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MEANS FOR DEFINING ROADWAYS

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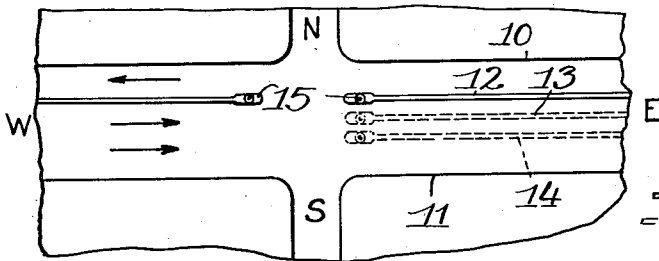


Fig. 1

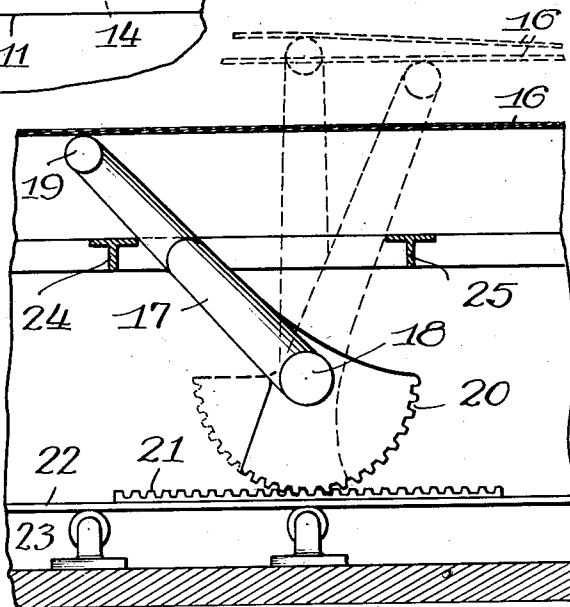


Fig. 2

Fig. 3

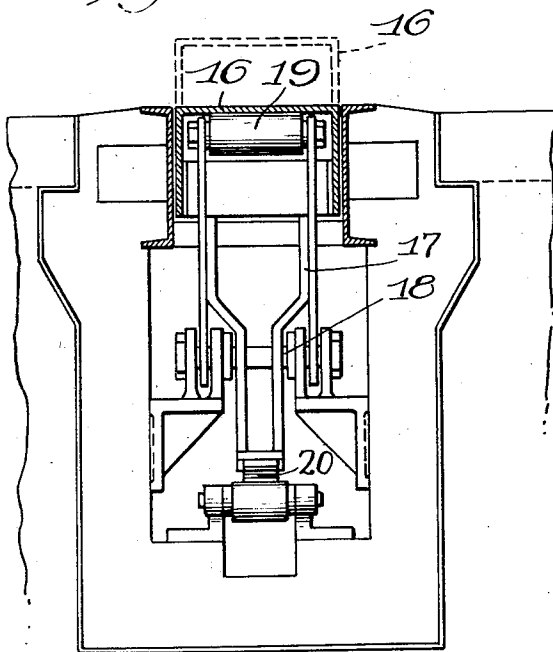
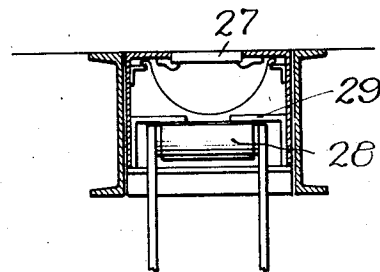


Fig. 4



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MEANS FOR DEFINING ROADWAYS

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4 Claims. (Cl. 94—1)

This invention relates to a means for varying the effective width of a roadway and more particularly to movable curbs or barriers for dividing a street or highway into two portions, to accommodate more traffic on one side of the movable curb than on the other. For example, the traffic on the two portions may flow in opposite directions, more vehicles traveling on one side of the curb than on the other in the morning, with the proportions reversed in the afternoon.

One feature of this invention, therefore, is that it provides means for varying the width of a roadway; another feature of this invention is that a roadway of variable width is defined on each side by a positive barrier; another feature of this invention is that it enables the width of a roadway to be conveniently changed at different periods of the day, or other different periods of time, in accordance with varying traffic requirements; other features and advantages of this invention will be apparent from the following specification and the drawing, in which:

Fig. 1 is a diagrammatic view of a street or roadway incorporating one modification of this invention;

Fig. 2 is a longitudinal, fragmentary sectional view of one vertically movable barrier;

Fig. 3 is a transverse sectional view of the same barrier; and

Fig. 4 is a fragmentary transverse sectional view of a modified vertically movable barrier.

Modern traffic conditions, particularly on the main roadways of a city, are subject to periodically fluctuating loads. For example, a main roadway leading from a residential section to a business section will have the majority of its traffic moving toward the business section in the early morning, about an equal amount of traffic moving both ways during the middle of the day and the majority of its traffic load moving away from the business section in the evening.

In situations of this kind it is desirable to provide roadways of widths proportionate to the amount of traffic being carried in a given direction. That is, in the morning it is desirable to provide more roadway width for the traffic moving downtown, and less for that moving away from the business section; whereas in the evening the reverse is true. During the intervening portion of the day it may be desirable to provide roadways of approximately equal width for the two oppositely moving streams of traffic. Modern highway and traffic engineering, moreover, indicates the necessity of a positive barrier between opposing streams of traffic, so that cars

moving in one direction are physically and positively prevented from getting into the roadway reserved for traffic moving in the other direction.

