

Feb. 21, 1933.

J. F. SEITZ

1,898,904

METHOD OF MAKING SETS FOR MOVING PICTURES

Filed Nov. 10, 1926

3 Sheets-Sheet 1

Fig. 1.

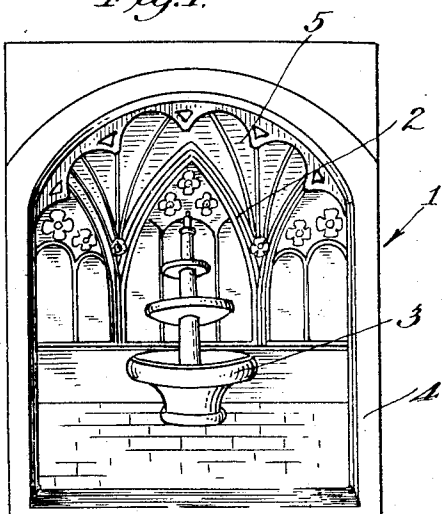


Fig. 2.

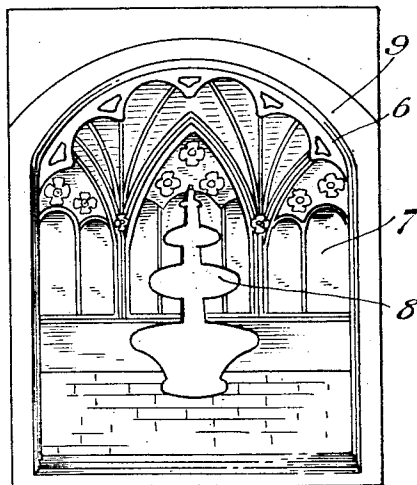


Fig. 4.

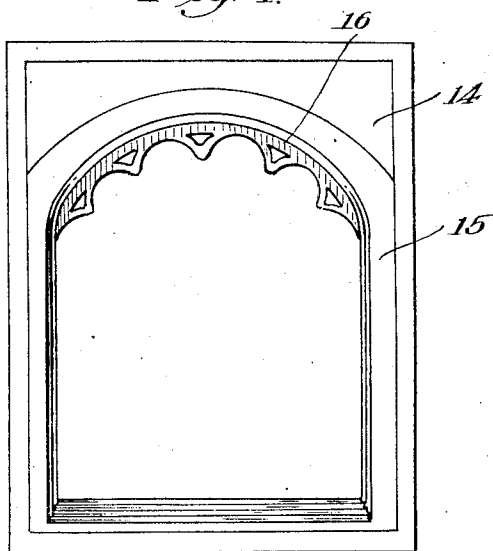
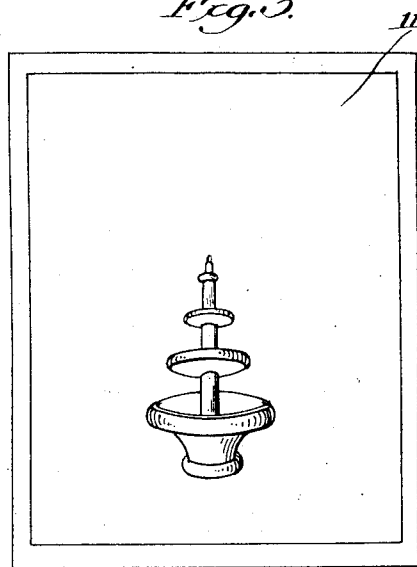


Fig. 3.



Inventor:
John F. Seitz,
by Hazard and Miller
Attorneys

Feb. 21, 1933.

