

March 12, 1963

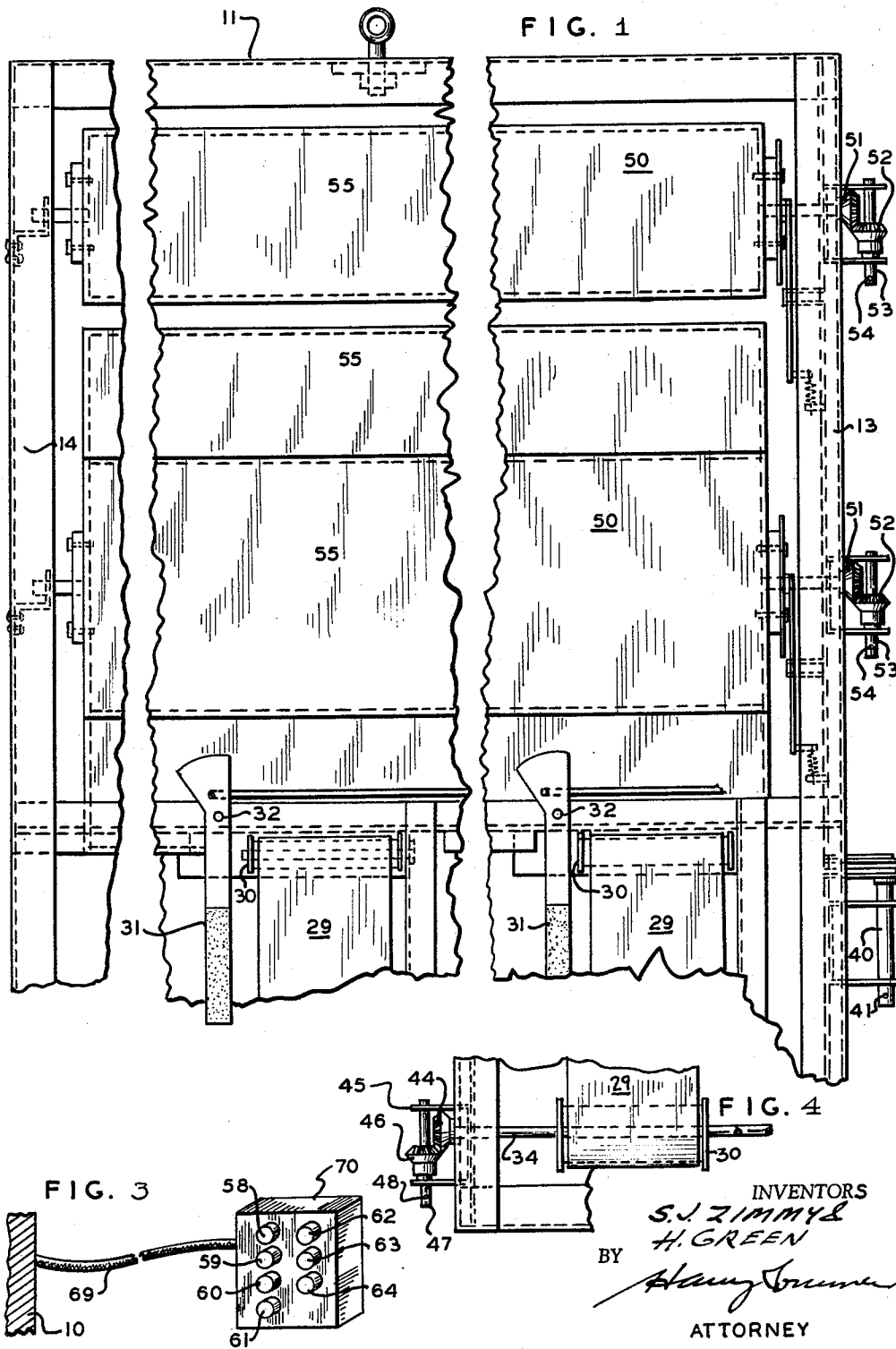
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3,080,669

