Sept. 11, 1956

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2,762,145

ONE-WAY-TRAVEL BARRIER

Filed April 27, 1953

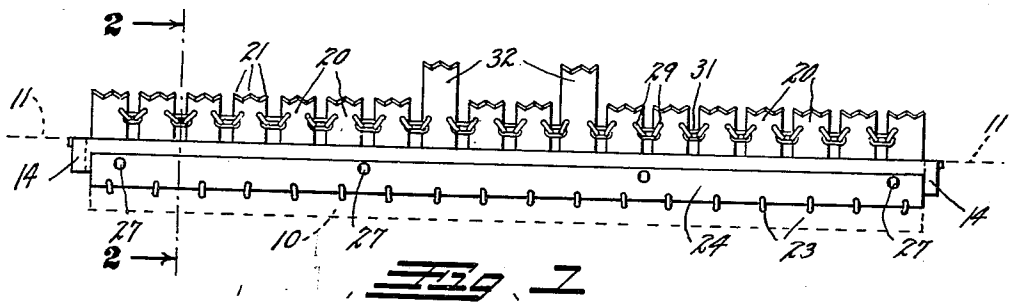


FIG. 1

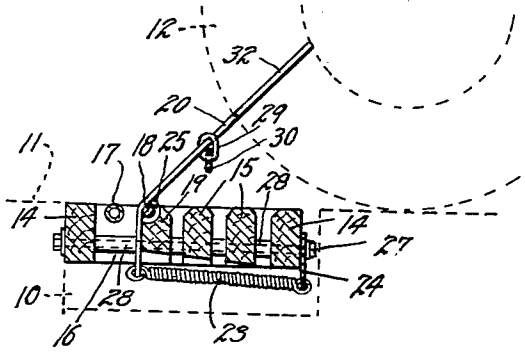


FIG. 2

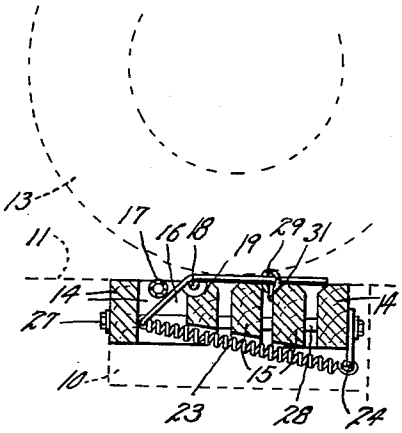


FIG. 3

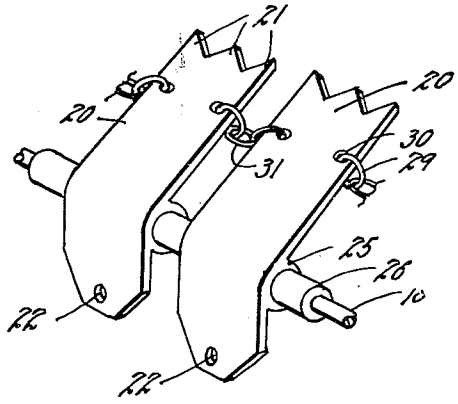


FIG. 4

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United States Patent Office 2,762,145 Patented Sept. 11, 1956

2,762,145

ONE-WAY-TRAVEL BARRIER

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Application April 27, 1953, Serial No. 351,133

5 Claims. (Cl. 39—5)

This invention relates to what might be termed a one-way-travel barrier for automotive vehicles. It is more particularly designed to be used as an exit gate for outdoor drive-in theaters and the like. Considerable difficulty has been experienced in preventing unauthorized cars from entering outdoor theaters through the exit gates thereof. It is difficult for the attendants at the main gate to watch the exit gates, and extra attendants must necessarily be retained for this purpose.

The principal object of this invention is to provide a vehicle exit gate which will not interfere in any way with cars leaving the theater, but which will prevent cars from entering the theater through the exit gates.

Another object of the invention is to provide a one-way-travel gate, the operation of which cannot be interfered with by unauthorized personnel and which will allow cars to pass in the proper direction at any speed without damage to the gate or car.

Other objects and advantages reside in the detail description of the invention, which is designed for simplicity, economy, and efficiency. These will become more apparent from the following description.

In the following detailed description of the invention, reference is had to the accompanying drawing which forms a part hereof. Like numerals refer to like parts in all views of the drawing and throughout the description.

In the drawing:

Fig. 1 is a rear view of the improved one-way-travel gate looking in the prohibited travel direction;

Fig. 2 is an enlarged cross-section therethrough, taken on the line 2—2, Fig. 1, illustrating, in broken line at 12, the position of the front wheels of the car attempting to make entry in the prohibited direction;

Fig. 3 is a similar sectional view, illustrating, in broken line at 13, the position of the wheels of a car traveling in the authorized direction; and

Fig. 4 is an enlarged, fragmentary, detail, perspective view, illustrating elements of the improved gate.