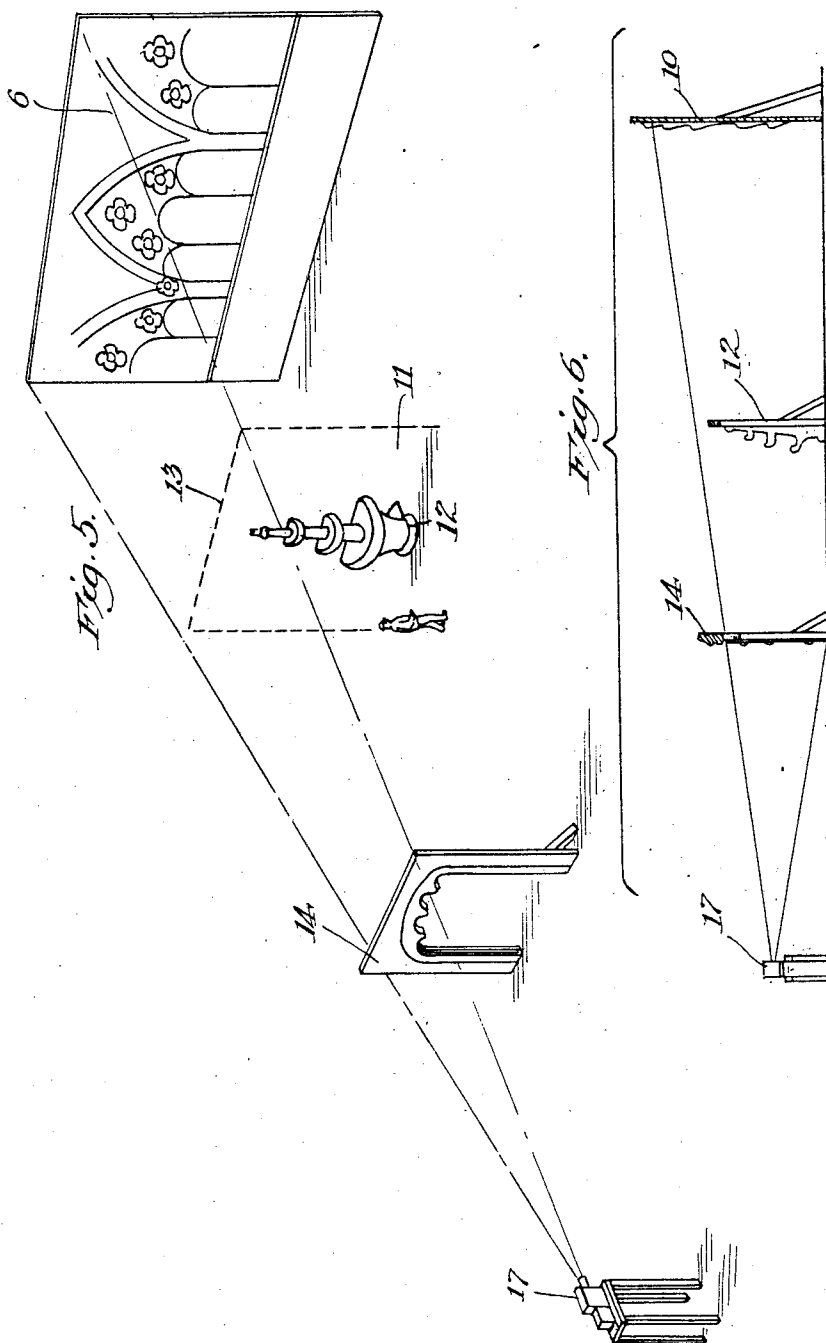
J. F. SEITZ

1,898,904

METHOD OF MAKING SETS FOR MOVING PICTURES

Filed Nov. 10, 1926

3 Sheets-Sheet 2



Inventor:
John F. Seitz,
by *Hayward and Miller* Attorneys

Feb. 21, 1933.

J. F. SEITZ

1,898,904

METHOD OF MAKING SETS FOR MOVING PICTURES

Filed Nov. 10, 1926

3 Sheets-Sheet 3

Fig. 7.

