

May 4, 1954

F. D. WYATT
CHANGEABLE SIGN

2,677,205

Filed July 17, 1950

2 Sheets-Sheet 1

FIG. 2

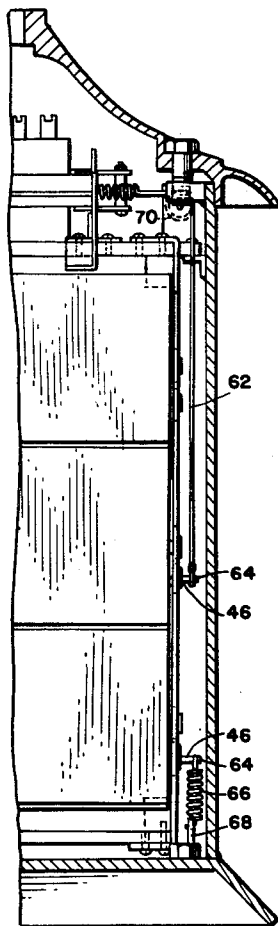
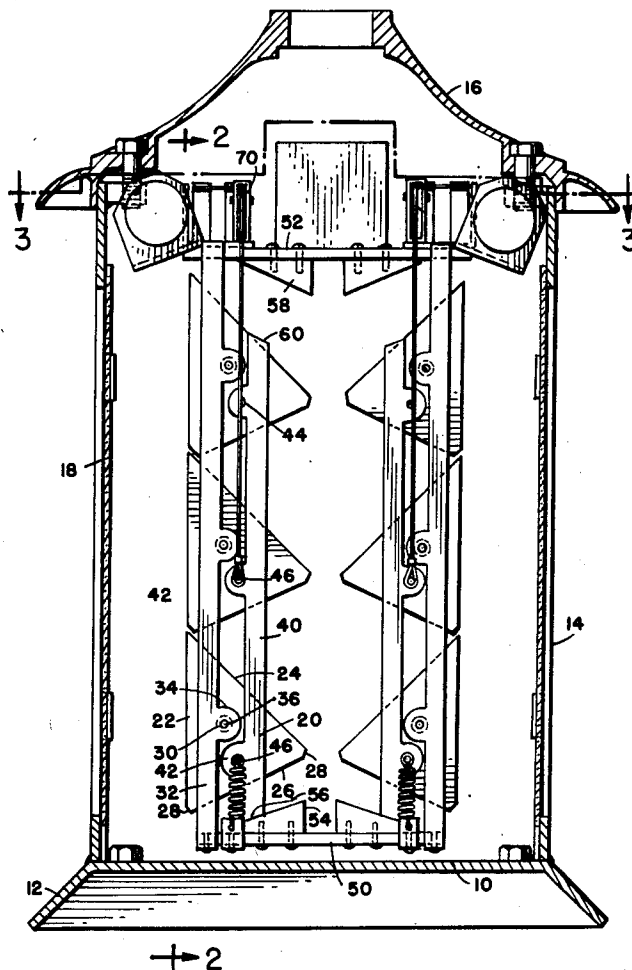


