Jan. 10, 1928.

1,655,524

G. J. TEAGUE

CHANGEABLE SIGN

Filed March 10, 1926

2 Sheets-Sheet 1

Fig. 1

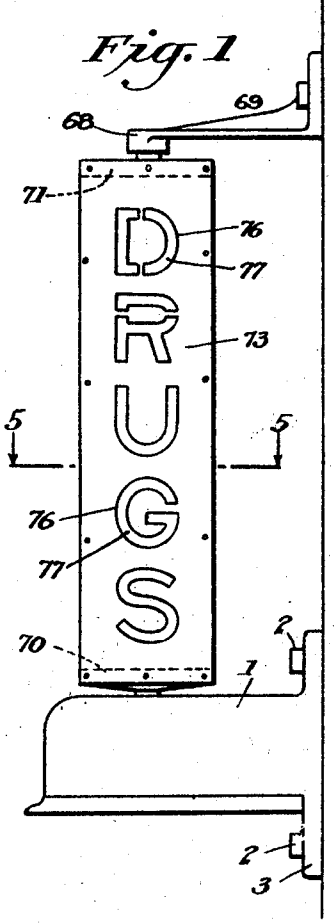


Fig. 2

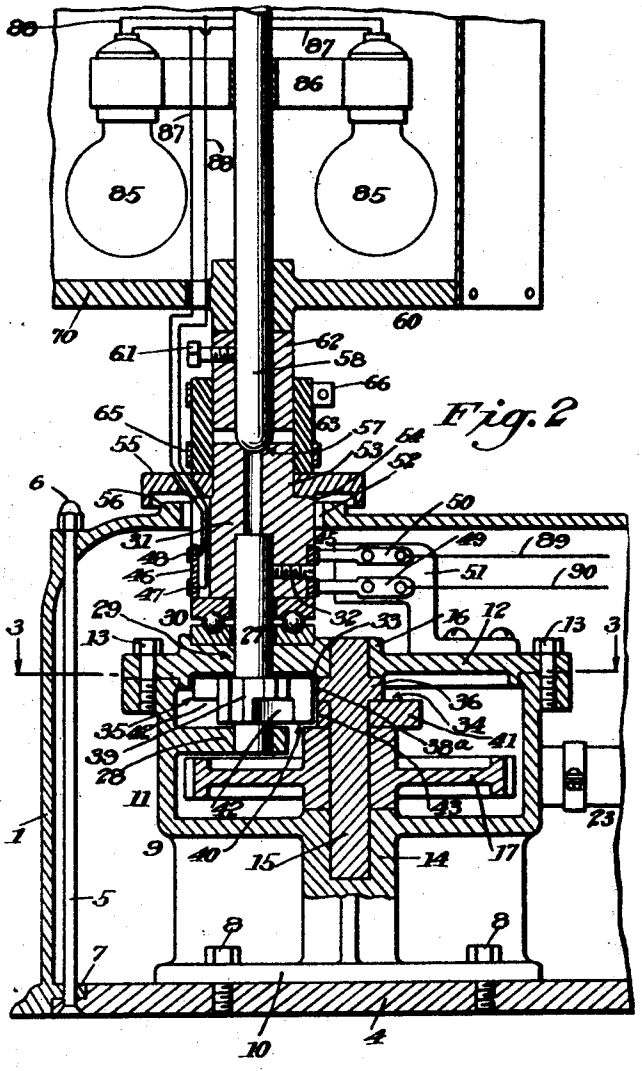
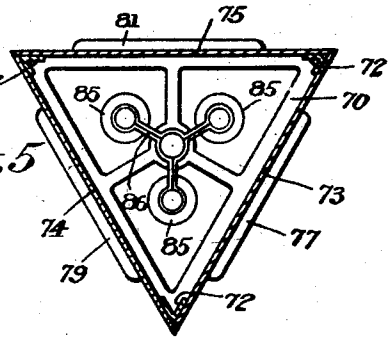