The present invention provides means for effectively varying the width of a roadway in accordance with traffic requirements, yet maintaining a positive, physical barrier at the edges of the roadway to define its width. The movable barrier is particularly adapted for use as a center barrier dividing a boulevard or street into two roadways. While my invention contemplates any means for defining the width of a roadway by a positive barrier in such a way as to enable variation of such width, it is here shown embodied in a form in which the width is varied through rendering a barrier effective or ineffective.

One particular form of the first embodiment of my invention is illustrated herewith in Figs. 1 to 3. Here a boulevard is bounded on its opposite sides in conventional manner by fixed longitudinal barriers, usually concrete curbs such as 10 and 11. These terminate at street intersections, of course, to permit free movement of cross traffic. The boulevard is here shown as provided with three barriers 12, 13 and 14, capable of movement to render them effective or ineffective as barriers to the movement of traffic on the roadways defined on each side thereof. That is, if the barrier 12 is so positioned as to be effective and the barriers 13 and 14 so positioned as to be ineffective, the roadway defined between the barrier 12 and the other barrier or curb 10, will be relatively narrow, as, for example, two lanes in width, whereas the roadway defined between the barriers 12 and 11 will be relatively wide, as for example, four lanes in width. This would permit a heavy movement of traffic in a direction to the right with respect to Fig. 1, as compared with a relatively lighter movement of traffic in the opposite direction. On the other hand, if the barrier 13 were rendered effective and the barriers 12 and 14 placed in such a position as to impose no limitation on traffic movement the boulevard would be divided into two roadways of equal width. And finally, if barrier 14 is rendered effective and barriers 12 and 13 ineffective, the boulevard illustrated will again be divided into two roadways, one being, for example, of four lanes and the other of two lanes; but in this instance the roadway permitting movement of traffic to the left with respect to Fig. 1 will be wider.

The barriers 12, 13 and 14 provide positive separation longitudinally of the boulevard for the length of a full city block, for example. They may comprise a traffic light 15 at each end there-

of, and an interconnecting curb or barrier here shown as comprising an inverted channel iron 16. This channel iron is movable vertically, and so arranged and mounted in the boulevard that it is adapted to lie with its top surface flush with the surface of the roadway, or to be elevated a desired distance thereabove, as six or eight inches.

Appropriate means for supporting the barrier and enabling vertical movement thereof at desired times is particularly illustrated in Figs. 2 and 3. At desired intervals along the barrier, as for example every fifteen or twenty feet, a lever 17 is provided. This lever is pivotally mounted at 18 and has a roller 19 at the upper end thereof in contact with the under surface of the channel bar 16, and a gear segment 20 at the lower end thereof adapted to mesh with and be actuated by a spur rack 21 on a longitudinally movable bar 22 carried by rollers 23 or other appropriate supports. Any suitable means may be provided for moving said bars. Stop means 24 and 25 are provided to limit the movement of the lever 17. These stops are not correspondingly placed with respect to the pivot point 18, and permit the lever 17 to move further to the left, speaking with respect to Fig. 2, than to the right. When the lever is in the position illustrated in solid lines in Fig. 2, the apparatus is preferably so designed that the upper or outer surface of the channel iron 16 is just flush with the roadway level; whereas when the lever is in the position illustrated in dotted lines, in contact with the stop 25 instead of the stop 24, the channel iron 16 is elevated the desired distance above the roadway to be effective as a barrier defining one edge of the roadway. Because of the fact that the lever goes beyond center in each position, it is only necessary to move the longitudinal bar 22 from any one point to effect movement of all of the levers 17, and thus simultaneous elevation of the barrier throughout its entire length, there being no necessity for locking the barrier in raised position by any independent mechanism.

Fig. 4 illustrates a modified form of channel and supporting apparatus, so designed that the channel has in the center thereof a glass or other transparent or translucent material 27 to

permit light to pass up therethrough. The supporting means or roller 28, in this particular case, contacts a member 29 spaced somewhat below the actual top surface of the barrier.

While I have described and claimed one embodiment of my invention it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement and in the materials used, may be made without departing from the spirit and scope of the invention as disclosed in the appended claims in which it is my intention to claim all novelty inherent in my invention as broadly as permissible in view of the prior art.

I claim:

1. Apparatus of the character described for providing, in conjunction with a longitudinal barrier, a roadway of variable width, including: a plurality of barrier means spaced at different distances from said longitudinal barrier; and means for rendering each of said barrier means effective or ineffective as a barrier to vehicles moving in said roadway.

2. Apparatus of the character described for providing, in conjunction with a longitudinal barrier, a roadway of variable width, including: a plurality of barrier means spaced at different distances from said longitudinal barrier; and means in connection with each of said barrier means for changing its vertical level to render it effective or ineffective as a barrier to vehicles moving in said roadway.

3. Apparatus of the character described for providing, in conjunction with a longitudinal barrier, a roadway of variable width, including: a plurality of vertically movable longitudinal barriers parallel to said first mentioned longitudinal barrier but spaced different distances therefrom; and means in connection with each of said movable barriers for changing its vertical level to render it effective or ineffective as a barrier to vehicles moving in said roadway.

4. Apparatus of the character claimed in claim 3, wherein each of said movable barriers is adapted to have its upper surface flush with the surface of said roadway or raised thereabove.

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