Jan. 1, 1924 1,479,485

P. S. VAN BLOEM

ILLUMINATED SIGN

Filed Oct. 10, 1922 2 Sheets-Sheet 1

Fig. 1.

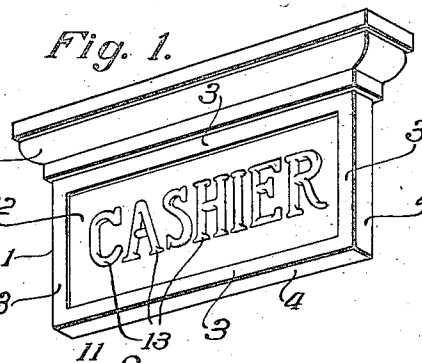


Fig. 2.

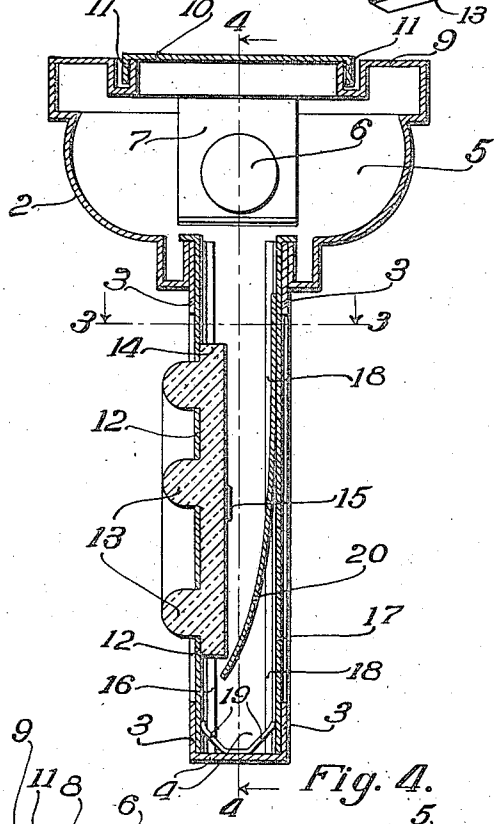


Fig. 3.

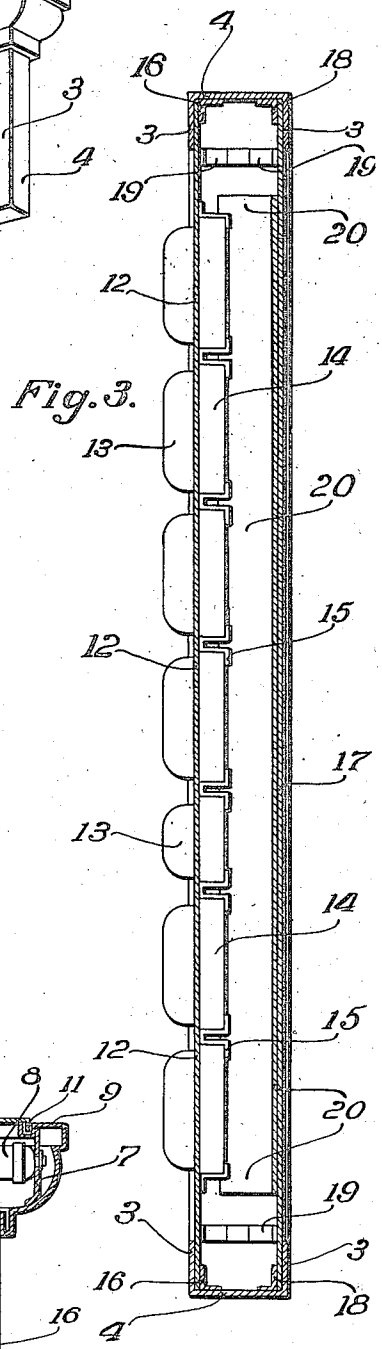
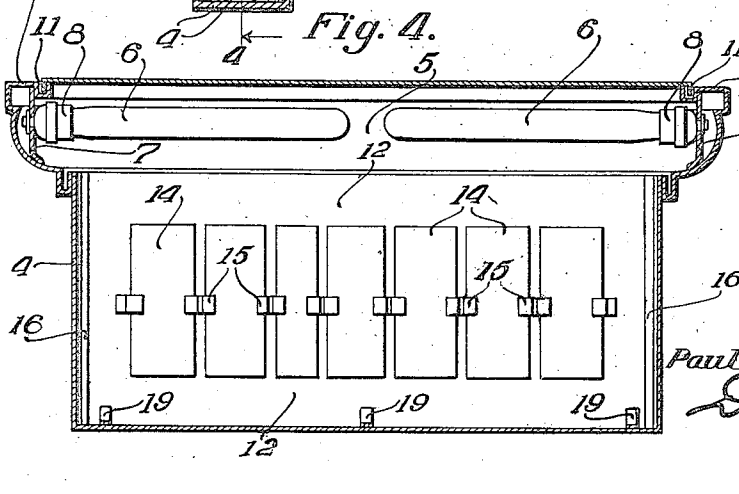