Fig. 5



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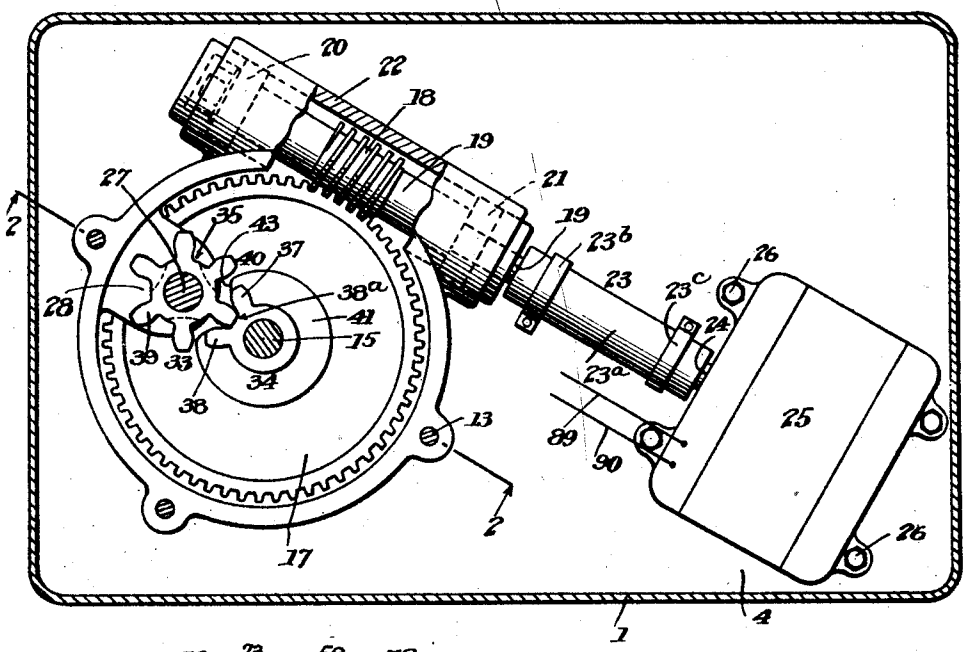
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CHANGEABLE SIGN

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2 Sheets-Sheet 2

Fig. 3



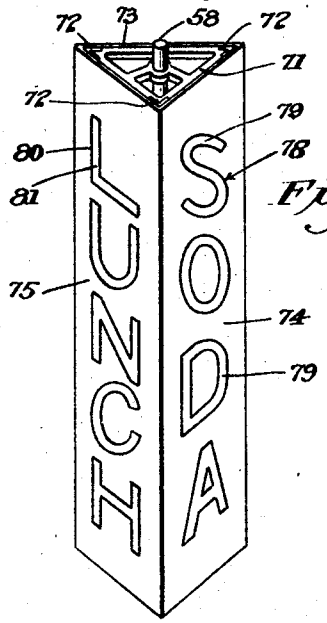


Fig. 4

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UNITED STATES PATENT OFFICE.

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CHANGEABLE SIGN.

Application filed March 10, 1926. Serial No. 93,703.

This invention relates to signs and more particularly to a changing sign which may be seen in the day time as well as at night.

One of the objects of the invention is to provide a sign constructed with a plurality of sign faces and with means for intermittently operating the same to expose said sign faces to differnt points of view for short periods of time.

A more particular object is to provide a triangular shaped sign with means for intermittently rotating the same to expose the sides thereof successively to view, the sign being particularly adapted to be placed in front of a store or building so that during each of its periods of rest and exposure two sides of the sign may be seen from directly across the street, while said sides may be respectively seen from opposite longitudinal directions of the street.

Another object is to provide a changeable sign with means for positively locking the same during its periods of rest and exposure.

A further object is to provide a sign of the character stated which will be simple in construction, inexpensive and efficient in operation.