FIG. 1



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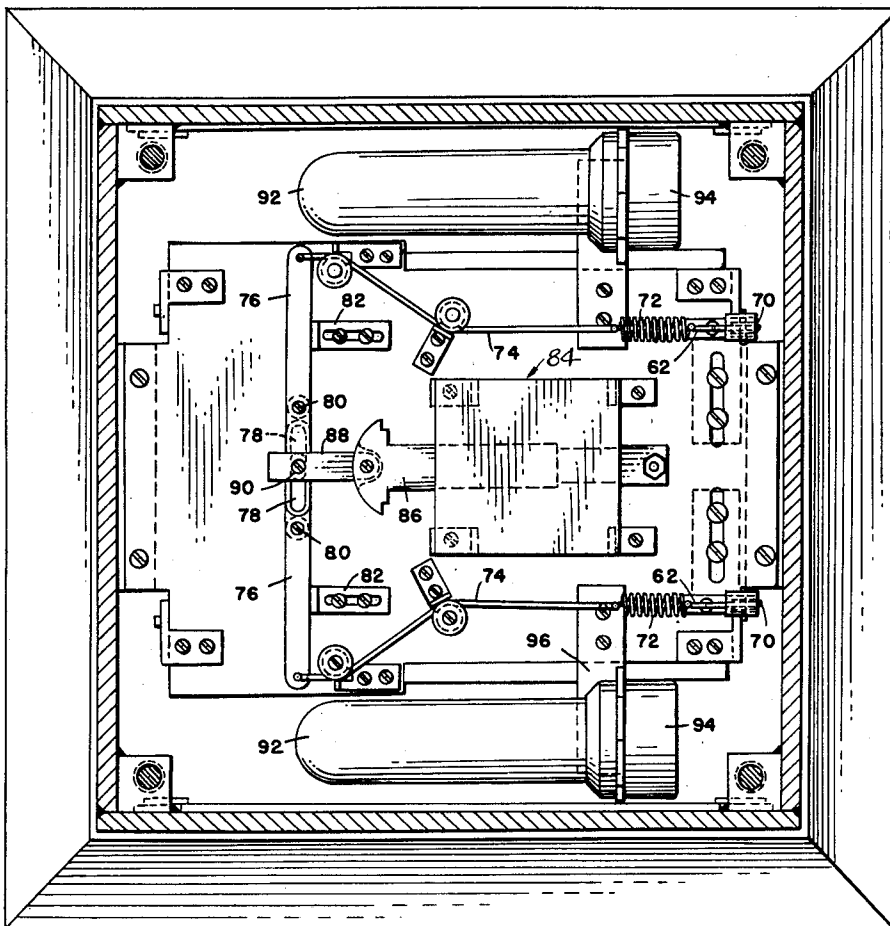
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FIG. 3



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CHANGEABLE SIGN

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5 Claims. (Cl. 40—76)

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This invention relates in general to a sign which is changed periodically and is more particularly described as a traffic sign although it may have a more general use wherever applicable.

An important object of the invention is to provide a directional sign which is changed from one limiting position to another and showing different directions at each limiting position thereof.

A further object of the invention is to provide a plurality of blocks in a directional sign which are simultaneously changed from one angular position to another to exhibit different faces and different directions thereon in the different positions.

A further object of the invention is to provide a multi-block directional sign having simple means for changing the blocks from one limiting position to the other.

Still a further object of the invention is to provide a directional sign with blocks triangular in cross section which may be moved from one limiting position to another and presenting substantially closed faces formed by different sides of the blocks in the different positions.

Still a further object of the invention is to provide a changeable sign comprising a plurality of triangular blocks mounted for movement to bring either one of two faces of the block into close fitting alignment to provide a composite direction in either limiting position of the block.

A still further object of the invention is to provide a changeable sign having a plurality of blocks movable from one limiting position to the other and in providing resiliently opposed motive means for changing the blocks from one position to another.

Other objects of the invention will appear in the specification and will be apparent from the accompanying drawings in which,

Fig. 1 is a sectional view of a casing in which a changeable sign, in accordance with this invention, is shown in end elevation;

Fig. 2 is a partial front view of the sign and a portion of the casing in section; and

Fig. 3 is a top view of the sign motive means with the top of the casing in section.

In the ordinary changeable sign, particularly for traffic signals, the changeable directions usually depend upon the changing of a light with the direction appearing either upon the light itself or applied to the light post so that the actual direction is often ignored.

The present invention is designed to provide a changeable sign which alters the traffic direc-

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tion when the sign is changed, thereby accentuating this direction and not depending upon a light or the changing of lights to call attention to the sign changed. This directional change may be used separately or in connection with ordinary traffic lights, and in fact, the casing is designed and intended to be placed on top of or in connection with an ordinary changeable light traffic signal.

