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SCREEN FOR X-RAY PHOTOGRAPHY.

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My invention relates to improvements in screens for X-ray photography, and it consists in the ingredients hereinafter set forth.

In X-ray photography it is customary to use a fluorescent screen which may be placed adjacent to the plate holder when the sensitized plate is being exposed. The use of such screens cuts down the time necessary for an exposure. Ordinarily these screens are made of bristol board or cardboard, to which a coating of cementitious material has been applied with a coating of a fluorescent salt such as calcium tungstate which is held in position by means of a cementitious coating.

One disadvantage in the use of a screen of this kind is that the fluorescent coating is apt to be scratched and to be stained badly after continued use, so that eventually the screen becomes useless and is discarded.

An object of my invention is to provide a fluorescent screen of the type described which will wear much longer and at the same time is just as effective for the purpose.

A further object of my invention is to provide a screen both sides of which may be used, thus giving an additional period of use.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claim.

In carrying out my invention I make use of celluloid. The ordinary method of preparing colored sheet celluloid is to incorporate pigment with the material when the latter is in a semi-plastic or liquid state, after which the sheets are rolled.

Instead of the ordinary pigment, I make use of fluorescent calcium tungstate. The amount of the salt and of the celluloid is the same, that is to say, I take for instance five parts by weight of fluorescent calcium tungstate and five parts by weight of celluloid. These I mix together and the subsequent forming of the sheet is done by the ordinary process.

The resultant sheet has the appearance of an ordinary white celluloid sheet. It has, however, the property of fluorescence. The surface of the sheet is smooth and therein it differs from the ordinary sheet which is coated with the fluorescent salt. My improved sheet cannot be as easily scratched as can the ordinary sheet, yet the sheet gives as good results as far as cutting down the time necessary for an exposure in an X-ray picture is concerned, as the ordinary sheet. Moreover, when one side has been worn, the sheet may be turned over and the opposite side used, thereby greatly prolonging the life of the sheet. This cannot be done with the ordinary sheet such as now in use, since the ordinary sheet is only coated on one side. The fact that my improved composition sheet works equally well on both sides greatly reduces the cost of using fluorescent screens owing to their longer life.

I claim:

A fluorescent sheet for use in X-ray photography consisting of a celluloid body portion having smooth surfaces, said body portion having incorporated therein fluorescent material so disposed as to render each face of the sheet equally fluorescent.

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