H. L. FORBES.

AUTOMATIC SIGN.

APPLICATION FILED APR. 17, 1915.

1,161,853.

Patented Nov. 30, 1915

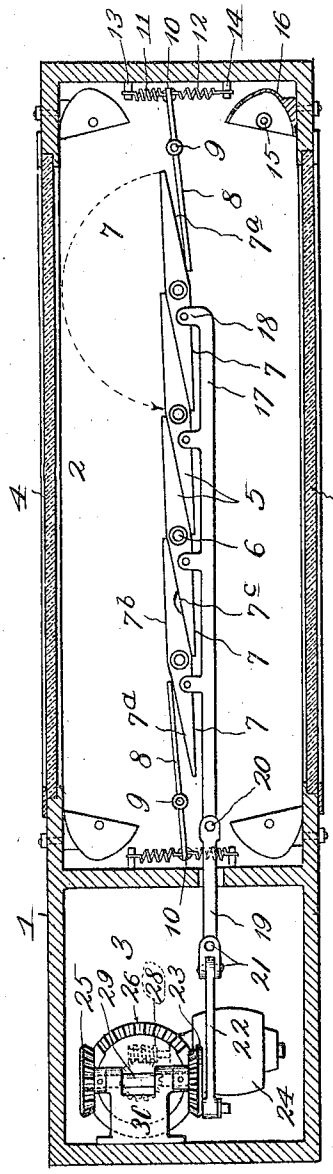


FIG. 1.

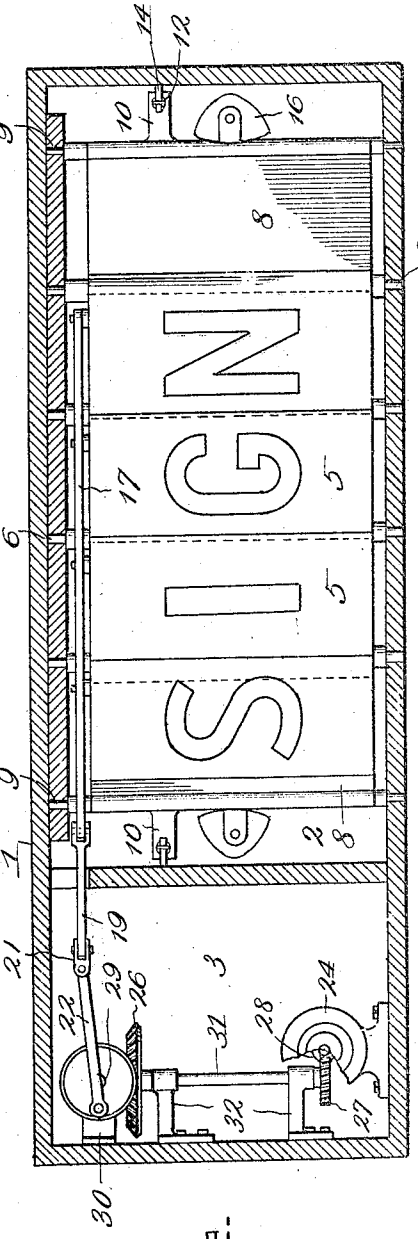


FIG. 2.

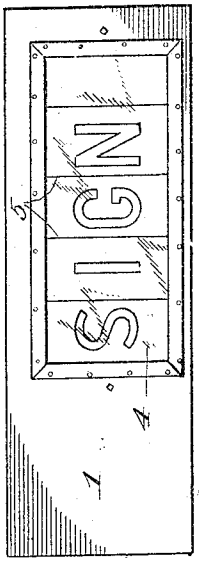


FIG. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

HARRY L. FORBES, OF KANSAS CITY, KANSAS.

AUTOMATIC SIGN.

1,161,853. Specification of Letters Patent. Patented Nov. 30, 1915.

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To all whom it may concern:

Be it known that I, HARRY L. FORBES, a citizen of the United States, residing at Kansas City, in the county of Wyandotte and State of Kansas, have invented certain new and useful Improvements in Automatic Signs, of which the following is a specification.

My invention relates to automatic signs, and one object is to provide a device of this character in which a greater number of different advertisements can be displayed than heretofore.

Further objects are to provide novel means for illuminating the display matter, and to provide simple and efficient means for actuating the slats carrying said display matter.

Other objects of the invention will hereinafter appear, and in order that said invention may be fully understood, reference will now be made to the accompanying drawing, in which:

Figure 1 is a sectional plan view of the invention on line I—I of Fig. 2. Fig. 2 is a vertical longitudinal section on line II—II of Fig. 1. Fig. 3 is a front elevation of the invention.

