

Nov. 16, 1948.

J. J. HAMMER

2,454,162

TRAFFIC OR DISPLAY SIGN

Filed April 12, 1946

2 Sheets-Sheet 1

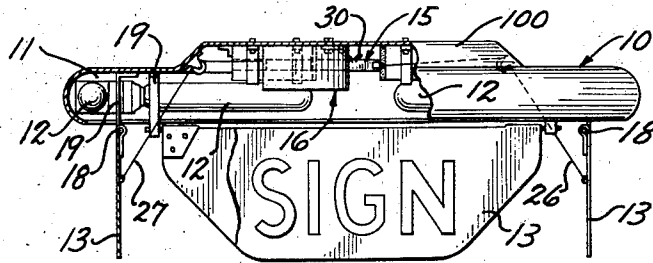


FIG. 1

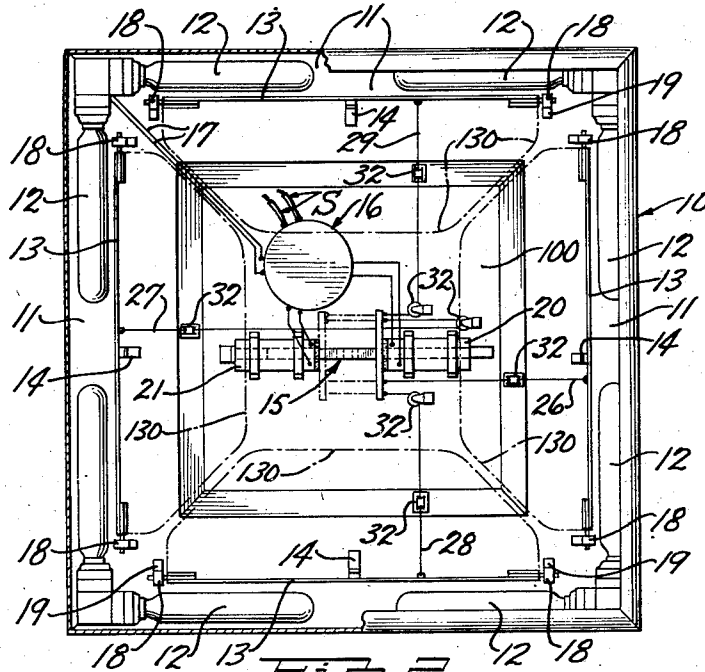


FIG. 2

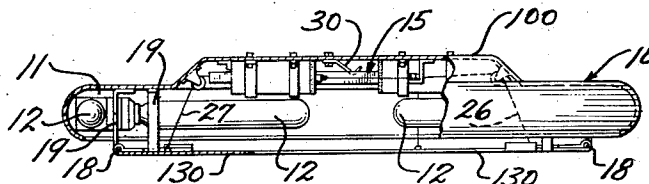


FIG. 3

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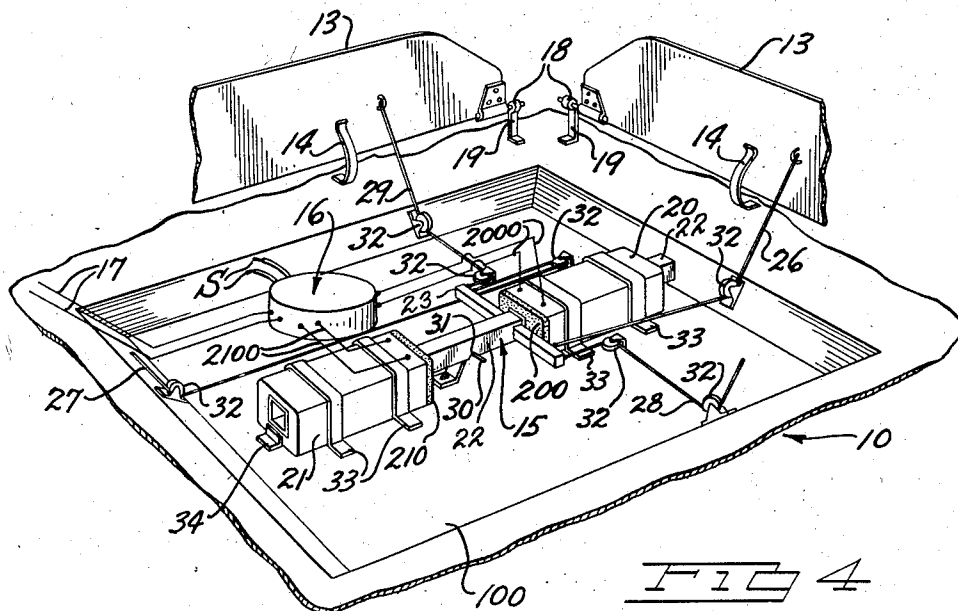
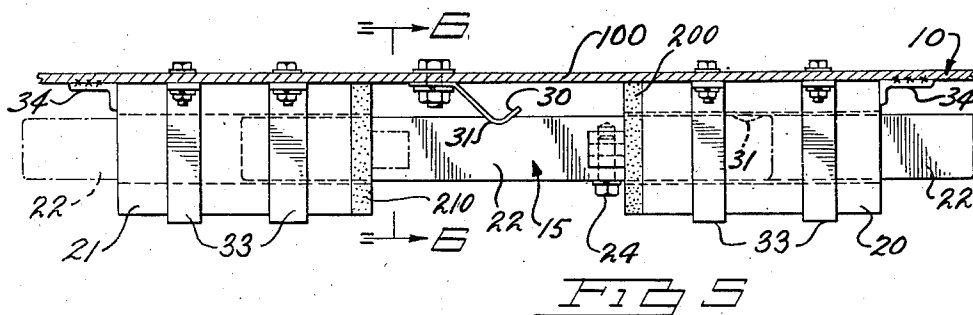
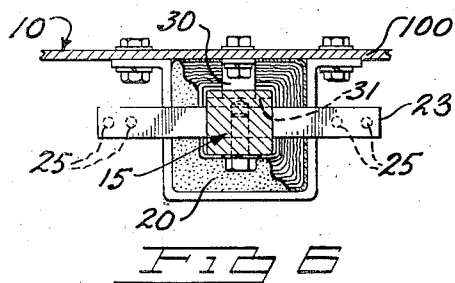
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TRAFFIC OR DISPLAY SIGN

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2 Sheets-Sheet 2



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TRAFFIC OR DISPLAY SIGN

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Application April 12, 1946, Serial No. 661,550

7 Claims. (Cl. 40—52)

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This invention relates to signs particularly adapted for traffic or advertising purposes.

The primary object of the invention is to provide a sign which is visible only when and as desired or required which may be employed as a traffic control unit for such purposes as to show "No Turn" or "20 MPH" or the like during rush traffic hours, also as a general purpose sign to show intermittently advertising or direction indicating indicia.

Other objects of the invention will become apparent by reference to the following detailed description taken in connection with the accompanying drawings, in which:

Fig. 1 is an elevation view of a sign embodying the invention with the sign panels thereof in their visible position and with portions thereof broken away to illustrate the construction and mechanism employed.

Fig. 2 is a bottom elevational view with portions broken away to illustrate the construction more clearly.

Fig. 3 is a view part in elevation and part in section similar to Fig. 1 except the sign panels are shown in their retracted position.

Fig. 4 is a fragmentary view in perspective with the sign turned upside down showing sign panel control mechanism preferably employed.

Fig. 5 is an enlarged elevational view of the double solenoid sign panel moving mechanism preferably employed.

Fig. 6 is a vertical sectional view taken on the line 6—6 of Fig. 5.

