S. S. COOKE & F. NOBLITT.

SEPARABLE AND ADJUSTABLE SCREEN.

APPLICATION FILED APR. 4, 1910.

992,857. Patented May 23, 1911.

2 SHEETS—SHEET 1.

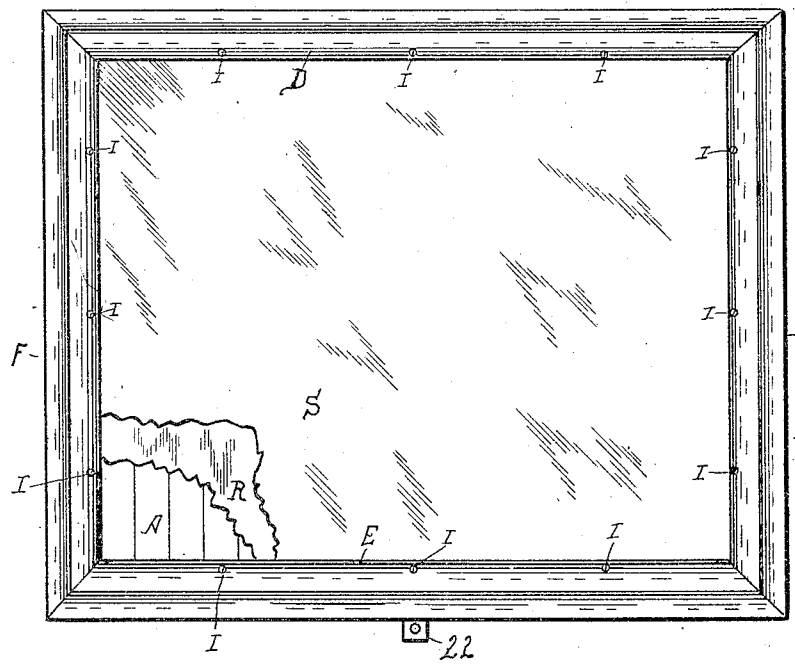

Fig. 1.

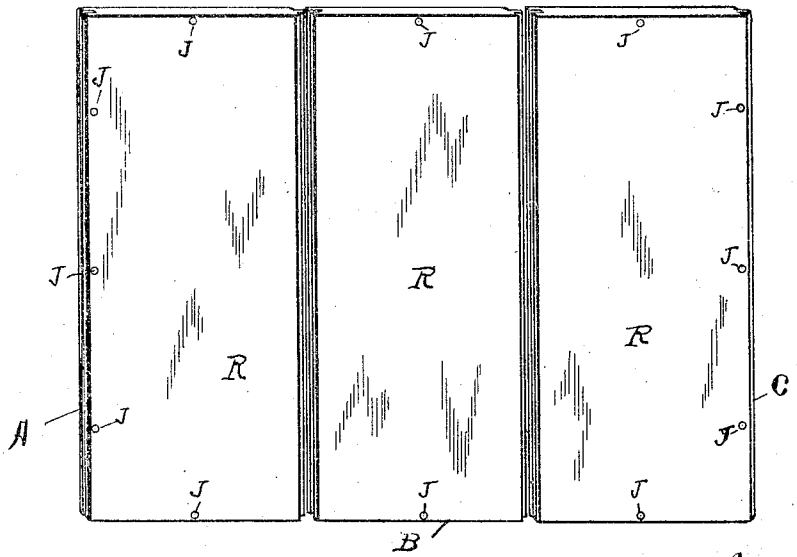

Fig. 2.

Witnesses:
Adelaide Kearns.
H. E. Randle.

