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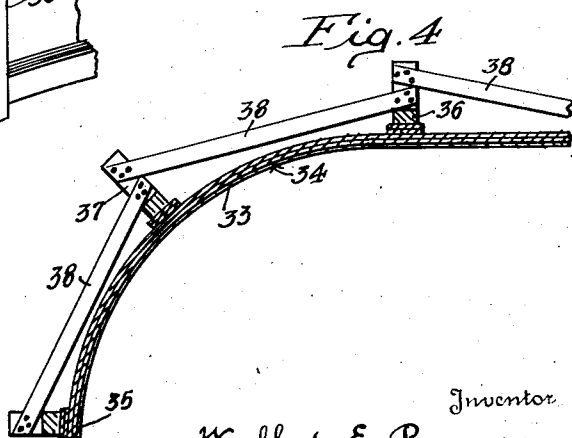
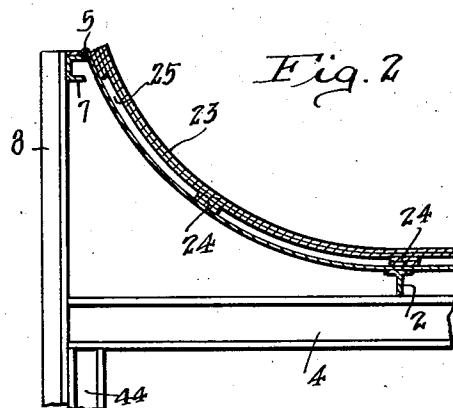
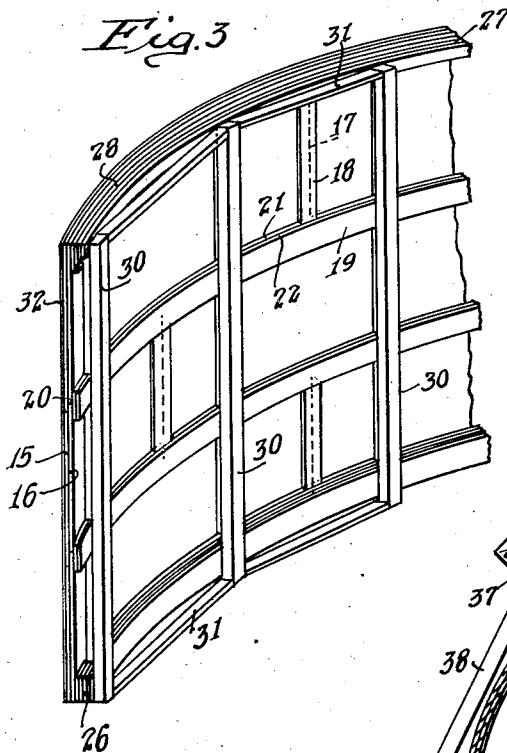
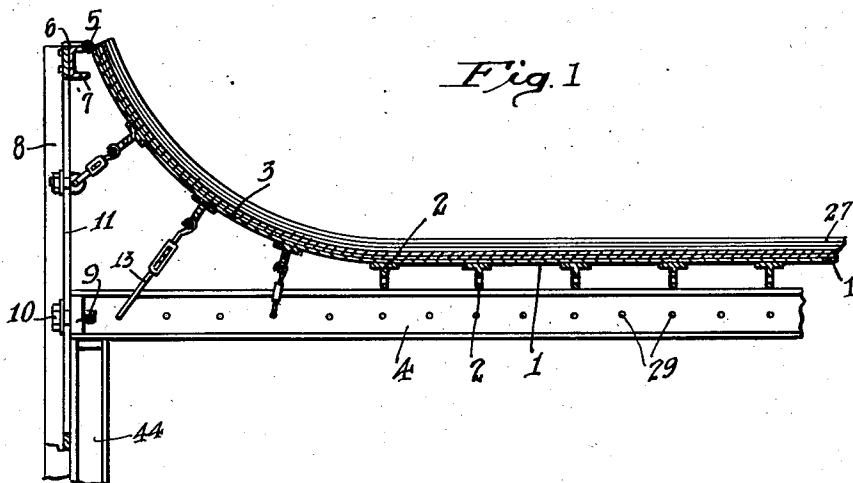
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2,303,003

METHOD OF FORMING FABRICATED WALLS

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2 Sheets-Sheet 1



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METHOD OF FORMING FABRICATED WALLS

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7 Claims. (Cl. 20-0.5)

