

G. R. PYPER.
ANIMATED SIGN.
APPLICATION FILED JULY 2, 1920.

1,382,230.

Patented June 21, 1921.

3 SHEETS—SHEET 1.

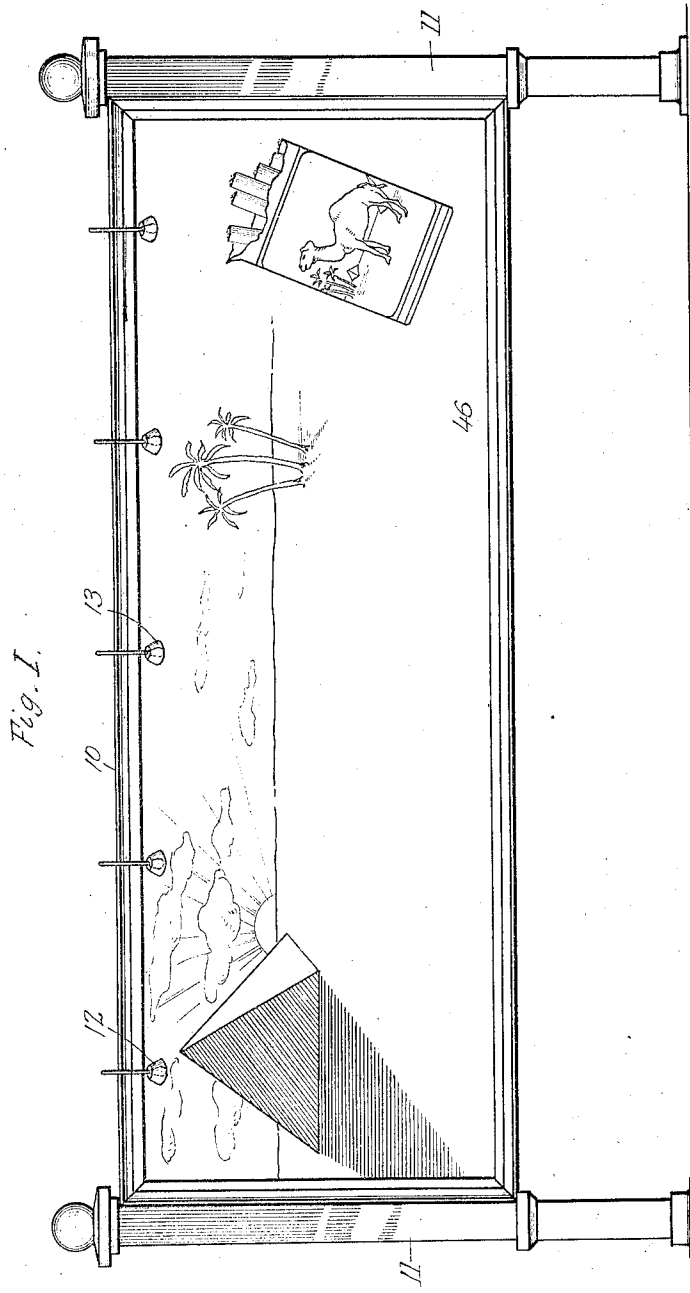


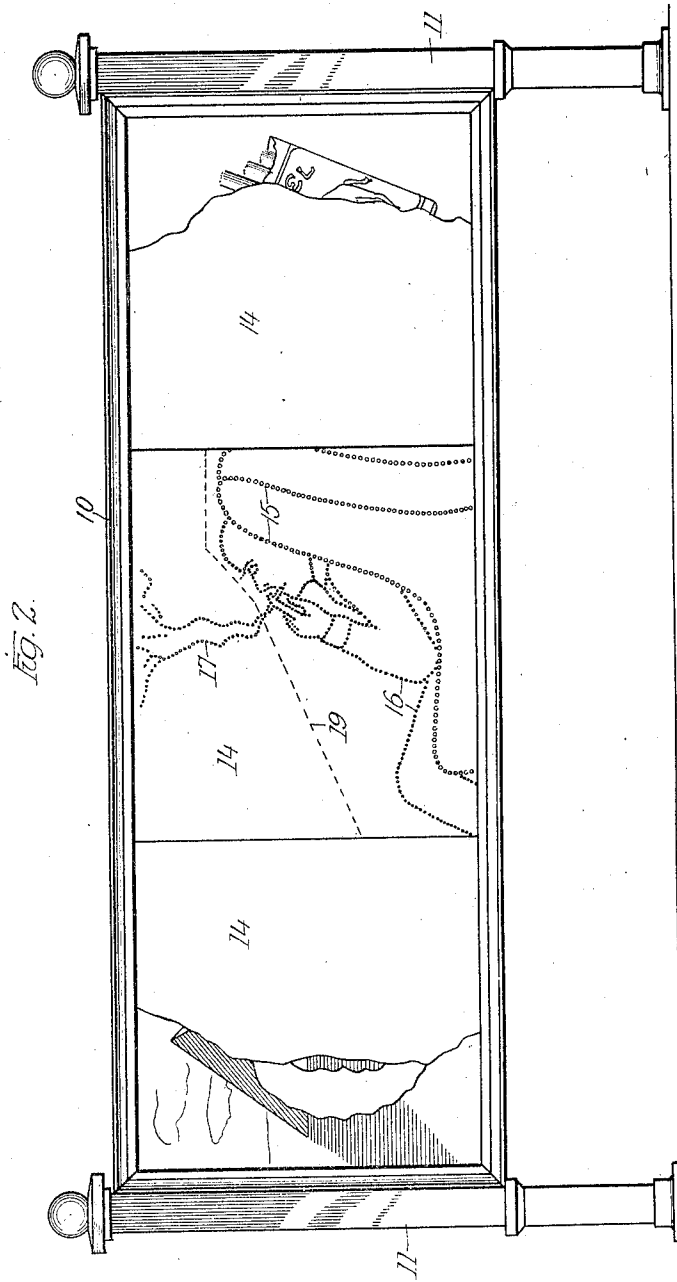
Fig. 1.

