Nov. 15, 1938. R. R. ROBERTSON 2,136,709

TRAFFIC LANE DIVIDER

Filed Dec. 11, 1936 2 Sheets-Sheet 1

Fig. 1

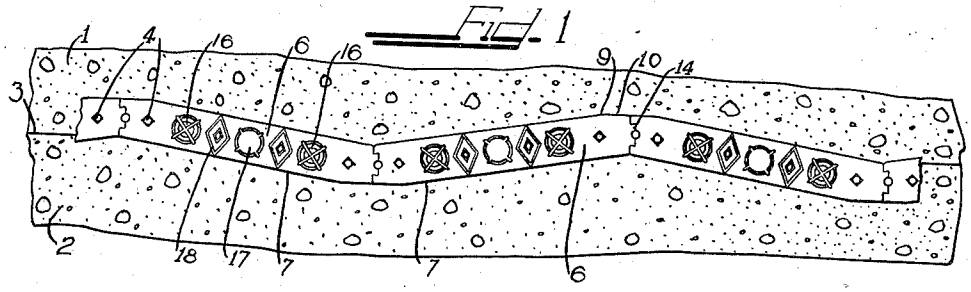


Fig. 2

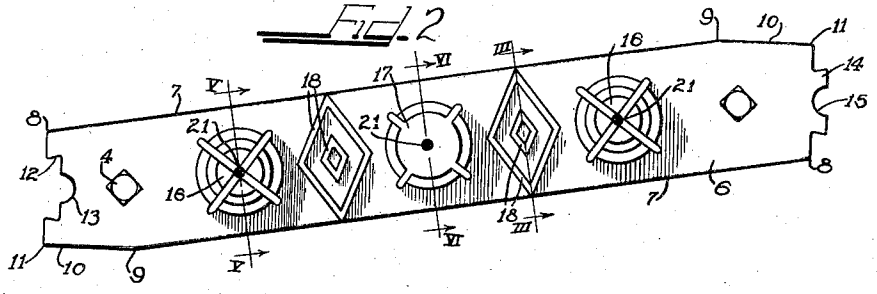


Fig. 3

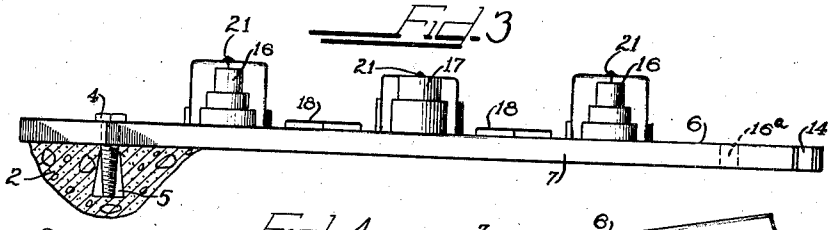
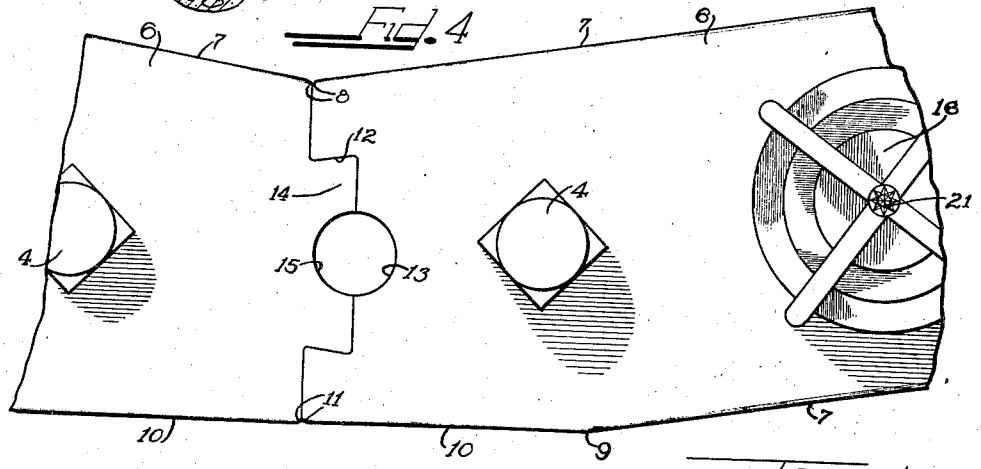