Other objects and advantages will appear as the description progresses.

My invention is illustrated in the annexed drawings which form a part of this specification, and in which:

Fig. 1 is a side elevation of my sign.

Fig. 2 is a vertical longitudinal section of my sign taken on line 2—2 of Fig. 3.

Fig. 3 is a horizontal section of my sign taken on line 3—3 of Fig. 2.

Fig. 4 is a perspective view of the sign board, showing the two sign faces thereof which are not shown in Fig. 1.

Fig. 5 is a horizontal section of the sign carrier taken on line 5—5 of Fig. 2.

Corresponding reference characters designate the same parts in all the views.

In the drawings 1 indicates a casing which is bolted to the front of a building or other structure by means of bolts 2 which extend through a flange 3 formed on the rear of the casing. The casing 1 is provided with a detachable bottom wall 4 which is secured to the lower part of the casing by means of bolts 5 and nuts 6 which bolts extend upwardly through said bottom wall, through an internal flange 7 on the lower edge of the casing, and said nuts screw on the upper ends of said bolts against the top of the casing. On the bottom wall 4 within the casing 1 is bolted, by means of bolts 8, a mounting 9 formed with a base 10 through which said bolts extend. On the upper part of the mounting 9 is formed a gear case 11 detachably closed at the top by a head 12 which is secured to the upper edge of the case by bolts 13. The mounting 9 is formed with a bearing 14 at the bottom of the case 11 in which the lower end of a vertical shaft 15 is journaled, the upper end of said shaft being journaled in a bearing 16 in the gear case head 12. On the shaft 15 within the gear case 11 is secured a gear 17 with which meshes a worm 18 on a shaft 19 journaled in bearings 20 and 21 within a barrel 22 formed on one side of the gear case 11. The shaft 19 is coupled at its outer end by a flexible coupling 23 to the shaft 24 of an electric motor 25 which is bolted by bolts 26 to the bottom wall 4 within the casing 1. The coupling 23 comprises a rubber fabric sleeve 23^a, and a pair of ring clamps 23^b and 23^c which clamp the sleeve on shaft 19 and motor shaft 24.

A vertical shaft 27 is journaled at its lower end in a bearing 28 in the gear case 11 and extends upwardly through the gear case head 12 and is journaled between its ends in a bearing 29 in said head. On the head 12 concentric with the shaft 27 is mounted an end thrust bearing 30 upon which rest a driving head 31 which is fitted on the upper end of the shaft 27 and is secured thereto by set screw 32.

An intermittent motion is transmitted from the shaft 15 to the shaft 27 through an intermittent movement 33 consisting of a drive member 34 and a driven member 35, the drive member being secured on the upper end of shaft 15 and the driven member 35 being secured on the lower end of shaft 27.

The drive member 34 comprises a segmental pinnion 36 with only two teeth 37 and 38 with single tooth space 38^a therebetween, while the drive member 35 comprises a conventional pinnion 39, the teeth of which mesh with the teeth 37 and 38 of pinnion 36. The driven member 35 and shaft 27 are rotated one third of a revolution upon each revolution of the drive member 34. Locking means 40 are provided for locking the driven member 35 and shaft 27 during their periods of rest, which means comprises a segmental disk 41, secured on the lower side

of the drive member 34, and three notches 42 cut in the lower edge of the driven member 35 equi-distant apart to successively receive said disk, the disk being notched at 43 coincident with the space 38[a] to permit the teeth of the pinnion 39 or driven member 35 to mesh with the teeth 37 and 38 of the drive member.

On the lower end of the driving head 31 is mounted a commutator 45 which consists of a ring of insulation 46 secured on the lower end of said mounting, a pair of metallic rings 47 and 48 secured on said insulation ring in spaced relation, and a pair of brushes 49 and 50 engaging said metallic rings respectively, said brushes being mounted on a bracket 51 secured on the head 12.

