Nov. 7, 1950 M. H. HINTERSTEINER 2,528,829

ORNAMENTAL SCREEN

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Fig. 1

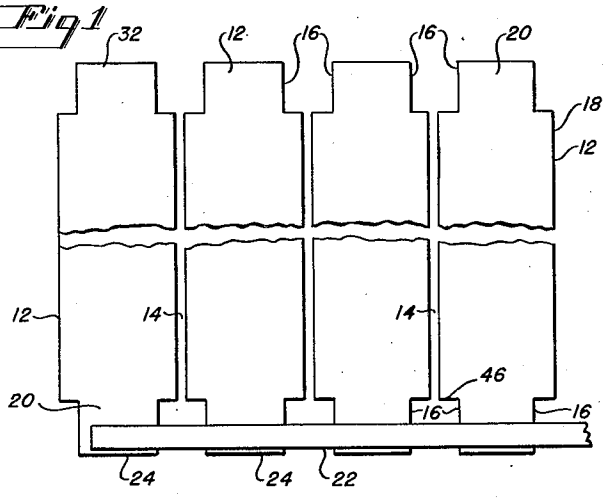


Fig. 4

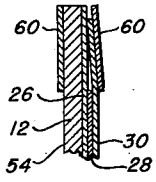


Fig. 5

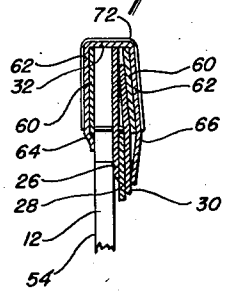


Fig. 2

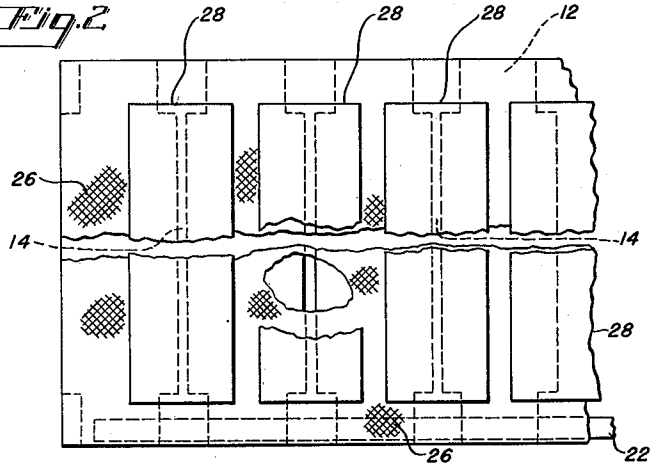
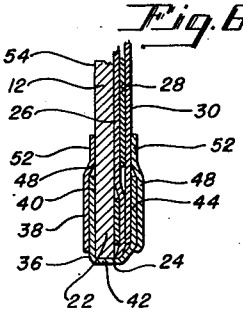