Inventor:
George R. Pyper,
by John Howard McElroy, atty.

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Fig. 3.

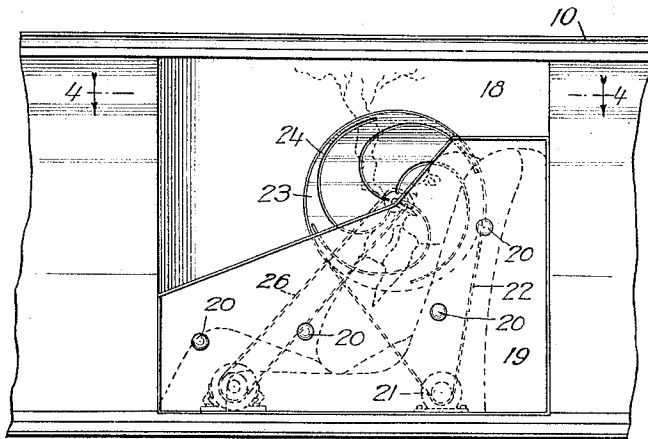


Fig. 4.

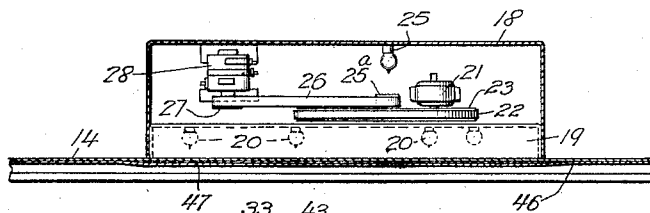
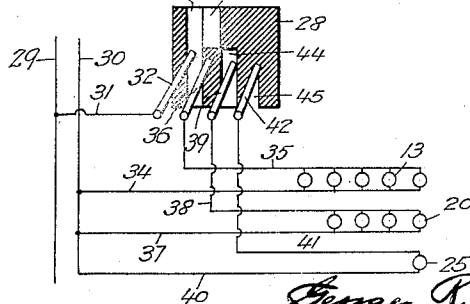


Fig. 5.



Inventor:
 George R. Pyper
 by John Howard (The Elroy
 his Atty.

UNITED STATES PATENT OFFICE.

GEORGE R. PYPER, OF SALT LAKE CITY, UTAH, ASSIGNOR TO PYPER ANIMATED SIGN COMPANY, OF SALT LAKE CITY, UTAH, A CORPORATION OF UTAH.

ANIMATED SIGN.

1,382,230.

Specification of Letters Patent. Patented June 21, 1921.

Application filed July 2, 1920. Serial No. 393,541.

To all whom it may concern:

Be it known that I, GEORGE R. PYPER, a citizen of the United States, and a resident of Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Animated Signs, of which the following is a full, clear, and exact specification.

My invention is concerned with animated signs, and is designed to produce a cheap and sufficiently durable sign that will display as elaborate a picture, for instance, as may be desired, together with an animated portion which may be a part of the main picture, if desired, or something different, if a contrast is desired to be secured by the animation which is intended primarily to attract attention to the main picture.

