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H. K. BENTE

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HIGHWAY GUARD

Filed Nov 14, 1930

FIG. 1.

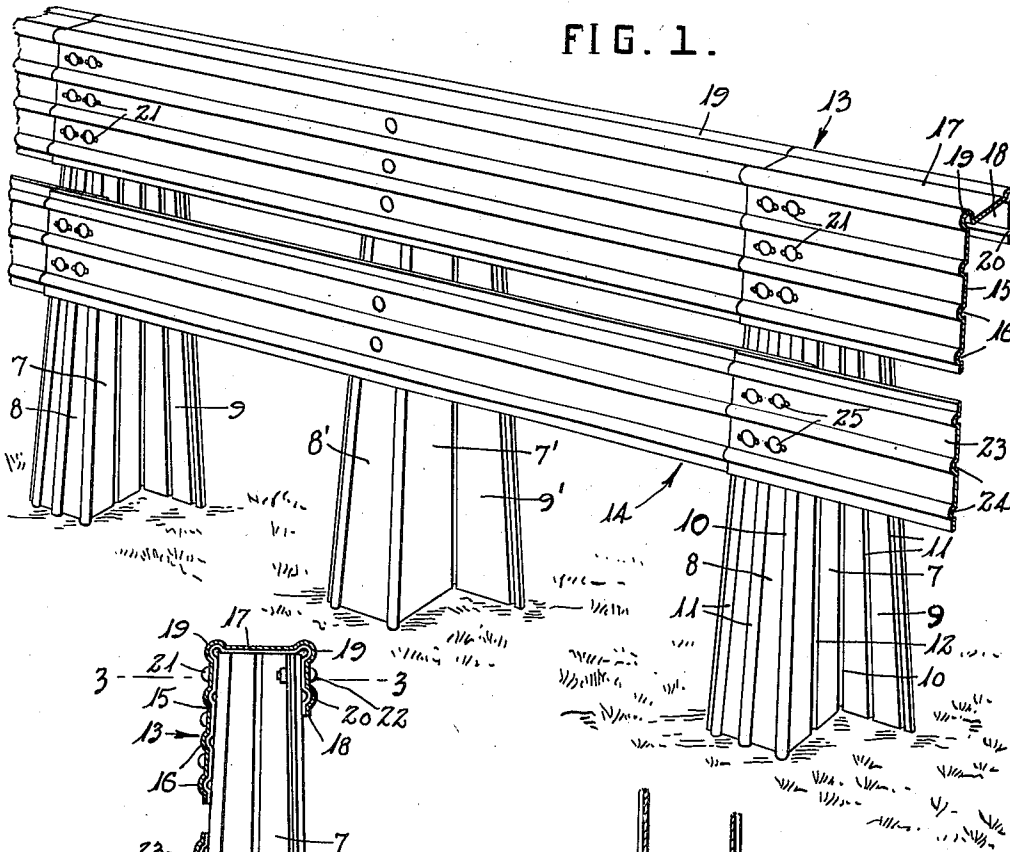
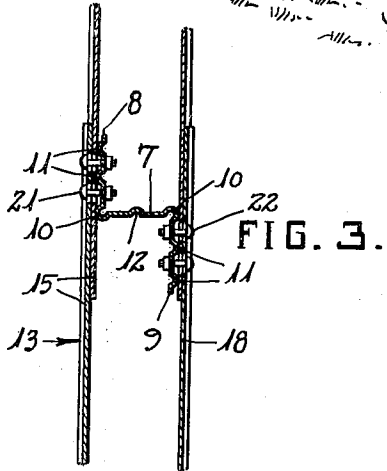
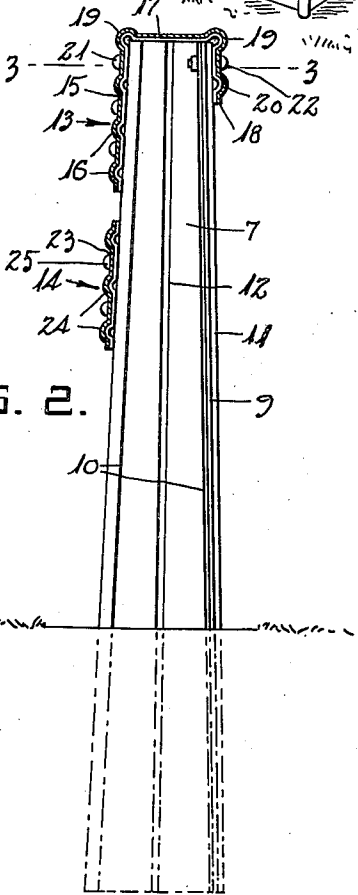


FIG. 2.



Inventor:

Henry K. Bente

By Monroe Miller

Attorney

UNITED STATES PATENT OFFICE

HENRY K. BENTE, OF SEDALIA, MISSOURI, ASSIGNOR OF ONE-HALF TO MARTIN
PHILLIPS, OF SEDALIA, MISSOURI

HIGHWAY GUARD

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The present invention relates to guards for highways, and aims to provide a novel and improved guard fence for use at curves and other points along highways to prevent automobiles and other vehicles from running off the highways.