The improved gate is designed to be installed in line with an enclosing fence and in a trench 10 excavated tranversely of a roadway leading through the fence. The top of the gate structure is flush with the surface of the roadway, indicated in broken line at 11.

The improved gate comprises an elongated rectangular, open frame 14 formed from 2" by 4" timbers or other equivalent frame members. A plurality of spaced-apart beams 15 extend lengthwise of the frame 14. One of these beams indicated at 19 is spaced from one side of the frame 14 sufficiently far to form an open swingway 16 which is partially closed at its top by a metal pipe 17 which extends between the ends of the frame 14. The beams 15 and 19 are supported in and maintained spaced in the frame 14 by means of clamping bolts 27 which extend transversely through the frame 14 and through all of the beams theerin. The bolts 27 are provided with suitable spacing sleeves 28 to maintain the proper spacing of the beams.

A hinge shaft 18 extends along the beam 19 and hingedly supports a plurality of bent obstacle plates 20. Each of the obstacle plates is provided with suitable hinge ears 25 which are rotatably mounted on the hinge shaft 18, and suitable spacing members 26 are mounted on the shaft 18 between the obstacle plates to maintain them in uniform spaced relation.

Each obstacle plate 20 consists of an upper portion positioned above the hinge shaft 18 and a lower portion extending below the hinge shaft 18. The two portions are positioned at an angle of substantially 135° from each other so that when the lower portion is vertical, the upper portion will extend at an angle of approximately 45° from the roadway surface. A chain link 29 is passed through a perforation 30 adjacent each side of each obstacle plate. The chain links of adjacent obstacle plates are interconnected by means of a connecting link 31.

The upper extremities of the plates 20 are preferably notched or serrated to provide a plurality of points 21. The lower extremities are perforated, as shown at 22, to receive the extremities of tension springs 23, there being one spring for each of the plates. The springs 23 extend to any suitable fixed mounting on the frame 14. As illustrated, they are all secured to an elongated spring plate 24 secured to the side of the frame 14 by means of the bolts 27.

The device is installed in the trench 10 with the frame 14 and the beams 15 and 19 flush with the road surface 11, and with the upper portions of the obstacle plates directed in the direction it is desired to allow travel over the device.

It can be readily seen that normally the upper portions of all the obstacle plates will project upwardly and rearwardly, as shown in Figs. 1 and 2. When the wheels 12 of a car traveling in the prohibited direction reach these plates, the points 21 will contact the tires and prevent further forward movement, as shown in Fig. 2. If the car is moving slowly, no damage will be done, but if a rapidly moving car strikes the upturned points 21, damage may result to the front tires thereof.

It will be noted that certain of the plates 20 adjacent the mid-portion of the device extend further upwardly than the remainder of the plates, as indicated by the plates 32. These elongated plates will engage the steering links and other sub-structure of the car to insure a positive stop.

Should a car approach from the authorized direction, as shown in Fig. 3, the wheels 13 will simply ride upon the plates 20 and depress them, against the action of the springs 23, onto the beams 15 without interference with the movement of the car. The chain links 29 and 31 act to pull the plates adjacent to those depressed by the vehicle wheels downwardly so that they will not be struck by depending portions of the traveling vehicle. The chain links also prevent wheels from entering between the plates 20.

Since all of the plates operate independently, except for the loosely connected chain links providing sufficient lost motion in the connection between the plates so that it is impossible for a person to force them down sufficiently by standing on the outside links, to allow a car to pass thereover in the wrong direction.

While a specific form of the improvement has been described and illustrated herein, it is desired to be understood that the same may be varied within the scope of the appended claims, without departing from the spirit of the invention.

Having thus described the invention, what is claimed and desired secured by Letters Patent is:

1. A one-way barrier for a roadway comprising a support adapted to extend across a roadway, a plurality of

barrier plates mounted at intermediate points thereof on said support on substantially coaxial pivots on said support, spring means interconnecting said plates and said support to movably maintain said plates in upright positions, and lost-motion means interconnecting intermediate portions of said barrier plates.

2. A one-way travel barrier as defined in claim 1, wherein said plates are formed with arms extending downwardly from their pivots, said spring means being connected to said arms to hold them normally against a stop, the angle between said plates and said arms being sufficient to position said plates upright in road blocking position when said arms abut said stop.

3. A one-way travel barrier as defined in claim 2, wherein the angle between said arms and the body of said plates is substantially 135°.

4. A one-way travel barrier as defined in claim 1, wherein said lost motion connections between said plates

are formed by linked chain portions loosely connecting adjacent plates.

5. A one-way travel barrier as defined in claim 1 wherein a number of said plates are of greater length, and are disposed adjacent the mid-length of said support, the length of said plates being sufficient to engage the steering rod of a car approaching the plates in the barred direction.

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