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T. N. EVENS

1,452,074

LOOSE LETTER SIGN AND THE LIKE

Filed Dec. 8, 1922

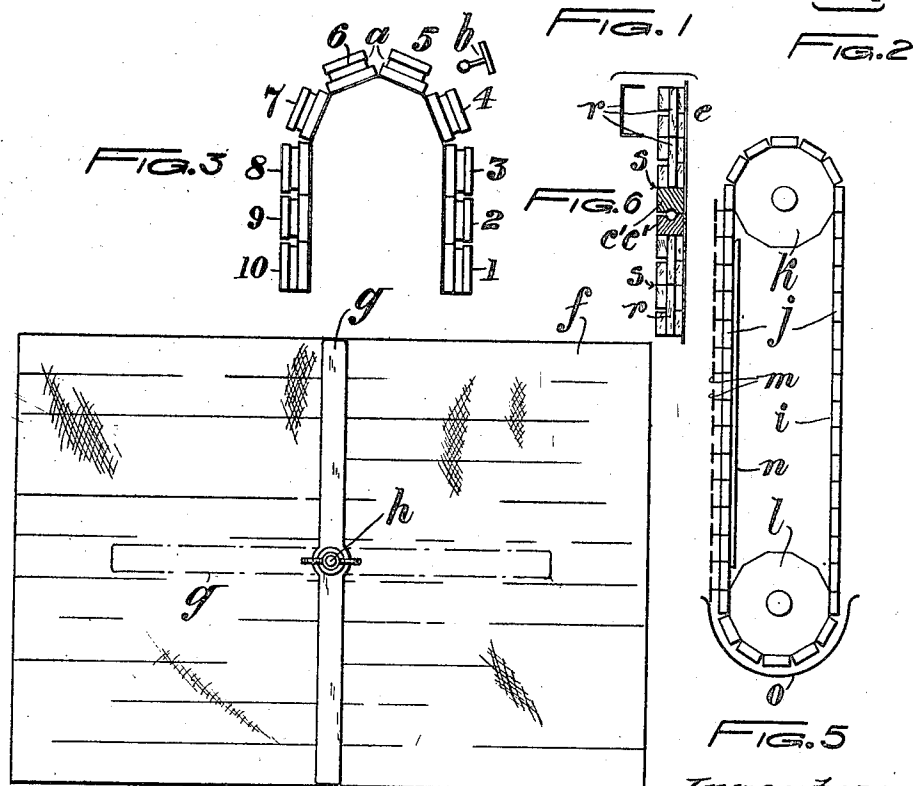
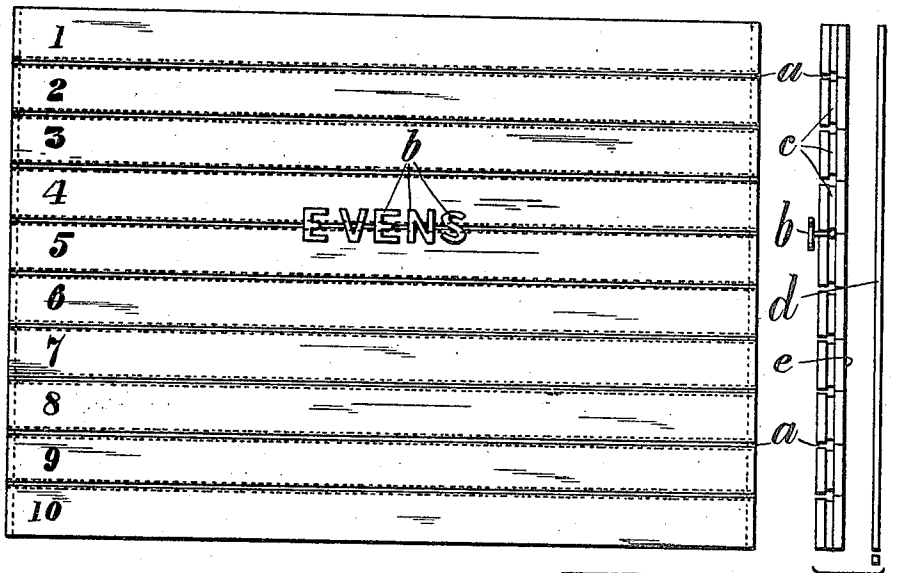


FIG. 4

FIG. 5

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UNITED STATES PATENT OFFICE.

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LOOSE-LETTER SIGN AND THE LIKE.

Application filed December 8, 1922. Serial No. 605,660.

To all whom it may concern:

Be it known that I, THOMAS NELSON EVENS, a British subject, of 3 and 4 Eagle Street, London, W. C. 1, England, have invented certain new and useful Improvements in Connection with Loose-Letter Signs and the like, of which the following is a specification, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to advertising, notice and the like boards of that kind usually known as loose letter signs and in which letters, figures and other characters are interchangeably arranged in grooves in a board, base or other suitable support.

My invention refers to the board, base or other support and which I will call the board, and may be broadly described as consisting in making the same of flexible form in such a manner that it can bend and when bent the grooves are opened sufficiently to enable the characters to be individually inserted and removed from the front of the board. Any suitable means may be employed to hold the board stiff when in use.

As an example the board may be made of a number of suitably shaped horizontal laths or ribs mounted on a flexible back or in any flexible manner so that when bent backwardly the spaces between the adjoining edges of the laths and which form the grooves, will gape sufficiently to enable the characters to be inserted and removed. When the characters are in place a stiff bar may be inserted in to a groove at each end of the laths and thus the board will become stiff. The laths may be vertical if desired and any other stiffening means may be employed such as a bar pivoted to the central lath and adapted to be turned parallel thereto, to flex the board, or at right angles to hold it stiff.

