E. H. AMET.

RETICULATED MOTION PICTURE CURTAIN.

APPLICATION FILED AUG. 20, 1912.

1,308,468.

Patented July 1, 1919.

Fig. 1.

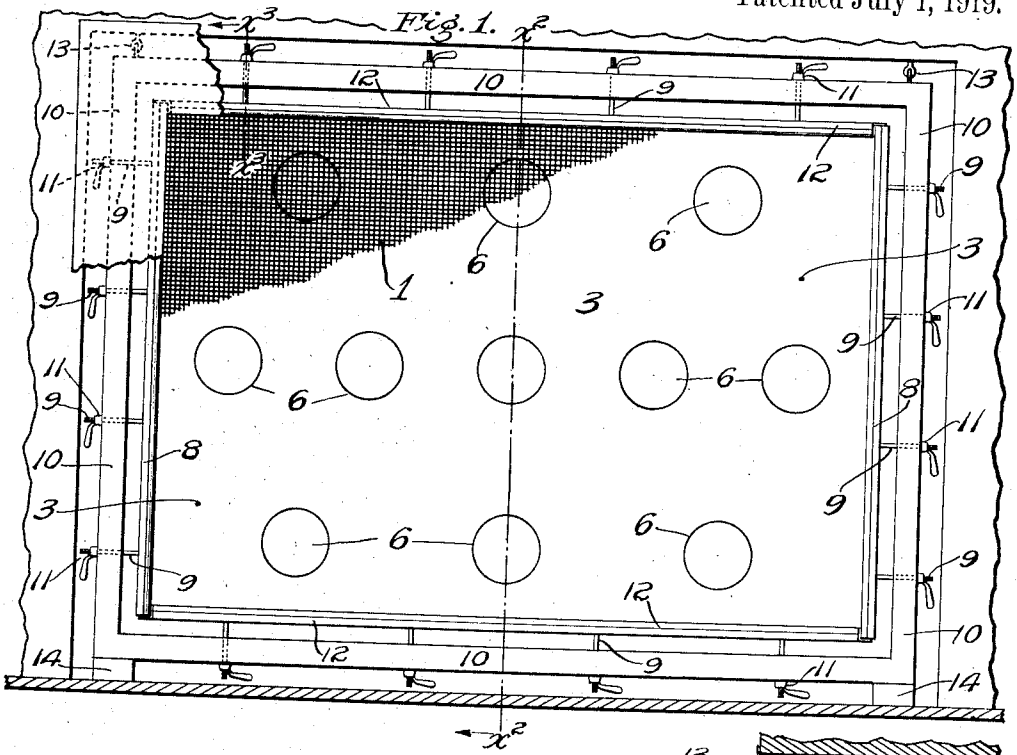


Fig. 3.

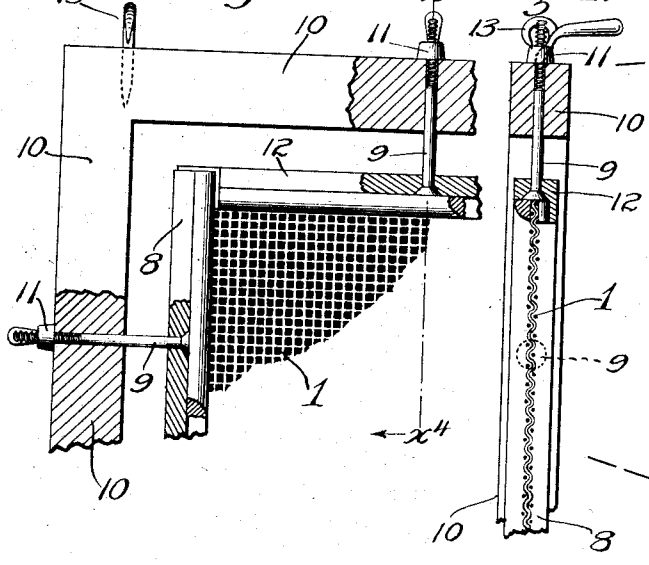
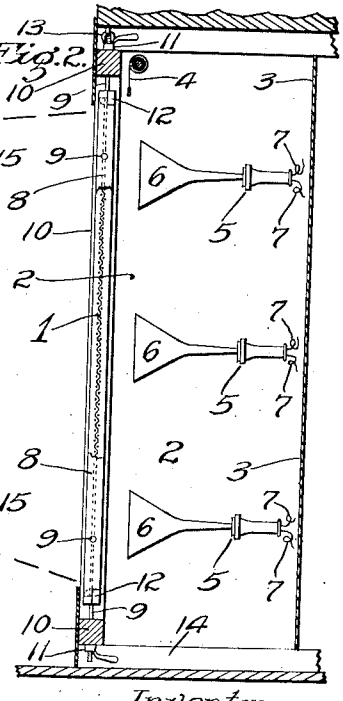


