, and a wedge clamping said wires in each opening, said openings being spaced and formed to receive said wires in their parallel position, the connection of said band to said anchor being characterized in service by uniformity of tension in all of the wires of the band and by uniformity of clamping engagement of the ends thereof.

4. In a road guard, the combination of a flat band comprising a plurality of laterally spaced parallel wires, an anchor comprising a plate provided at one end with a boss having a plurality of wire-receiving openings lying in the plane of said band the side walls of each of which openings converge towards the edge of said plate, the ends of a pair of adjacent wires of said band being positioned in each of said openings in contact with the opposite sides thereof, and a wedge binding said wires in each opening, said openings being spaced and formed to receive said wires in their parallel position, and the opposite end of said plate provided with lugs having eyes to receive anchor rods, the connection of said band to said anchor being characterized in service by uniformity of tension in all of the wires of the band and by uniformity of clamping engagement of the ends thereof.

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