This invention relates to the construction of walls, and the present specification describes the invention as applied to the construction of walls for moving picture sets. The walls of moving picture sets are usually constructed of plywood secured to rigid frames constructed by carpenters. Unless the plywood is of considerable thickness it is quite readily vibrated, and sometimes acts as a resonant sounding-board that may interfere with technically correct reproduction of sounds occurring on the stage of the set. When it is necessary to form a curved wall for a set, it is necessary for the carpenters to construct a frame with a considerable number of supports for the rear side of the curved wall in order to give sufficient rigidity to the structure, and to overcome any tendencies to develop vibrations and resonance in the wall. On this account it is highly desirable that a moving picture set should have natural rigidity sufficient to insure, for example, that when a door in a wall is slammed, no vibration will be apparent in the moving picture.

One of the objects of the present invention is to provide a simple method and apparatus for facilitating the construction of moving picture sets, and particularly those involving the use of curved walls.

A further object of the invention is to provide a simple method for constructing curved walls, which will have natural rigidity due to the manner in which the same are fabricated.

A further object of the invention is to provide a simple method for making a rigid curved wall without the necessity for employing clamps or other means for exerting pressure between the layers of material that are being secured together to form the wall.

A further object of the invention is to provide a simple method for forming fabricated walls for curved moving picture sets, which will be relatively inexpensive as compared with the present methods of constructing the same, and which will be substantially unaffected by sound and vibrationless from sounds produced on the stage, or in its vicinity.

Further objects of the invention will appear hereinafter.

The invention consists in the novel acts and combination of acts to be described hereinafter, all of which contribute to produce an efficient method of fabricating a moving picture set.

In the drawings:

Fig. 1 is a vertical section taken through a partially formed curved wall for a moving picture

set constructed in accordance with my method, and illustrating in section a portion of the apparatus which I prefer to employ for accomplishing the purposes of this invention. In this view portions of the apparatus and fabricated structure are broken away.

Fig. 2 is a view similar to Fig. 1, but less extensive and of a more or less diagrammatic nature. This view particularly illustrates steps in the method employed in constructing a set that is to present its concave face to the camera.

Fig. 3 is a perspective illustrating a portion of a curved fabricated set constructed in accordance with my invention, and in which the convex face is to be exposed to the camera.

Fig. 4 is a horizontal section through a portion of a wall such as could be used for a moving picture set constructed in accordance with my invention, and including a curved portion, the concave side of which is to be exposed to the camera.

Fig. 5 is a plan view of the platen and other apparatus employed therewith for constructing moving picture sets in accordance with my method. In this view a portion of the platen sheet is broken away so as to expose the transverse ribs that stiffen the same.

Fig. 6 is a side elevation of the apparatus illustrated in Fig. 5.

Fig. 7 is an end view of the apparatus viewed from the left end of Fig. 6, and particularly illustrating means which may be employed where a right angle is to be formed in a wall structure.

In practicing the method, I support a sheet of material preferably of a non-elastic character, in a curved state. In the present specification the sheet material is supported with the concave side uppermost. The material I prefer to employ is preferably of a porous composition such as Insulite, or similar material. This material is quite flexible, and when supported on a curved bed or sheet, will readily assume the form of the supporting sheet or plate. The sheet takes its shape by gravity on the bed or plate. On this bottom layer or sheet I apply an adhesive or cement over which I apply the second sheet of the material being employed, such as Insulite. In this way the method may be proceeded with to produce a wall of any desired thickness. The rigidity of this wall is derived from the fact that the layers, while holding themselves in a curved condition, are secured together. By reason of this inherent rigidity in this fabricated structure, it is unnecessary to build a frame on which the wall material is applied, and which will give a

desired curved shape to the wall. In other words, it is merely necessary to attach the fabricated wall to a light frame, providing a foot or base that will facilitate its being handled on and off of the set, and without necessitating the workmen's placing their hands on the outer or forward face of the wall that is to be presented to view, and to the camera. The method may be practiced in forming a set that is to present a convex face to the camera, or a concave face. The fabricating of the wall in each case, necessitates slight variations in the method of securing the abutting edges of the sheets of material together.

