G. R. PYPER.

ANIMATED SIGN.

APPLICATION FILED SEPT. 10, 1920.

1,403,631.

Patented Jan. 17, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

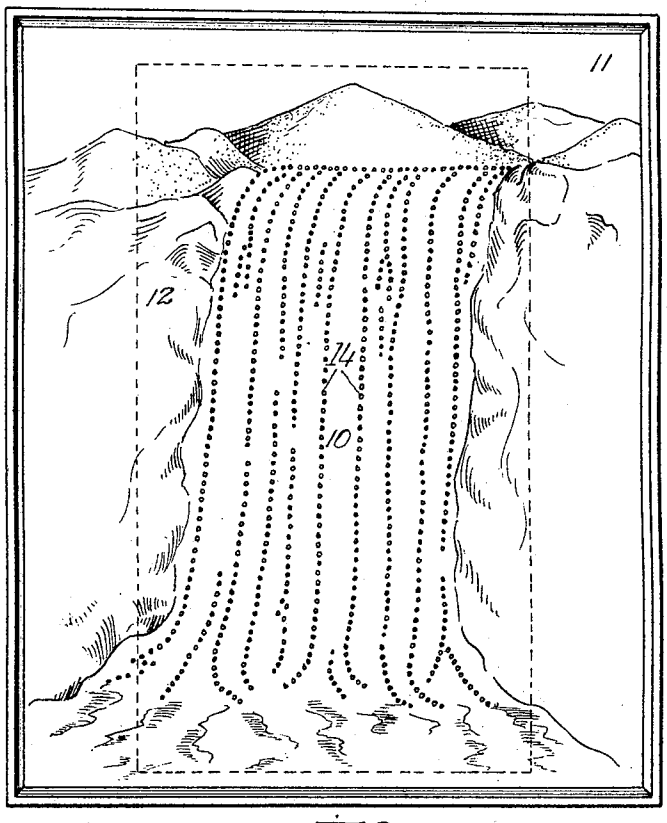
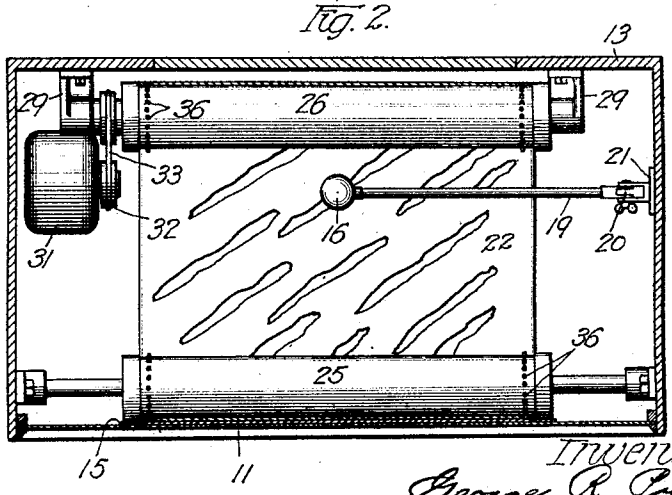



Fig. 2.




Inventor:
George R. Pyper,
by John Howard McElroy, his Atty.

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2 SHEETS—SHEET 2.

Fig. 4.

