Aug. 17, 1937. P. M. HEERWAGEN 2,090,043

ACOUSTIC TILE

Filed Jan. 13, 1936 2 Sheets-Sheet 1

Fig. 1.

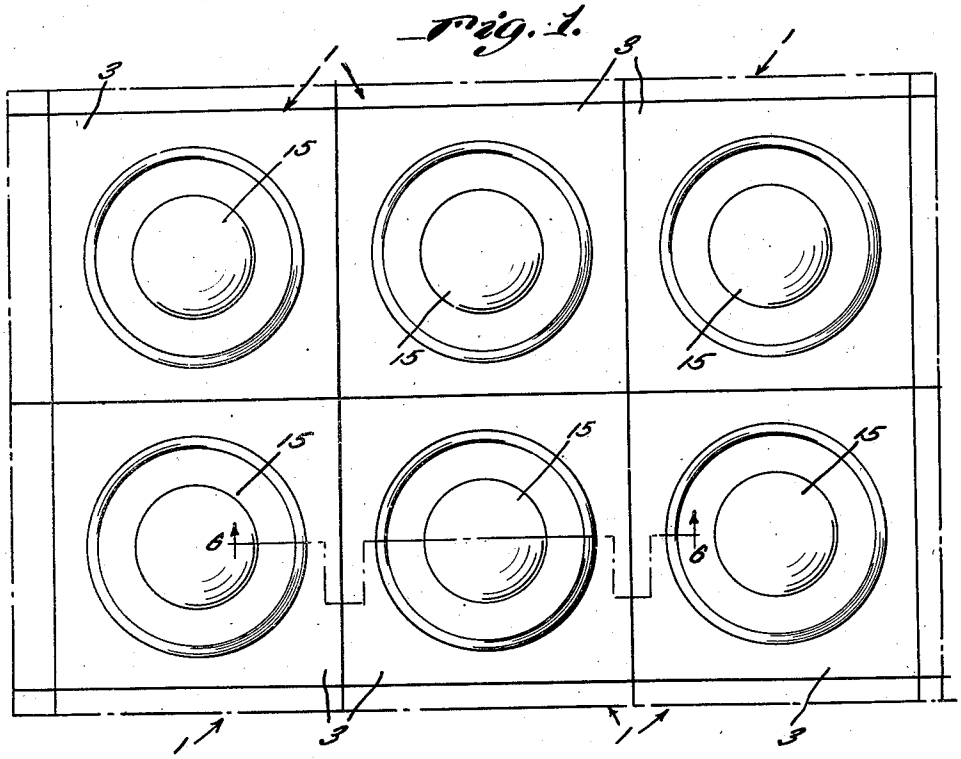
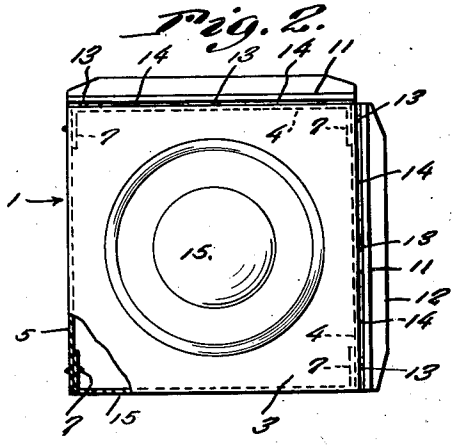


Fig. 2.



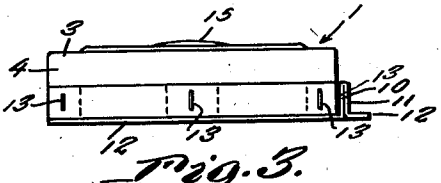
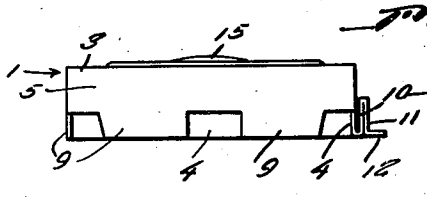


Fig. 3.

Fig. 4.



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Aug. 17, 1937. P. M. HEERWAGEN 2,090,043

ACOUSTIC TILE

Filed Jan. 13, 1936 2 Sheets-Sheet 2

Fig. 5.