Inventors
Shubel S. Cooke,
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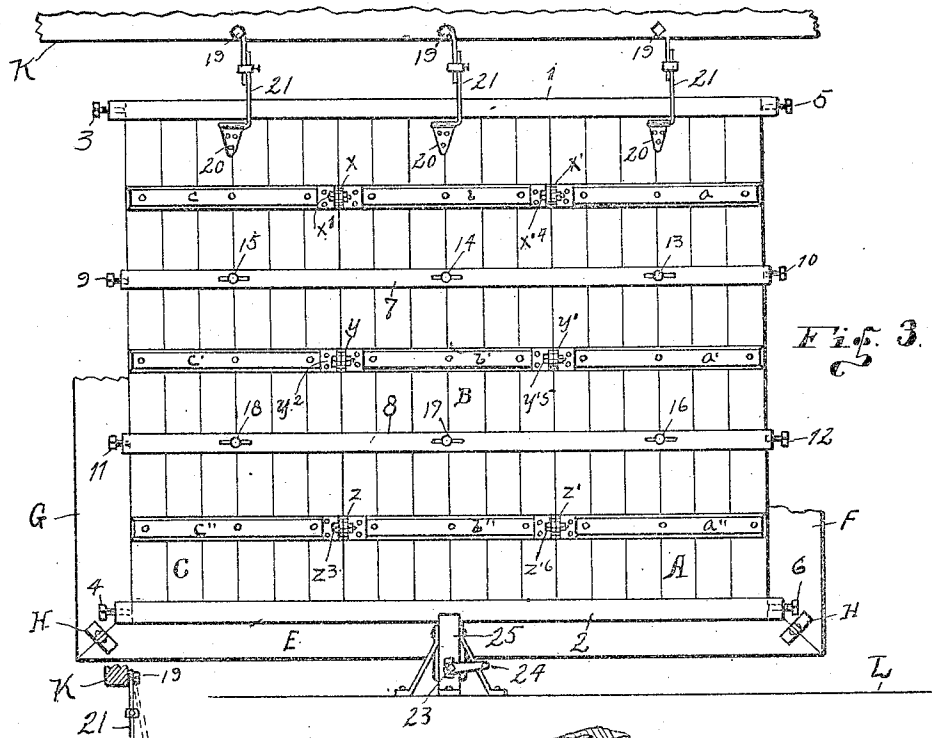

Fig. 3.

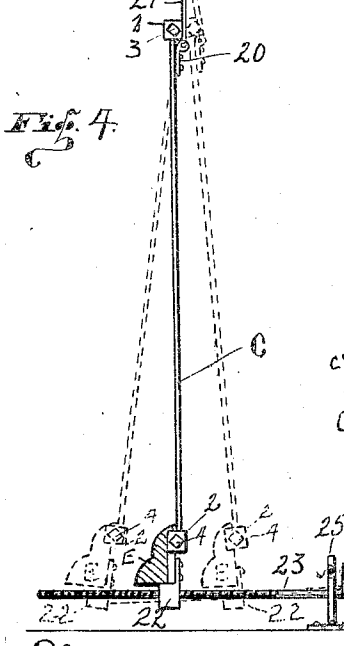

Fig. 4.

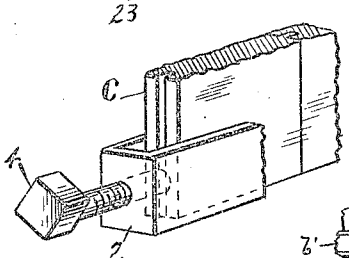

Fig. 5.

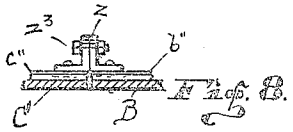

Fig. 8.

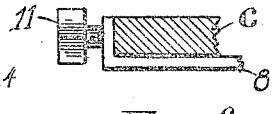

Fig. 6.

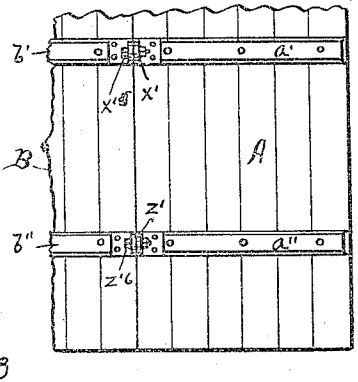

Fig. 7.

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UNITED STATES PATENT OFFICE.

SHUBEL S. COOKE AND FRANK NOBLITT, OF RICHMOND, INDIANA.

SEPARABLE AND ADJUSTABLE SCREEN.

