

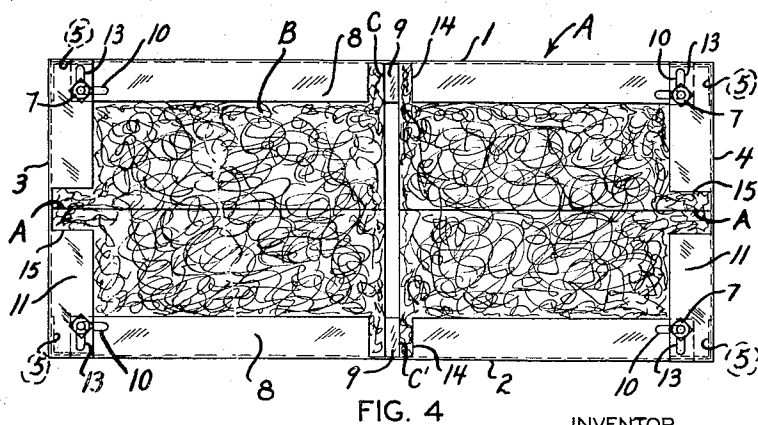
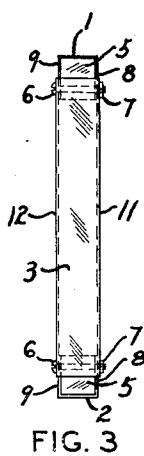
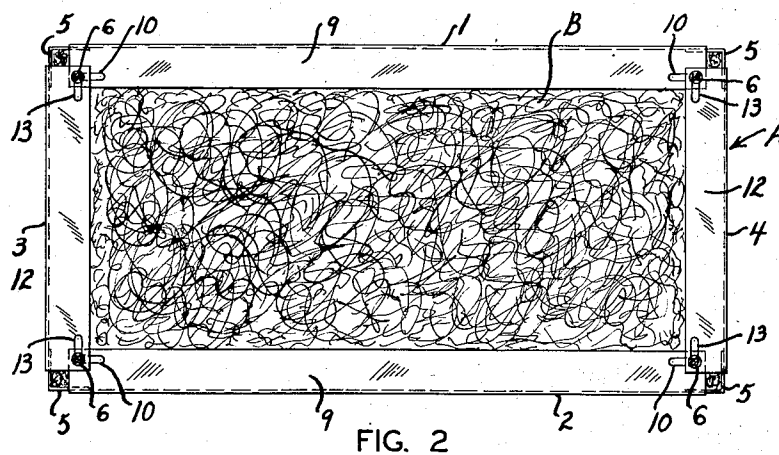
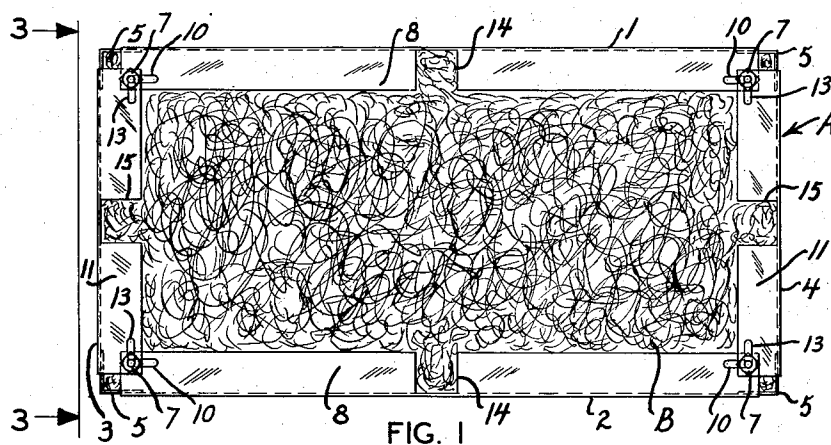
Aug. 28, 1951

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2,565,698

INSULATOR ASSEMBLY

Filed May 14, 1947



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## UNITED STATES PATENT OFFICE

2,565,698

## INSULATOR ASSEMBLY

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Application May 14, 1947, Serial No. 748,133

3 Claims. (Cl. 189—34)

1

This invention relates to improvements in insulator assemblies of the type having a frame adapted to support and aid in the positionment of a body of material, such as insulation, in an opening of a structure.

An important object of the invention is to be found in the simple and economical formation of a frame structure for supporting a body of relatively frangible or easily destructible material, wherein the frame is comprised of side members, substantially identical except as to length, and cooperating corner shielding elements which are self-adjustable and movable relative to the side members.