Fig. 4.



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Fig. 5.

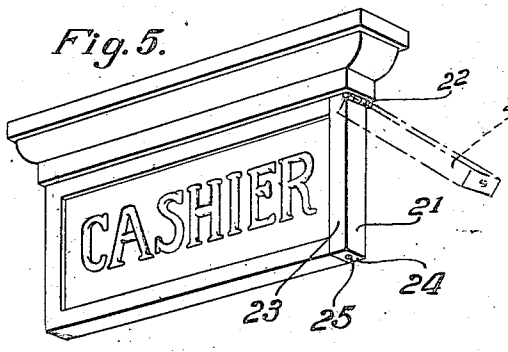


Fig. 6.

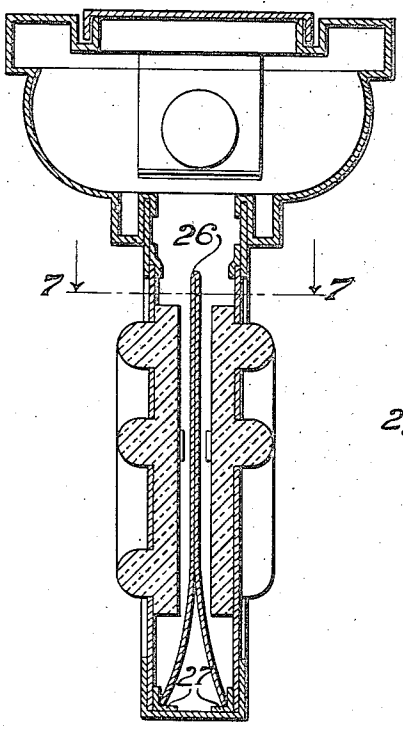


Fig. 7.

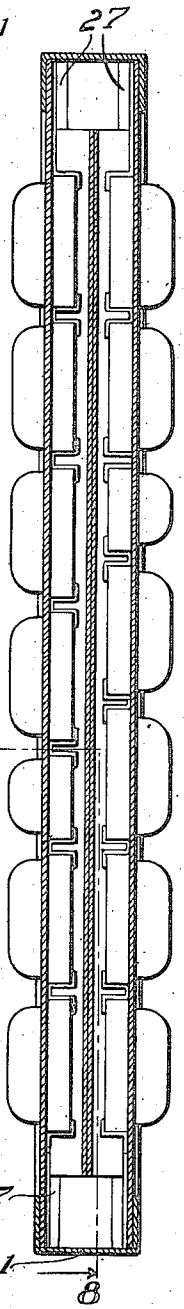


Fig. 9.

