May 24, 1938. E. L. TAROF 2,118,331

GRATING TRAFFIC GUIDE

Filed April 20, 1937

Fig. 1

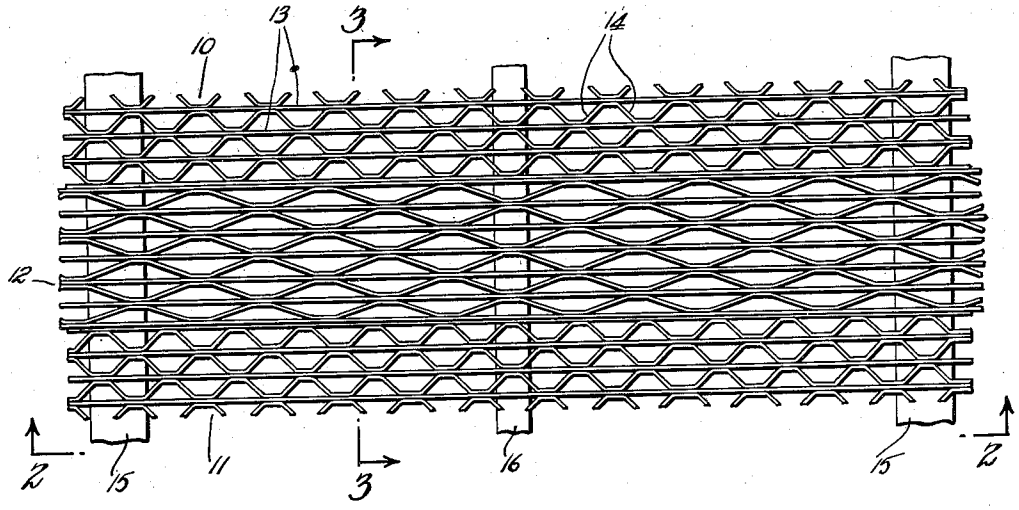


Fig. 2

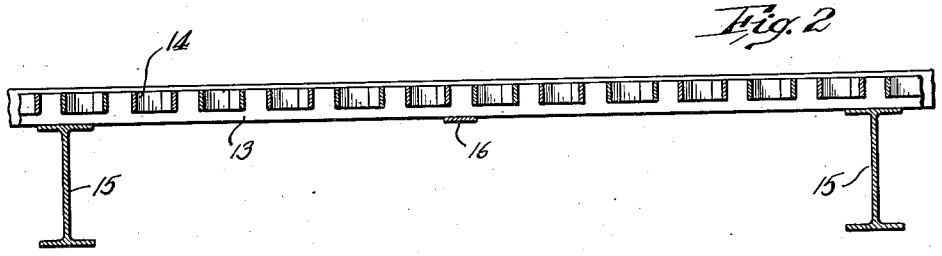
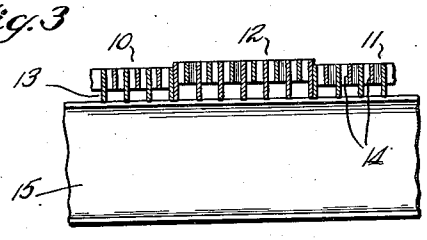


Fig. 3



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GRATING TRAFFIC GUIDE

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3 Claims. (Cl. 14—73)

This invention relates to gratings for highway bridges and the like and has for its object to increase their safety without increasing their cost.

Another object is to strengthen the paving of such bridges when it consists of grating sections.

A common expedient on highway bridges is to have the roadways formed of open metal grating sections, with a traffic guide or central dividing strip formed by solid sheet material between the roadways. An objection to such a construction is that more snow and ice collects on the traffic guide than on the roadways with the result that a car may skid more easily and this is true in wet weather when there may be no ice.

Referring to the drawing

Fig. 1 is a top plan view of a portion of a bridge embodying this invention.

Fig. 2 is a section on the line 2—2 of Fig. 1.

Fig. 3 is a section on the line 3—3 of Fig. 1.

Roadways are comprised of grating sections 10 and 11 between which is arranged a traffic guide or central section 12 also composed of grating sections which are preferably of much less width than the grating sections comprising the roadways.

Each section includes substantially straight longitudinal bars 13 and spacing bars 14 extending laterally between the straight bars. Transverse supporting beams 15 carry the grating sections, such beams being placed at any suitable distance but preferably closer together than the length of a grating section.

The traffic guide portion includes grating sections laid end to end but so constructed that the spacing bars are shaped substantially different from the spacing bars in the grating sections of the roadways. Preferably the spacing bars in the traffic guide portion form larger openings so that there is more tendency for a vehicle tire to enter slightly the openings formed with the result that the traffic guide portion not only provides a visually conspicuous and different portion of the bridge surface but also is so arranged as to be better able to prevent skidding of cars on this central portion.