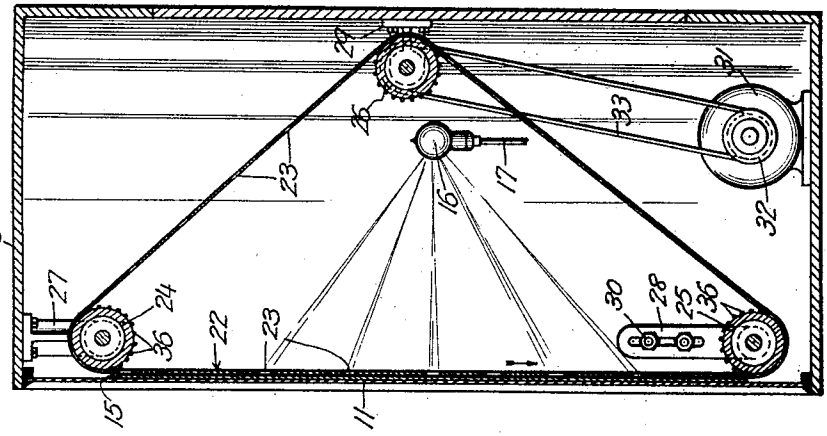
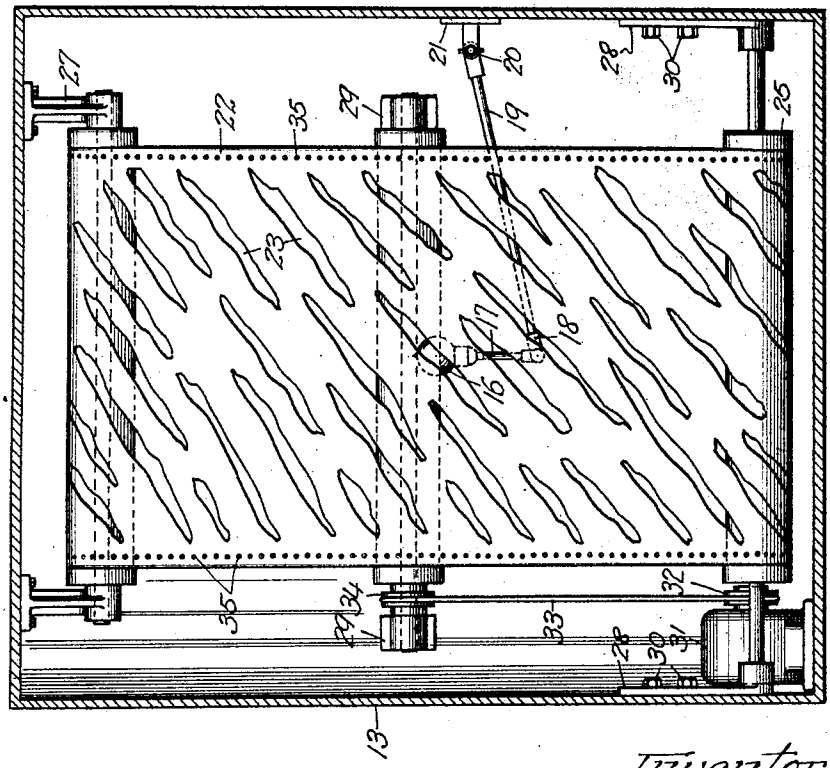



Fig. 3.




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

1,403,631. Specification of Letters Patent. Patented Jan. 17, 1922.

Application filed September 10, 1920. Serial No. 409,394.

*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 the art of animated signs, and is designed to produce an animating mechanism which is particularly adapted to animate some portion of the sign, such for instance as falling water, or ascending smoke, flames from a conflagration, etc.

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

Fig. 1 is a front elevation of a sign embodying my invention;

Fig. 2 is a plan view in section on the line 2—2 of Fig. 1;

Fig. 3 is a view with the screen plate removed substantially as seen in section on the line 3—3 of Fig. 4; and

Fig. 4 is a vertical section on the line 4—4 of Fig. 3.

I have shown my invention as applied to the animating of a waterfall 10, which is shown as painted or otherwise depicted upon the front of the screen plate 11, and forming a part of the landscape 12 which will ordinarily be employed to attract attention to the sign and to the advertising matter associated therewith.

The screen plate 11 forms the front of the casing 13, which may be of any desired substance and design to accommodate the working parts hereinafter described. The screen plate 11 is preferably composed of some naturally opaque substance, such as sheet metal, in which case the waterfall will be outlined thereon by the series of small perforations 14 formed in the material of the screen plate and which extend in the direction of the flow of the water as depicted on the screen plate and outline its course. It will be understood that the front of the plate is painted or otherwise colored to simulate the appearance of the falling water, and also that the perforations 14 are small enough so as not to attract attention to themselves, but that they appear to be a part of the background of falling water, and to increase this appearance, I preferably cover all of the back of the screen plate containing the perforations with a sheet 15 of thin translucent paper or other material which will have the same color as that of the falling water depicted on the front of the screen plate.

The illumination for the animating effect is preferably provided by the single high power incandescent light 16, which is preferably adjustably mounted in the casing, for instance as by being placed in the socket carried by the arm 17 which is connected by the adjustable joint 18 with the arm 19 which in turn is connected by the adjustable joint 20 with the bracket 21 secured on the side of the casing.

