A. L. RAVEN.

SCREEN FOR MOVING PICTURES.

APPLICATION FILED NOV. 14, 1918.

1,315,743. Patented Sept. 9, 1919.

Fig. 1.

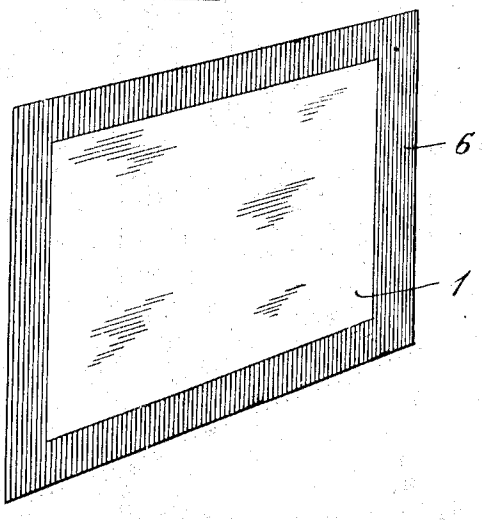
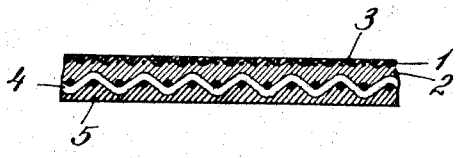


Fig. 2.



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By his Attorney

W. B. Morton

UNITED STATES PATENT OFFICE.

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SCREEN FOR MOVING PICTURES.

1,315,743. Specification of Letters Patent. Patented Sept. 9, 1919.

Application filed November 14, 1918. Serial No. 262,413.

To all whom it may concern:

Be it known that I, ALBERT L. RAVEN, a citizen of the United States, and a resident of Mount Vernon, Westchester county, State of New York, have invented new and useful Improvements in Screens for Moving Pictures, of which the following is a specification.

This invention relates to improvements in curtains or screens for projected pictures, and has for its object to provide a screen which is particularly adapted for use out of doors and for temporary installations.

A further object of the invention is to provide a screen of this character which will be complete in itself, that is, which may be hung in the open air or in front of any kind of a background and show a good picture without loss of light and definition through light transmitted from the rear.

A further object of the invention is to provide a curtain of this class which may be rolled or folded into a small space for packing, etc., without causing folds and wrinkles in the curtain when hung for use, and also to provide a curtain which will hang flat without being suspended under tension or stretched in a frame.

A further object of the invention is to provide a curtain having a picture-receiving surface which will show a bright picture with clear definition, but without the shiny effect so often seen in metalized curtains.

In the accompanying drawings I have illustrated my improved curtain and in the said drawings,

Figure 1 is a perspective view showing the face of the curtain; and

Fig. 2 is a sectional view very much enlarged to show the structure of the fabric.

Referring to the drawings, 1 indicates the layer of fabric which forms the surface of the curtain. This fabric is preferably of closely woven thin cotton goods such as sheeting. The sheet 1 is backed with a layer of white rubber 2 which is rolled into the sheet under pressure between rollers or otherwise, so as to form a filler for the sheet as well as a backing, the rubber filling the minute depressions in the face of the sheet formed by the weave of the threads, as indicated at 3.

The sheet 1 is of light fabric and of itself would not have the strength to withstand the rough usage to which a screen of this kind is subjected. For this reason I have preferably backed the rubber sheeting 2 with a second layer 4 of fabric, preferably a heavier cotton goods, the layer of rubber serving to cement the two layers of fabric together.

I preferably add to the sheet thus made a further coating 5 of black rubber on the face of the heavier fabric to form a thoroughly opaque backing for the sheet as well as to further render it weather-proof and add to its flexibility. I may also provide the face of the sheet with a margin of black rubber, as indicated at 6, to form a frame for the picture, as is customary with permanently mounted curtains.

I have found that a curtain constructed in this manner with the rubber filler and backing may be folded flat and packed for transportation without showing creases in the sheet when it is unfolded and hung, although merely suspended from its upper edge instead of stretched in a frame, as is necessary with ordinary cloth sheeting. Further, I obtain a much brighter picture because of the character of the surface formed. A fabric which has no filler presents a surface consisting of tufts with intervening depressions where the threads cross, as is easily discernible with the naked eye in a coarse fabric and apparent in any fabric when slightly magnified. A portion of the light projected on a plain fabric is always lost, the loss being greater to those spectators who look at the curtain from an angle, because the bottoms of the depressions are cut off from the line of vision. Also, the area of the surface is really much greater than the area of the sheet, due to those irregularities, with a corresponding loss of light. If the fabric is at all coarse this rough surface interferes greatly with the definition of the picture. Any fabric sufficiently strong mechanically will of necessity have a surface too rough for the best projection. The rubber filler greatly strengthens the fabric and also fills the depressions in its surface, so that the face of the fabric, while in no sense glazed, presents a finish very much like a white plastered wall which, as is well known, provides an excellent surface for projection.

The layer of black rubber on the back of the reinforcing fabric renders the curtain completely opaque so that no light can be reflected back through the curtain from objects to the rear of it. This feature of the

curtain is particularly desirable for temporary installations, in camps, etc.

My improved curtain has the advantage also that it may be washed when soiled or stained without damage to the curtain. The incorporated rubber is unaffected by the water and maintains the flexibility of the curtain and prevents its wrinkling or shrinking even when merely hung loosely in the air to dry.

I have found that a curtain constructed in accordance with the above description and embodying all the features described gives the best results, but it will of course be understood that my invention is not limited to all such details and may be variously modified within the scope of the appended claims.

I claim:

1. A screen for projected pictures comprising a textile fabric and a backing of opaque plastic material, said plastic material being forced through the mesh of the fabric into the depressions on the face of the fabric, substantially as described.

2. A screen for projected pictures consisting of a woven fabric of comparatively fine texture, a backing for said fabric of opaque plastic material forced through the mesh of the fabric from the back and into the depressions in the face of the fabric, and a second sheet of textile material back of or beneath the plastic material and cemented to the first fabric by the plastic material.

3. A screen for projected pictures consisting of a woven fabric of comparatively fine texture, a backing for said fabric of opaque plastic material forced through the mesh of the fabric from the back and into the depressions in the face of the fabric, and a sheet of heavy textile material forming a strengthening back for the screen and cemented thereto by the plastic material.

4. In a screen for projected pictures the combination of a white woven fabric, a backing of white rubber for said fabric, the rubber being forced through the mesh of the fabric into the depressions on its face, and a backing for the screen of light-absorbing material.

5. In a screen for projected pictures the combination of a white woven fabric, a backing of white rubber for said fabric, the rubber being forced through the mesh of the fabric into the depressions on its face, a second sheet of fabric of heavier material cemented to the screen by the rubber layer, and a backing of black rubber for the second fabric for rendering the screen light-absorbing and water-proof.

Signed at New York in the county of New York and State of New York, this 23d day of October, 1918.

ALBERT L. RAVEN.