Fig. 4



Inventor

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Fig. 5

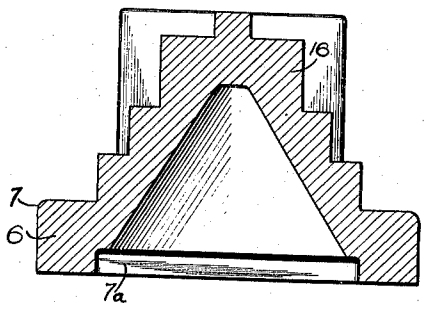


Fig. 6

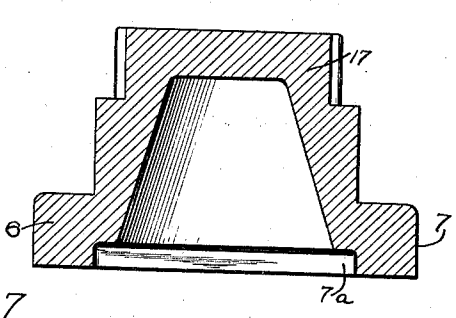


Fig. 7

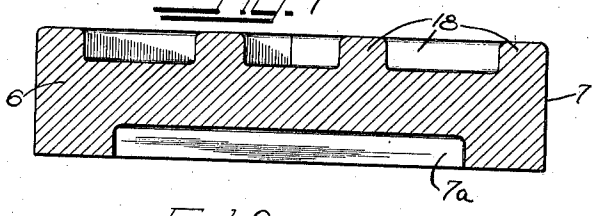


Fig. 8

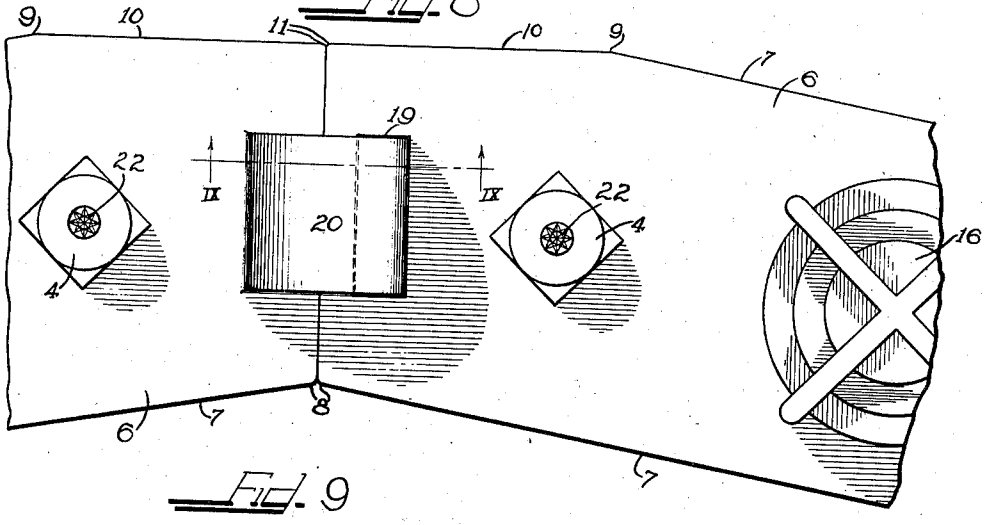
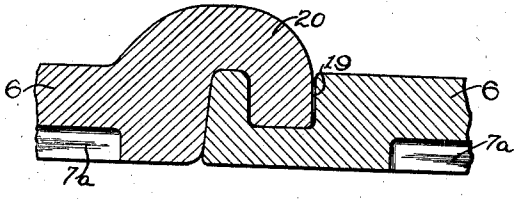


Fig. 9



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Patented Nov. 15, 1938 2,136,709

UNITED STATES PATENT OFFICE

2,136,709

TRAFFIC LANE DIVIDER

Robert R. Robertson, Chicago, Ill.

Application December 11, 1936, Serial No. 115,281

7 Claims. (Cl. 94—1.5)

This invention pertains to traffic lane dividers for use on multiple lane roads for the purpose of regulating and controlling the traffic in adjacent road lanes by means of zig-zag or waved dividers mounted upon the road over the longitudinal joints or cracks of the pavement to form definite elevated barriers between the traffic lanes. The dividers or traffic lane barriers are constructed of interlocked sections consisting of base plates formed to interlock one another and having formed integrally on the top thereof a plurality of spaced heads or bosses separated by tread members. The divider sections are interlocked with one another and disposed at an angle with respect to each other to permit vehicles in one traffic lane when slowly and carefully driven to pass from one lane over a divider into an adjacent lane. The heads or bosses on the divider section serve as obstacles for obviating or discouraging the reckless movements of vehicles over the divider sections, but permit the passage of carefully driven vehicles, the tires of which are adapted to coact with the tread members on the divider sections and with the irregularly shaped heads or bosses.