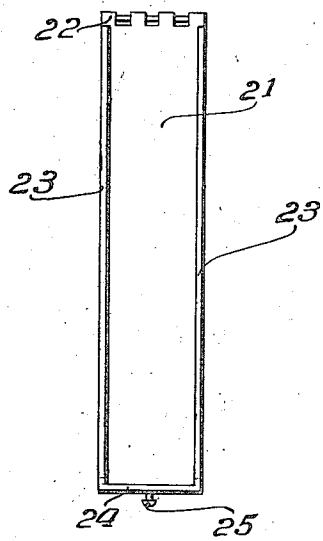
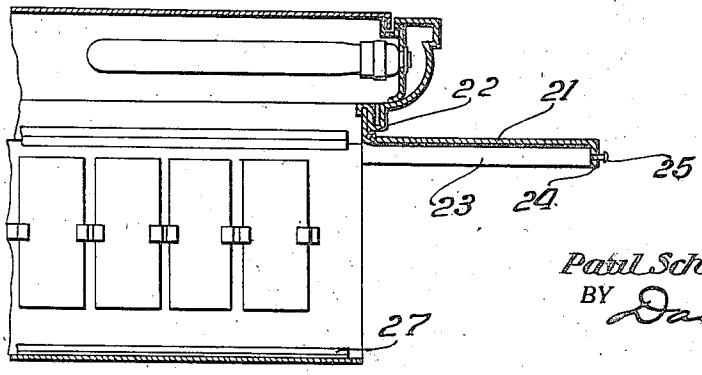


Fig. 8.



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Patented Jan. 1, 1924. 1,479,485

UNITED STATES PATENT OFFICE.

PAUL SCHUYLER VAN BLOEM, OF HEMPSTEAD, NEW YORK, ASSIGNOR TO THE VIKING PRODUCTS CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

ILLUMINATED SIGN.

Application filed October 10, 1922. Serial No. 593,588.

To all whom it may concern:

Be it known that I, PAUL S. VAN BLOEM, a citizen of the United States, and resident of Hempstead, in the county of Nassau and State of New York, have invented certain new and useful Improvements in Illuminated Signs, of which the following is a specification.

One of the main objects of this invention is to provide an illuminated sign having a thin body part adapted to hold the characters of the sign, and a larger top or head portion designed to receive a source of light, such as an electric bulb, by means of which the sign characters are illuminated. The narrow body part of the sign is so constructed that the light rays from the source of illumination, arranged in the enlarged head, pass into and through the sign characters both directly and indirectly, a suitable reflector being arranged in the body part of the sign to receive and reflect the light rays and to direct them through the sign characters to be illuminated. The sign characters are preferably molded glass letters inserted in and displayed through an opaque stencil plate. These glass letters are preferably formed in accordance with Patent No. 1,311,472, dated July 29, 1919, but of course it will be understood that any form of glass letters may be used.

There are other objects and advantages of the invention which will hereinafter appear.

In the drawings Fig. 1 is a perspective view of a sign constructed in accordance with this invention;

Fig. 2 a vertical transverse sectional view thereof;

Fig. 3 a horizontal sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 a vertical longitudinal sectional view taken on the line 4—4 of Fig. 2;

Fig. 5 a perspective view of a slightly modified form of the invention;

Fig. 6 a vertical transverse sectional view of the device shown in Fig. 5;

Fig. 7 a horizontal sectional view taken on the line 7—7 of Fig. 6;

Fig. 8 a detail longitudinal sectional view of one end of the sign taken on the line 8—8 of Fig. 7; and

Fig. 9 a detail elevation of the door which closes one end of the body part of the sign shown in Fig. 5.