Fig. 4.

Fig. 2.



Witnesses:

H. N. Kirkby

L. Belle Rice

Inventor

Edward H. Amet

by James R. Townsend

his atty.

UNITED STATES PATENT OFFICE.

EDWARD H. AMET, OF REDONDO BEACH, CALIFORNIA.

RETICULATED MOTION-PICTURE CURTAIN.

1,308,468. Specification of Letters Patent. Patented July 1, 1919.

Application filed August 20, 1912. Serial No. 716,102.

To all whom it may concern:

Be it known that I, EDWARD H. AMET, a citizen of the United States, residing at Redondo Beach, in the county of Los Angeles and State of California, have invented a new and useful Reticulated Motion-Picture Curtain, of which the following is a specification.

My object is to make a curtain for displaying motion pictures and the like which will produce an improved picture effect; and my invention consists of the novel features herein shown, described and claimed.

The accompanying drawings illustrate the invention.

Figure 1 is a fragmental view of a motion picture curtain constructed in accordance with this invention, a large portion of the painted woven wire screen being broken away and the exhibited portion of said screen being shown in black lines instead of white lines for convenience of illustration.

Fig. 2 is a fragmental elevation, partly in vertical section on line x^2, Fig. 1.

Fig. 3 is a fragmental detail of the screen, the screen-holding frame and the stretching frame; the screen in this instance being shown practically as it would appear when detached; the light reflecting portion being shown white and the light-absorbing portion being shown black.

Fig. 4 is a vertical sectional elevation on line x^4, Fig. 3.

In constructing the curtain, I take a section of woven wire fly screen 1 of the desired size and give the screen several coats of pure white paint, such as oxid of zinc, thereby producing a reticulated reflecting surface characterized by a multiplicity of tiny uniform cup-shaped reflectors with holes in their bottoms, there being by this process one such reflector formed in each mesh of the screen.

The screen is fastened to two side rails 8, made laterally adjustable by tension bolts 9 extending through a stretching frame 10 and tightened by nuts 11; and the top and bottom of said screen are attached to sliding rails 12 secured in like manner to the top and bottom rails of the stretching frame 10, the whole being supported by suitable means as the hooks and eyes 13 at the top and blocks 14 at the bottom.

The screen thus framed is placed upright in the front of a dark room 2 having a black back 3 some distance, say four or five feet, from the screen.

The facing 16 of opaque material is placed in position to cover the joint between the screen 1 and the front wall of the dark room 2, so that no light can pass to the dark room except through the screen 1.

The whiter the screen 1, the darker and deeper the room 2 and the blacker the back 3, the better.

The curtain thus produced has a smooth undulating exhibiting surface, and a picture displayed thereon is luminous, strong, deep, and pleasing, the light being projected, as indicated by the lines 15 in Fig. 2, from a motion picture projecting lens, not shown, to the miniature open bottomed reflectors in the respective meshes of the screen 1.

I attribute the satisfaction thus attained to the indirect and conflicting reflection and to the relief afforded by discharging a percentage of the light through the tiny vents of the reflectors into the dark room.