Referring now to the drawings wherein like numerals refer to like and corresponding parts throughout the several views, the illustrative embodiment of the invention shown in the drawings comprises a housing 10, light channels 11 formed around the periphery of the said housing 10, lighting means 12 disposed in said light channels, a plurality of sign panels 13 hinged in depending relationship from said housing 10 visible from the sides thereof, means 14 constantly urging the said sign panels 13 to their depending visible position, means 15 for retracting said sign panels 13 to a substantially horizontal obscure position 130 and for releasing said sign panels 13 from said horizontal obscure position 130 to their visible position, and timing means 16 for causing said sign panels 13 to be retracted to and released from their obscure position at desired intervals.

The said housing 10 shown square in the drawings may be square, rectangular, triangular or trapezoidal in shape. Light channels 11, preferably arcuate in shape, are formed around the

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periphery of the sign in such a manner as to reflect light onto depending sign panels 13 from electric lights or other suitable lighting means 12 preferably connected to a source of electric current S through the timing means 16 by a pair of suitable leads 17. In the particular embodiment of the invention shown, the sign panels 13 are hinged at 18 on the lower end of hinge brackets 19 depending from the top of the housing 10 and located at the extreme ends of the said sign panels 13. The sign panels 13 are so shaped as to permit them to be retracted from a substantially vertical depending visible position indicated in the drawings by the numeral 13 to a substantially horizontal retracted obscure position indicated by the numeral 130. Spring means such as the leaf springs 14 secured to the housing 10 constantly urge the sign panels 13 to their depending visible position and are sufficiently resilient to permit the said sign panels 13 to be pivoted to their retracted obscure position 130.

The top of the sign housing 10 is preferably paneled upwardly in the central portion thereof as indicated by the numeral 100 to accommodate means 15 for retracting the said sign panels 13 to their horizontal obscure position 130 and for releasing the said sign panels for pivoting by the leaf spring 14 to their depending visible position 13. This sign operating mechanism comprises a pair of spaced solenoids 20 and 21 having a common preferably square armature 22 therein which reciprocates from one solenoid to the other responsive to alternate energization thereof. The said solenoids 20 and 21 are secured to the panel 100 of the housing 10 by suitable straps 33 and are prevented from moving outwardly by means of stops 34 welded to the said panel 100 of the housing 10. A cable arm 23 is telescoped transversely through the armature 22 and is fixed therein by means of the stud 24. This cable arm 23 is provided with a plurality of bores 25 into which sign panel operating cables 26, 27, 28 and 29 are fixed. The said cable arm 23 acts as a stop to limit the extent of reciprocation of the armature 22 when the said cable arm 23 is moved by the armature 22 against the bumpers 200 and 210 of the solenoids 20 and 21 respectively. A spring detent 30 cooperating with notches 31 formed in the armature 22. As best indicated in Figs. 2 and 4, the sign panel operating cables 26, 27, 28 and 29 are each connected through suitable pulleys 32 to sign panels 13 and are of such length as to permit the sign panels 13 to be moved by the leaf spring 14 to a substantially vertical depending relationship with

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respect to the sign body 10. When the solenoid armatures 22 and cable arm 23 are in the position indicated by the numeral 22 in Figs. 1, 2 and 4, the said sign panels 13 are released to their visible depending position and are maintained in such position by the leaf springs 14, the operating cables 26, 27, 28 and 29 and the spring detent 30. When the armature 22 is in the position indicated by the numeral 220 in Figs. 2 and 3, the sign panels 13 are retracted to their obscured horizontal position and are maintained in such position by the operating cables 26, 27, 28 and 29 and the spring detent 30. Obviously means other than or in addition to the operating cables 26, 27, 28 and 29 may be employed to limit the extent of pivotal movement of the sign panels 13 by the leaf springs 14.

To move the sign panels 13 from their visible depending position 13 to their obscure horizontal position 130, solenoids 20 and 21 are alternately energized which may be accomplished by any known means such as the timing means 16 through which current from a source S is alternately provided to solenoids 20 and 21 through leads 2000 and 2100 and through which current for lighting the electric lighting means 12 is supplied when the sign panels 13 are disposed in their visible depending position. Timing switch means such as the timing means 16 are well known in the time switch art and need not be herein described in detail. The said timing means 16 may be mounted in the sign itself or, if more convenient, it may be incorporated in a separate switch box located remote therefrom.