The upper wall of the casing 1 is provided with an opening 52 through which projects the upper end of the driving head 31. The upper end of said mounting is reduced slightly in diameter as indicated at 53 and formed with a shoulder 54 at the base of said reduced portion and above the opening 52, on which reduced portion is tightly fitted a disk 55 which rests upon the shoulder 54 over the opening 52 and forms a cover for said opening to prevent rain from dropping through said opening into the casing 1. The wall of the casing 1 is raised slightly around the opening 52 as indicated at 56 to prevent water from flowing into said opening. The upper end of the mounting 31 is formed with a seat 57 in which rests the lower end of a spindle 58 of a rotatable sign carrier 60, whereby said sign carrier is supported. On the lower end of the carrier shaft 58 is secured by means of set screw 61 a sleeve 62. The sign carrier 60 is coupled by a flexible coupling 63, to the sign mounting 31, said coupling comprising a rubber fabric sleeve 64 and a pair of ring clamps 65 and 66, and said sleeve being fitted on the reduced upper end 53 of said sign mounting and on the sleeve 62 and clamped thereon by said clamps respectively.

The carrier 60 is triangular in cross section and comprises a lower triangular frame member 70, an upper triangular frame member 71, three vertical angle irons 72 secured at their lower and upper ends to said lower and upper triangular frame members 70 and 71 respectively, and three sign plates 73, 74 and 75, each of which plates being secured at its lower and upper ends to said frame members and at its side edges to two of said angle irons, and closing one side of the carrier. The lower frame member 70 and the upper frame member 71 are secured centrally on the shaft 58. The shaft 58 is journaled in a bearing 68 on a bracket 69 secured to the front of a building. In the plate 73 are cut openings 76 in a vertical row forming the letters and word "Drugs", in which openings are fitted raised glass letters 77. In the plate 74 are cut openings 78 in a vertical row forming the letters and word "Soda", in which openings are fitted raised glass letters 79. In the plate 75 are cut openings 80 in a vertical row, forming the letters and word "Lunch", in which openings are fitted raised glass letters 81. Electric lights 85 are mounted in the carrier 60 on brackets 86 secured on the carrier shaft 58, which lights are connected by wires 87 and 88 to the commutator rings 47 and 48 respectively. The commutator brushes 49 and 50 are connected by wires 89 and 90 to the motor terminals 91 and 92 respectively.

The operation of my invention is as follows: The motor 25, through coupling 23, shaft 19, worm 18 and worm gear 17, rotates the shaft 15 and the intermittent drive member 34, which member intermittently rotates the driven member 35, which in turn, through the medium of shaft 27, head 31, flexible coupling 63, sleeve 62 and shaft 68, intermittently rotates the sign carrier 60. During each period of rest of the sign carrier is locked by the engagement of the edge of the disk 41 with a notch 42.

The sign is mounted so that when the sign carrier 60 is at rest, two of its signs, either Drugs and lunch, Lunch and soda or Soda and drugs face frontwise of the device and may be seen across the street, while two of said signs will respectively face the street longitudinally in opposite directions.

What I claim is:

1. An advertising sign comprising a driving mechanism including an intermittently rotatable shaft, a casing enclosing said mechanism, a rotatable sign carrier above said casing having a spindle depending therefrom, a bearing in said casing, a driving head on said intermittently rotatable shaft, adjacent said bearing and projecting through an opening in said casing, a flexible coupling operably connecting said driving head and said carrier shaft, and a bearing above said carrier alined with the bearing in said casing for rotatably supporting said carrier shaft.

2. An advertising sign as characterized in claim 1 including a flanged member carried on said driving head below said coupling, and covering the opening in said casing for preventing the entrance of water into the casing.

3. An advertising sign as characterized in claim 1 including contact devices mounted within said casing, and including members carried on said driving head, and electric lights within said carrier connected in circuit therewith for illuminating the carrier.

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