It is an object of this invention to provide traffic lane dividers adapted to be mounted longitudinally over the longitudinal cracks or joints of a multiple lane road to provide positive dividers between the lanes and with said dividers having elevations of varied form integrally formed thereon making it imperative for vehicles to drive carefully and slowly over the dividers when it is desired to drive a vehicle from one traffic lane into an adjacent lane.

Another object of the invention is to provide a multiple lane road with elevated traffic lane dividers, with said dividers being formed of interlocked sections which are positioned at an angle with respect to one another to form an irregular or waved divider having irregularly formed projections provided on the top thereof for regulating the movements of vehicles from one lane into an adjacent lane over the dividers.

It is also an object of this invention to provide a multiple lane road with dividers for separating the lanes, said dividers being constructed of a plurality of aligned sections interlocked with one another and rigidly secured to the concrete of the road with said sections being disposed at an angle with respect to one another and having a plurality of various shaped obstacle heads and tread members formed thereon for governing the driving of vehicles from one lane into an adjacent lane over the traffic lane dividers.

A further object of the invention is the construction of a traffic lane divider having the various sections thereof constructed to interlock with one another to definitely hold the interlocked sections inclined with respect to one another to form a waved or irregularly shaped divider to facilitate the movement of vehicles from one lane into an adjacent lane when the vehicles are properly steered and furthermore adapted to serve as a means tending to direct vehicles back into the occupied lane away from the divider when a vehicle is not properly steered or accidentally is driven into contact with the side of a divider.

Another object of the invention is the provision of a multiple lane traffic divider in the form of an irregular elevated strip upon the road, with said strip having obstacles secured or formed on the top thereof for hindering the reckless driving of vehicles from one lane into an adjacent lane and furthermore aiding the careful driving of vehicles over the dividers from one lane into another.

It is an important object of this invention to provide improved traffic lane dividers for use on either new or old roads, with said dividers having a waved or scalloped shape to normally serve as a definite barrier between adjacent traffic lanes and furthermore acting as a means for permitting the driving of vehicles from one lane into another when proper precautions are observed.

Other and further important objects of this invention will be apparent from the disclosures in the specification and the accompanying drawings.

The invention (in preferred forms) is illustrated in the drawings and hereinafter more fully described. On the drawings:

Figure 1 illustrates a fragmentary top plan view of two adjacent concrete road traffic lanes having an improved type of irregularly shaped traffic lane divider mounted longitudinally upon the road over the joint between the lanes, with said divider embodying the principles of this invention.

Figure 2 is an enlarged top plan view of one of the divider sections removed from the road.

Figure 3 is a side elevation of the divider section illustrated in Figure 2 illustrating a fragmentary portion of a concrete road lane and the means for securing the section in place.

Figure 4 is an enlarged top plan view of two interlocked ends of two adjacent divider sections.

Figure 5 is an enlarged vertical detail section taken on line V—V of Figure 2.

Figure 6 is an enlarged vertical transverse section taken on line VI—VI of Figure 2.

Figure 7 is an enlarged vertical transverse section taken on line VII—VII of Figure 2.

Figure 8 is an enlarged fragmentary top plan view of two connected ends of divider sections provided with modified means for connecting the ends of the sections together.

Figure 9 is an enlarged vertical detail section taken on line IX—IX of Figure 8.

As shown on the drawings:

The reference numerals 1 and 2 indicate adjacent concrete road lanes separated by means of a longitudinal road joint 3. The road lanes 1 and 2 are separated from one another by a definite barrier in the form of a waved, scalloped or irregular traffic dividing means secured upon the top surfaces of the lanes 1 and 2 over the joint 3 by means of retaining bolts 4, the lower threaded ends of which are engaged in expansion sockets 5 embedded in the concrete as clearly illustrated in Figure 3.

The improved waved type of traffic lane divider is constructed of a plurality of sections having the ends thereof so formed that they may be interlocked with the ends of other divider sections to form a continuous waved or irregularly shaped divider to be used as a means for separating the traffic in the road lanes 1 and 2.

Each of the traffic lane divider sections comprises a metal plate or rail 6 having the bottom thereof hollowed out to form recesses 7a for reducing the weight and the cost of the divider sections.