Fig. 6



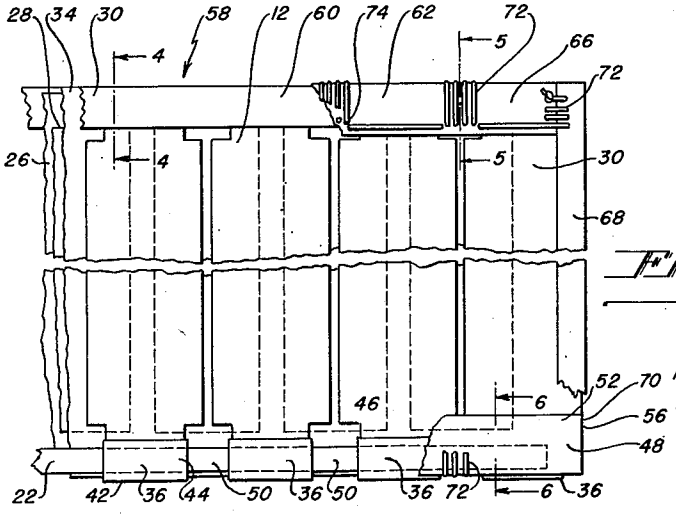


Fig. 3

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Fig. 7

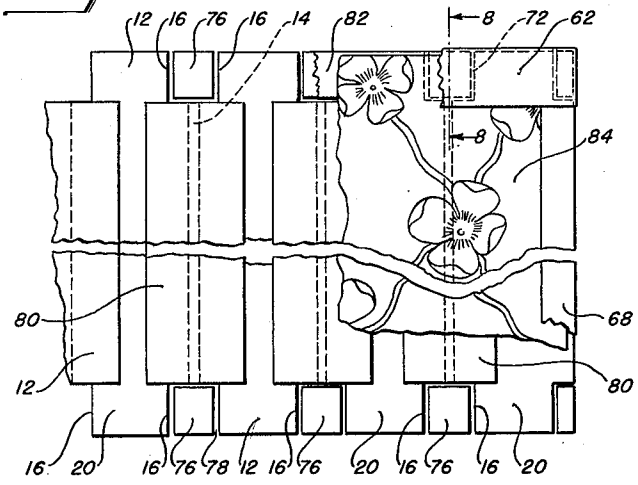
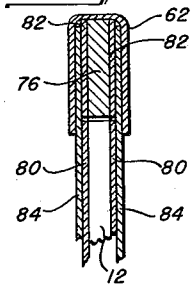


Fig. 8



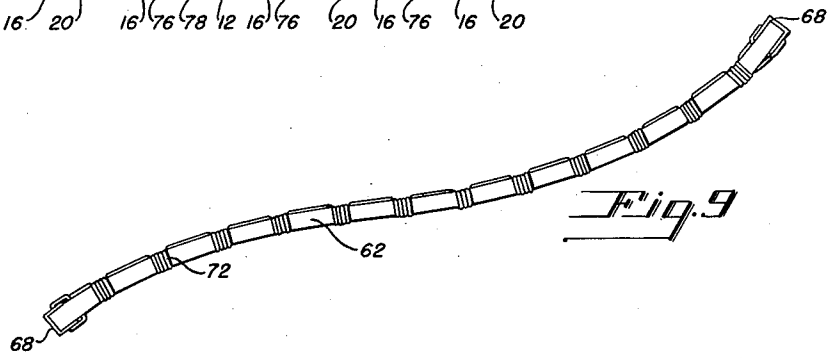


Fig. 9

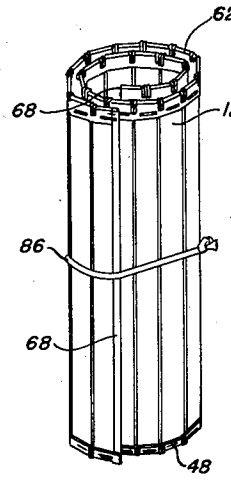


Fig. 10

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UNITED STATES PATENT OFFICE

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ORNAMENTAL SCREEN

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Application October 8, 1946, Serial No. 701,891

4 Claims. (Cl. 160—231)

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This invention relates to screens.

An object of the invention is to provide a screen which is formed of a plurality of elongated members which are flexibly interconnected and so constructed and arranged as to permit the screen to stand upon a level surface such as a floor without further bracing.

Another object of the invention is to provide a floor screen which includes a number of elongated slats slightly spaced from each other, with flexible members interconnecting the slats along their upper and lower end portions, and having a resilient member underlying said flexible members.

A further object of the invention is to provide a floor screen formed of a number of upstanding slats slightly spaced from each other and backed on at least one face with facing material, said screen including opaque flexible strips overlying the spaces between adjacent slats to block the passage of light therethrough.

Still another object of the invention is to provide a floor screen which is adapted for being bent into any suitable curved shape for supporting itself upon a floor, and which is easily folded or rolled up for storage or transportation.

Another object of the invention is to provide a floor screen which is simple in design, inexpensive to manufacture, light in weight, and which is attractive in appearance.