In carrying out the invention, I employ a case 1 divided into compartments 2 and 3, the former of which contains the sign proper and the latter the sign operating mechanism. The longitudinal sides of the compartment 2 are glazed with glass 4, so that advertisements and other display matter carried by the sign may be seen from opposite sides thereof.

The sign proper consists of a plurality of vertical slats 5, provided at their upper and lower ends with trunnions 6, journaled in the top and bottom walls of the compartment 2. Each slat 5, in plan view, tapers from its central portion toward its vertical edges, as disclosed by Fig. 1, thus providing four distinct surfaces 7, 7^a, 7^b and 7^c, for different kinds of display matter. This configuration of the slats also causes the sign to present substantially straight surfaces at its opposite sides, so that the display matter thereon can be easily read.

The slats 5 are so related to each other that when in the position disclosed by Fig. 1, one slat contacts and laps half of the adjacent slat and thus hides the display matter on the contacting surfaces, hence but one advertisement will appear on each side of the sign.

8 designates a pair of vibratory wings mounted adjacent the two endmost slats 5, to hide certain display surfaces thereon when other display surfaces are exposed. For instance when the surfaces 7 and 7^b of all the slats are exposed, the surface 7^a of the left end slat and the surface 7^c of the right end slat are covered by the adjacent wings and consequently the display matter on all of the surfaces 7 and 7^c, cannot become confused with the display matter on said surfaces 7^a and 7^c of the two endmost slats. When the slats are shifted to a reverse position to expose the display matter on all of the surfaces 7^a and 7^c, the surface 7^b of the left end slat and the surface 7 of the right end slat are covered by the adjacent wings 8. The wings 8 are of the same length as the slats 5 and have trunnions 9 mounted in the top and bottom walls of the compartment 4. Each wing 8 has a rearwardly extending arm 10 engaged by oppositely-extending springs 11 and 12 secured to pins 13 and 14, respectively, projecting from the adjacent end of the compartment 4. The springs 11 and 12 hold their respective wings 8 in engagement with the adjacent slats 5.

In order to allow the display matter to be read at night, I provide electric lamps 15, arranged in the corners of the compartment 4 and having reflectors 16, to cast the light rays along both sides of the sign.

Alternating rotary motion is simultaneously imparted to the slats 5 by a connecting-rod 17, arranged to one side of the trunnions 6, to keep from contacting therewith. Connection is made with the bar 17 and the respective slats 5 through lugs 18, projecting laterally from said bar. The connecting-bar 17 is actuated by a link, 19, having a pivotal connection 20, with said connecting-bar and a universal connection 21 with a pitman 22, pivoted to a bevel gear 23. The bevel gear 23 is part of a train driven by an electric motor 24 and consisting of said bevel gear 23, a bevel gear 25, a mutilated gear 26, a worm-wheel 27 and a worm 28, which latter is mounted upon the shaft of the motor 24. The bevel gears 23 and 25 are reversibly-disposed and mounted upon the ends of a shaft 29, journaled in a bearing 30. The mutilated gear 26 is mounted upon a vertical shaft 31, carrying the worm-wheel 27, at its lower end and journaled in bearings 32.

In practice, the mutilated gear 26 is constantly driven and as it alternately engages the bevel gears 23 and 25, imparts an alternate rotary motion thereto. This alternating motion is in turn imparted to the slats 5, so that the display matter upon the surfaces 7—7^b and 7^a—7^c is alternately exposed. As the slats 5 rotate a half revolution the endmost slats push the vibratory wings 8 to a reverse position to that disclosed by Fig. 1. There is a sufficient pause after each reverse movement of the slats 5 to permit the display matter to be easily read, due to the fact that the teeth on the mutilated gear 26, pass out of engagement with the two gears 23 and 25.

While I have shown and described the preferred form of the invention, I do not restrict myself to the exact construction, combination and arrangement of parts shown, but reserve the right to make such changes as properly fall within the spirit and scope of the claims.

Having thus described my invention, what I claim and desire to secure by Letters Patent, is:

1. In a device of the character described, a plurality of pivotally-mounted slats having display surfaces on their opposite sides and so disposed that each slat overlaps a display surface on a contacting slat, means for imparting alternate rotary motion to said slats to alternately display their display surfaces, wings to lap display surfaces on the endmost slats, and resilient means for holding said wings in engagement with said endmost slats.

2. In a device of the character described, a case having glass sides, a plurality of slats pivotally-mounted in said case and having display surfaces on their opposite sides and so disposed that each slat overlaps a display surface on a contacting slat, means for imparting alternate rotary motion to said slats to alternately expose their display surfaces, wings to lap display surfaces on the two endmost slats, and springs for holding said wings in engagement with said endmost slats.

In testimony whereof I affix my signature, in the presence of two witnesses.

HARRY L. FORBES.

Witnesses:
FRED C. FISCHER,
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