Although but one embodiment of the invention has been disclosed and described in detail, it is obvious that many changes may be made in the size, shape, arrangement and detail of the various elements of the invention without departing from the spirit and scope thereof as defined by the appended claims.

I claim:

1. A traffic or display sign comprising a housing, a plurality of sign panels disposed in depending visible relationship therefrom, lighting means within said housing adapted to illuminate said sign panels when disposed in their depending visible relationship, spring means constantly urging said sign panels to their depending visible position, and solenoid means for retracting said panels to an obscure position.

2. A traffic or display sign comprising a housing, a plurality of sign panels disposed in depending visible relationship therefrom, lighting means within said housing adapted to illuminate said sign panels when disposed in their depending visible relationship, spring means constantly urging said sign panels to their depending visible position, and solenoid means operable responsive to timing means for retracting said panels to an obscure position.

3. A traffic or display sign comprising a housing, a plurality of sign panels disposed in depending visible relationship therefrom, lighting means within said housing adapted to illuminate said sign panels when disposed in their depending visible relationship, spring means constantly urging said sign panels to their depending visible relationship, and solenoid means including an armature to which said sign panels are connected for raising said sign panels to an obscure position.

4. A traffic or display sign comprising a housing, a plurality of sign panels disposed in depending visible relationship therefrom, spring means constantly urging said sign panels to their de-

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pending visible relationship, a pair of spaced solenoids having their hollow cores disposed in alignment in said housing, a common armature positioned within said hollow cores reciprocatingly movable therein responsive to alternate energization of said solenoids, linkage between said armature and said sign panels causing the said sign panels to be raised to their obscure position and released to their visible position responsive to said alternate energization of said solenoids, and means for energizing first one solenoid and then the other.

5. A traffic or display sign comprising a housing, a plurality of sign panels disposed in depending visible relationship therefrom, spring means constantly urging said sign panels to their depending visible relationship, a pair of spaced solenoids having their hollow cores disposed in alignment mounted in said housing, a common armature positioned within said hollow cores reciprocatingly movable therein responsive to alternate energization of said solenoids, linkage between said armature and said sign panels causing said sign panels to be raised to their obscure position and released to their visible position responsive to said alternate energization of said solenoids, means for energizing first one solenoid and then the other, and means for releasably retaining said armature and sign panels linked thereto in the last position to which they are moved by the energization of one or the other of the said solenoids.

6. A traffic or display sign comprising a housing, a plurality of sign panels disposed in depending visible relationship therefrom, lighting means within said panels adapted to illuminate said sign panels when disposed in their depending visible relationship, spring means constantly urging said sign panels to their depending visible relationship, a pair of spaced solenoids having their hollow cores disposed in alignment mounted in said housing, a common armature positioned within said hollow cores reciprocatingly movable therein responsive to alternate energization of said solenoids, linkage between said armature and said sign panels causing the said sign panels to be raised to their obscure position and released to their visible position responsive to said alternate energization of said solenoids, and means for energizing first one solenoid and then the other.

7. A traffic or display sign comprising a housing, a plurality of sign panels disposed in depending visible relationship therefrom, lighting means within said panels adapted to illuminate said sign panels when disposed in their depending visible relationship, spring means constantly urging said sign panels to their depending visible relationship, a pair of spaced solenoids having their hollow cores disposed in alignment mounted in said housing, a common armature positioned within said hollow cores reciprocatingly movable therein responsive to alternate energization of said solenoids, linkage between said armature and said sign panels causing said sign panels to be raised to their obscure position and released to their visible position responsive to said alternate energization of said solenoids, means for energizing first one solenoid and then the other, and means for releasably retaining said armature and sign panels linked thereto in the last position to which they are moved by the energization of one or the other of the said solenoids.

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