Having a traffic guide formed in this manner eliminates the necessity for continually painting since the difference in appearance of the grating is at all times sufficient to conspicuously delineate the two roadways. Added to this the spacing bars in the traffic guide sections are arranged so as to give a different sound as a vehicle moves along compared to the sound made by the vehicle wheels on the differently shaped grating sections of the roadways. The traffic guide sections are preferably made of aluminum or duralumin or stainless steel or other alloy so that such traffic guide portions may at all times be conspicuous without the necessity for painting them white or other color as is the custom in traffic guide portions of many roadways.

It is also preferred to have the traffic guide portions slightly elevated about a half inch above the top of the grating sections of the roadways adjacent thereto in order that a driver may not only have his attention called visually and audibly to the fact that he is traveling on a traffic guide portion, but he is also told by his sense of touch as a car is steered over and on to the slightly elevated traffic guide portions.

The longitudinal straight bars on a grating section in a roadway being arranged on edge are well adapted to withstand heavy loads. Ordinarily the spacing members are of less depth and frequently bent to the shapes illustrated and secured to the straight bars by either welding or riveting. The bent portions of the spacing members are not adapted to transmit much stress in either tension or compression. In order to provide a construction which will better transmit loads laterally so that other straight bars adjacent the load may assist in carrying it, there has been provided a lateral tension member 16 extending across the full width of the bridge, each tension member being located substantially centrally between the pair of transverse supporting beams 15.

The lateral tension bar 16 is preferably welded to the bottoms of the straight bars of each grating section. Where the traffic guide portion is raised or lowered the tension bar may be bent to enable it to be welded to the bottoms of the straight bars of the traffic guide sections 12, or if desired extensions may be formed on the straight bars of the traffic guide portion to which the lateral tension member may be welded without having to bend the member 16.

These extensions on the traffic guide straight bars may be formed either integrally or by extensions attached by riveting or otherwise. When the traffic guide portion as well as the roadways are thus welded to the tension bar 16, the straight bars of each grating section are in effect made stronger because adjacent straight bars are better adapted to assist in supporting the load.

Instead of the straight bars in the traffic guide portion being of the same depth as they are in the other grating sections, as shown in Fig. 3, they may be slightly deeper, say one-half inch

deeper in order to raise the center or guide section as illustrated.

The transverse tension member 16 may be applied to each grating section at the factory or it may preferably be applied on the job after the grating sections have been put in place. In this last event the tension member 16 may extend across the full width of the bridge paving, being connected to the straight bars of each longitudinal member in the roadway and traffic guide portions.

While not shown, it should be understood the traffic guide gratings, as well as those of the roadways, may be spliced as described in my Patent No. 2,014,912 dated September 17, 1935, for Grating, and the effects of expansion and contraction taken care of as described in my copending application, Serial Number 126,102, filed Feb. 17, 1937 for Expansion joint.

I claim:

1. Paving for elevated structures such as bridges and the like comprising roadways of grating sections and an intermediate traffic guide portion including grating sections arranged parallel to the first mentioned grating sections but presenting a substantially different appearance, both the grating sections of the roadways and intermediate portion being open to allow removal of snow and ice through the open portions of said grating sections, each of said grating sections including longitudinal members and lateral spacing members contiguous the longitudinal members, the intermediate or traffic guide portion grating sections having the spacing members contiguous the longitudinal members at substantially different longitudinal distances from the grating sections in the roadways whereby said intermediate or traffic guide portions may serve to delineate visually and audibly one roadway portion from another and at the same time lessen any tendency for a vehicle to skid.

2. Paving for elevated structures such as bridges and the like comprising roadways of grating sections and an intermediate traffic guide portion including grating sections arranged parallel to the first mentioned grating sections but presenting a substantially different appearance, both the grating sections of the roadways and intermediate portion being open to allow removal of snow and ice through the open portions of said grating sections, each of said grating sections including longitudinal members and lateral spacing members contiguous the longitudinal members, the intermediate or traffic guide portion grating sections having the spacing members contiguous the longitudinal members at substantially different longitudinal distances from the grating sections in the roadways whereby said intermediate or traffic guide portions may serve to delineate visually and audibly one roadway portion from another and at the same time lessen any tendency for a vehicle to skid, the longitudinal spacing of the contiguous portions of the spacing members in the intermediate or traffic guide portion sections being substantially more than said spacing in the roadway grating sections.

3. Grating for paving elevated structures such as bridges and the like comprising roadways of grating sections and an intermediate traffic guide portion including grating sections presenting a substantially different appearance from the grating sections of the roadways, both the grating sections of the roadways and the intermediate traffic guide portion being open to allow removal of snow and ice through the open portions of said grating sections, each of said grating sections including longitudinal section members and lateral spacing members contiguous the longitudinal members, the intermediate traffic guide portion grating sections having their longitudinal and spacing members so arranged that said intermediate or traffic guide portion delineates geometric shapes different from those formed in the gratings of said roadways visually and audibly to the driver of a suitably moving vehicle one roadway portion from another and, at the same time, offers resistance to a tendency for a vehicle to skid.

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