As clearly illustrated in Figure 2 each of the divider sections 6 is of a biased or diagonal type comprising a plate or bar having substantially parallel sides 7. Each of the sides 7 continues in a straight line from a corner 8 at one end of the plate to within a short distance from the opposite end of the plate to a point 9 and then continues at an angle from the main direction of the side 7 to form an inclined side portion 10 extending to a corner 11. As illustrated in Fig. 2 the inclined portions 10 of the side walls 7 are positioned diagonally opposite one another and form offset tapered end portions. One end of the divider section plate 6 is in the form of a female end portion provided with a dove-tailed notch or recess 12 formed with a semi-circular notch or recess 13 at the middle. The opposite tapered end portion of the divider plate 6 is formed with a dove-tail projection or locking member 14 formed with a semi-circular notch or opening 15. The end walls of the tapered end portion of each of the divider sections are parallel to one another as shown in Figure 2 and are disposed substantially at right angles to the side edges 10. Openings 16a are provided in the end portions of the divider sections for the reception of the retaining bolts 4 which project through the openings 16a to be engaged in the expansion sockets 5 embedded in the concrete of the road lanes.

As clearly illustrated in Figure 2 the offset ends of the divider sections are shaped to provide a female end portion at one end of the section and a male portion at the opposite end of the section. The novel construction of the end portions of each of the divider sections permits the divider sections to be interlocked with one another as illustrated in Figure 1 with the dove-tail projection 14 of one divider section interfitting or seating in the dove-tailed notch or opening 12 in the end of another divider section. When the divider sections are interlocked with one another, the semi-circular notches 13 and 15 register with one another to form a circular opening between the contacting or interlocked ends of the divider sections as illustrated in Figure 4.

The offset end portions formed at the ends of the respective divider sections permit a line of the divider sections to be joined to provide a continuous road lane divider of a waved or scalloped formation positioning the various divider sections at an angle with respect to one another. The irregular shape of the divider forms an arrangement of alternately disposed concave and convex curves on the opposite sides of the divider so that when a vehicle in either of the traffic lanes accidentally runs into the divider the wheels of the vehicle adjacent the divider are guided to direct the vehicle back into the lane thereby tending to obviate promiscuous or accidental movement of vehicles from one traffic lane into another.

For the purpose of preventing reckless driving of vehicles from one traffic lane into another across the divider, each of the divider sections 6 has integrally formed or rigidly secured upon the top surface thereof a plurality of spaced obstructions in the form of hollow irregularly shaped heads or bosses 16 and 17 which in the form illustrated are of stepped conical form provided with cross ribs or radial flanges. Integrally formed upon the top surface of each of the divider sections 6 between the heads 16 and 17 are tread ribs or beads 18 which may be arranged in any desired configuration such for example as the concentric diamonds shown in Figure 2.

The elevated heads or bosses formed on the tops of the divider sections 6 afford inclined rows of obstructions for curbing the reckless driving of vehicles from one lane into another over the dividers. With the divider sections 6 arranged in inclined relation with respect to one another vehicles when carefully driven may cross the divider from one lane into an adjacent lane and the tires of the vehicles may coact with the tread ribs 18 and with the flange portions of the heads 16 and 17 to facilitate the movement of a vehicle over the divider.

The dividers with the projections formed thereon serve to prevent the reckless movement of vehicles from one traffic lane into another for the reason that the obstacle heads 16 and 17 will cause bumping or jarring of fast driven vehicles to such an extent to make it hazardous to cross the divider at driving speeds.

When the traffic lane divider sections 6 are mounted in position upon a road over a longitudinal joint 3 as illustrated in Figure 1, each of the divider sections is positioned above the joint 3 at an angle thereto, so that the joint extends beneath substantially diagonally opposite corners of the divider sections thereby forming an arrangement whereby the interlocked divider sections 6 when in position form a traffic lane divider which extends equally beyond the sides of the joint 3.

Figures 8 and 9 illustrate a modified form of traffic lane divider section constructed substantially the same as the divider section 6 illustrated in Figure 2 with the exception that the modified form of divider section is formed with a modified form of locking arrangement at the ends of the divider section to replace the dove-tailed interlocking means provided on the divider sections illustrated in Figures 1 to 7 inclusive.

In the modified form of divider section 6 one end of the base strip or bar is formed with a transverse slot or socket 19, while the opposite end of the divider section is formed with a locking hook 20 which projects beyond one end of the divider section to permit the end portion of the

hook 20 to seat in the notch or socket 19 of the next divider section.