In Fig. 1 I illustrate one end of a platen 1, that is preferably of sheet metal form and relatively thin, so that it can be readily bent to any desired curve or arc. In order to enable this thin sheet to support the weight of a wall fabricated upon it, I prefer to provide its under side with a plurality of transverse bars 2 preferably having a cross-section of some structural shape, for example, T-iron. In using the platen in fabricating a curved wall 3 such as illustrated in Fig. 1, one end of the platen 1 would be raised to an elevated position as illustrated in Fig. 1. In order to do this, of course, the platen is left unattached to its support. In other words, as illustrated in the present drawing, the stiffener bars 2 rest unattached on the upper side of side bars 4 of a frame that supports the platen. The end of the platen 1 may be connected by a hinge joint 5 to a plate 6 that is carried on the upper side of a transverse head bar 7, which may be of channel form, and this bar may be secured to a pair of stanchions 8 that are adjustably secured to blocks 9 at the head of the frame. Any suitable adjusting means may be provided in the present instance, which consists of a bolt 10 secured in the block 9 and passing through a longitudinal slot 11 in the stanchion. The stanchion should be slotted for a considerable length, and would be attached at its upper end by removable bolts 12 to the cross head 7. When the platen is not being used to form a curved wall, it would lie flat on the frame, and the stanchions 8 would not be employed. In order to provide a positive support for the under side of the platen at the curve, and also in order to enable it to be given any special form, I provide a plurality of adjustable members 13. These members have their ends attached to the side bars 4, or to the stanchions 8, and include turnbuckles 14 for adjusting their length. The upper ends of these members are attached to the more or less vertical webs of the stiffener bars 2.

In Fig. 1, I illustrate the fabrication of a wall in which the convex face of the finished fabricated wall is intended to face the camera. This view illustrates the body of the wall as composed of two layers 15 and 16 of Insulite. In forming a wall of this character, the abutting transverse edges 17 of the upper layer are covered by transverse strips 18, which may be applied intercostal with longitudinal strips 19 that are laid over the longitudinal seams or longitudinal abutting edges 20 (see Fig. 3). Although I have illustrated the body of the wall as composed of only two layers 15 and 16, it is obvious that any number of layers of the material may be employed, depending upon how substantial and thick the wall is to be.

The strips 19 are preferably formed of two layers 21 and 22. These strips are simply laid in place over the seams after applying the cement or adhesive, and pressed down lightly so as to

bring the attached faces close together. Due to the inert and inelastic nature of this material, Insulite, the sheets and the longitudinal strips 19 readily assume the curve of the upper face of the platen, and it is unnecessary to employ any high degree of pressure to insure an efficient securing of these parts together.

If the fabricated wall is to present its concave face to the camera, then the longitudinal and cross strips are applied on the under side of the layers of wall sheets 23, as indicated in Fig. 2, in which view 24 indicates a cross strip and 25 indicates a longitudinal strip placed over the longitudinal seam, or seams, in the wall sheets 23.

If it is desired to form a base stringer 26 for the bottom of the set, and an upper stringer or cap stringer 27 for the upper edge of the wall, these stringers could be formed on the platen in the same way as the body of the wall, and then attached by cementing the faces of the stringers to the face of the wall body; or, if desired, the stringers can be formed directly on the upper face of the sheet material by attaching the layers 28 successively, at the same time placing the adhesive between all the layers of material.

It may be necessary to provide means for raising the platen 1 and holding the same at some intermediate point at an elevated position. In order to enable this to be accomplished, the side bars 4 of the frame of the apparatus may be provided with a series of holes 29 into which the lower ends of suitable adjusting members like the adjusting members 13, may be secured.

After the curved wall section such as illustrated in Fig. 3 is completed, it may be removed from the platen and set up in an upright position, and be secured by adhesive to vertical frame members 30 spaced apart and braced by means of diagonal braces 31. These braces can be secured to the vertical members 30 by nails, or by employing small metal fasteners that are driven sidewise across the joint.

After the fabricated wall is taken off of the platen, I cover the face that is to be exposed to the camera, with a flexible waterproof fabric 32, known under the trade name as "Fabrikoid." This material can be applied from rolls, and is obtainable in various colors, and with different embossed designs, if desired.

In Fig. 4 I illustrate a portion of a curved fabricated wall 33 formed on the platen in the manner indicated in Fig. 2, so as to leave an unobstructed concave face 34 to which the Fabrikoid 35 is applied. This Fabrikoid is, of course, applied by means of an adhesive.

In this instance, the handling frame for the wall, is located on the convex side of the curve, and may comprise a plurality of vertical frame bars 36 with feet 37 to rest on the floor, and connected by diagonal braces 38.

If it is necessary to form a set wall with a corner 39 as illustrated in Fig. 6, I prefer to employ a transverse header plate 40, which is set up across the platen and supported on end bars 41, the lower ends of which are attached by bolts 42 to the side bars 4 of the frame.

