June 27, 1944. L. WINTERS 2,352,420

FLEXIBLE WALL OR PARTITION

Filed Nov. 26, 1943

Fig. 1.

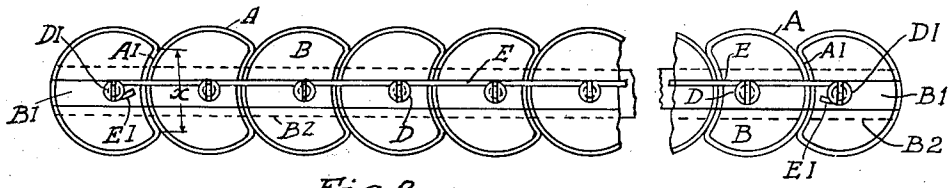
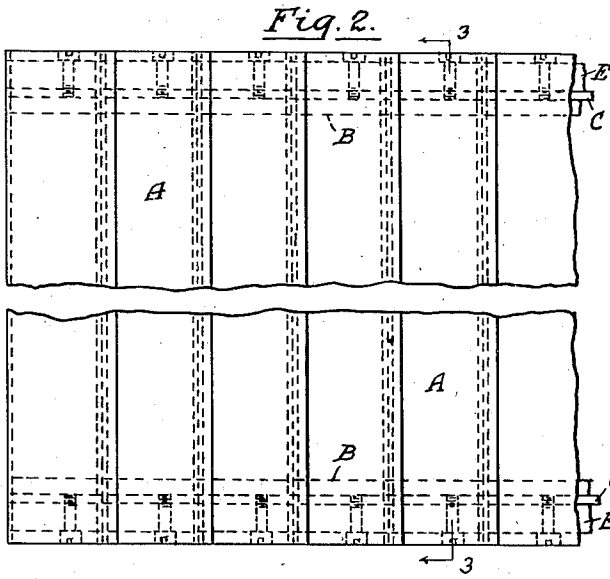


Fig. 2.



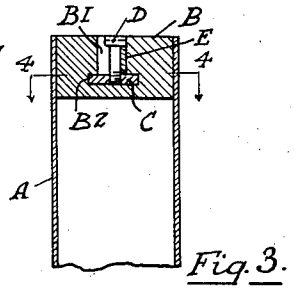


Fig. 3.

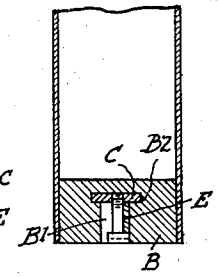


Fig. 5.

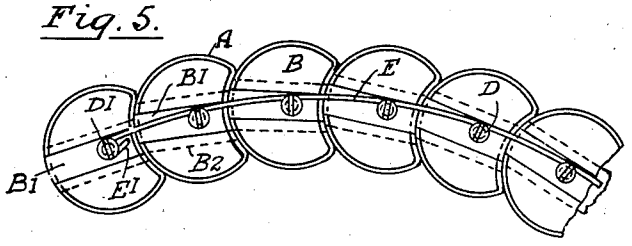


Fig. 4.

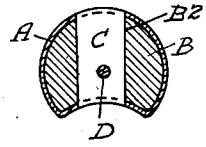


Fig. 6.

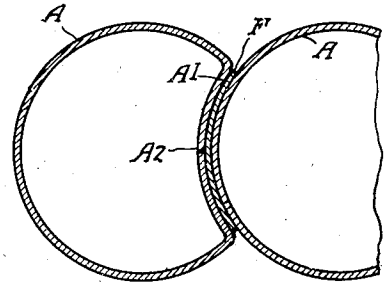
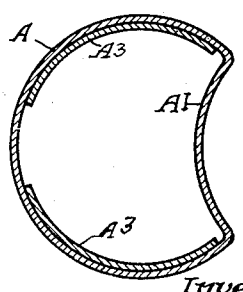


Fig. 7.



Inventor.

Leo Winters

Patented June 27, 1944 2,352,420

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2,352,420

FLEXIBLE WALL OR PARTITION

Leo Winters, Detroit, Mich.

Application November 26, 1943, Serial No. 511,869

8 Claims. (Cl. 160—231)

My invention relates to flexible walls or partitions, and its principal object is to provide a wall or partition which, while possessing a certain degree of flexibility, is at the same time perfectly insulated both against the passage of heat from one side to the other and against the leakage of rain water, dust and dirt.

Another object of my said invention is to provide a construction in which it is possible to build up a wall or partition of any required size from a series of stock elements cut from commercial lengths and combined in various numbers to form any desired width.

A further object is to provide means for making the inside and outside of a wall of different finishes and colors and of such materials as will be inherently fade-proof and weather-proof, so that no additional painting or finishing is necessary.

The present invention, while of general utility, is particularly adapted for use in connection with house trailers of the kind described in my pending application, Serial No. 476,485, filed February 19, 1943, in which folding roof and floor extensions are provided, together with a flexible wall by which the enclosed area of the trailer is greatly increased.

In order that my invention may be readily understood I will now describe a preferred embodiment of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a plan view showing a short section of wall arranged in rectilinear form.

Figure 2 is a fragmentary side elevation of the same.

Figure 3 is a fragmentary vertical section, taken on line 3—3 of Figure 2.

Figure 4 is a horizontal section, taken on line 4—4 of Figure 3.

Figure 5 is a plan view similar to Figure 1, but showing the elements arranged in curved formation.