TURNPIKE SIGN

Filed May 4, 1960

2 Sheets-Sheet 1



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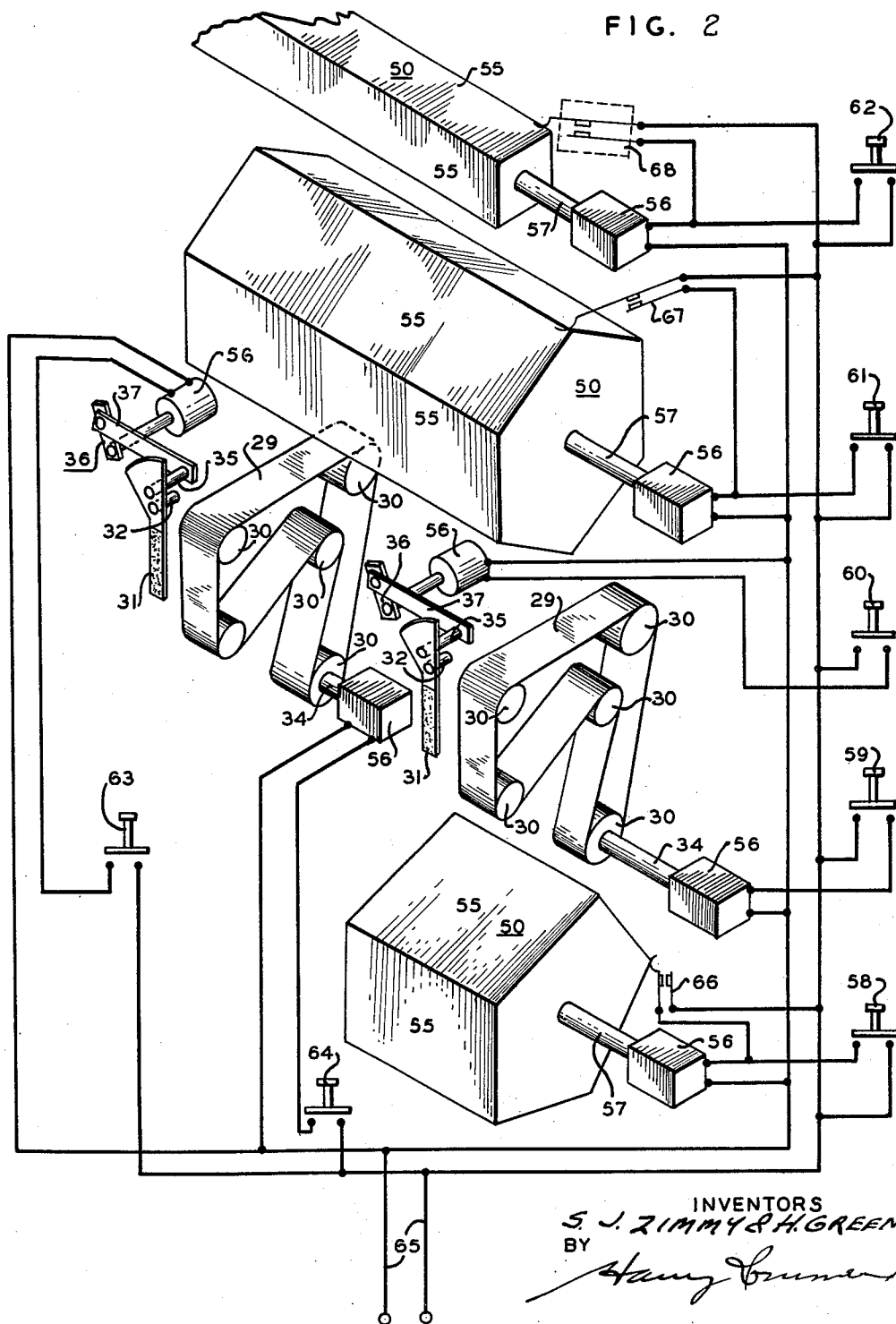
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FIG. 2



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TURNPIKE SIGN

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1 Claim. (Cl. 40—52)

This invention relates to a turnpike sign which is readily adjustable by the booth operator to display composite indicia for guidance of motorists.

Novel means are provided for selection and juxtapositioning of indicia in the sign and for selection of the desired indicia to define a composite message as, for example, to indicate rate of speed, road conditions, exit and interchange numbers and other composite messages at the face of the sign by action of the operator in a rapid and accurate fashion. The sign of this invention includes novel means for mounting and combining sign components and for adjusting them to register them to complete the desired sign messages to be displayed.

The foregoing and other objects will become apparent from a consideration of the invention as described below and in the accompanying drawings forming a part hereof wherein similar reference characters indicate similar parts and wherein:

FIG. 1 is a partly fragmentary front elevational view of a turnpike sign embodying the invention,

FIG. 2 is a perspective, exploded, schematic view of a motor-operated form of the sign, and

FIG. 3 is a fragmentary view of a control cable and panel which may be used in connection with the form of invention shown in FIG. 2 and

FIG. 4 is a partly fragmentary rear elevational view of the lower end of the casing and associated parts.

The drawings, illustrating devices useful in carrying out the invention, and the description below, are exemplary only of the invention, which shall be deemed to cover all other devices coming within the scope and purview of the appended claim.