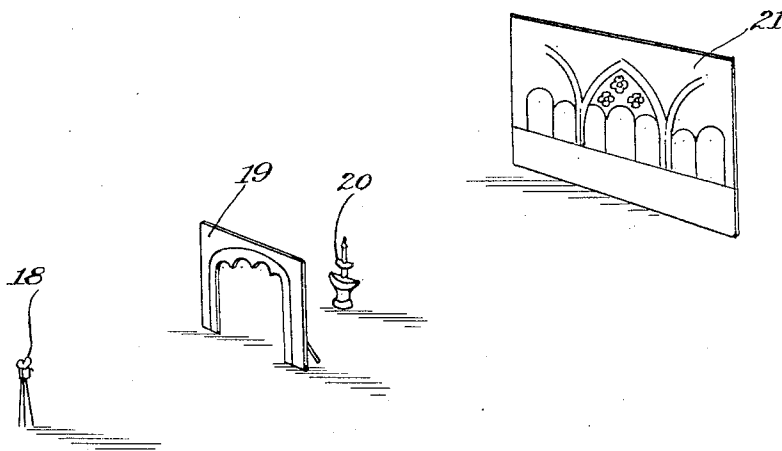
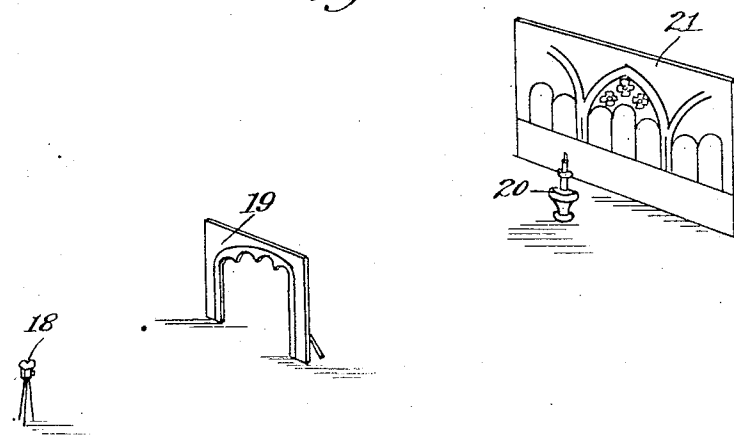


Fig. 8.



Inventor:
John F. Seitz,
by Hazard and Miller
Attorneys

UNITED STATES PATENT OFFICE

JOHN F. SEITZ, OF HOLLYWOOD, CALIFORNIA

METHOD OF MAKING SETS FOR MOVING PICTURES

Application filed November 10, 1928. Serial No. 147,526.

My invention is primarily a method of making so-called sets, particularly adapted for the moving picture industry, such sets being utilized as the background for the dramatic or comedy action in the photographing of moving pictures.

An object of my invention is to simplify the making of these sets for moving pictures, also to reduce the cost of constructing sets, particularly those requiring an unusually large amount of modelling or carving, such as for example the portal of a cathedral with all of its statuary, the interiors of palaces etc.

A further object of my invention is in reducing a picture of a contemplated setting to its component elements in regard to perspective and constructing different sets to be placed at different distances from the camera in accordance with the foreground, the background and the intermediate features of the picture.

Another object of my invention is to simplify the making of sets so that these can be made to a great extent by more or less skilled artisans. In particular these sets are by my invention formed in relief, full or partial relief, bas relief or after the manner of intaglio sculpture should that be desired. It is to be understood, also, that my invention applies to and includes drawn or painted sets on a flat backing or screen.

My invention comprehends utilizing a picture (photograph or drawing) of a desired set as the basis for constructing the set desired. From this picture (photograph or drawing) a transparency is made. This transparency is an important step of the invention and is the basis of all the subsequent construction. The transparency can follow the photograph or drawing exactly or can be modified, changed or rearranged in any manner to serve as the basis for the desired set, whether it be an exterior structure or an interior land or seascape.

The transparency being completed in the desired manner, it is then projected on a suitable screen (the nature and composition of which has been predetermined). These screens can be made of the usual studio materials such as beaver board or glass and covered with a suitable plastic material of the required thickness such as clay, wax, plaster or any material capable of being molded. The workman follows the design of the projected image, making the indentations in the plastic material until the full design of the transparency is impressed on the larger screen. The artisan can also use paint or other color material to bring out contrasts or assist in forming the general effect when desired. However, one of the principal objects of this invention is that all or as much as possible of the work be done plastically in relief, full or partial, so that when illumined by sunlight or artificial light it will have the proper depth, a natural light and shade which can only be achieved by solid objects and only approximated with flat paintings even by the cleverest artists.

For convenience of illustration I will say that a set to be constructed will be in three perspective planes, foreground, middle distance and background.

