

July 20, 1937

J. J. SHIVELY

2,087,658

ANIMATED ILLUMINATED SIGN

Filed Aug. 7, 1935

2 Sheets-Sheet 1

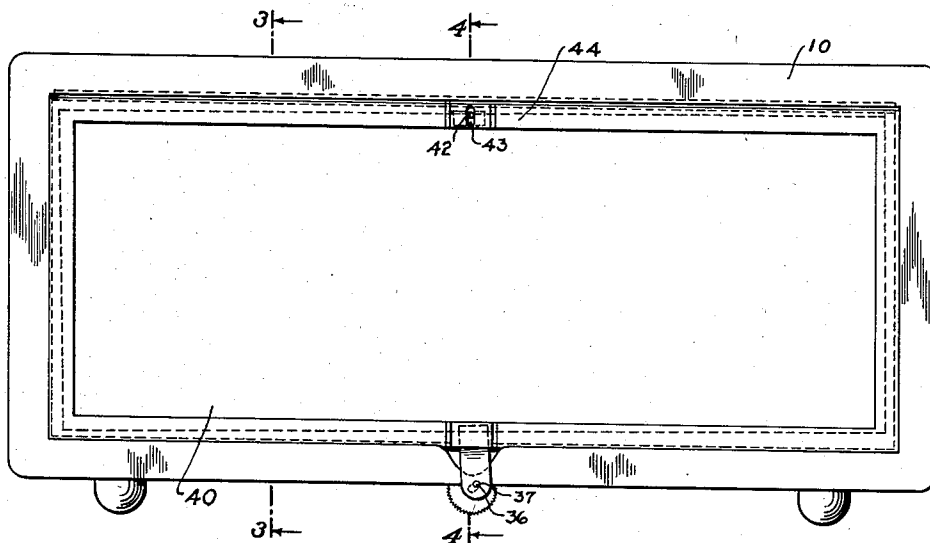


Fig. 1

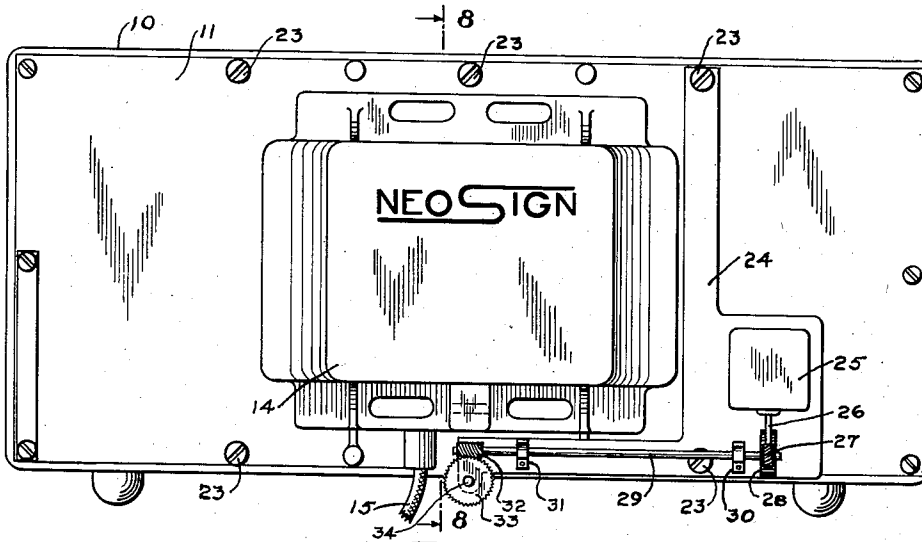


Fig. 2

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2 Sheets-Sheet 2

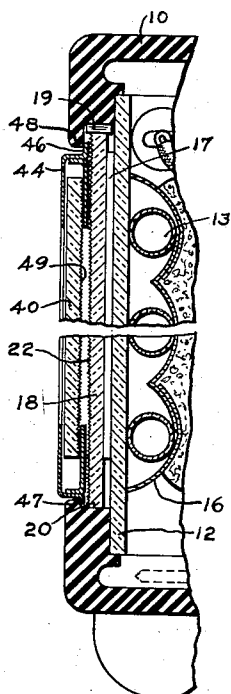


Fig. 3

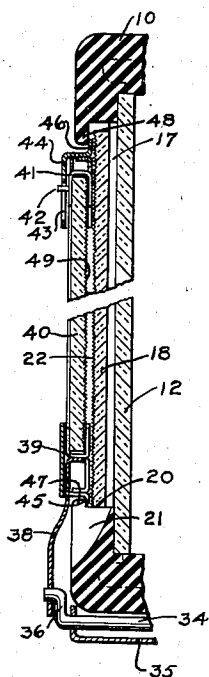


Fig. 4

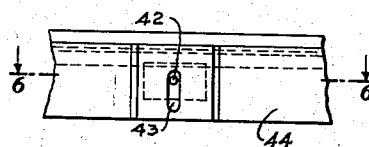


Fig. 5

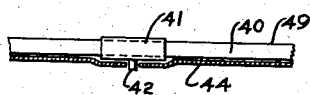


Fig. 6

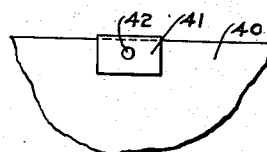


Fig. 7

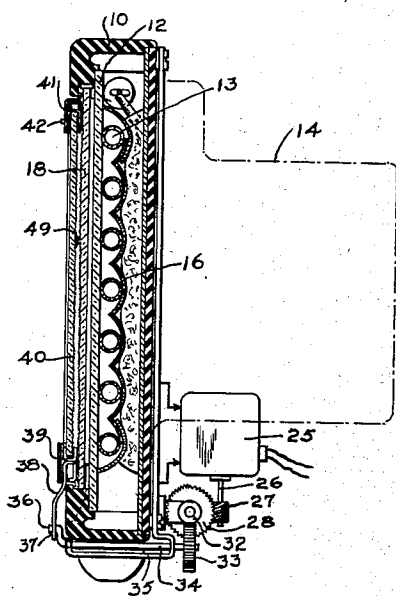


Fig. 8

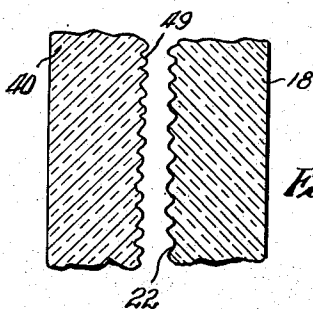


Fig. 9.

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## UNITED STATES PATENT OFFICE

2,087,658

## ANIMATED ILLUMINATED SIGN

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mesne assignments, to Service Devices, In-  
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Application August 7, 1935, Serial No. 35,035

6 Claims. (Cl. 40—132)

This invention relates to improvements in ani-  
mated illuminated signs and more particularly to  
signs of the type disclosed in the co-pending ap-  
plication Serial Number 22,333, filed May 20, 1935,  
entitled Illuminated signs wherein is shown a  
sign having a grid of tubing filled with neon or  
the like, so disposed in the front of the sign as  
to give the effect of a solid sheet of neon glow  
when illuminated. By putting a transparency in  
front of the grid, a sign is obtained having all  
the advantages of the usual neon tubing signs  
with the further advantage that the lettering or  
design can be changed at will by merely chang-  
ing the transparency.

The present invention has for its object a sim-  
ple and cheap means of giving apparent motion  
to the indicia displayed by the sign. Assuming  
for example, the sign displays a fish. By the  
means herein described the fish will apparently  
move. Many such movable displays will immedi-  
ately suggest themselves to those familiar with  
the use of signs.

In the accompanying drawings:

Figure 1 is a front view of a sign embodying  
the invention;

Figure 2 is a rear view of the sign Figure 1;

Figure 3 is a sectional view on the line 3, 3,  
Figure 1;

Figure 4 is a sectional view on the line 4, 4,  
Figure 1;

Figure 5 is a view of a part of the frame 44  