Other objects and advantages of the invention will become apparent from the following description of a preferred embodiment thereof as illustrated in the accompanying drawings, and in which,

Figure 1 is a face view of one of the first stages in assembly of the screen, showing the slats and the resilient metal strip,

Figure 2 is a face view similar to Figure 1, but showing a later assembly stage with other parts added,

Figure 3 is a face view of a portion of the assembled screen, broken out to illustrate the underlying construction,

Figure 4 is a sectional view taken on line 4—4 of Figure 3,

Figure 5 is a sectional view taken on line 5—5 of Figure 3,

Figure 6 is a sectional view taken on line 6—6 of Figure 3,

Figure 7 is a face view similar to that of Figure 3, showing a modified form of the invention, and broken out to show the underlying construction,

Figure 8 is a sectional view taken on line 8—8 of Figure 7,

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Figure 9 is a top plan view of the screen shown in Figure 3, in standing position upon a floor, and

Figure 10 is a perspective view of the screen shown in Figures 3 and 9, rolled up for storage or transportation.

In the manufacture of floor screens, it has been customary to construct them of a number of rigid panel sections, usually three, hinged together along abutting edges. The present invention, as described herein, constitutes a departure from the prior customary screen construction, and permits the manufacture of a screen which may be considerably lighter in weight, and which may make use of flexible covering materials in a particularly decorative and utilitarian manner. In addition, the use of a continuous flexible backing material blocks passage of light through any portion of the screen, which with the prior types of construction presented a problem which was not easily solved.

Reference may now be had to the drawings, in which like reference characters denote similar parts throughout the several views. As best shown in Figure 1, a number of elongated slats 12 are laid side by side with a slight spacing or crack 14 therebetween. The slats may be formed of wood or other suitable material, and are cut away along an end portion 16 of their longitudinal edges 18, the ends 20 of the slats being accordingly reduced along both edge portions as shown in Figure 1.

A flat resilient strip 22 of metal such as spring brass or the like, is then laid across the reduced end portions or lower extensions 24 of the slats, as shown in Figure 1, the metal strip being long enough to overlie all the slats in the screen. It will be observed that the brass strip is slightly spaced from the lower ends of the slats. Then a backing sheet 26 of fabric or other suitable flexible material is laid over all the slats and the brass strip 22, as shown in Figures 2, 5 and 6. The backing sheet 26 is cemented to the faces of the slats but not to the brass strips 22, which thus floats therebetween, that is to say, is slidable longitudinally across the ends of the slats to a limited extent.

As already explained, there is some slight spacing 14 between adjacent slats, as shown in Figures 1 and 2, and accordingly, to prevent the passage of light through the cracks 14 and through the backing cloth 26, strips 28 of opaque flexible paper are cemented onto the backing cloth 26 over each crack 14, so as to overlie the cracks and prevent passage of light therethrough. These paper strips not only prevent passage of light, but

also have the advantage of adding stiffening to the backing fabric over the cracks where it is of considerable importance, thereby preventing the fabric 26 from being depressed into the cracks 14. The paper strips are shorter than the slits, as illustrated.

An outer sheet 30 of fabric is then laid over the inner fabric 26 and paper strips 28, as shown in Figures 3, 4, 5 and 6. It will be observed that both the inner fabric sheet 26 and the outer fabric sheet 30 extend all the way from the top edges 32 of the slats 12, to their bottom edges 24, also extend sidewise across the slat faces from the left hand edge of the extreme left slat to the right hand edge of the extreme right hand slat of the screen, so as to overlie the entire screen face. The outer fabric may be cemented directly onto the surface of the inner fabric 26 and the paper strips 28 provided the outer fabric is of such material that the cement will not soak through it and be visible from the outside surface thereof.

If, however, as is usually the case with decorative outer fabrics, the cement might penetrate the outer fabric and show through, it has been found best to first sew a liner fabric sheet 34 to the undersurface of the outer fabric 30. Then the liner fabric sheet 34 which is just as large as the outer fabric sheet 30, may be cemented directly over and to the inner fabric 26 and paper strips 28, the liner sheet being selected particularly for having a degree of impermeability to penetration by the cement. The use of a liner sheet is also necessary when the outer fabric is of a plastic material which is not readily cemented onto the inner fabric.