As illustrated in Figures 2, 3, and 4, the obstacle heads 16 and 17 may be provided with sparkler buttons 21 to make the traffic divider sections clearly discernible at night. If preferred the sparkler buttons may be omitted from the tops of the members 16 and 17 thereby providing head members as illustrated in Figures 5 and 6. Referring to the modified form of the traffic lane divider as illustrated in Figure 8, the anchoring bolts 4 may have the heads thereof provided with sparkler buttons 22 in case it is not desired to mount the sparkler buttons on the obstacle heads 16 and 17.

In the two forms of traffic lane divider sections illustrated and described, irregular type traffic lane dividers are adapted to be formed upon a multiple lane road to divide the various traffic lanes and form a definite elevated barrier projecting above the top surface of the road and so formed that when vehicles are carefully driven at a slow rate of speed vehicles may be driven from one traffic lane over a divider and into an adjacent lane. The formation of the traffic lane divider, however, is such that the promiscuous driving of vehicles from one lane into another is made sufficiently hazardous when vehicles are driven at regular driving speeds so that a substantially definite control is had over the traffic.

While selected forms of traffic lane divider sections are illustrated in the forms shown it will, of course, be understood that the shape of the traffic lane divider sections may be varied as well as the shape of the obstacle heads and tread members which are integrally formed or rigidly secured on the top surfaces of the divider sections.

It will, furthermore, be understood that various other details of construction may be varied through a wide range without departing from the principles of this invention, and it is therefore not the purpose to limit the patent granted hereon otherwise than necessitated by the scope of the appended claims.

I claim as my invention:

1. The combination with a concrete road, of a traffic lane divider rigidly mounted upon the road to form a definite barrier between the lanes, said divider constructed of a plurality of interlocked sections disposed at an angle with respect to one another, traffic obstacles of different heights alternately arranged on the divider sections for obstructing the movement of vehicles from one lane into an adjacent lane over the divider, and tread units on the divider sections between the traffic obstacles and of less height than the traffic obstacles.

2. The combination with a concrete road, of a traffic lane divider mounted thereon and formed of a plurality of divider sections placed end to end to form a scalloped continuous divider, means for interlocking the adjacent ends of the divider sections, stepped conical traffic obstacles provided with vertical radial flanges formed on each of the divider sections in spaced relation with respect to one another, and tread members formed on each of the divider sections between the traffic obstacles.

3. The combination with a concrete road, of a traffic lane divider mounted thereon and formed of a plurality of divider sections placed end to end to form a scalloped continuous divider, means for interlocking the adjacent ends of the divider sections, radially flanged stepped conical traffic obstacles of different heights formed on each of the divider sections in spaced relation with respect to one another, tread members formed on each of the divider sections between the traffic obstacles, anchoring members for securing the divider sections to the concrete road, and sparkler means on the anchoring members making the traffic lane dividers readily discernible at night.

4. A road traffic lane divider comprising a plurality of sections connected end to end and inclined with respect to one another with the alternate divider sections disposed parallel to one another, sparkler head anchoring members for anchoring the divider sections in place, a plurality of relatively high stepped conical members integrally formed on each of the divider sections in spaced relation with respect to one another, radial flanges integrally formed on said conical members, and relatively low tread means on the divider sections between the conical members.

5. A waved traffic lane divider including in combination a plurality of interconnected divider sections each comprising a body portion having only two diagonally opposite corners thereof cut off to form substantially tapered end portions, the end edges of which are disposed at substantially right angles with respect to the cut-off corners of the divider sections, a male member formed upon one of the tapered end portions of the divider section, a female member formed on the opposite tapered end portion of the divider section, and relatively high traffic obstacles and relatively low tread members alternately arranged on the top of the body portion.

6. A traffic lane divider comprising a plurality of inter-connected sections each comprising an elongated body member having only one corner of each end thereof cut off to provide diagonally opposite inclined edges extending to the ends of the body member to form tapered end portions on the body member having the end edges thereof disposed at substantially right angles to the diagonally opposite inclined edges of the body member, said end portions of the body member formed to permit the same to interlock with the end portions of similarly formed divider sections to hold said sections inclined with respect to one another and locked against pivotal swinging with respect to one another.

7. A traffic lane divider comprising a plurality of inter-connected sections each comprising an elongated body member having a portion of each side thereof cut off near one end to provide two diagonally opposite inclined edges extending to the ends of the body member to form tapered end portions on the body member having the end edges thereof disposed at substantially right angles to the diagonally opposite inclined edges of the body member, said end portions of the body member formed to permit the same to interlock with the end portions of similarly formed divider sections locked against transverse pivotal swinging and to hold said sections inclined with respect to one another, spaced heads on the body member, and radially disposed flanges integrally formed on said heads and projecting outwardly beyond the sides thereof.

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