992,857. Specification of Letters Patent. Patented May 23, 1911.

Application filed April 4, 1910. Serial No. 553,312.

To all whom it may concern:

Be it known that we, SHUBEL S. COOKE and FRANK NOBLITT, both residing in the city of Richmond, in the county of Wayne, and in the State of Indiana, have invented certain new and useful Improvements in Separable and Adjustable Screens, of which the following is a full, clear, and accurate specification and exposition, being such as will enable others to make and use the same with exactitude.

Our invention is intended to be used in connection with moving pictures where the pictures are projected upon a screen. The screen usually employed for this purpose is non-reflective, that is the surface usually being dead white or of some other equally light-absorbent character, the result being that the pictures shown thereon are not as clear and as distinct as they should be.

The object of our invention, broadly speaking, is to provide a screen composed of a plurality of sections adapted to be rigidly connected together, having means whereby the screen may be adjusted as to vertical inclination; to provide a screen which will be strong and durable in construction, easily operated and controlled, not easily damaged or rendered inoperative, and which can be manufactured and sold at a comparatively low price.

Another object is to provide a screen for exhibiting moving pictures or the like, in which a maximum of efficiency is obtained with a minimum of expense, and at the same time providing a screen which may be easily packed into a small compass of space, transported at a minimum of expense, and set up in position with a minimum of labor and without damage to the building in which it is contained.

Other objects and particular advantages of the invention will be brought out and made apparent in the course of the following specification taken in connection with the accompanying drawings forming a part thereof.

One manner for carrying out our invention in a practical manner and that which in practice we have determined to be the most practical, is shown in the accompanying drawings, in which—

Figure 1 is a face view showing one of our screens complete and in operative position, portions being shown as broken away in order to show the construction of the screen proper. Fig. 2 is a face view of a plurality of panels disconnected and stripped of the other parts of our invention. Fig. 3 is a rear elevation of the assembled panels, and showing the means for connecting them together in operative position. Fig. 4 is an edge view of the screen in operative position. Fig. 5 is a detail perspective view of one of the corners showing the manner of clamping the panels together at the ends. Fig. 6 is a detail view showing an end portion of one of the intermediate clamps. Fig. 7 is a fragmentary view of the back of portions of the panels, showing another, or auxiliary, manner of clamping the sections together. And Fig. 8 is a detail view showing one of the last named clamps in elevation.

Similar reference characters denote like parts throughout the several views.

In order that the construction, operation, and the advantages of our invention may be fully understood, we will now take up a detail description thereof in which we will set forth the same as briefly and as comprehensively as we may. In this instance we provide three panels A, B and C, although a greater or a less number of panels may be provided as required or found desirable. In practice we propose to make said panels equal in size the same being formed preferably of matched lumber, tongue and grooved together, the several panels also being tongue and grooved together to form an integral construction, the panels also being interchangeable.

The several boards forming each of the panels are retained in position by a plurality of cleats a, a', a''; b, b', b''; and c, c', c'', respectively.

Characters x, x', y, y', z, z', denote each a pair of angle clips, one-half of each of said clips being secured on the face of the end portion of said cleats, and the two members of each clip are adapted to be drawn tightly together, or toward each other, by bolts x^1, x'^2, y^3, y'^4, z^5, and z'^6, respectively, all substantially as indicated in Figs. 3, 7 and 8.

The upper and the lower edges of the panels are adapted to be detachably secured together as follows: Numeral 1 denotes the upper channel iron, and numeral 2 denotes the lower channel iron. The two

channel irons are identical with each other but they are oppositely disposed with relation to each other. The upper edges of all of the panels are to be inserted in channel iron 1, and the lower edges of all of the panels are to be inserted in channel iron 2. The ends of each of said channel irons are closed each by a web T formed integral therewith. Formed horizontally through each of said webs or ends T is a threaded aperture to receive the respective set-screws 3, 4, 5 and 6, by which the ends of the panels may be clamped together.