To construct this we may use one or more transparencies, as one for each plane. The size of the screens having been determined, the transparency is projected on the screen which will serve as the background. The workman follows the design of the projected image, making the indentations in the plastic material.

The middle ground is then constructed on a separate screen, the transparency being projected on the screen, the workman proceeds to work as he did in constructing the background.

The foreground is then constructed on

another screen, the work being done in the same manner.

When these various screens are made they are cut so that the proper action of the actors may take place and when assembled in the desired position the action will appear to take place in the scene of the original picture or the original picture modified to conform with the setting required by the particular drama being played.

While I have only indicated the use of three transparencies in the construction of this set, it is to be understood that sets may be in many more perspective planes, also that a background or middle screen will sometimes be so large that it would require several transparencies to properly construct it.

The various features of my invention will be more readily understood from the following description and drawings, in which;

Figure 1 illustrates a picture from which the component parts of the set are to be constructed;

Fig. 2 is a picture of a screen forming the background, constructed in accordance with my invention and showing the background of the picture of Fig. 1;

Fig. 3 is a screen illustrating the middle distance, showing an object or the like between the foreground and background, this being constructed utilizing the picture of Fig. 1;

Fig. 4 is a screen illustrating the foreground constructed from the picture of Fig. 1;

Fig. 5 is a perspective view illustrating the relative positioning of the screens and the manner of making same from a picture such as Fig. 1;

Fig. 6 is a longitudinal section of the sets of screens;

Fig. 7 is a perspective view of the sets of screens in reference to a camera, showing the manner of changing the relative size of one element of the picture in reference to the other elements, illustrating a middle distance feature as being enlarged;

Fig. 8 is a view similar to Fig. 7, illustrating the middle distance feature as being pictures on a reduced scale.

Referring to Fig 1, this illustrates a picture designated generally by the numeral 1, which may be an actual photograph, in this case being a photograph of an interior or it may be an artist's painting or conception in drawing. This picture is typical having three components, these being the background showing in this case Gothic windows and arches, a middle distance structure 3 such as a fountain and a foreground 4, this being an arch having pendants 5. The picture may be divided into other components but for sake of simplicity these three elements entered into perspective are men-

tioned. A transparency is made of such photograph or artist's picture so that same may be projected from a projecting machine or transparencies may be made for the background, middle distance and foreground.

Presuming the background is constructed first, a screen of suitable material is built up at the proper distance from the projector and the transparency projected thereon in the usual manner. The artist or other workman then follows the lines of the projected picture, working in the various features such as the arches 6, the windows 7 and if desired leaving a blank space 8 occupied by the fountain or middle distance article 3. The surrounding part 9 of the screen may be left blank, this being the part representing the foreground 4.

It is to be understood that the set so formed may be constructed by painting or by suitable drawings or by utilizing a molding as indicated by the numeral 10 in Fig. 6 to give so-called depth to the picture when photographed and to reproduce shadows or the like when the set is illuminated by sunlight or artificial light giving a more natural effect than any painted shadows.

A second screen 11 is then constructed of suitable material, being placed a suitable distance from the camera as indicated in Figs. 3 and 5 and the middle distance element is constructed being designated by the numeral 12 indicating a fountain. In constructing this it is to be understood that the whole picture of Fig. 1 or the middle distance part may be projected on the screen and the artist may follow the lines of the middle distance element. In this case the fountain structure is built out to a considerable extent, as indicated by the numeral 12, to give the effect of it being rounded or of irregular shape so that, if desired, receptacles may be placed therein for water or the like flowing in the fountain. After the middle distance article is constructed, the screen is cut away in accordance with the outline of such article, the original screen being indicated in dotted lines 13 in Fig. 5 and the finished set in full lines.

The foreground set 14 is constructed by having a screen, the picture of Fig. 1 or the foreground part being projected thereon, and the artist building and sculpturing in the various features indicated by the arch 15 and the pendants 16 corresponding to the pendants 5 of the picture of Fig. 1. It is to be understood that the features of this may be changed to an architectural construction, to harmonize with the photo drama. This screen would then be cut away, leaving the archway with suitable relief. It is to be understood that in making the screens I prefer to have such a substantial backing for same that they can be molded, being thus

distinct from flat surface painting or crayon, or the like, pictures.