Another object is the further improvement in an insulator assembly of the above character wherein the side members are adjustably secured in assembly by fastening elements, and wherein the latter elements are normally held in fixed positions by the body of material to be supported, provision being made for easily removing portions of the body material in order to effect a suitable adjustment of the frame and body for a given size of opening.

Other objects hereof are to be found in the form, structure and adjustable assembly provisions which will carry out the foregoing objects in accordance with the following detailed description of an exemplary embodiment of the invention when taken with the accompanying drawing, in which:

Fig. 1 is a rear face view of the present insulator assembly illustrating certain of its novel features;

Fig. 2 is a front face view of the assembly;

Fig. 3 is an end view of the assembly as seen along line 3—3 of Fig. 1, and

Fig. 4 is a view similar to that in Fig. 1 but wherein the body material supported by the frame has been reduced in size to illustrate the adjustable nature of the assembly.

In the views of Figs. 1, 2 and 3 the present improvement is seen to comprise an adjustable frame structure A arranged to afford support for the marginal portions of a body of material B such as insulation or the like. In this embodiment, frame A is of rectangular form and includes a pair of oppositely related longitudinal side members 1 and 2, a pair of similarly related transverse end members 3 and 4, and a plurality of identical corner shield elements 5. As will presently appear, these frame members and corner elements are adjustably secured in assembly about the periphery of the body B by means of identical, threaded elements 6 having nuts 7 en-

2

gaged thereon for clamping the several parts together.

Frame members 1 and 2 are each of a channel section form having spaced channel flanges 8 and 9 projecting in parallel relation to receive the body marginal portion therebetween. Each of these flanges is also formed at its opposite corner zones with elongate slots 10 which are directed substantially lengthwise of the members and are located in registering pairs. In like manner, the frame members 3 and 4 are of a channel section form having spaced channel flanges 11 and 12 to receive the body marginal portion therebetween. These latter flanges 11 and 12 are formed with registering pairs of corner slots 13 directed substantially lengthwise of the members.

In assembly, the body of material B to be supported is cut to proper size so as to be slightly longer than side members 1 and 2 and slightly wider than end members 3 and 4. The respective members are then slipped into positions over the margins of the body and are brought into cooperative relation such that the respective flanges of one pair of members, as members 3 and 4, overlap the flanges of the other pair, as members 1 and 2, sufficiently to have the pairs of slots 13 and 10 respectively in registry and also substantially at right angles. For ease of assembly, end members 3 and 4 may have a slightly greater flange spacing to receive the members 1 and 2, or the same may be true of members 1 and 2. In effecting this assembly the several corner elements 5 are first manipulated into positions with their leg portions slidably received under the adjacent corner portions of the respective side and end members whereby to afford protective shields at the exposed corners of the body B. Each of these protective corner elements is held in position by the presence of the body B, but is also capable of sliding adjustment in either of two directions.

The threaded securing elements 6 for this assembly are inserted in the registering slots 10 and 13 and pass through suitable, close fitting apertures in the body B. Nuts 7 may then be applied to hold the elements 6 and hence the assembly in final condition for use. As may be seen in Figs. 1, 2 and 3, the assembly is shown as having its greatest size such that the elements 6 are located at the extreme outer ends of the respective pairs of registering slots 10 and 13. It is considered preferable to manufacture these assemblies in an originally expanded form or maximum size so that a user may reduce the same to fit the aperture or opening desired to be

3

closed and insulated by the body B. Thus a graduated series of stock assemblies may be manufactured to care for the normal range of use hereof, the drawing illustrating only one such stock size having the above noted features. Of course, the limit to which any of these assemblies may be reduced will be dictated by the depth of the channel flange and by the corresponding length of slots provided therein.

With reference to the drawing, particularly Fig. 4, the present assembly is readily and easily adjusted to a reduced size in either or both of its length and breadth directions by the simple expedient of cutting out a portion or section of the body material B and slidably compressing the members of the frame about the body as reduced. In many prior constructions this reduction in size required partial or complete disassembly of the frame members in order to be able to cut the body to the required new size. In the present assembly no disassembly is required, but the body may be cut to proper size while fully assembled in the frame members. This improved feature is obtained by providing in the opposed flanges 8 of side members 1 and 2 notch means 14 which may be located at any point therealong to expose the body periphery. The end members are also formed with notch means 15 in the respective flanges 11 which are on the same side and cooperate with side flanges 8. These several notches 14 and 15 are preferably located in directly opposed relation for a rectangular assembly to facilitate cutting of the body B to a proper fit by the use of a straight edge, square or similar tool laid along the face of the body within the zones of the notches.