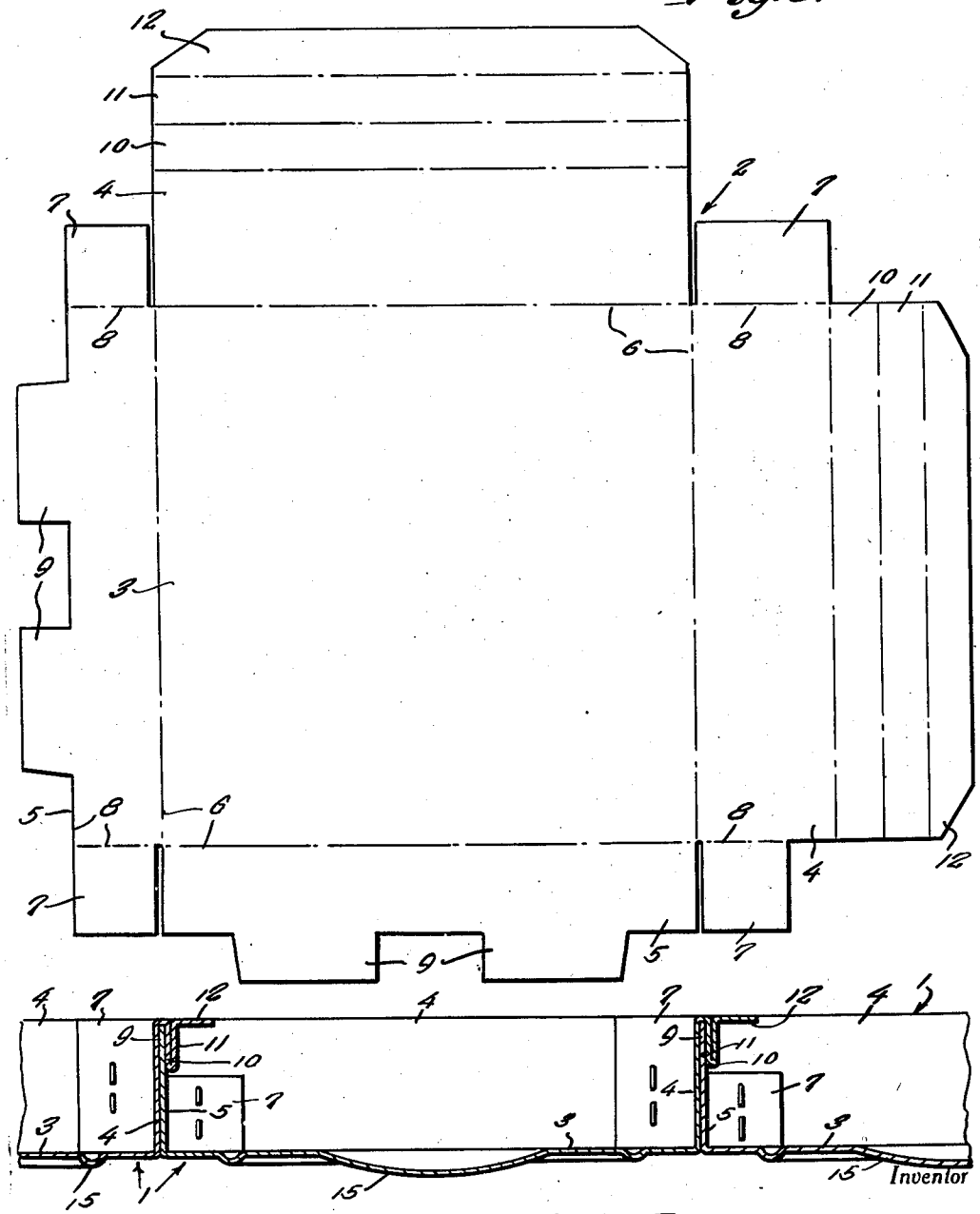


Fig. 6.

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UNITED STATES PATENT OFFICE

2,090,043

ACOUSTIC TILE

Paul Martin Heerwagen, Fayetteville, Ark.

Application January 13, 1936, Serial No. 58,965

3 Claims. (Cl. 20—4)

This invention pertains to new and useful improvements in acoustic tiles of the general nature of that constituting the subject matter of my United States Patent No. 1,975,002, issued on September 25, 1934.

