J. F. R. TROEGER.

TRANSLUCENT PICTURE PROJECTION SCREEN.

APPLICATION FILED DEC. 24, 1913.

1,151,502. Patented Aug. 24, 1915.

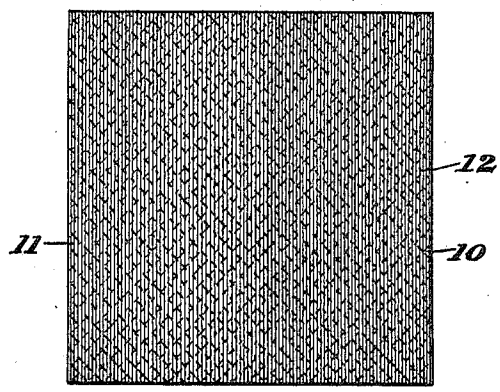


Fig. 1.

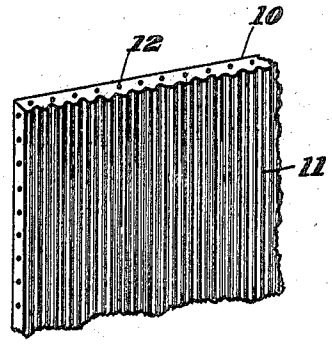


Fig. 2.

WITNESSES:

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TRANSLUCENT PICTURE-PROJECTION SCREEN.

1,151,502. Specification of Letters Patent. Patented Aug. 24, 1915.

Application filed December 24, 1913. Serial No. 808,546.

To all whom it may concern:

Be it known that I, JOHN F. ROBERT TROEGER, a citizen of the United States, and a resident of New York city, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Translucent Picture-Projection Screens, of which the following is a specification.

This invention relates to translucent exhibition screens for projecting machines.

The principal object of the invention is to provide a composition for screens of this character giving the required degree of translucency, strength, flexibility and water and fire resisting properties.

In the accompanying drawing, Figure 1 is an elevation, and Fig. 2 is a fragmental detail perspective view illustrating the structure of the screen formed of the composition according to my process.

In carrying out my process to produce the improved composition, I take four parts of gelatinous or gummy substance such as gelatin or glue and add to the same two parts of glycerin and two parts of formaldehyde and boil until water is driven off when a dough-like mass remains which may be rolled into sheets. The latter, while still soft, may be run over with a corrugated roller, which imparts to the surface of the sheet longitudinal corrugations or ridges. The sheet may then be dried in an oven or hot room at about 100° F. The glycerin imparts flexibility to the base while the formaldehyde tends to harder the sheet and to make it insensible to changes in weather conditions in regard to temperature and humidity and also renders it fireproof. Thus, the screen may be used in the open air and not be affected by the elements and is also safe as a fire risk.

Referring to the drawing, the sheet 10 is illustrated as formed with the wavy corrugations or ridges 11. When it is desired to reinforce the sheet to make it stronger, I preferably stretch a mesh of fibrous strands of a suitable strong substantial but translucent material 12, such as silk or the like and place the mesh or web over the sheet while the latter is still soft. The fibers may then be embedded in the sheet by passing the same into the soft material. If desired, a roller may be passed over so as to more completely embed the fibers and to smooth and compact the surface of the sheet into which the fibers have been embedded. To further increase the weather resisting properties as well as durability of the screen, I may coat the same with a thin coating of a translucent tough flexible weather resisting compound. This compound is preferably formed as follows: Ten parts of air dried white soap and ten parts of alum are dissolved separately in water, boiled separately, mixed together forming a dough-like substance consisting of stearate, palmitate or oleate of aluminum, and then the water is entirely expressed and the residue perfectly dried. The latter is then dissolved in thirty parts of benzin and into this solution the sheet prepared as previously set forth is dipped and then dried. The benzin quickly evaporates leaving a hard tough flexible weather resisting film or coating which entirely envelops the sheet and protects the same from the action of the elements. Also it has been found by actual experiment that through this coating and the screen as a whole the color tones and tints of the picture are displayed to the best advantage from an artistic standpoint when a colored picture is projected. At the same time it softens the light so as to obviate any fatigue to the eyes of the spectators.

When the enveloping protective coating above described is used, the formaldehyde may if desired be omitted without sacrificing materially the advantages arising from my improved composition.

It will be understood that I do not desire to be limited by the exact proportions of the ingredients above given as these may be varied without departing from the spirit of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A translucent sheet for translucent screens for projecting machines consisting of a base consisting of a gelatinous or gummy substance, and an agent for imparting flexibility thereto, and a layer of tough translucent water-proof coating enveloping the sheet.

2. A translucent sheet for translucent screens for projecting machines consisting of a gelatinous or gummy base, an agent to render the same fire-proof, and an exterior translucent waterproof coating covering the

same, said coating being insoluble in water and insensible to ordinary atmospheric temperatures.

3. A translucent sheet for translucent screens for projecting machines consisting of a base of gelatin and glycerin, and a surface coating for the base consisting of a saponaceous compound of aluminum.

4. A translucent sheet for translucent screens for projecting machines consisting of a base formed of two parts of gelatin and one part of glycerin, and a surface coating consisting of a saponaceous compound of aluminum.

5. A translucent sheet for translucent screens for projecting machines consisting of a base having two parts of gelatin, one part of glycerin and one part of formaldehyde, and a translucent surface coating consisting of a saponaceous compound of aluminum.

Signed at New York city, in the county of New York, and State of New York, this 19th day of December A. D. 1913.

JOHN F. ROBERT TROEGER.

Witnesses:

WM. I. COHEN,

GEO. B. HALBUT.