As best shown in Figures 3 and 6, footing strips 36 of flexible material such as leather, are bent in substantially a U-shape as shown in Figure 6, and so disposed so as to have one leg 38 overlying the inner face surface 40 of the reduced portion 20 at the lower end of each slat 12, the footing strip being cemented thereto as shown. The web portion 42 of the footing strip is cemented against the lower edge of the slat, as shown in the views, particularly Figure 6, and the other leg 44 of the footing strip extends upward and over the lower marginal edge portion of the outer fabric 30, being cemented thereto. It will be observed that there is one such footing strip attached to the bottom of each slat, and the legs 38 and 44 thereof do not extend upwards quite to the upper ends 46 of the notches 16 on the slats, and also that the footing strips need be only as wide as, or possibly slightly wider than the reduced end portions 20 of the slats, as best shown in Figure 3.

The spaced footing strips should be of sturdy material inasmuch as the screen is supported directly upon them, as it rests on the floor surface. An elongated bottom edging tape 48 is then placed along the lower inner and outer margins of the screen, as shown in Figures 3 and 6, being cemented onto the legs 38 and 44 the footing strips and to the intervening outer fabric along its lower margin, in the spaces 50 between the footing strips. The upper edge 52 of the edging tape 48, which extends above the upper ends of the footing strip legs 38 and 44, as best seen in Figure 6, is cemented directly against the outer fabric 30 on one face of the screen, and directly against the slats 12 on the rearward face 54 of the screen. The edging tape 48 may be a continuous strip if desired, being bent about the edges of the screen, as at 56 in Figure 3.

The upper edge 58 of the screen, having no footing strips, may be bound by means of an upper edging tape 60 which is similar to the lower edging tape 48, extending around the front and rear faces of the screen along its upper margins, as shown in Figures 3, 4 and 5, the tape being cemented against the underlying slats on the rearward face 54 of the screen and against the underlying outer fabric 30 on the forward face of the screen. A binding tape 62 is then folded into the form of a U-shaped channel as seen in Figure 5, and placed over the top edge of the screen, with its depending legs 64 and 66 cemented down upon the underlying materials as already described.

A binding tape 68, similar to the top binding tape 62 and also bent into a channel, is employed to bind the vertical left and right side edges 70 of the screen, as shown in Figure 3. Ornamental straw or rattan 72 is used to bind the binding tapes 62, 68 and also the lower edging tape 48 if desired, the rattan being threaded through holes 74 formed in the screen, the rattan being preferably in a contrasting color.

Figures 7 and 8 show a modified form of the invention. The form of screen shown is similar to that shown in the other views and already described, inasmuch as it makes use of the elongated slats 12, noched out at 16 on both ends and laid side by side with their abutting side edges slightly spaced as at 14. However, the modified form does not have the spring brass strip shown at 22 in Figure 1. Instead it has small wooden blocks 76 which are disposed between the noched edge portions 16 of adjacent slats in the recesses 78 defined thereby. Then, paper strips 80 are cemented over the cracks 14 between adjacent slats, the spaced paper strips being cemented on both faces of the slats so as to block passage of light therethrough and to prevent the outer fabrics from entering the cracks 14. Edging tapes 82 are then cemented over both marginal face portions of the screen somewhat in the manner of the tape 60 in Figure 5, but being cemented directly upon the upper margins of the faces of the slats and the wood blocks therebetween on both faces of the screen, and along both the upper and lower edges of the screen.

An outer fabric sheet 84 may then be cemented directly upon both faces of the screen, directly upon the underlying paper strips, slat faces, and edging tapes 82, provided the material is such that the cement will not penetrate it to spoil its appearance, as already discussed above. If, however, the material is such that penetration of the cement would spoil its decorative appearance, or if it is of a plastic material which is not easily cemented, then an inner lining sheet may be stitched to the inner surface of the outer fabric sheet as already described above, and the inner lining sheet then cemented upon the underlying paper strips, slat faces, and edging tapes.

The upper and side edges of the modified form of screen may also be bound with binding tape 62 and 68 as already described for Figures 3 and 5, decorative rattan 72 being employed if desired in the same manner.