for the panel 40;

Figure 6 is a view partly in section on the line  
6, 6, Figure 5;

Figure 7 is a view of the top edge of panel 40;  
and

Figure 8 is a sectional view on the line 8, 8,  
Figure 2.

Figure 9 is an enlarged sectional view showing  
the ribbing of the panels.

The invention in the form here shown by way  
of illustration takes the form of an attachment  
that may be secured to a sign as shown in the  
co-pending application aforesaid.

The invention consists substantially in the con-  
struction, combination, location and relative ar-  
rangement of parts, all as will be more fully here-  
inafter set forth and as shown by the accompany-  
ing drawings and finally pointed out in the ap-  
ended claims.

The sign proper, without the attachments con-  
stituting this invention, consists of the front cas-  
ing or frame 10 and rear casing 11. Positioned  
within the frame is a transparent panel 12 of  
glass or the like behind which is located a grid

13 of tubing, which may be filled with neon gas.  
The terminals of this tube are connected to the  
secondary winding of a transformer (not shown)  
enclosed in the rearwardly extending portion 14  
of the rear casing 11. The primary winding of  
the transformer is connected to the usual con-  
necting cord 15 usually provided on its outer end  
with a connecting plug, which, when plugged into  
a suitable source of current, causes the tube 13  
to glow.

A reflector 16 is positioned back of the grid  
13 to reflect the light forward through the panel  
12, which may be a stencil, transparency or the  
like, to form the sign.

However, to make the sign readily changeable  
without having to change or work upon the panel  
12, a space 17 is provided in which a transpar-  
ency of celluloid or the like, forming the sign,  
may be placed, this space being closed in by  
means of an outer panel 18 of glass or the like.  
The upper edge of 18 fits into a slot in the top  
of frame 10 and is pressed downward by leaf  
springs, one of which is shown at 19. The lower  
edge of frame 10 has a shallow groove 20 there-  
in in which the bottom edge of panel 18 rests.  
A finger slot 21 permits access to the bottom edge  
of 18 so that it can be raised upwardly and lifted  
out to change the transparencies placed in the  
space 17.