If desired, the material of the screen may be made of suitable material that it may be carved. The sculptor or artist may thus cut this in the manner of intaglios or bas relief and relief work. In such manner, when the proper lighting is utilized the sets would be combined with the moving drama as hereunder set forth and by proper lighting give the appearance of solid structures as distinguished from moving pictures formed with merely paintings or drawn sets.

Figs. 5 and 6 represent the substantial relative position of the screens of the foreground, that is the arch, the middle distance, that is the fountain and the background, that is the windows and arches, in relation to which the moving drama will be acted. In such case a camera will take the place of a projecting machine indicated by the numeral 17 and the acting may take place before the foreground screen 14, that is the archway or behind same around the fountain or any place in front of the background. It is also to be understood that if desired the windows in the background may be transparent and various scenes may be photographed through the windows.

As it is frequently necessary to change the size of different elements of an actual picture when made into moving picture sets and photographed, I may do this by the arrangement shown in Figs. 7 and 8. In this case a camera is indicated by the numeral 18, the foreground set by the numeral 19, the middle distance set 20 and the background set 21, these being sets made from the screens as mentioned. If the middle distance set 20, that is the fountain is to be illustrated larger than as shown in the original picture, it is moved nearer the foreground set 19 and if it is desired to show same smaller than in the original picture it is moved closer to the background set as shown in Fig. 8. Where it is moved nearer to the background set it would be necessary to fill in to a certain extent the portion 8 which was left blank as described in connection with Fig. 2. It is obvious also that the middle distance set, the foreground and background sets may be shifted in relation to each other and if desired the middle distance set may be positioned laterally in regard to the sets 19 and 21 and also that the sets 19 and 21 may be located at an angle one to the other to give a different representation than in the picture as shown in Fig. 1.

While the above method of making sets has been illustrated as having to do with an interior of a building, it is obvious that the same principles may be adapted to substantially any type of constructed set.

While the primary object of this process

is the construction of sets for motion-pictures, we can also make objects of various kinds or reproductions of valuable objects such as carved chests, chairs, furniture of all kinds, paintings, on canvas or frescoes, etc., by the same process.

It is to be understood that when making sets in accordance with the procedure disclosed in connection with Figs. 1 through 8, these sets or scenes would preferably be made in the work-shop and assembled on the stage or lot where the picture is to be photographed. It is also apparent that in projecting a picture on the screen only certain parts of this picture need be copied; if desired, and other details can be worked out by a skilled workman, to satisfy the particular photographic effect desired in the completed picture.

It is to be noted that a characteristic feature of my invention as disclosed herein embodies the projection of a picture on a screen, and, while the picture is still being projected, the artist and workmen build up the set by painting or sculpturing, or by other methods known in the moving picture art. My application herein, therefore, distinctly differentiates from my prior Patent No. 1,616,237, dated Feb. 1, 1927, in which the enlargement of a photograph, or the like, is made by so-called brush developing, which is in reality a photographic procedure. Therefore, in this application, where I use such terms as "projecting a picture on a screen and making a set from such picture" it is to be distinctly understood that there is no enlarged or equivalent photograph made on the screen, but the set is made up from the outlines of the projected picture.

Various changes may be made in the principles of my invention without departing from the spirit thereof as set forth in the description, drawings and claims.

What I claim is:

1. The method of making the fixed scenery for moving picture sets, comprising projecting a picture on a first screen, making a first portion of the fixed scenery on the first screen while the picture is being projected on such screen, said portion corresponding to part of the projected picture, projecting at least part of the picture on a second screen in proper perspective relation to the whole picture, and to the first screen, and making a second portion of the fixed scenery on said second screen while the picture is being projected on the second screen, said second portion corresponding to another part of the projected picture.

2. The method of making the fixed scenery for moving picture sets as claimed in claim 1, projecting at least part of the picture on a third screen in proper perspective to the whole picture and while such picture is projecting on the third screen making at

least a third part of the fixed scenery for the set on such third screen, to correspond at least in part with the projected picture, the said first, second and third screens when
 5 completed being adapted to be positioned at different distances from a photographic camera and from each other to obtain the proper perspective of the prepared sets in relation to actors acting in relation to the
 10 sets.