In the example of Fig. 4, the body B is shown as having been cut and compressively refitted in its lengthwise direction along the abutting cut line A. The space left after removal of a longitudinal section of the body has been closed by compressing side members 1 and 2 inwardly and in the direction guided by the securing elements 6 riding in slots 13. This is a relative movement, as elements 6 do not move since each is held in position in the body B. The endwise reduction in size is accomplished by cutting out a transverse section of material from body B. In the present example the transverse cutting is shown prior to refitting of the two portions of the body along the spaced edges C and C'. Closure of these edges is accomplished by compressing end members 3 and 4 in the direction of slots 10 and relative to securing elements 6. Upon completion of this operation, nuts 7 may be tightened to secure the assembly in its reduced condition.

During the procedure of reducing the size of the assembly, the protective corner elements 5 are slidably compressed beneath the respective side and end members and effectively maintain their shielding positions in both directions.

The present frame assembly may now be seen to embody an improved and highly useful combination of structural features which will fully carry out the objects of the invention. The uses to which this assembly may be put are many and varied, one possible use being found in connection with the cold weather insulating of building foundation ventilator apertures commonly provided in buildings erected without basement excavations as prevail in the more southern area of the country.

In view of the foregoing, it is not intended that the invention be limited to the exact features shown, but that all similar or equivalent struc-

4

tures and assemblies be included within the teachings hereof and as are reasonably included within the spirit and scope of the appended claims.

I claim:

1. An insulator assembly comprising the combination of a body of insulating material of a generally rectilinear configuration, and a supporting frame structure adjustably secured about the periphery of said body and provided with a series of notches arranged in opposed pairs and located at a common face of said body, said notches acting to expose limited peripheral zones of said body to permit the severance and removal of rectilinear sections thereof for altering the original size of said body, said frame structure upon adjustment serving to compress the severed body portions and close the space formed by such removal of body sections.

2. An insulator assembly for use in insulating foundation ventilator apertures, said assembly comprising the combination of a body of insulating material, and an adjustable frame structure for said body including a pair of side members and a pair of end members arranged in spaced rectangular relationship, each of said members being formed to provide spaced, longitudinally extending flanges having a longitudinally directed slot near the opposite ends of each flange arranged in registering pairs, said members being positioned with the flanges thereof supporting the body along the margins thereof and the end portions of one pair lapping adjacent end portions of the other pair to bring the corresponding pairs of slots into registry in substantially right angular relationship, body shield elements slidably mounted in adjacent ends of said pairs of members, releasable securing elements extending through said body and engaging in said registering slots, said securing elements being retained in fixed relation by said body such that one of said pairs of members, upon relative sliding adjustment thereof, is guided by the securing elements for movement in the direction of the slots provided in the other pair of members, and said pairs of members providing, in the flanges common to one face of said body, opposed pairs of notches whereby said body is exposed thereby for the removal of a limited section of body material from between said members to permit sliding of said pairs of members to compress the separated body material and thus close the space resulting from removal of the body sections in adjusting the insulator assembly to the foundation ventilator aperture, said shield elements being slidably displaced by said members during adjustment thereof.

3. In an insulator assembly, the combination of a rectangular frame structure having channel-shaped oppositely arranged pairs of side and end members, with the channels in inwardly facing relations and the channel flanges of said end members partly lapping the channel flanges of said side members in the opposite, adjacent end portions thereof to provide corner openings therebetween, registering pairs of slots in the opposite end portions of said side members, registering pairs of slots in the opposite end portions of said end members, the first said pairs of slots being directed normal to the second said pairs of slots and intersecting therewith at the respectively lapped end portions, a shield element slidably engaging adjacent end portions of said members at each corner opening, a body of insulating material carried by said frame structure

and supported along its margins by the channel flanges of said members, said body serving to retain each of said shield elements in position at the corner openings, securing elements extending through said intersecting pairs of slots 5 for holding said members in assembly and serving to constrain one pair of members to movement in the direction of the slots in the other pair of members, said body acting to retain the securing elements in spaced and relatively fixed 10 positions during movement of said pairs of members, and notch means provided in a common side flange of each of said members, said notch means being arranged in opposed side and end

pairs to expose the body material and permit removal of sectional cuttings whereby the body and frame structure is rendered adjustable for size.  
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