Pursuant to the invention, one or more belts (a description of one will suffice for all) 29 are mounted within a casing in spaced parallel relation to the front viewing wall of the casing, as (FIG. 2) by entraining said belts around a series of rollers 30, two of which are positioned in vertically spaced parallel relation to the front wall of the casing so as to display that portion of the belt intermediate said rollers, through an opening in the casing. The belts are provided with a series of indicia markings thereon for example, sequential second numerals, such as one to nine and zero—for display at the front of the casing and for composite reference to complementary first numeral indicia markings on a member 31 (FIG. 2) mounted in spaced relation to the belt as, for example, by rotatably journalling or pivoting said members 31 at 32 for selective rotation through shaft 35 which engages member 31 at a point spaced from its pivot point 32 (FIG. 2) to the full line position shown in FIG. 2 at which said member 31 and its indicia will not be visible through the opening 17 or to a second position (FIGS. 1 and 2) where it is visible through opening 17. The belt 29 is moved to selectively display the indicia thereon by the shaft 34 (FIGS. 4 and 2) fixed to a roller 30.

As will become apparent, from a consideration of the drawings, movement of shaft 35 will rotate the member 31 into a position adjacent belt 29 (FIG. 2) or selectively to a position away therefrom. Thus the operator may, by actuation of shafts 34 and 35, move the belt to present the desired selected indicia—for examples, numbers 1 to 9 and zero, and may move the member 31 to cooperate with the belt for registry of numbers higher than nine. Other composite messages utilizing one or a

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combination of members 31 and belt 29 may be thus displayed.

Actuation of shafts 34, 35 may be achieved by means passing through the casing and controllable from a position exteriorly thereof. The belts 29 may be actuated through shafts 34 (FIGS. 4, 2) keyed to the rollers 30 over which said belts are entrained and keyed to pinion 44 and meshing with pinion 46. Pinion 44 may be fixed to an end of shaft 34 which passes through the casing and pinion 44 is enclosed preferably within one of the housings 45. Pinion 46 rotatably journalled in the housing 45 meshes with pinion 44 and has keyed thereto and depending therefrom a post 47 (FIG. 4) similar to the post 40 (FIG. 1) for the linkage for actuating said shaft 35, post 47 having a stud 48 to be engaged by a socket member or tool. Thus the operator may readily selectively rotate the posts 40 and 47 to register the desired indicia of the belts 29 and members 31 and for the display of the composite message at the front of the casing. One of the rollers 30 may be spring loaded to maintain the belt under tension and prevent slippage.

In addition to the members 29, 31 above described, the device may be provided with polygonal drums 50 (FIG. 2) rotatably journalled in the casing, keyed to shafts 57 fixed to pinions 51 which pass through the casing and project into a housing 45 for meshing therein with a second pinion 52 (FIG. 1) the latter having fixed thereto and depending therefrom a post 53 having a stud 54 for engagement by a socket member or tool. Thus the operator may readily rotate the polygonal drums (which will (FIGS. 4 and 7) bear different indicia marking on the faces 55 thereof) to thereby selectively register the desired indicia drum faces with the front of the casing. For example, a drum may bear indicia indicating the speed limit and another drum may bear indicia designating the roadway and the drums at the lower portion of the casing may bear indicia such as interchange number and conditions of the road.

Shafts 35 and 34 for actuating the members 31 and roller 30 of belt 29 may be operated automatically instead of manually by (FIG. 2) keying said shafts to the armatures of motors 56. Likewise the shafts 57 to which the drums 50 are secured may be keyed to motors 56. The shafts 35 may be keyed to such motors through linkage such as 37, 36. Such motors may be selectively controlled by switches 58—64 (FIGS. 2 and 3) controlling the flow of current from the power source 65 to the motors. Second switches such as 66, 67 and 68 may be provided and entrained for example, on the drums 50 to permit the flow of current only sufficient to rotate said drums for the arc defined by a face of the drum. Such switches may, for example, be normally closed switches which open the motor circuit upon contact with the apex between two faces of a drum as, for example, shown in FIG. 2. In the case of the switches 59 and 60 the operator may observe the rotation of the belt and members 29 and 31 and need simply release the switch 59 or 60 as soon as the indicia on the belt or member 29, 31 is visible at the front of the casing. A dwell may be provided as by linkage 37, 36 to facilitate prevention of movement of any member 31 beyond its truly registered position (FIG. 2). Other actuating or switch means may be used in place of those above described.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is:

A turnpike signal device comprising a casing having a front face, a non-transparent plate positioned at the front of the casing and having an indicia opening therein, said plate closing the front of the casing except for said opening, a member carrying indicia thereon pivotally mounted within the casing for rotation in a plane parallel to the plane of the front of the casing for movement into regis-

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try and out of registry with said opening, link actuating means for selectively pivoting said member, said link actuating means engaging said member at a point spaced from the pivot point thereof, a drive link pivotally connected to said link actuating means, an electric motor within said casing, said motor having its armature shaft operatively connected to said drive link to selectively swing said member about its pivot when the motor is actuated, and switch means connected to said motor and being actuable from a point outside of said casing.

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