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REINFORCED CORRUGATED SHEET

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Fig. 1

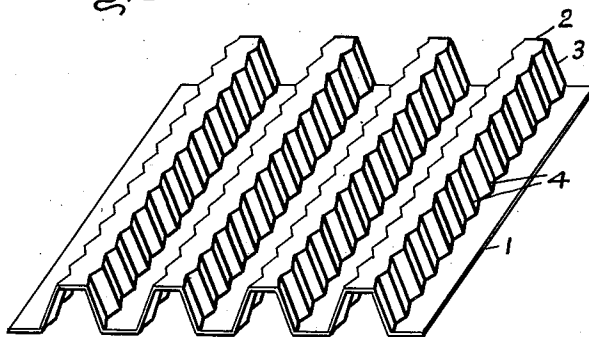
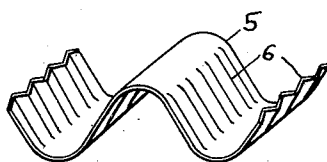


Fig. 2



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REINFORCED CORRUGATED SHEET

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3 Claims. (Cl. 154—55)

My invention relates to reinforced corrugated sheets and has particular reference to corrugated metal or paper sheets.

Ordinary corrugated sheets have relatively low resistance against crushing, especially if the corrugations are deep and have more or less flat sides which readily buckle under load. My invention has for its object therefore to reinforce the side walls of the corrugations by providing them with additional or transverse corrugations extending at right angles to the main or longitudinal corrugations. The transverse corrugations impart rigidity to the walls of the main corrugations and strengthen them against collapsing under load so that my corrugated sheets can withstand greater loads without collapsing than ordinary corrugated sheets. Such doubly corrugated sheets can be advantageously used for making cardboard boxes of a relatively high rigidity, sound and heat insulating boards and similar articles.

My invention is more fully described in the accompanying specification and drawing in which—

Fig. 1 is a perspective view of my corrugated sheet, and

Fig. 2 is a perspective view of another form of my corrugated sheet.

My reinforced corrugated sheet 1 comprises main or longitudinal corrugations 2 which may be of a trapezoidal shape as shown in Fig. 1 or rounded as shown in Fig. 2. The side walls 3 of the main corrugations are themselves corrugated, having relatively small transverse corrugations 4 extending at right angles to the longitudinal corrugations. These transverse or secondary corrugations may be of any suitable shape.

These secondary corrugations represent reinforcement of the side walls of the main corrugations and prevent or inhibit their buckling under load. The top surfaces of the corrugations may

be flat as shown in Fig. 1 for gluing them to sheets of flat board or paper when preparing built-up boards.

The sheet of Fig. 2 has round corrugations 5 with small transverse stiffening corrugations 6 formed in the flat portions of the sides of the longitudinal corrugations and partly extending into the curved top portions.

My doubly corrugated sheets can be also used as a building material because of their considerable rigidity. When applied to sheet metal, the double corrugations render this material suitable for fire-proof structures, such as metal garages, store-rooms, warehouses, workshops, etc.

I claim as my invention:

1. A reinforced corrugated sheet with corrugations of a trapezoidal cross-section, having top and bottom planar portions lying in two parallel planes, the side walls having straight transverse corrugations coterminous with the said planar portions thereby imparting a zig-zag outline to the edges of the planar portion.

2. A reinforced corrugated sheet with corrugations having straight side walls and planar top and bottom portions lying in two parallel planes, the walls having transverse corrugations of a zig-zag shape coterminous with the said planar portions.

3. A reinforced corrugated sheet with corrugations having side walls and top and bottom planar portions lying in two parallel planes, the walls having transverse corrugations coterminous with said planar portions thereby imparting an outline to the edges of the planar portions corresponding to the cross-sectional outline of the corrugations and thereby rendering inflexible the joints between the walls and planar portions.

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