A. WRIGHT.

PICTURE SCREEN.

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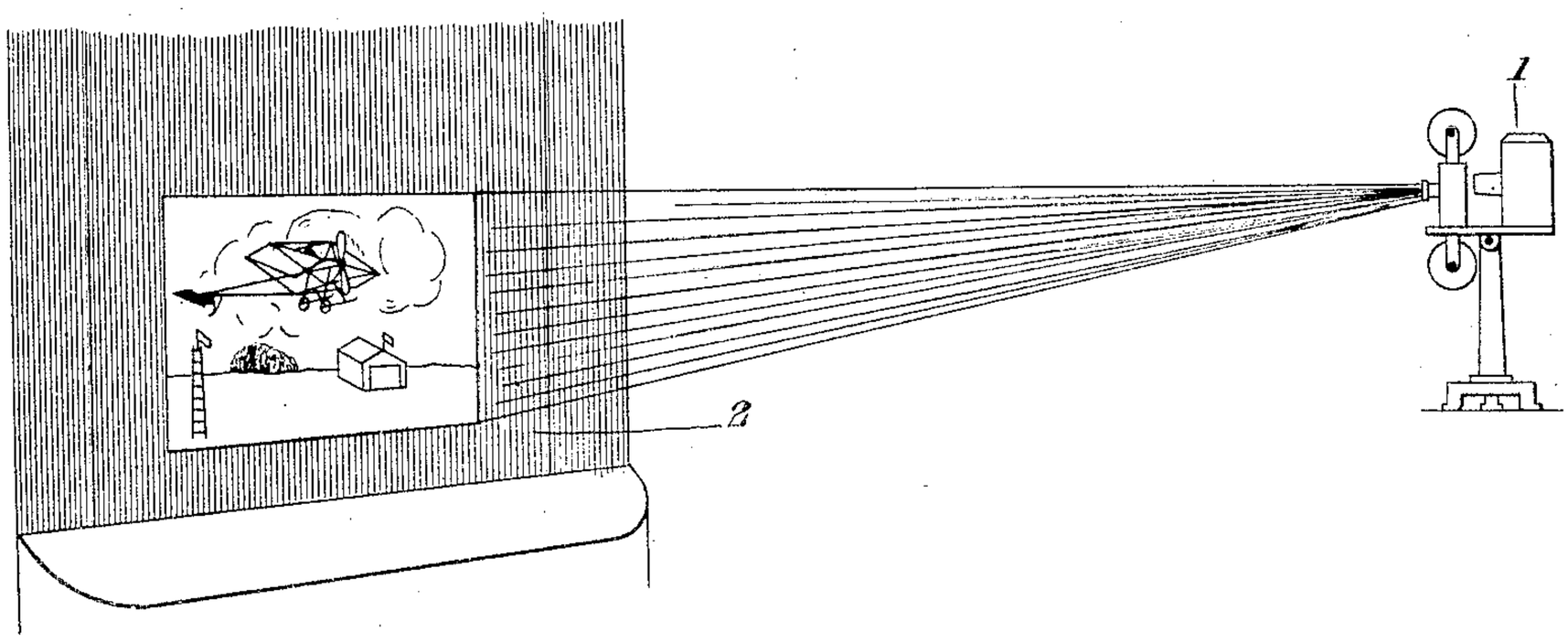
1,166,569.

Patented Jan. 4, 1916.



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PICTURE-SCREEN.

1,166,569. Specification of Letters Patent. Patented Jan. 4, 1916.

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To all whom it may concern:

Be it known that I, ARTHUR WRIGHT, of New York city, in the county of New York and State of New York, have invented a certain new and useful Improvement in Picture-Screens, and do hereby declare that the following is a full and exact description thereof.

My invention relates to a screen for motion picture projecting purposes, having a surface adapted to become luminescent under excitation of a light-emitting body so as to provide a screen adapted to remove eye-strain as well as to increase and improve the clearness and character of the projected presentations on the screen.

While my invention is capable of being carried out in many different ways, I will hereinafter, by way of illustration, set forth certain ways in which my invention may be carried out, and for the purposes of illustration I have shown diagrammatically one form of apparatus which may be used in carrying out my invention, in the accompanying drawings, in which—

The figure is a diagrammatic perspective view of an apparatus made in accordance with my invention and showing a screen of the character described herein.

Referring to the drawings, I make use of a projecting machine 1 of the ordinary type, and constructed in any desired manner whereby a series of pictures may be projected in succession upon a screen 2 to give the effect of moving objects. The screen 2 may be of any desired construction or thickness, it being only necessary that it be provided with a light-receiving surface of the character hereinafter set forth. In the operation of the projecting machine the light may, as usual, be entirely cut off from the projecting machine so that no light passes therefrom to the screen 2 during these intervals.

The screen may be provided with a coating of any one of a number of different materials, either alone or mixed with other desired materials, and the same may be applied to the surface of the screen in any desired manner. I, however, prefer to provide the screen with a coating of any one or a number of the following materials: Willemite; cadmium sulfate alone or mixed with manganese sulfate or sodium compounds such as sodium sulfate, sodium silicates, sodium manganate, sodium fluorid, sodium borate, and sodium aluminum sulfate; zinc chlorid, either alone or mixed with manganese sulfate; cadmium chlorid, either alone or mixed with manganese sulfate; zinc sulfate, either alone or mixed with manganese sulfate; calcium sulfid; strontium sulfid; barium sulfid; sidot blende or phosphorescent zinc sulfid; manganese chlorid mixed with sodium chlorid; fluorite; and various organic compounds such, for example, as naphthyl carmine, phthalic anhydrid, beta-naphthol, and tetra-chlor phthalic anhydrid. In some instances these materials may be previously subjected to prolonged heating to make them entirely anhydrous in order to improve the effects obtained. These substances may be applied to a screen of any desired character in any suitable way, but preferably I apply them in a coating of varnish, gelatin, soluble cellulose compounds, water-glass or any other similar coating material which will retain the active substances in position upon the screen, it being understood that the gelatin and water-glass are dissolved in water in the usual way, or that the water may be used alone.

As a suitable example of my invention, I may apply a coating of colorless willemite to a screen such as one made of a flexible fabric, the willemite being applied in a finely divided condition with a coating of transparent varnish. If desired, a screen may be constructed of a solid body of crystalline willemite or similar compound.

While I have described my invention above in detail, I wish it to be understood that many changes may be made therein without departing from the spirit of my invention.

I claim:

1. A projection screen provided with an image-display surface adapted to become luminescent under excitation of a light-emitting body, substantially as and for the purposes described.

2. A motion picture screen having a phosphorescent light-receiving surface.

3. A motion picture screen having a surface comprising willemite.

4. A motion picture screen having a surface comprising willemite held in place by a transparent binder.

5. A motion picture screen having a phosphorescent light-receiving surface comprising willemite held in place by varnish.

6. A projection screen having an image-display surface adapted to become luminescent under excitation of a light-emitting body, said luminescence having the inherent quality of being persistent for only a short period of time.

In testimony that I claim the foregoing I have hereunto set my hand.

ARTHUR WRIGHT.

Witnesses:
L. BRODERICK,
J. FRENDENVOLL.