Referring to the various parts by numerals, 1 designates the narrow vertical body part of the sign and 2 the enlarged upper end or head thereof, these two parts being rigidly and firmly connected together and the head being in the form of an ornamental molding to give the sign a pleasing appearance. The body part of the sign consists of a rectangular open frame having side walls 3. The side walls forming the ends and the bottom of the body part of the sign are connected by rigid transverse walls 4 to form a channel frame having its flanges turned inwardly. The upper side walls 3 extend up into the head portion 2 and are rigidly secured therein. These upper side walls are not connected together so that the upper end of the body part of the sign opens directly into the hollow head portion 2. The head portion is formed of sheet metal and is suitably shaped as an ornamental molding and forms a chamber 5 adapted to receive the electric light bulb 6. These bulbs may be of any suitable form and are preferably located directly above the center of the body part of the sign. As shown in Fig. 4 these light bulbs are long narrow tubes located directly above the longitudinal center of the sign so that the light rays therefrom will be directed downwardly into the hollow body part of the sign through the open upper end thereof. In the chamber 5 of the head portion 2, at each end thereof, supporting plates 7 are arranged, and on these supporting plates are mounted the electric lamp sockets 8. The top of the head portion 2 is closed by a horizontal wall 9 and a removable cover 10 which closes a large longitudinally extending opening in the said top wall 9. The cover 10 is formed with marginal flanges 11 which are adapted to fit down in corresponding grooves formed in the top wall 9. The purpose of this is to provide an easy means of access to the light bulbs and to the interior of the sign body while at the same time preventing light rays from escaping from the chamber 5 through the upper wall thereof. The lamp supporting sockets 8 are preferably located beyond the ends of the sign body so that when the lamp bulbs are removed from the lamp sock-

ets access may be had to the entire interior of the sign body for the purpose of adjusting the sign characters and the reflector plates, as will be hereinafter described.

The opening in the front of the sign is closed by removable opaque stencil plate 12. This stencil plate is cut out to receive the glass sign characters 13. As shown in the drawings these sign characters are in the form of letters, each letter having an individual back plate 14 adapted to bear directly against the inner side of the stencil plate. Each letter is secured in position on the stencil plate by readily bendable metal fingers 15 which are rigidly secured to the inner side of the stencil plate. The stencil plate is held in position against the front walls 3 by means of vertically extending flanges 16 secured to the end walls 4 of the body part of the sign. The rear side of the body of the sign is closed by an opaque plate 17; and said plate is held in position by means of vertical flanges 18 which are secured to the end walls 4 of the body part of the sign. The stencil plate and the opaque back plate may be readily inserted in and removed from the sign body through the opening in the top wall of the head portion. The lower ends of the stencil plate and of the back plate are held tightly against the walls 3 at the bottom of the sign body by means of transverse springs 19. The purpose of this is to prevent any possibility of light rays escaping from the sign body around the bottom edges of these plates. Secured to the inner side of the plate 17 is a downwardly curved reflector plate 20, the lower portion of said reflector being curved toward the front wall of the sign and the upper portion of said reflector being secured flat against the plate 17. The purpose of this reflector plate is to divert the light rays from the source of illumination and direct them outwardly through the glass letters so that said letters will be illuminated to a large extent by indirect rays. These letters will also be illuminated to a certain extent by direct rays from the source of light, said direct rays passing directly into the body of the glass letters and, because of the construction of the letters, said rays will be deflected and caused to pass outwardly through the characters which project through the opaque stencil plate. It is manifest that by drawing the opaque back plate 17 upwardly from the body part of the sign access may be had to the sign characters through the open rear wall of the sign. It is also manifest that when the sign characters have been removed from the stencil plate, the said plate may be removed from the sign body by drawing it upwardly through the sign portion 2.

It is manifest that instead of forming the hollow head portion at the top of the sign it may be formed at the bottom thereof and serve as a sign base, or it may be formed at either end thereof.

A sign constructed in accordance with the foregoing has many advantages. It is pleasing in appearance; the source of light is wholly concealed in an ornamental molding which is also pleasing in appearance and gives an artistic and proportional finish to the sign. The illumination of the sign characters is effective without the source of illumination being evident.

If desired the sign characters may be colored on the rear side of their supporting flanges 14, or the reflector plate itself may be colored.