Another object of the invention is the provision of a guard of the kind indicated constructed of sheet metal and capable of economical manufacture and installation, as well as being strong in construction to withstand the impacts and abrasions of the vehicles as well as to deflect same back to the highway.

A further object of the invention is the provision of novel sheet metal posts and rails which are comparatively light in weight although rigid.

With the foregoing and other objects in view, which will be apparent as the description proceeds, the invention resides in the construction and arrangement of parts as hereinafter described and claimed, it being understood that changes can be made within the scope of what is claimed, without departing from the spirit of the invention.

The invention is illustrated in the accompanying drawing, wherein—

Figure 1 is a perspective view of the improved highway guard.

Fig. 2 is a cross section of the rails, showing a post in elevation.

Fig. 3 is a horizontal section on the line 3—3 of Fig. 2.

The posts are bent from sheet metal of suitable gage and material, and each post has the web 7 and the oppositely extending front and back flanges 8 and 9, respectively. The post is of suitable height and the web and flanges are tapered upwardly, so that the post increases in size to its lower end which is embedded in the ground or in concrete.

The post is formed with outstanding rounded beads or ribs 10 at the bends between the web and flanges, thereby adding considerable strength to the post, and the flanges have the outstanding ribs 11 extending longitudinally thereof, to stiffen the flanges and to also provide portions for the contact of the rails. The web 7 is also preferably provided with a longitudinal rib 12 between the ribs 10.

Upper and lower rails 13 and 14, respectively, are secured to the posts, although in some instances the lower rails 14 may be omitted in which event it is preferable to use lower posts with the rails 13 near the ground or the rails 13 may be wider.

The upper rail 13 comprises the broad front or face portion 15 having outstruck longitudinal ribs 16, the upper horizontal web 17, and the rear depending flange 18, there being outstanding rounded ribs or beads 19 at the bends between the front portion 15, web and flange, and the flange 18 have an outstanding longitudinal rib 20.

The rail 13 is disposed astride the upper ends of the posts, so that objects or portions of vehicles which may slide on the rail will not encounter the upper ends of the posts. The web 17 seats on the upper ends of the posts while the flange 18 extends behind the posts.

The portion 15 of the upper rail is secured to the front flanges 8 of the posts by bolts 21 or other securing elements which are located between the ribs 10 and 11, and the flanges 18 are similarly secured to the back flanges 9 by bolts 22 or other securing elements, thereby clamping the front and rear portions of the rail to the ribs of the posts, and the front and rear portions of the rail contact only with the ribs of the post, with the securing elements located between such ribs to provide for tight contact of the rail and posts.

The rail 13 is composed of sections of suitable length, and the rail sections are overlapped or telescoped at their ends, as seen in Fig. 3. It is also preferable to provide slots in the rail through which the bolts 21 and 22 extend, to provide for tolerance in assembling the rail and posts.

As shown, supplementary posts are located between the ends of the rail sections, and as shown these supplementary posts, one of which is seen in Fig. 1, have webs 7' and flanges 8' and 9' which do not have the intermediate ribs, this being a modification of the post previously described.

The lower rail 14 comprises a broad plate 23 having the outstanding ribs 24, and said

rail is secured to the posts by bolts 25 or other securing elements, similar to the upper rail. The lower rail is also composed of sections having their ends overlapping.

5 The posts and rails may be made in various sizes and proportions according to the requirements, and the posts although light in weight are strong in construction to withstand impacts against the rails. The ribs stiffen the rails and also serve to guide the
10 hub caps, bumpers or other portions of automobiles along the rails, to prevent the vehicles from glancing upwardly across the rails. The rails are so positioned as to be encountered by the hub caps, bumpers and other
15 parts of automobiles in order to deflect the vehicles along the rails and back toward the highway. The posts being of Z-shaped cross section will resist bending in various directions, and the top rail sections overlapping
20 and being secured to both the front and rear flanges of the posts will provide a strong construction, said upper rail also being disposed astride the posts.

25 Having thus described the invention, what is claimed as new is:

1. A highway guard comprising sheet metal posts having front and back flanges, and a sheet metal rail fitted astride said posts
30 and secured to both the front and back flanges.

2. A highway guard comprising sheet metal posts having front and back flanges, and a sheet metal rail having a web above the posts
35 and having front and rear portions overlapping and secured to the front and back flanges, respectively, of the posts.

3. A highway guard comprising sheet metal posts of Z-shaped section formed with outstanding rounded beads at the bends between the web and flanges, said flanges having outstanding ribs, and a sheet metal rail extending across the beads and ribs of one flange
40 of each post, and securing elements passing through said flanges and rail and located between said beads and ribs.

4. A highway guard comprising sheet metal posts having outstanding longitudinal ribs, a sheet metal rail extending across said ribs,
50 and having outstanding longitudinal ribs, and securing elements fastening the rail to the post, said securing elements being located between the ribs of the post and also between the ribs of the rail.

55 5. A highway guard comprising sheet metal posts, and a sheet metal rail having a web above the posts and having front and back portions overlapping the posts and secured thereto, said rail having outstanding rounded
60 ribs at the bends between said web and front and rear portions.

In testimony whereof I hereunto affix my signature.

HENRY K. BENTE.