Referring now more particularly to the drawings, this sign is mounted in a casing having a metal base 10 with downwardly flaring edges 12 and with opposite sides 14 continuously welded to the base around the bottom and having a cap 16 extending over the top and suitably secured to the sides. The front and rear of the casing are open to display the changeable sign therein, and preferably the openings are closed by a glass panel 18 through which the changeable elements may be clearly seen.

The changeable sign comprises a plurality of blocks 20 each triangular in shape with opposite equal sides 22 and 24 at an angle of approximately 55° to each other and with a third side 26 joined to the other sides by beveled corners 28. These blocks may be made of any suitable construction such as wood, fiber, plastic, metal, or they may be metal covered, but the dimensions of the blocks are such that the two opposite sides 22 and 24 of each block will provide a substantial space for presenting thereon a traffic message or such other direction as may be desired.

Each block is thus substantially in the form of an isosceles triangle in cross section and is rotatable upon a longitudinal axis comprising a pivoting projection 30 at each end centrally located with respect to the apex thereof and the corners 28 if extended. These blocks are mounted in horizontal position by engaging them in upright bars 32, one at each side of the blocks. Each bar has a rearward extension 34 in which is a bearing opening 36 into which the pivoting projection is mounted. The blocks are spaced apart so that the apex of one block extends over the beveled end 28 of the block next to it, thus providing a substantially continuous surface for the three (or more) blocks, and providing a neat and close fitting arrangement.

In order to rotate the blocks, a movable bar 40 is located at each end of the blocks and has extensions 42 corresponding to the blocks, each with an opening 44 to form a bearing for engaging a projection 46 extending from the end of the block. This projection 46 is spaced between the

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pivotal projection 30 and the base of the triangular block upon the center line from the apex including the axis of the projection 30, so that when the bar 20 is moved in one direction or the other, it will swing free from engagement with the extension 34 of the fixed supporting bar 32.

The supporting side bars 32 are secured at the bottom to a base plate 50 and at the top to a top plate 52. Also secured to the base plate is a cam block 54 adapted to engage a lower beveled edge 56 of the movable bar 40 in its lower position as shown in Fig. 1. Secured to the under side of the top plate 52 is a corresponding cam block 58 which is adapted to engage an upper beveled extremity 60 of the movable bar 40 when it is in its raised position. In one limiting position of the movable bar, the corresponding outer faces 22 of the blocks will be in alignment as shown in Fig. 1, and in the other limiting position of the movable bar with the end 60 against the cam block 58, the other surfaces 24 of the blocks will be in alignment at the outer exposed side thereof.

In the position as shown in Fig. 1, the lower block slightly overlaps the next upper block because of the beveled corner 28 thereof and in the reverse position, the lower block is overlapped at its corner 23 by the apex of the next upper block. The dimensions of the blocks and the cut corners are necessary in order to have them swing freely and to overlap each other in forming the signs at the outer aligned faces thereof. To move the bars 40 in opposite directions, a pull cord or cable 62 is connected to one of the projections 46 which extends outwardly from the end of the block to which it is attached, and has a groove 64 for seating the end of the cable. The projection 46 for the lower block is likewise formed with a groove 64 for engaging one end of a spiral spring 66, the other end of which is engaged by a perforated bracket 68 secured to the bottom plate 50.

With this construction, it is necessary only to pull the cable upwardly to move the blocks into one limiting position and to allow the spring 66 to move the blocks downwardly in the other limiting position.

For operating signs at opposite sides of a casing, two cables 62 extend over pulleys 70 mounted on the top plate and they are connected through a spiral spring 72 with a cable 74 each attached to one end of a lever 76, the lever having a slot 78 at its other end and an intermediate pivot 80 close to the slotted end. Each lever is limited in its movement toward the spring 72 by an adjustable bracket 82 near the outer end thereof and the movable bars 40 are raised by engaging the end slots 73 of the lever. An operating electrical motor 84 of the solenoid type has a movable core 86 with a link 88 pivoted at one end thereto and with a bolt 90 extending through the link and through the slots 73 of the two levers 76 which overlap so that they are moved simultaneously by the same movement of the core 86. When the solenoid 84 is energized, the core will be drawn into the solenoid and when it is deenergized, the springs 72 and 66 will operate to return the lever arms against the brackets 82, also returning the movable bars 40 to their lower position.