Numerals 7 and 8 denote auxiliary clamps, having their ends turned at right-angles to their body portion in order to engage over the outer edges of the panels, with set-screws 9, 10, 11 and 12 threaded into the ends of the respective clamps 7 and 8 to engage the edges of the panels, as indicated in Fig. 6. Said bars or auxiliary clamps are slidingly and detachably connected to each of the sections A, B, and C by screws 13, 14, 15 and 16, 17, 18, respectively, as shown in Fig. 3. There are slots in said bars or clamps 7 and 8 through which said screws are inserted into the backs of said sections to allow the sections to be clamped together.

Letters D, E, F and G denote the four members of the frame which surrounds the assembled panels A, B and C, in order to give an artistic appearance to the screen. The corners of said frame are secured together by the clamps H, one at each corner at the back of the frame, as in Fig. 3, said clamps H being substantially the same as that shown in Fig. 8. The frame may be secured to the panels by a plurality of screws I, shown in Fig. 1, which screws pass through the frame and enter the holes J in the panels, the holes being shown in Fig. 2. The screen thus framed is to be suspended from the ceiling as from the joist K, and extends down to near the floor L. Secured on the back of each panel is the plate 20 having a horizontally disposed eye in the upper edge thereof. Numeral 21 denotes extensible arms, one for each of said plates 20, said arms each having a horizontal portion which fits in the eye of the respective plate 20, the upper ends of said arms being secured to the joist K by bolts 19 or otherwise. By reason of the extensible arms 21 the height of the screen may be adjusted, and the connection of the arms 21 with the plates 20 permits the screen to be placed in position or removed without removing screws or bolts, or otherwise changing the parts from operative position.

Secured to the center of the member E of the frame and extending below the lower edge thereof is a nut 22. Operating through said nut is the threaded shaft 23, which is provided with a crank 24 by which the shaft is revolved. Said shaft may be supported by the bracket 25 which in this instance is secured to the floor L.

One of the most essential features of our present invention is the surfacing of the screen, which we will now describe. The face of the panels, or of the assembled panels, are to be covered with a veneer R of thin and smooth material, and finally the veneer is to be given a facing of aluminum or other suitable material S, which is preferably applied in a liquid form and allowed to dry. The material S should be such, when dry, as to act as a reflecting surface for turning back the rays of light and thereby causing the picture which may be projected thereon to appear more plain, distinct, and clear than would otherwise be the case.

From the above it will be manifest that the device may be packed in a small space, may be taken into a building through a comparatively small opening and there assembled. The screen when assembled will be suspended clear of the floor, except for the adjusting means above referred to, allowing for the screen to be swung to attain a desired angle. By means of the crank 24 the angle of inclination may be adjusted as desired and retained at the point desired with precision.

The surfacing of the screen with a smooth, clear, polished or reflective surface increases the efficiency of the resultant product, the tipping of the screen by means of the crank 24, or otherwise, increases the efficiency even beyond that of the surfacing alone.

We desire that it be understood that the details of construction herein described may be modified in various ways without thereby departing from the principles of our invention.

Having now fully shown and described our invention what we claim and desire to secure by Letters Patent of the United States, is—

A separable and adjustable screen comprising in combination a plurality of corresponding panels, angle-clips having the members thereof connected by bolts for drawing the panels together and holding them in proper relation to each other, a channel iron detachably securing the panels together at the top, a channel iron detachably securing the panels together at the bottom, the ends of said panels being fitted in said channel irons, the ends of said channel irons being closed and each of the closed ends having a set-screw threaded therein for clamping the ends of the panels together, a frame surrounding all of the panels, hangers for suspending the screen from a ceiling, each of said hangers including an extensible arm whereby the height of the screen may be varied after it has been suspended in position, means for moving the lower edge of the screen forward and backward and for

retaining it in the adjusted position, veneering covering the face of all of said panels, and a reflecting material disposed over the veneering, all substantially as shown and described.

In testimony whereof we have hereunto subscribed our names to this specification in the presence of two subscribing witnesses, April 2ond 1910.

SHUBEL S. COOKE.
FRANK NOBLITT.

Witnesses:
GEORGE O. BALLINGER,
R. E. RANDLE.