Sept. 28, 1943. R. G. LE TOURNEAU 2,330,602

METHOD OF MAKING INSULATED BRACES

Original Filed Aug. 23, 1939

Fig. 1

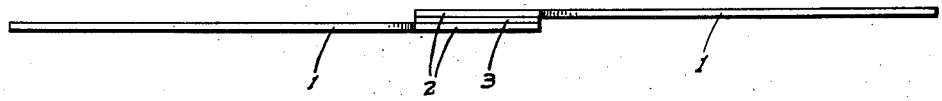


Fig. 2

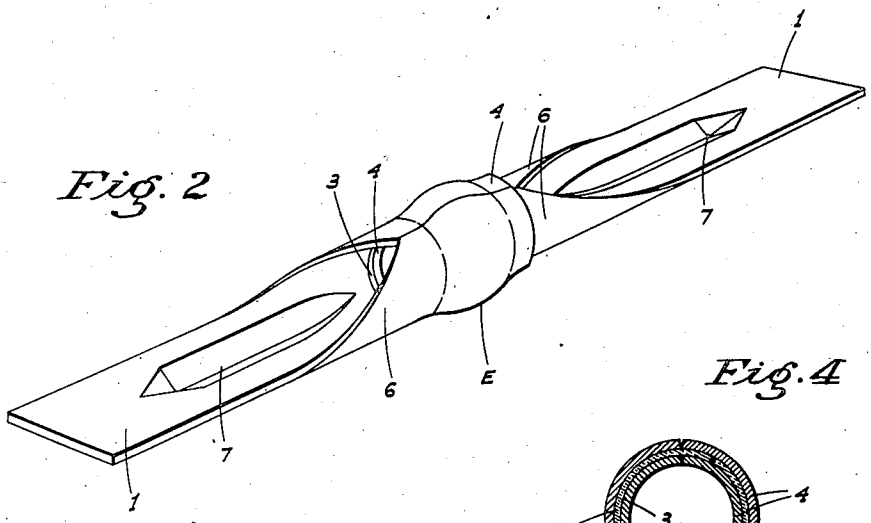


Fig. 4

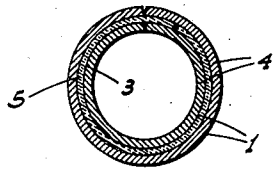
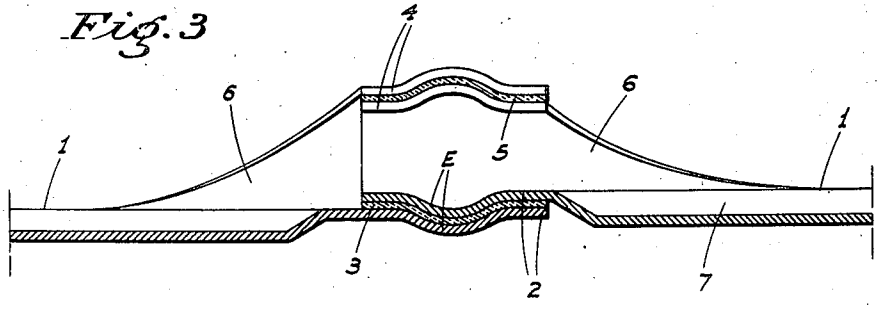


Fig. 3



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METHOD OF MAKING INSULATED BRACES

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Original application August 23, 1939, Serial No. 291,552. Divided and this application August 1, 1941, Serial No. 405,036

2 Claims. (Cl. 29—150)

This invention relates to the manufacture of heat-insulated braces for connection between the spaced metal plates of prefabricated building panels such as are shown in my Patent No. 2,180,830, issued November 21, 1939.

The present invention deals with the method of making the brace shown in my allowed application for patent, Serial No. 291,552, filed August 23, 1939 (U. S. Patent No. 2,252,012), and is a divisional part of such application. My object is to provide a method of assembling the parts of the brace in a commercially practical manner and so that a rigid unit is formed.

In the accompanying drawing:

Figure 1 is a side or edge elevation of the initially separate and flat metal strips which form the brace, shown as overlapped at their adjacent end with the sheets of insulating material disposed between said overlapped portions.

Figure 2 is a perspective view of the brace as manufactured or formed and ready for use.

Figure 3 is a longitudinal sectional elevation of the brace.

Figure 4 is a transverse section through the brace at a point centrally of its ends.

Referring now more particularly to the characters of reference on the drawing, the brace consists of a pair of initially flat relatively long rectangular deformable metal strips and a relatively small rectangular sheet 3 of insulating material of suitable nature. In forming the brace from these parts, the strips are disposed in longitudinal alinement with their adjacent end portions 2 overlapped for the length of the sheet 3, the latter being interposed between and of substantially the width of said overlapped portions. By die-forming, or other suitable manufacturing operations, the overlapped portions 2 of the strips, with the insulation sheet 3 therebetween, are simultaneously rolled or formed into tubular sections 4 of substantially semicircular form, and so that the corresponding portions of the side edges S of the strips substantially meet, as shown in Fig. 2. The insulation sheet 3 then obviously forms a cylindrical spacer or band 5 between the tubular sections and preventing any metal-to-metal contact thereof.

In connection with this forming operation, which leaves the outer end portions of the strips 1 alined and projecting from the periphery of the sections 4 opposite their meeting edges, the tubular sections 4 are pressed or deformed outwardly from within to form annular enlargements or bulges E which obviously prevent axial operation or movement of the sections. The desired rigidity of the brace is obtained by reason of the side walls or skirts 6 formed along the strips 1 in conjunction with the formation of the tubular sections, and which extend along the strips a certain distance from the ends of the sections at their meeting edges S. Further strengthening of the brace against deflection may be obtained by pressing depressions or troughs 7 into the remaining flat portions of the strips to provide longitudinal stiffening ribs.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. That method of forming an insulated brace from a pair of initially flat bendable strips, and a sheet of insulation material of substantially the same width; comprising the steps of disposing the strips in longitudinal alinement with only adjacent end portions overlapping, and with said sheet of insulation material engaged between said overlapping end portions, thereafter simultaneously bending said overlapped end portions of the strips and intermediate sheet of insulation material transversely thereof into a telescopic assembly of tubular configuration wherein the end portion of one of said strips surrounds the end portion of the other strip and said sheet in clamping engagement, and radially deforming said telescopic assembly throughout only a part of its length and to an extent to alter the diameter of said part so as to thereafter prevent relative axial separating movement of said strips.

2. That method of forming an insulated brace from a pair of initially flat bendable strips, and a sheet of insulation material of substantially the same width; comprising the steps of disposing the strips in longitudinal alinement with only adjacent end portions overlapping, and with said sheet of insulation material engaged between said overlapping end portions, thereafter simultaneously bending said overlapped end portions of the strips and intermediate sheet of insulation material transversely thereof into a telescopic assembly of tubular configuration wherein the end portion of one of said strips surrounds the end portion of the other strip and said sheet in clamping engagement, and radially deforming said telescopic assembly annularly, from within, and throughout only a part of its length intermediate its ends whereby to form an annular enlargement and thereby prevent relative axial separating movement of said strips.

ROBERT G. LE TOURNEAU.