Other types of operating motors may be used, if desired, but the solenoid type having a single motion is simple in construction and positive in operation.

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The faces of the blocks are spaced in the casing at a distance from the glass covering the opening and in this space at the top (and at the bottom too, if desired) electric lamps 92 are mounted in sockets 94 secured to a bracket 96 projecting from the top plate (and from the bottom plate too, if necessary). These lamps are at a sufficient angle to properly illuminate the faces of the blocks so that they may be clearly seen at night.

With this construction, a simple, effective and efficient periodically variable traffic sign may be produced and operated with a simple type of motor. The mechanism and the motor are not likely to get out of order, and repairs and changes may be made with very little trouble. The operation of the sign is so simple that it is not likely to get out of order, and repairs may be easily made by unskilled labor.

While this invention has been described in some detail, it should be regarded as an illustration or example rather than as a limitation of restriction of the invention, since various changes in the construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention.

I claim:

1. In a changeable sign, a plurality of blocks each in the form of an isosceles triangle in cross section with beveled corners at the ends of the base, the opposite sides of a plurality of adjacent blocks comprising sets of faces containing different complete messages in the form of a word or words, means mounting the blocks about parallel, horizontal axes spaced apart so that the apex of each triangle will overlay the edge of the next adjacent block and will be seated in the beveled corner of the next adjacent block when either set of faces is moved into alignment at the front of the sign, means connected to each of the blocks of a set for moving them simultaneously from a position exhibiting one set of faces at the front of the sign to a rotated position exhibiting the other set of faces at the front of the sign.

2. A changeable sign in accordance with claim 1, comprising spring means tending to hold said engaging means for turning the blocks in a direction to overlap the apices of the blocks in a direction to expose one set of faces, and power means connected to said means engaging the blocks for turning them to overcome the pressure of the spring for overlapping the apices engaging the blocks in the opposite direction and exposing the other set of faces at the front of the sign.

3. In a changeable sign in accordance with claim 1, a movable bar connected to each of the blocks of a set for moving them all simultaneously, a spring tending to hold the bar with the apices of the blocks overlapping the beveled edges of the adjacent blocks to exhibit one set of faces in alignment at the front of the sign, a cable attached to the bar to rotate the blocks upon their axes and to move the apices into overlapping position with the beveled edges of the opposite blocks and thereby to bring another set of faces of the blocks into alignment at the front of the sign, and power means to engage the cable and to move the bar connected thereto against the tension of the spring to effect the said change in position of the blocks.

4. In a changeable sign according to claim 3, comprising a set of blocks at opposite sides of the sign, the blocks presenting horizontal aligned

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faces at opposite sides of the sign in either angular position of each set of blocks, spring means at the bottom of each bar tending to move it into a lower limiting position bringing its corresponding blocks into one aligned position, cables connected to the upper ends of the bars for moving them to another limiting position by rotating the blocks, a lever at the top of the sign connected to each cable, the ends of the levers overlapping and having slots therein, power means comprising a movable member with a link pivoted thereto and having means extending through both of the slots of the levers which overlap so that they are moved simultaneously by the same movement of the movable member.

5. In a changeable sign in accordance with claim 4, a casing for enclosing and mounting the blocks and the mounting means therefor in the casing, the casing comprising a supporting base,

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transparent windows opposite the blocks and a top plate upon which the levers and the power means are mounted, and a removable cap at the top of the sides of the casing and overlapping the edges thereof, the blocks being spaced from the transparent windows in the casing, and means at the top of the casing in the space between the blocks and transparent sides of the casing for illuminating the faces of the blocks that are turned outermost into alignment.

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