To this end I employ a permanent, preferably metallic screen plate of any desired size, which has outlined thereon, in fine perforations, the subject to be animated, and upon the front of this plate I paste or otherwise secure the main picture which is a preferably multicolored print upon an inexpensive paper which will be thin enough so that it is translucent. Where the front of the screen gets no other illumination at night, I provide as many shaded lights as may be necessary to flood the front of the screen. Back of the screen, and more especially back of the perforated portion, preferably in a casing, I place one or more strong incandescent lights, and between so much of the outlined picture as is to be animated and its light or lights, I place the movable animating element, such as a rotating slotted disk, and provide means for rotating said disk, and the necessary flasher switch for controlling the current to illuminate the various lamps in whatever arrangement may be desired.

To illustrate my invention, I annex hereto three sheets of drawings in which the same reference characters are used to designate identical parts in all the figures, of which—

Figure 1 is a front elevation of a sign employing my invention as it appears when illuminated from the front only;

Fig. 2 is a similar view of the same sign, but with the central portion of the poster torn away to disclose the illuminating perforations for the animated portion of the sign, which is here represented as being en-

tirely different from the main poster, but suggestive of the matter there advertised;

Fig. 3 is a view in elevation of the animated part with the screen plate removed from in front thereof;

Fig. 4 is a plan view in section on the line 4-4 of Fig. 3; and

Fig. 5 is a diagrammatic view showing the wiring for the flasher.

In carrying out my invention in the form illustrated, I employ a main rectangular frame 10, which may be of any desired construction, and which I have shown as permanently supported from a pair of ornamental posts 11. Where the sign is displayed at night without any other illumination in front of it, such for instance, as if it is located on a very dark street, I suspend from the frame and projecting over the front and top thereof a plurality of shades 12, each of which contains the customary electric bulb 13 for flooding the front of the sign to illuminate the matter posted, which is here shown as a desert view associated with a certain brand of merchandise. This view is printed in as many colors as may be desired upon posters which can be made of some fairly cheap paper that is thin enough so that it is translucent, and the poster is supported by securing it, preferably by pasting, upon the front of the screen plate 14, which is of sheet metal, and of a size large enough to fill the entire space of the frame, and it will be understood that this plate or sheet metal need not be continuous, but that some section thereof, containing the perforations, as the central section indicated, may be removable so that in case the sign is to be changed, a new perforated section may be put in place, and a correspondingly different poster substituted for the one originally displayed. Unless the main picture is to be changed, it will be understood that whenever the poster becomes weather-beaten or disfigured, it can be readily removed, and more especially the portion over the perforated part of the screen plate, and a new one pasted on to take its place.

In the illustration of my invention shown, the animated portion is entirely different from the poster, although I have illustrated as an appropriate subject, a man seated in a chair smoking a cigarette, and the chair will be outlined with small perforations 15, but larger than the smaller perforations 16,

which outline the figure. In this case, the animation is confined to the smoke ascending from the cigarette, and represented by the third line or perforations 14, which may be even finer than the perforations 16. Back of this central animated section, I preferably provide the sheet metal casing 18 to contain the parts, which will be of customary construction and provided with a door to give access thereto. The picture formed by the perforations 15 and 16 is not animated, and to furnish a separate illumination therefor, I provide the shallower sheet metal casing 19, inside of the main casing 18, and having a plurality of incandescent lights 20 secured to the back thereof and located wherever they are needed to furnish a steady illumination for the perforations 15 and 16 when the current is on these lamps. To produce the animation, I preferably provide a small electric motor 21 mounted on the bottom of the casing 18 and driving through a pulley on its armature shaft and the belt 22 the large animating wheel 23 journaled on a shaft projecting from the rear of the casing 19 in the position shown in Fig. 3. The body of this wheel 23, which is preferably a disk of sheet metal, has a plurality of spiral openings 24 therein radiating from the center so that as the wheel rotates the rays of light from the incandescent lamp 25 secured on the back of the casing 18 preferably concentric with the axis of the disk 23 will pass through said slots 24 and through the perforations 17 and illuminate the portions of the poster which cover said perforations, thus giving the appearance of animation to the rising smoke from the cigarette indicated by the said perforations 17.