As shown in Fig. 5 of the drawings, one end of the sign body is made in the form of a door 21 which is hinged at its upper end 22 to the lower edge of the head portion of the sign. The hinged door is formed with side flanges 23 which when the door is closed complete the rear and front walls of the body part of the sign. When this door is swung to its upper open position, as illustrated in Fig. 8, the entire end of the sign body is open and the stencil plates and reflectors may be withdrawn from the sign body through said opening. The lower end of the door is formed with a horizontal flange 24 which is adapted to fit under the bottom wall of the sign body; and a screw 25 is provided in said flange to lock the door in its closed position. This screw is caused to bear on the bottom wall of the sign body in order to lock the door in place.

Instead of using a single stencil plate and an opaque back plate, as illustrated in Fig. 2, two stencil plates may be used so that a sign may be displayed at the front and rear of the sign body, as shown in Figs. 6 and 7. In this arrangement of the sign the reflector is arranged between the two stencil plates along the longitudinal center of the sign body. As shown in Figs. 6 and 7 this central duplex reflector 26 is brought to a thin edge at its upper end and curved outwardly at its lower end. Its lower end is guided by guide way 27 mounted in the lower corners of the sign body. This reflector plate is adapted to be drawn outwardly through the sign body when the door 21 is open.

What I claim is:

1. An illuminated sign comprising a narrow hollow body part having an open horizontal end and closed light tight at all of its other ends, a hollow ornamental molding entirely surrounding and connected to the open horizontal end of the body part the said molding forming a light chamber opening into the hollow body part throughout substantially the length of said body part, an electric lamp removably mounted in the light chamber, the said chamber having an

opening therein adapted to give access to the lamp, a movable light tight closure for the said opening, an opaque stencil plate forming one wall of the body part, transparent sign characters mounted in said stencil plate, a reflector mounted in the body part spaced rearwardly from the stencil plate and substantially parallel thereto and adapted to divert the ligh trays outwardly through the sign characters, and parallel guides within the body part through which the stencil plate and the reflector are adapted to be withdrawn edgewise in the same direction.

2. An illuminated sign comprising a narrow hollow body part open at its upper end and closed light tight at all of its other ends, a light chamber formed as an ornamental molding connected to the sign body at its open upper end, a lamp socket fixed in the light chamber, an electric lamp removably mounted in the said socket, the said light chamber having an opening over said lamp adapted to give access to it, a movable light tight closure for the said opening, a slidably removable opaque stencil plate forming one wall of the body part, transparent sign characters mounted in said stencil plate, and a reflector mounted in the body part and arranged to divert the light rays through the sign characters, the said reflector being slidably removable in the same direction as the stencil plate.

3. An illuminated sign comprising a narrow hollow body part formed of a channel frame open at its upper end, a hinged door forming one vertical end of said channel frame, a light chamber connected to the sign body at its open upper end and adapted to contain a source of light whereby the rays from the said source of light may pass directly into the body part, slidably removable opaque stencil plates mounted in the hollow body part to close the sides thereof, transparent characters mounted in said plates, guides secured upon the inner sides of the body part and engaging the upper and lower edges of the stencil plates to support them in place, and a slidably removable duplex reflector adapted to divert the light rays through the sign characters, the said reflector being disposed vertically between the stencil plates and supported at its lower end by the lower guides for the stencil plates, the said stencil plates and the reflector being removable endwise through the said guides when the said hinged door is opened.

4. An illuminated sign comprising a narrow hollow body part formed of a channel frame and having an open horizontal end, a hinged door forming one vertical end of said channel frame, a hollow ornamental molding entirely surrounding and connected to the open horizontal end of the body part, the said molding forming a light chamber opening into the hollow body part throughout substantially the length of said body part, an electric lamp removably mounted in the light chamber, the said chamber having an opening therein adapted to give access to the lamp, a movable light tight closure for said opening, slidably removable opaque stencil plates adapted to be inserted in the hollow body part to close the sides thereof, transparent characters mounted in said stencil plates, and a slidably removable duplex reflector mounted in the body part substantially centrally thereof and arranged to divert the light rays through the sign characters, the said stencil plates and the reflector being removable edgewise when the said hinged door is open.

In testimony whereof I hereunto affix my signature.

PAUL SCHUYLER VAN BLOEM.