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P. J. KEATING  
WALLBOARD SECURING MEANS  
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2,066,205

Fig. 1

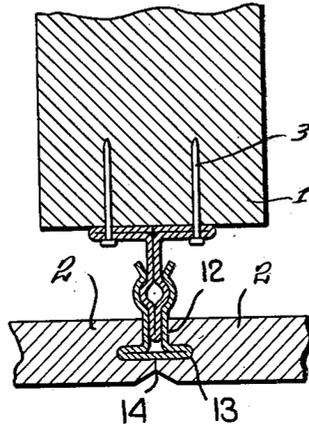


Fig. 2

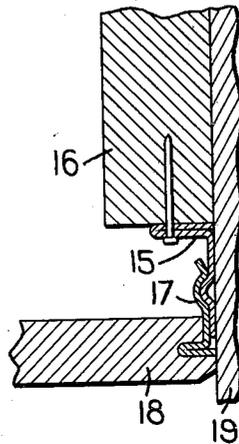


Fig. 3

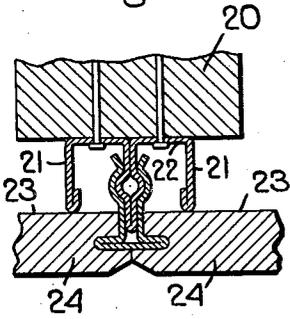


Fig. 4

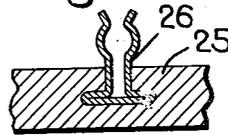


Fig. 5

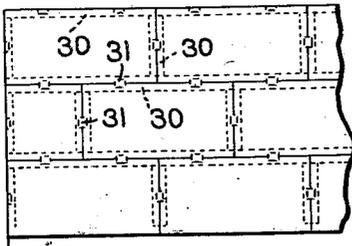


Fig. 7

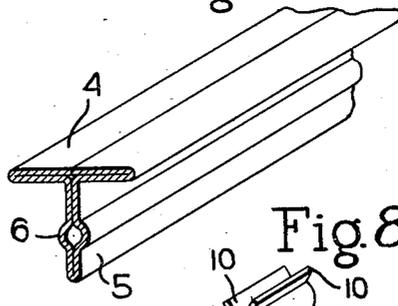


Fig. 6

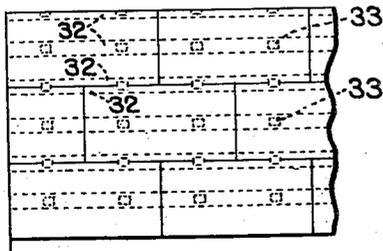


Fig. 8



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# UNITED STATES PATENT OFFICE

2,066,205

## WALLBOARD SECURING MEANS

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3 Claims. (Cl. 72-118)

This invention relates to a building construction in which a wall or ceiling is covered with thick sheet material such as the wallboards of various types now commonly used for that purpose. Such thick sheets of material of various sizes are usually secured in place by being fastened directly to the wall structure by nails or brads at the edges of the sheets and at the intermediate portions where necessary. This type of building construction has come into extensive use and is often employed in large areas of wall and ceiling, sometimes constituting the finished surface and sometimes serving as a foundation for plaster or other finish.

It is the object of the present invention to provide means for securing such sheet material in place rapidly and efficiently, with a minimum amount of labor and with a low cost of fastening materials.

When, as is customary, the sheets of material such as wallboard are secured in place by nails or brads, the operation is relatively slow and expensive because the nails or brads have to be inserted at every few inches around the entire perimeter of each sheet and, if the sheets are large, also at points throughout the area of the sheets. Frequently also it is necessary to provide wooden furring strips and nail them in place throughout the wall or ceiling area before the sheet material can be secured in position.

The present invention provides a metal construction which can be cheaply prefabricated, readily applied to the wall or ceiling and to the sheet material, which eliminates the necessity of furring strips and which enables the sheet material to be placed and secured in position rapidly and efficiently.

The nature and object of the invention will appear more fully from the accompanying description and drawing and will be particularly pointed out in the claims.