When it is desired, telephone receivers 5, and horns 6 with suitable leads 7 leading to and connected with a source of sound-reproduction such as a phonograph, not shown, may be located in the dark room behind the painted screen.

In applying this to practical use the following observations are of particular value in order to avoid failure to attain the desired results.

If a screen of white or light colored net is backed up with a dark or black background in close contact therewith, the light colored screen will become dark as if covered or painted with a color comprising the colors of the front screen and its background. If a picture is projected upon the screen as thus constructed the picture will be lacking in illumination and flat in character as definition and atmospheric effect will be absent. The same front or light colored or white screen with the dark background placed away from it will become light in proportion to the distance the dark background is spaced away from said light or white screen, and a picture projected upon the light colored or white screen will have an atmospheric appearance entirely absent in the first-mentioned combination. The atmospheric effect is caused by the projected picture showing upon the white reflecting or opaque portions of the net and being attended by a cutting out at the open

or dark patches in the net, illumination which would otherwise cause aberration; the portions reflected not being from a flat opaque surface, have a certain depth depending upon the penetrating of or the intensifying of the light effects.

The whole picture reflected and recorded by the eye beholding it through the optical illusion thus created reproduces a natural depth and atmospheric effect.

By atmospheric effect or atmospheric appearance I mean the appearance or effect which is produced by the presence of atmosphere between the eye and the object viewed, it being well known that the atmosphere contains light reflecting particles which give an appearance of distance between objects which are at different distances from the eye, and an object of this invention is to secure such effect or appearance which is recognized as being distinct from stereoscopic effect that is dependent upon viewing the object from somewhat different angles.

The results obtained indicate that there is a degree of reflection from the so called dark room which is provided with the light absorbing back or rear screen 3, and this reflection passes from the air space through the interstices of the net. The absorption or non-reflection of the surplus rays which by reason of the dark room are allowed to discharge through the net relieves the picture of a glare.

The net of the picture-reflecting opaque surface or portion almost entirely vanishes when a picture is projected upon it and the component parts of the picture stand out in natural relief. When closely observed the picture appears to be hung in air, and seems to be out and away from the white or light colored surface of the screen. The closer the mesh of the net the less of the described effect results and I find that from 30 to 40% open space is the desirable proportion, but in all cases the backing net or surface of light-absorbing character must be spaced away from the back of the white screen to produce the effect described.

I claim:—

1. A motion picture curtain comprising a woven wire fly-screen heavily coated with light reflecting paint so as to produce a smooth undulating surface characterized by a multiplicity of uniform tiny cup-shaped reflectors having holes in their bottoms.

2. A motion picture curtain comprising a woven wire fly-screen heavily coated with light reflecting paint so as to produce a smooth undulating surface characterized by a multiplicity of uniform tiny cup-shaped reflectors having holes in their bottoms, and a frame for holding the screen.

3. A motion picture curtain comprising a section of woven fly-screen heavily coated with light reflecting paint and still of a perforate nature.

4. A motion picture curtain comprising a section of woven wire fly-screen heavily coated with light reflecting paint and still of a perforate nature.

5. A motion picture curtain comprising a reticulated screen section heavily coated with light reflecting paint on its front side so as to produce a smooth, undulating surface characterized by a multiplicity of uniform, tiny, cup-shaped reflectors formed in the respective meshes of the screen; and each reflector having a hole in its bottom for the purpose of discharging rearwardly of the screen a percentage of the light projected upon the front side of the screen.

6. A motion picture curtain comprising a reticulated screen section heavily coated with light reflecting paint on its front side so as to produce a smooth, undulating surface characterized by a multiplicity of uniform, tiny, cup-shaped reflectors formed in the respective meshes of the screen; and each reflector having a hole in its bottom for the purpose of discharging rearwardly of the screen a percentage of the light projected upon the front side of the screen; a dark room of which the screen forms the front; said dark room having a black back some feet back of said screen.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 15th day of August, 1912.

EDWARD H. AMET.

In presence of—

JAMES R. TOWNSEND,

L. BELLE RICE.