For the animating member, I employ an endless belt or apron 22, which may be made of canvas, leather, rubber, or any other suitable belt material which is preferably naturally opaque so that the light transmitting portions 23 therein can be formed simply by cutting portions away from the body of the material. These slots 23 for the purpose of animating the waterfall, are preferably formed as numerous elongated slots set diagonally of the length of the belt, as shown, as I have found that this arrangement produces a very natural appearance of falling in the water. The belt is mounted preferably upon the three rollers 24, 25 and 26, journaled in the bearing brackets 27, 28 and 29, respectively, secured to the top, sides and back of the casing, and I preferably make the bearings 28 adjustable, as shown, so that any slack developing in belt can be taken up by loosening the bolts 30, lowering the roller 25, and then tightening them again. The belt is driven in any suitable manner, preferably by the small electric motor 31 shown as mounted on the bottom of the casing and having the small pulley 32 on its armature shaft connected by the belt 33 with the pulley 34 secured on the shaft of the roller 26. To prevent any possible slipping of the belt on the rollers, I preferably provide in the edge thereof the series of regularly spaced perforations 35, which co-operate with the teeth 36 projecting from the ends of the rollers 24, 25 and 26 in the same vertical plane, the action being that of the well known feeding mechanism employed in moving picture machines and films.

The operation of the foregoing apparatus will be readily understood to those skilled

in the art, and 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 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 an animated sign, the combination with a screen plate having a picture suitably applied thereto and with an animated portion suitably outlined by portions thereof permitting the passage of light therethrough, of a generally opaque endless belt mounted back of the screen plate and having portions thereof permitting the passage of light therethrough arranged systematically thereon, a source of illumination back of the portion of the belt adjacent the screen plate, said light transmitting portions being long enough to cover many degrees of the rays rotating from the light, and means for moving the belt constantly to produce the animating effect, substantially as and for the purpose described.

2. In an animated sign, the combination with a screen plate having a picture suitably applied thereto and with an animated portion suitably outlined by portions thereof permitting the passage of light therethrough, of a plurality of suitably journaled rollers back of the screen plate, a generally opaque endless belt held taut upon said rollers and having portions thereof permitting the passage of light therethrough arranged systematically thereon, a source of illumination back of the portion of the belt adjacent the screen plate, said light transmitting portions being long enough to cover many degrees of the rays rotating from the light, and means for rotating one of said rollers.

3. In an animated sign, the combination with a screen plate having a picture suitably applied thereto and with an animated portion suitably outlined by portions thereof permitting the passage of light therethrough, of a plurality of suitably journaled rollers back of the screen plate, a generally opaque endless belt held taut upon said rollers and having portions thereof permitting the passage of light therethrough arranged systematically thereon, a source of illumination back of the portion of the belt adjacent the screen plate, said light transmitting portions being long enough to cover many degrees of the rays rotating from the light, and means for rotating a roller and thereby positively driving said belt.

4. In an animated sign, the combination with a screen plate having a picture suitably applied thereto and with an animated portion suitably outlined by portions thereof permitting the passage of light therethrough, of a plurality of suitably journaled rollers back of the screen plate, a generally opaque endless belt held taut upon said rollers and having portions thereof permitting the passage of light therethrough arranged systematically thereon, a source of illumination back of the portion of the belt adjacent the screen plate, said light transmitting portions being long enough to cover many degrees of the rays rotating from the light, and means for rotating a roller and thereby positively driving said belt, said means consisting of regularly spaced perforations on said belt and a series of teeth on the rollers engaging the perforations.

5. In an animated sign, the combination with a screen plate having a picture suitably applied thereto and with an animated portion suitably outlined by portions thereof permitting the passage of light therethrough, of a generally opaque endless belt mounted back of the screen plate and having portions thereof permitting the passage of light therethrough arranged systematically thereon, a source of illumination back of the portion of the belt adjacent the screen plate, and means for moving the belt constantly to produce the animating effect, said light transmitting portions being elongated on an axis at an angle of substantially 45 degrees to the line of movement of the belt, substantially as and for the purpose described.

In witness whereof, I have hereunto set my hand and affixed my seal, this 24th day of August, A. D. 1920.

GEORGE R. PYPER. [L. S.]

Witnesses:
K. W. YEATES,
H. E. WALLACE.