3. The method of making the fixed scenery for moving picture sets comprising preparing a picture representing different portions of the set such as a foreground and a
 15 background, projecting this picture on a first screen and while the picture is being projected preparing at least part of the scenery of the background on the first screen, positioning a second screen in front of the first
 20 screen, projecting the same picture on the second screen on a properly proportioned scale whereby portions representing the foreground are shown in proper perspective relation to the background, and while such
 25 picture is being projected forming at least part of the fixed scenery of the foreground on such second screen, the scenery corresponding at least in part to the picture projected, the two screens being adapted on
 30 completion to be positioned in a set in proper perspective relation to a camera and to actors performing in relation to the said screens and to each other.

4. The method of making the fixed scenery for moving picture sets comprising preparing a picture showing portions of a back-
 35 ground, middle distance and foreground of the set, projecting such picture on a background screen and while such picture is projected preparing at least part of the
 40 background scenery on the background screen, secondly positioning a middle distance screen in proper perspective relation to the projected picture and to the back-
 45 ground screen and while such picture is being projected preparing at least a part of the middle distance scenery on the middle distance screen, thirdly positioning a fore-
 50 ground screen in proper perspective relation to the picture and to the middle distance screen and projecting the picture thereon and while projected preparing at
 55 least part of the foreground scenery on the foreground screen, the scenery corresponding at least in part to the picture projected, the background screen, middle distance screen and foreground screen being adapted to be positioned in a set in proper perspective
 60 relation to a camera and to the actors performing in relation to said scenery.

5. The method of making moving picture sets comprising preparing a picture representing at least part of a background and
 65 at least part of a foreground of the fixed scenery of a motion picture set, projecting

at least part of said picture on a background screen and while projected on such screen preparing at least part of the background
 70 fixed scenery, secondly projecting at least part of the said picture on a foreground screen, such screen being positioned in proper perspective relation to the picture and to the background screen and while projected
 75 on the foreground screen preparing at least a part of the foreground fixed scenery on such foreground screen, the scenery corresponding at least in part to the picture projected, the foreground screen and the background screen being adapted to be positioned
 80 in proper perspective relation to a camera and to actors performing in relation to such screens and to each other.

6. The method of making the fixed scenery for moving picture sets comprising preparing a picture showing at least part of a
 85 background and foreground of a moving picture set, projecting such picture on a background screen and while projected preparing at least part of the fixed background scenery on the background screen, secondly
 90 positioning a foreground screen in front of the background screen and in proper perspective relation to the picture and to the background screen, projecting the picture thereon, and while projected preparing at
 95 least part of the fixed foreground scenery on the said second screen, the scenery corresponding at least in part to the picture projected, the said screens being adapted to be used in the relation of positioning relative
 100 to the projector and to a camera used in photographing actors performing in relation to the fixed scenery on the fixed screens.

7. The method of making the fixed scenery for moving picture sets comprising preparing a picture showing at least part of a back-
 105 ground and a foreground of the set, projecting at least part of such picture on the background screen while projected preparing at least part of the fixed background scenery on such screen and molding portions
 110 of the scenery forward of the screen, positioning a foreground screen in proper perspective relation to the picture and to the background screen and projecting at
 115 least part of the picture thereon and while projected preparing at least part of the fixed scenery of the foreground on the foreground screen, and molding projections on the front of such latter screen, the scenery correspond-
 120 ing at least in part to the picture projected, the said screens being adapted to be positioned in a set in proper perspective relation to a camera and to actors performing
 125 in relation to said screens.

8. The method of making the fixed scenery for moving picture sets comprising preparing a picture representing the scenery and
 130 projecting at least part of said picture on a first screen, making a first portion of the

fixed scenery while the picture is being projected on the first screen, projecting at least part of the picture on a second screen in proper perspective relation to the whole picture and to the first screen and making a second portion of the fixed scenery on said second screen while the picture is projected thereon, the scenery being prepared on the side of the screens on which the picture is being projected, and corresponding at least in part to the picture projected, and eliminating at least a portion of one of the screens.

In testimony whereof I have signed my name to this specification.

JOHN F. SEITZ.

20

25

30

35

40

45

50

55

60

65