Although I have illustrated the plate 1 as mounted and operated in such a way that it presents a concave upper face to receive the layers of material in practicing my method, it is obvious that if desired, the plate 1 could be supported adjustably so as to present a convex upper face on which the layers of material could rest in using the method. In any case, the layers

of material assume their curved form by the action of gravity. It is unnecessary to clamp them in position or against each other. However, it is also obvious that if desired, pressure could be applied to press the uppermost layers forcibly against the lower layers. This can be more conveniently done on a concave form than on a convex form; and, furthermore, I prefer the concave form because it leaves the end edges of the layers at an elevated point, which feature facilitates the application of the adhesive substance between the layers, and also prevents any dripping of the same out of the space between the layers. In other words, the effect of gravitation on any fluid adhesive, would be to have the adhesive run further into the wall being formed.

If the frame is constructed of light angle iron, it may be provided with a plurality of intermediate legs 43, in addition to the end legs 44, and all of the legs may be braced in place by suitable diagonal braces 45.

What I claim is:

1. A method of forming a rigid fabricated wall of curved shape, which consists in supporting a layer of flexible sheet material disposed in a curve with its concave side uppermost, applying an adhesive and a second layer of flexible material to lie freely upon the upper face of the first-named layer, and thereby permitting the said second layer to assume by the action of gravity, the curved form of the first-named layer to form a curved body, and covering the forward face of the fabricated body with a flexible adhering sheet presenting a finished surface on its outer side.

2. A method of forming a rigid fabricated wall of curved shape, the convex face of which is to be presented to view, which consists in supporting a layer of sheets of flexible material with their ends abutting, and with their concave side uppermost, applying an adhesive and a second layer of said sheets to lie freely upon the upper face of said first layer, so that the said second layer under the action of gravity, assumes the curved form of the first-named layer, and with the ends of the sheets of the second layer abutting each other and forming butt joints out of line with the abutting ends of the first-named sheets, and covering the convex face of the fabricated body with a flexible adhering sheet having a finished face on its outer side.

3. A method of forming a rigid fabricated wall of curved shape, the concave face of which is to be presented to view, which consists in supporting a layer or rows of sheets composed of abutting sheets of flexible material disposed in a curve with their concave faces uppermost, placing transverse cross-tie strips under the abutting ends of said sheets with adhesive between the faces of the sheets and the tie-strips, laying longitudinal tie-strips under the abutting longitudinal edges of the said rows, laying an upper layer of similar sheets lying freely on the first layer with adhesive connecting the same, and so that the upper layer assumes by gravity, the curved form of the lower sheets, and covering the concave face of the body so fabricated, with an adhering flexible sheet having a finished outer surface.

4. A method of forming a rigid fabricated wall of curved shape, which consists in supporting a layer of flexible sheet material disposed in a curve with its concave side uppermost, applying an adhesive, and a second layer of flexible material to lie freely upon the upper face of the first-named layer, and permitting the same to assume by gravity the curved form of the lower sheet to form a curved body, and stiffening the said curved body at separated points by laying and cementing successive layers of strips of similar material on the upper face of the curved body.

5. A method of forming a curved stringer for the upper or lower edge of a curved wall for a moving picture set, which consists in supporting a layer of flexible strip material disposed in a curve with its upper face concave, and applying adhesive and successive layers of similar material so as to lie freely on the concave upper face of the same to form a curved rigid fabricated body.

6. A method of forming a rigid fabricated wall of curved shape, which consists in supporting a layer of flexible sheet material disposed in a curve, applying an adhesive, and a second layer of flexible material to the upper face of the first-named layer to lie freely upon the first-named layer so that the same assumes by gravity, the curved shape of the first-named layer.

7. A method of forming a rigid fabricated wall of curved shape, which consists in supporting a layer of sheets of flexible material with their ends abutting, and with their concave side uppermost, applying an adhesive and a second layer of said sheets to lie freely upon the upper face of said first layer, so that the said second layer under the action of gravity assumes the curved form of the first-named layer, and with the ends of the sheets of the second layer abutting each other and forming butt joints out of line with the abutting ends of the first-named sheets, placing transverse cross tie-strips adjacent the abutting ends of said sheets only on one side of the same with an adhesive between the faces of the sheets and the tie-strips, and covering the other face of the fabricated body with a flexible adhering sheet having a finished face on its outer side.

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