Figure 6 is a fragmentary horizontal section showing one method of forming the adjoining elements and

Figure 7 is a horizontal section showing an alternative construction.

Like characters designate corresponding parts throughout the several views.

In the drawing, A designates a series of vertical tubular members adapted to be assembled side by side, each of said members being in general cylindrical but each having a concave portion A^1 which fits against the adjoining member so as to obtain an effective depth of wall x approximately three-fourths of the full diameter of the member, so as to provide perfect insulation between the inner and outer surfaces of the wall. The members A are provided at their ends with plugs B in which are diametrically extending slots B^1. Inwardly of these slots are formed wider slots B^2 in which are placed flat plates C and in these latter plates are tapped holes to receive screws D. Between the heads of the screws D and the plates C is held a strip of metal E which extends throughout the width of the wall and has its ends E^1 bent around so as to engage the terminal screws D^1 as shown in Figure 1. Due to the construction of the wall members above described and to their means of connection by the member E, it is possible to bend the wall into a curved shape as shown in Figure 5 of the drawing, the amount of curvature depending upon the width of the slots B^1.

The tubular members A may be constructed in various ways, one of which is shown in Figure 6, a tube in this case being formed from a flat strip of material having a butt joint at A^2, and between the adjoining surfaces of the tubes are interposed packings F either of plastic material or some form of water-proofed fabric which makes a completely water and dust proof joint. The tubes A may be formed of metal, as shown in Figure 6, and the inner and outer exposed surfaces of the wall may be painted or otherwise decorated in different colors. In some cases, however, I may form the tube A of transparent plastic material having inner and outer linings A^3 of different colored plastic material, as shown in Figure 7, thereby producing a highly ornamental and permanent finish on both sides of the wall. Alternatively the tubes may be formed by extrusion or other means from a single piece of plastic material so as to present different colors on the inside and outside of the wall.

It will be obvious that, due to the fact that the plates C pass through the tubular members as well as through the plugs B, the latter are securely held in place lengthwise of the tubes. In order to increase the insulating effect of my improved wall I may fill the body of each tube with ground cork, spun glass, mica, rock wool or any of the insulating substances used for similar purposes. The plugs B may be of metal, plastic or other suitable material and where the ends of the tubular elements abut upon a support, I may apply a molded fillet of felt or the like extending around them so as to exclude the possibility of leakage.

It will be observed from the foregoing descrip-

tion and by reference to the drawing that I have provided a wall or partition which is at the same time flexible and sag-proof and which may be used alternatively in fixed rectilinear form, and while I have herein shown a preferred embodiment of the invention, it will be readily understood by those skilled in the art to which the same pertains that various modifications in detail may be made to suit any particular or peculiar requirement without departing from the spirit of the invention as defined in the appended claims.

Having thus described my said invention, what I claim and desire to secure by Letters Patent of the United States is:

1. A flexible wall comprising a plurality of tubular members having their external surfaces adapted to fit together, each of said members having an arcuate concave portion to receive the convex portion of an adjacent member and said respective portions having packing means therebetween, and means for holding them in permanent contact one with the other.

2. A flexible wall comprising a plurality of tubular members having their external surfaces adapted to fit together, and means for holding them in permanent contact one with the other, said means including transverse slots in the ends of said members, and a tensile element passing through said slots and anchored to each of the end members.

3. A flexible wall comprising a plurality of tubular members having their external surfaces adapted to fit together, each of said members having an arcuate concave portion to receive the convex portion of an adjacent member, and means for holding them in permanent contact one with the other, said means including transverse slots in the ends of said members, and a tensile element passing through said slots and anchored to each of the end members.

4. A flexible wall comprising a plurality of tubular members having their external surfaces adapted to fit together, each of said members having an arcuate concave portion to receive the convex portion of an adjacent member and said respective portions having packing means therebetween, and means for holding them in permanent contact one with the other, said means including transverse slots in the ends of said members, and a tensile element passing through said slots and anchored to each of the end members.

5. A flexible wall comprising a plurality of tubular members having their external surfaces adapted to fit together, and means for holding them in permanent contact one with the other, said means including closure plugs secured in the ends of the members and having transverse slots therein, a tensile element passing through said slots and anchored to each of the end members, and screws in said plugs for retaining said element in place.

6. A flexible wall comprising a plurality of tubular members having their external surfaces adapted to fit together, each of said members having an arcuate concave portion to receive the convex portion of an adjacent member, and means for holding them in permanent contact one with the other, said means including closure plugs secured in the ends of the members and having transverse slots therein, a tensile element passing through said slots and anchored to each of the end members, and screws in said plugs for retaining said element in place.

7. A flexible wall comprising a plurality of tubular members having their external surfaces adapted to fit together, each of said members having an arcuate concave portion to receive the convex portion of an adjacent member and said respective portions having packing means therebetween, and means for holding them in permanent contact one with the other, said means including closure plugs secured in the ends of the members and having transverse slots therein, a tensile element passing through said slots and anchored to each of the end members, and screws in said plugs for retaining said element in place.

8. A flexible wall comprising a plurality of tubular members having their external surfaces adapted to fit together, each of said members having an arcuate concave portion to receive the convex portion of an adjacent member, and means for holding them in permanent contact one with the other, said means including closure plugs secured in the ends of the members by locking plates passing through said plugs and said members and said plugs having transverse slots therein, a tensile element passing through said slots and anchored to each of the end members, and screws in said plugs for retaining said element in place.

LEO WINTERS.