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CINEMATOGRAPH OR LIKE PROJECTION SURFACE AND METHOD OF MAKING SAME

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Fig. 1.



Fig. 1a.



Fig. 2.



Fig. 2a.



Fig. 3.



Fig. 3a.



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CINEMATOGRAPH OR LIKE PROJECTION
SURFACE AND METHOD OF MAKING
SAME

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10 Claims. (Cl. 29—139)

This invention relates to cinematograph or like projection surfaces.

One of its objects is to provide a process of producing large projection surfaces such as a seamless projection screen of high lateral scattering capacity. Further objects will appear from the following detailed specification.

In the known production of projection screens of this kind, the surface has been provided with small depressions of a concave nature or grooves. The natural limitation in these constructions exists in the lateral steepness of the depressions. The steeper the side surfaces of the depressions, the greater is the lateral scattering, but the more quickly is the scattering screened by the neighbouring elements. I have found that the reverse construction, namely numerous convex projections on the surface, produces a much less screening of the lateral reflection when the steepness is very great.

Projection surfaces of this kind are made by my invention. There is formed on the support (card, wood, metal, cork, brickwork and the like), by means of the metal spraying process, a layer of a metal such as aluminium, zinc, tin or the like, which at first is matt. This layer is then polished so as to produce a grained addition, that is to say in the matt layer the grains are suppressed and the surface appears lustrous. For the polishing there may be used a brush having fine iron bristles. The projection surface thus produced has already a considerable scattering capacity. A very favorable proportion between laterally scattering and forwardly reflecting elements may be obtained by passing an instrument over this surface which will cut or plane off the points of the grains. This instrument may have a continuous cutting edge or it may be toothed, in which case fine channels may additionally be produced in any direction on the screen. In this manner seamless projection surfaces or screens of excellent lateral scattering capacity and also effective in direction perpendicular to the surface are produced. The area of the projection surface may fulfill all the requirements of the cinematograph theatre.

It has not previously been known that matt metallic surfaces have a grain very favorable for the purpose in question, that when polished such surfaces do not lose their favorable form and that by cleaning the layer a very favorable proportion of forward and lateral reflecting surfaces is produced.

The invention is illustrated in the accompanying drawing in which:

Fig. 1 is a section through the sprayed metal and support;

Fig. 1a is a plan view of a portion of the sprayed surface as it appears in Fig. 1;

Fig. 2 is a section through the sprayed metal and support after brushing, showing in dotted lines the portions removed by the brushing;

Fig. 2a is a plan view of a portion of the metal surface as it appears in Fig. 2 showing the scratches made by the brush;

Fig. 3 is a section through the sprayed metal and support showing in dotted lines portions removed by a planing tool passed over the surface and

Fig. 3a is a plan of a portion of the metal surface as it appears in Fig. 3.

What I claim is:

1. Process of producing seamless projection surfaces of high capacity for scattering light which comprises providing a granular matt metal surface by granularly spraying a metal on to a support and rendering said matt surface lustrous by fine discontinuous scratches following the contour of the surface by brushing the surface.
2. Process as defined in claim 1 in which the matt metal surface is treated with a brush having wire bristles.
3. Process of producing seamless projection surfaces of high capacity for scattering light which comprises providing a matt metal surface by granularly spraying a metal on to a support and rendering said matt surface lustrous by forming discontinuous scratches following the contour of the surface and by cutting plane areas in said surface.
4. Process as defined in claim 3 in which said plane areas are provided by channeling the surface.
5. Process as defined in claim 3 in which said plane areas are provided by planing off the points of the grains of the surface.
6. Process as defined in claim 3 in which the matt surface is treated with a wire bristled brush and the surface is additionally provided with plane areas by passing a cutting edge over it.
7. A seamless projection screen comprising a support, and a non-specular grained metal surface on said support having fine discontinuous scratches following the contour of the surface.
8. A seamless projection screen comprising a support and a non-specular grained metal surface on said support having fine discontinuous scratches following the contour of the surfaces and also plane areas formed by cutting.
9. A seamless projection screen as defined in claim 8 in which said plane areas are the walls of channels extending continuously across the surface.
10. A seamless projection screen as defined in claim 8 in which said plane areas are parallel to the plane of the support.

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