The outer surface of the panel 18 has thereon a  
plurality of horizontal lines or ribs 22, which serve  
to diffuse the light from the grid 13 and lessen  
the streaked effect caused by the horizontal legs  
of the grid and the presence of the reflector 16.

The rear casing 11 is secured to the frame 10  
by screws 23 and forms therewith an insulating  
casing surrounding and enclosing all parts and  
forming a complete portable sign.

Obviously any matter displayed by a sign as  
just described will be stationary. No part of the  
lettering or design on any transparency displayed  
thereby will appear to move and the purpose of  
the attachment now to be described is to give  
apparent motion to all or part of any lettering  
or design displayed by the sign. It has been found  
that if the whole design can be given a wave  
motion, that it will attract favorable attention,  
so the invention will be described as applied to  
giving an apparent wave motion to the entire face  
of the sign.

A bracket 24, adapted to be secured to the rear  
of the sign by screws 23 supports an electric mo-  
tor 25 which may be connected by wires (not  
shown) to the cord 15. To the shaft 26 of this  
motor is connected a worm 27 meshed with the

worm wheel 28 mounted on shaft 29 supported in bearings 30, 31 mounted on bracket 24. A worm 32 on shaft 29 is meshed with worm wheel 33 secured to shaft 34 journaled in the forwardly extending portion 35 of bracket 24.

The foregoing worms and gears reduce the speed of the motor to the desired number of R. P. M. to give the desired effect to be presently described. Any suitable form of gear reduction can be used.

The shaft 34 is shaped on its outer end to form the crank 36 which engages a hole 37 in the lower end of an arm 38, the upper end of which is secured to a U-clip 39 secured to the bottom edge of a transparent panel 40. A similar U-clip 41 is secured to the top edge of the panel 40 and has a pin 42 projecting from the front thereof which pin is free to move vertically in a slot 43 in the frame 44 which surrounds the edges of the panel 40.

Frame 44 has outwardly extending clips 45, 46 (as many as necessary) which snap under the lips 47, 48 on the frame 10 thus holding the front assembly comprising panel 40 in place.

The frame 44 is made thin so as to bring the inner surface 49 of panel 40 close to the outer ribbed surface 22 of panel 18. Surface 49 is also ribbed or provided with a plurality of horizontal lines. Both panels 18 and 40 may be made of ordinary clear, ribbed glass, the ribs being spaced somewhat closer together than those usually employed in such glass commonly used in office partitions and the like.

It will be understood that the ribs 22 and 14 on the panels 18 and 40 run the full length of these panels, a cross section of the panels being as shown in Figure 9, the ribs running horizontally the full length thereof.

The motor 25 being in operation, crank 36 will revolve, and via arm 38 will impart an oscillating motion to panel 40, which is free to oscillate in frame 44. This causes the ribs on the opposed surfaces of panels 18 and 40 to so interrupt the light as to produce the effect of wave motion over the entire front of the sign.

A variety of effects can be obtained by having one set of ribs crosswise to the other, or one set vertical and the other horizontal.

It will now be evident that the invention contemplates the use of a fixed and movable panel and means for projecting light therethrough and means, such as the ribs as described, for giving motion to the beam of light emerging from the outer panel 40.

Although the invention has been disclosed in connection with the specific details of preferred embodiments thereof, it must be understood that

such details are not intended to be limitative of the invention except insofar as set forth in the accompanying claims.

What is claimed is:

1. An illuminated sign comprising a casing, a light source supported therein comprising a grid of gaseous tubing, a panel having a ribbed outer surface forming a front wall of said casing and overlying said grid, a movable panel having a ribbed inner surface overlying said front and mounted to move in said casing and means for oscillating said last panel.

2. The sign as claimed in claim 1 wherein the means for moving the movable panel includes a motor secured to the rear of the casing and driving means extending from said motor outside the casing and to said movable panel and adapted to oscillate the same, whereby the illumination through said panels may be given an appearance of wave motion.

3. An attachment for a sign having a casing with a transparent panel having an externally ribbed face and a light source behind said panel, comprising a frame adapted to be mounted on said casing, a panel mounted in said frame and adapted to be oscillated therein, said panel having ribs on the surface thereof adapted to oppose said ribbed face, a motor, gearing and support therefor adapted to be externally secured to said casing, and means connecting said panel and gearing whereby said panel may be oscillated by said motor.

4. In an attachment for signs having a casing enclosing a light source including a gaseous tube and a transparent front panel cooperating with said tube to form a sign, a frame adapted to be secured to said sign, a glass panel carried in said frame and free to oscillate therein and adapted to overlie the front panel of said sign when said attachment is in place thereon, a clip secured to said panel, a crank engaging said clip, and a motor supported on said sign for driving said crank.

5. A device as claimed in claim 4 wherein the glass panel has a second clip secured thereto and said second clip has a pin projecting therefrom and engaging a vertical slot in the frame.

6. In a device of the character described, a glass panel, a frame in which said panel may oscillate, a clip secured to said panel, a crank engaging said clip, and a motor for driving said crank, said frame extending along the upper and lower edges of the glass and having laterally extending portions adapted to secure the same in place for use with a sign.

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