The primary object of the present invention is to provide an acoustic tile of suitable sound absorbing vibratory material which may be manufactured, packed and shipped in the form of substantially flat sheets, thereby requiring a minimum of space, and which may be conveniently and rapidly folded or assembled into substantially box-like units by mechanics at the location where the tiles are to be applied to the walls, ceiling and other surfaces to be treated.

Another very important object of the present invention is to provide an acoustic tile of the character described embodying novel interlocking means for positively securing the adjacent units together in a manner to present a substantially smooth or unbroken surface upon the completion of the work.

The foregoing and other objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:—

Figure 1 is a plan view of a plurality of acoustic tiles constructed in accordance with the present invention.

Figure 2 is a plan view of a single tile, a corner portion thereof being broken away in section.

Figure 3 is an elevational view of the invention.

Figure 4 is an elevational view, taken at right angles to Figure 3.

Figure 5 is a plan view of the blank from which the substantially box-like tile is formed.

Figure 6 is a vertical sectional view, taken substantially on the line 6—6 of Figure 1.

The embodiment of the invention which has been illustrated comprises a substantially box-like unit which is designated generally by the reference numeral 1. The unit 1 is formed from a flat blank (see Figure 5) of suitable vibratory, sound absorbing material. This blank is designated generally by the reference numeral 2.

The unit 1 comprises a diaphragm 3 with the marginal edges of which side walls 4 and 5 are integral, said side walls being foldable on the lines 6. The side walls 4 and 5 are secured in folded position at right angles to the diaphragm 3 through the medium of flaps 7. The flaps 7 are foldable on the lines 8, said flaps being integral with the sides of certain of the side walls.

As shown to advantage in Figure 5 of the drawings, the side walls 5 are short as compared with the side walls 4 and on the free ends of said side walls 5 are spaced, integral tongues 9 the purpose of which will be presently set forth. At their ends, the side walls 4 are folded upon themselves as at 10 and reversed, as at 11, and terminate in right angularly extending flanges 12. The portions 10 and 11 are secured at spaced points to the side walls 4, as at 13, in a manner to provide pockets or the like 14 for the reception of the tongues 9 of the adjacent tiles when the units are assembled, as seen in Figure 1 of the drawings. The flanges 12 are for the purpose of securing the tile firmly in position on the wall, ceiling or other surface being treated by any suitable means, such as an adhesive.

In use, the tiles are assembled in the form shown to advantage in Figures 2, 3 and 4 of the drawings from the flat blank shown in Figure 5. After being thus folded or assembled, the tiles are secured in position on the wall, ceiling or other surface being treated through the medium of the flanges 12. The tongues 9 are engaged and glued in the pockets 14 and it will thus be seen that the tiles are positively secured together in abutting engagement in a manner to present an attractive, substantially unbroken surface. The diaphragms 3 of the tiles may, if desired, be attractively ornamented, as at 15. This ornamenting may be done by any suitable means, such as stamping, pressing, painting or printing, etc.

It is believed that the many advantages of an acoustic tile constructed in accordance with the present invention will be readily understood, particularly by those skilled in the art to which the device pertains, and although a preferred embodiment is as illustrated and described, it is to be understood that changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:—

1. A surfacing for walls, ceilings, partitions or the like, comprising a plurality of hollow units formed from individual blanks; each blank embodying a diaphragm body portion, integral sides foldable to substantially a right angle position relative to said body portion; means for joining the side members together to form a box-like unit in conjunction with said diaphragm body portion; certain of said sides being provided with a channel formation and an engagement flange

extending outwardly of said channel formation and at right angles thereto, and the others of said sides being so formed as to conveniently fit and be engaged in the said channel of the next respective units.

2. An acoustic tile, comprising a diaphragm body portion; integral sides foldable in relation thereto; certain of said sides having a portion thereof folded back upon itself to form a channel between the side proper and the folded-back portion thereof; said sides each having a surface-engaging flange extending outwardly from said folded-back portion and the other of said sides having tongues for engagement in said channels.

3. An acoustic tile originally blanked out from substantially flat sheets and certain portions thereof scored to provide foldable parts; the foldable side parts of said tile being provided with and carrying interengagement means to retain said side parts in predetermined fixed relation relative to the body portion of said tile; certain of said sides being provided with tongues at their marginal edge and certain of said sides being provided with pockets to receive said tongues and having an attachment flange at their respective marginal edges.

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