The hub of the wheel 23 is preferably provided with the small belt pulley 25^a, which through the belt 26 cooperating with the belt pulley 27 on the shaft of the flasher 28 mounted on the bottom of the casing 18 serves to rotate said flasher 28 at the proper rate of speed. In the preferred embodiment of my invention shown, the wiring as indicated in Fig. 5 is as follows: The current is supplied from the mains 29 and 30, and the return wire 31 extends from the main 29 to the contact 32 which is always in engagement with the conductor 33. The wire 34 from the main 30 is connected to the lights 13, from which extends the wire 35 connected to the contact 36, which is shown as engaging the insulated portion of the flasher 28. The wire 37 from the main 30 extends to the lights 20, from which extends the wire 38 to the contact 39, which is shown as in engagement with the conducting portion 44 of the flasher. The wire 40 from the main 30 extends to the light 25, from which extends the wire 41 to the contact 42 which is shown in engagement with the insulating portion of the flasher. The conducting por-

tion 43 which is in the plane of the contact 36 leaves off where the conducting portion 44 in the plane of the contact 39 begins, and the conducting portion 45 in the plane of the contact 42 occupies a part of the same angular space as the portion 44, and it will be understood that all of the conducting portions 33, 43, 44 and 45 are connected. With the construction shown, the return wire 31 is always operative, and during a portion of the time when the contact 36 is on the conductor 43, the front lights 13 only will be lighted, and the sign will appear simply as an ordinary sign without any animation. When the flasher rotates to a point where the contact 36 is off of the conductor 43, the contact 39 comes on to its conductor 44, and the lights 20 are illuminated with the result that the front of the sign is darkened while the man sitting in the chair appears outlined on the sign. With the further rotation of the flasher, the conductor 44 comes under the contact 42 and the light 25 is switched on, and the smoke from the cigarette is illuminated, and also animated and appears to rise from the cigarette. At the end of the complete rotation of the flasher 28, the contacts 39 and 42 are cut off simultaneously, cutting off all the rear illumination, and the contact 36 is energized, throwing on the front lights again, and the cycle of illumination is repeated.

As it would be somewhat difficult to scrape off all the poster from the portion 14 that has the perforations therein, and there would be danger that the bill-posters would do this carelessly so as to leave some of the perforations more or less closed by the paste and the old poster, I provide for the ready removal of all this portion of the poster by interposing between the plate 14 and the portion of the poster sheet 46 that is in register with the illuminated section a sheet 47 of cheesecloth, or some similar material, that is held between the back of the poster and the front of the plate 14 by the paste. When it becomes necessary to remove the old poster, by taking hold of the cheesecloth and pulling it, the entire poster over that portion is readily ripped away without any danger of any of it being left in place to obscure the illumination of the next poster that may be applied.

While I have shown and described my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that it is capable of some modifications, and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the prior art.

What I claim as new, and desire to secure by Letters Patent of the United States is—

1. In a sign, the combination with a screen plate perforated to outline matter to be ani- 130

5 mated, of a flexible poster sheet covering the front of the screen plate and the perforations therein and carrying any desired display matter different from the matter to be animated, said poster sheet over the perforations being translucent, a light to the rear of the screen plate, a member movable between the light and the screen plate to animate the matter outlined, and means to move the member.

10 2. In a sign, the combination with a screen plate perforated to outline matter to be animated, of a sheet of thin paper covering the front of the screen plate and the perforations therein and having any desired display matter printed thereon, a light to the rear of the screen plate, a member movably between the light and the screen plate to animate the matter outlined, and means to move the member.

15 3. In a sign, the combination with a screen plate perforated to outline matter to be animated, of a poster sheet covering the front of the screen plate and the perforations therein and carrying any desired display matter, said poster sheet over the perforations being translucent, lights to illuminate the front of the screen, a light to the rear of the screen plate, a member movable between the rear light and the screen plate to animate the matter outlined, means to move the member, and automatic switching mechanism alternately to light the front lights and the rear light.

20 4. In a sign, the combination with a screen plate perforated to outline matter to be animated and other matter associated therewith but unanimated, of a poster sheet covering

the front of the screen plate and carrying any desired display matter, said poster sheet over the perforations being translucent, lights to illuminate the front of the screen, lights to illuminate the perforations not to be animated, a light to the rear of the screen plate and screened from the last mentioned lights, a member movable between the light and the animated part of the screen plate, automatic switching mechanism alternately to light the front lights and the rear lights first and afterward the single light so that in the automatic cycle, the illuminated poster sheet will be shown at one time, the outlined picture at another, and the latter animated at a third, and means to move the animating member.

25 5. In a sign, the combination with a screen plate perforated to outline matter to be animated, of a poster sheet covering the front of the screen plate and carrying any desired display matter, said poster sheet over the perforations being translucent, a sheet of cheesecloth or some similar material, interposed between the perforated portion of the screen plate and the poster sheet for the purpose described, a light to the rear of the screen plate, a member movable between the light and the screen plate to animate the matter outlined, and means to move the member.

30 In witness whereof, I have hereunto set my hand and affixed my seal, this 11th day of June, A. D. 1920.

GEORGE R. PYPER. [L. s.]

Witness:

JOHN HOWARD McELROY.