In use, the screen is opened out as shown in Figure 9, in the form of a roughly S-shaped curve when seen from above, and is then stood upon the floor, where it will stand in a stable manner. The screen may also be set up in other shapes, such as a semi-circle when seen from above, and will also stand in such positions. For transportation or storage, the screen may be rolled up as shown in Figure 10, with the slat faces on the outside when the form of screen

shown in Figure 3 is employed, and it may also be rolled up when the modified form shown in Figure 7 is used. A strap 86 may be used to encircle the rolled up screen, to hold it against unrolling.

Although I have described preferred forms of my invention, it is to be understood that various changes may be made in size, shape, materials and arrangement without departing from the spirit and scope of the invention as claimed.

I claim:

1. A screen comprising a plurality of elongated slats disposed in side by side relationship with their abutting longitudinal edges slightly spaced from each other to form cracks therebetween, a resilient metallic strip disposed in overlying relationship to all said slats near one end thereof, edging tapes overlying both faces of all of said slats near an end margin thereof and adhesively secured thereto to flexibly interconnect said slats to form a flexible screen body, an inner fabric sheet overlying all said slats on one face thereof and adhesively secured thereto, elongated opaque strips adhesively secured to said inner fabric sheet overlying said cracks between said slats, and an outer fabric sheet overlying said inner fabric sheet and secured thereto.

2. A screen comprising a plurality of elongated slats disposed in side by side relationship with their abutting longitudinal edges slightly spaced from each other to form cracks therebetween, a resilient metallic strip disposed in overlying relationship across all said slats near one end thereof, edging tapes overlying both faces of all said slats near an end margin thereof and adhesively secured thereto to flexibly interconnect said slats to form a flexible screen body, an inner fabric sheet overlying all said slats on one face thereof and adhesively secured thereto, elongated opaque strips adhesively secured to said inner fabric sheet overlying said cracks between said slats to block passage of light therethrough, an outer fabric sheet overlying said inner fabric sheet, and an outer flexible liner sheet secured to the inner surface of said outer fabric sheet and adhesively secured to the outer surface of said inner fabric sheet.

3. A screen comprising a plurality of elongated slats disposed in side by side relationship with their abutting longitudinal edges slightly spaced from each other to form cracks therebetween, a resilient metallic strip disposed in overlying relationship across all said slats near one end thereof, said slats being recessed at the ends of their abutting edges to form recesses therebetween, an inner fabric sheet overlying all said slats on one face thereof and adhesively secured thereto, elongated opaque strips adhesively secured to said inner fabric sheet overlying said cracks between said slats to block light passage therethrough, an outer fabric sheet overlying said inner fabric sheet, an outer flexible liner sheet secured to the inner surface of said outer fabric sheet and adhesively secured to the outer surface of the said inner fabric sheet, and substantially U-shaped footing strips secured over the lower ends of said slats and having one leg thereof secured to the rearward surface of said slats, and having the other leg thereof secured over the lower marginal edge surface of said outer fabric sheet.

4. A screen comprising a plurality of elongated slats disposed in side by side relationship with their abutting longitudinal edges slightly spaced from each other to form cracks therebetween, a resilient metallic strip disposed in overlying relationship across all said slats near the lower end thereof, said slats being recessed at the ends of their abutting edges to form recesses therebetween, an inner fabric sheet overlying all said slats on one face thereof and adhesively secured thereto, elongated opaque strips adhesively secured to the inner fabric sheet overlying said cracks between said slats to block passage of light therethrough, an outer fabric sheet overlying said inner fabric sheet, an outer flexible liner sheet secured to the inner surface of said outer fabric sheet and adhesively secured to the outer surface of said inner fabric sheet, substantially U-shaped footing strips secured over the lower ends of said slats and over said lower marginal edge of the outer fabric sheet, lower edging tapes overlying and secured to all of said footing strips, upper edging tapes overlying and secured to the upper ends of said slats and the adjacent outer fabric sheet, and binding tapes overlying and secured to the upper edging tapes and the side edges of said screen body.

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