Several laths or boards may be mounted on endless bands running over rollers and when between the rollers may be held rigid by a back board, rods fixed adjacent to the ends of the boards or in some other manner.

My invention enables small alterations to be made in a line without otherwise disturbing it so that part of a line can be changed and the rest which does not need changing can be left intact.

The characters can be set up as on an ordinary solid back as by sliding the characters in from the ends of the grooves or

they can be set up from the face of the back while it is bent. The advantages of locking and general setting as described in the specification of my previous Letters Patent No. 1,405,991 can be utilized here.

The laths or segments are built so that the slots along which the characters are placed open (unless held as hereinafter described) when the board is flexed or the segments can be so made that they open both along the slots and between the laths.

I will now describe my invention with reference to the accompanying drawings in which:—

Fig. 1 is a front view of one of my boards of rectangular shape comprising ten strips of laths numbered 1 to 10 between the edges of which grooves *a* adapted to take the supports on the backs of the characters are arranged. Five of such characters *b* are shown held between laths 4 and 5.

Fig. 2 is an end view of the board seen in Fig. 1 and shows the ends of the letter, etc., holding grooves *a* and also shows an end groove *c* into which a stiff bar *d* can be placed to hold the board rigid. The laths are secured to a canvas or other flexible back *e* and can bend in hinge-like manner at the lines of junction between the laths.

Fig. 3 shows a like board bent to inverted U shape and with one of the characters removed. In practice it is not necessary to bend the board to the extent shown unless the board is to move over a roller or equivalent.

Fig. 4 shows the back of another rectangular board *f* composed of eleven laths to the central one of which a stiff bar *g* is pivoted at *h*. This bar is seen in the position in which it holds the back rigid but it can be turned on the pivot to lie along the central lath, see dotted line, in which case all the laths are movable in relation to the others of them so that the characters may be inserted into the grooves, not shown, and when these characters are correctly assembled the stiff bar is turned to the position shown in full lines and the laths and the characters are held sufficiently rigid and tightly for all practical purposes.

Fig. 5 illustrates diagrammatically one of my boards or supports *i* constructed of laths *j* in endless band fashion and adapted to move over rollers *k* and *l*. The characters are shown at *m* on the left hand side which may be assumed to be the front of the de-

vice. A fixed support *n* serves to keep the laths on this side flat and a guard *o* prevents the letters etc., falling out as they pass round the underside of the roller *l*.

5 Fig. 6 shows how two laths with the letter-holding groove between them can be clamped together so as to retain the letter even when the laths pass the underside of a roller.

10 In Fig. 6, the back *e* is much the same as in the other cases shown and the laths *c'*, *c'* are much like *c*, *c* but are arranged in pairs held together by removable clamps *r* one of which is seen in side view. When the board is flexed the pairs of laths will be held intact with the characters they hold by means of the clamps *r* and the board will flex or gape on the lines *s*, *s*.

20 The invention can be carried out in numerous forms within the scope of the following claims.

What I claim is:—

1. An advertising board having relatively swinging elements, the cooperating faces of which form character receiving grooves, and means whereby the elements may be swung relatively to each other to open or close the grooves to release or hold the characters.

30 2. An advertising board, comprising relatively hinged elements forming character receiving grooves between them, a support for said elements to permit their relative hinge movement to open the grooves, and means for holding said elements in relatively rigid groove forming relation.

40 3. An advertising board, comprising a flexible backing, a series of strips secured on the backing with their contiguous edges forming character receiving grooves, the flexible backing permitting relative movement of the strips to open the grooves.

45 4. An advertising board, comprising two elements formed to provide a character receiving groove between them, and means for hingedly connecting said members at one edge to permit the opposite edges to be moved together or apart, thereby closing or opening the groove.

50 5. An advertising board, comprising a flexible backing, strips independently secured thereto, the adjacent edges of said strips being formed to provide character receiving grooves, said strips when aligned presenting said grooves in character holding relation the independent mounting of the strips permitting their relative movement to

open the grooves to release the characters therefrom.

60 6. An advertising board, comprising independent members arranged to normally present adjacent faces in substantial contact, means for mounting said members to permit the adjacent faces to swing apart, said adjacent faces of the members being each channelled to present a groove rearwardly of the forward edges of the members when the members are in normal relation.

70 7. A sign board, comprising independent members arranged for relative swinging movement to present meeting faces, the meeting faces of the members being formed to present a sign element receiving groove inwardly of the forward faces of the members when the members are serving together.

80 8. A sectional sign board formed with a locking groove rearwardly of the face of the board to receive a projection of a sign element, and means to permit operation of the board sections relative to one another to permit insertion of or prevent removal of the projection of the sign element.

85 9. The combination with a sign element having a projection formed with an enlarged terminal, of a sectional sign board formed rearwardly of its face with a groove to receive and hold the enlarged terminal, said board being formed with a channel leading from said groove and opening through the face of the board to receive the projection of the sign element, and means to permit relative operation of the board sections to enlarge the channel and open the groove to facilitate removal of the sign element.

100 10. The combination with a sign element having a projection formed with an enlarged terminal, of a sectional sign board formed rearwardly of its face with a groove to receive and hold the enlarged terminal, said board being formed with a channel leading from said groove and opening through the face of the board to receive the projection of the sign element, means to permit relative operation of the board sections to enlarge the channel and open the groove to facilitate removal of the sign element, and means to secure said sections relatively fixed at will.

110 In witness whereof I have hereunto set my hand.

THOMAS NELSON EVENS.