The drawing illustrates simple and preferred embodiments of the invention.

Fig. 1 is a detail in cross section of one form of construction embodying the invention.

Fig. 2 is a similar view of the type of construction shown in Fig. 1 as applied at the corner of a room.

Fig. 3 is another detail in cross section of another form.

Fig. 4 is a detail in cross section showing one part of an interlocking device applied to the intermediate portion of a sheet of material.

Fig. 5 is a more or less diagrammatic plan view of a portion of a wall or ceiling with sheets of

material connected thereto in accordance with the invention.

Fig. 6 is a view similar to Fig. 5 showing a different arrangement.

Fig. 7 is a perspective view of a preferred form of that one of the two interlocking elements applied to the wall or ceiling.

Fig. 8 is a perspective view of a preferred form of that one of the two interlocking elements applied to the sheet material.

The term "sheet material" as herein employed is to be understood as including any suitable material supplied in thick sheet form and having sufficient rigidity to be secured to a wall or ceiling and form the main body of the wall or ceiling. Examples of suitable material are the well known wallboards made of a wide variety of materials and of various sizes.

Where herein the sheet material is referred to as being secured to a wall or ceiling, it is to be understood that the wall or ceiling may be either a new construction in skeleton-like form consisting of spaced beams, studs or rafters or in a solid form, that is, presenting a substantially continuous surface. In a new construction, a wall or ceiling is in the former condition, while in an old construction it may be in the latter condition.

The invention provides primarily a pair of pressure-interlocking devices, one secured to the wall or ceiling and the other inserted in the sheet material between its surfaces. The former device is first permanently secured in place and then the sheet material is secured in place by pressing the second device into locking engagement with the first device.

Figs. 1, 7 and 8 of the drawing illustrate one embodiment of the invention. Therein the wall or ceiling is represented by a stud or rafter 1 and the sheet material is shown of substantial thickness, such as the Celotex type of wallboard, portions of two sheets 2 being illustrated. The device secured to the wall or ceiling, shown separately in Fig. 7, is in the form of a strip and is made from sheet metal rolled or otherwise fabricated into the required shape. The term "strip" is not intended to indicate any particular length but this element of the device is usually made in long lengths and may take the place of furring strips commonly heretofore employed. It is preferably secured in place by being nailed as at 3 directly to the studs, beams, or rafters, or to any suitable portion of the wall or ceiling.

The device engaging the sheet material, shown separately in Fig. 8, is in the form of a lug simi-

larly rolled or fabricated from sheet metal and by the term "lug" again it is not intended to limit the device to any particular length, although in practice this device is made in short lengths as compared with the length of the device secured to the wall or ceiling. A number of the devices such as shown in Fig. 8 are placed at intervals around the edge or perimeter of the sheets of material and, when necessary, at intermediate points of the area of these sheets and they preferably, as illustrated, engage the sheets of material without being nailed or otherwise permanently secured thereto.

The device such as shown in Fig. 7 is of generally T-shape comprising a flat base 4 adapted to be nailed or otherwise secured to the wall or ceiling and a fin 5 projecting centrally from and longitudinally of the base. Intermediate of its depth this fin is formed to present a rib 6 extending longitudinally thereof. The device shown in Fig. 8 is also of generally T-shape presenting the flat base 7 and a bifurcated or two-part fin projecting centrally from the base. The bifurcations 8 of this fin are formed to present opposed grooves 9 extending longitudinally of the fin and adapted to spring over and interlock with the rib 6. The free ends 10 of the bifurcations are also flared so as to enable this fin readily to snap over the fin 5.

In the construction shown in Fig. 1, edges of the sheets 11 are cut away at 12 and recessed at 13 to allow the bifurcated fin to extend only part way between the opposed edges and to have its base embedded in the opposed edges of the sheets midway the thickness. The edges of the sheets near the outer surface thus preferably abut as at 14.

At the corner of the room where the sheets come against another wall, the interlocking devices may be made in half sections, as shown in Fig. 2, wherein a half section strip 15 is shown nailed to a wall structure 16 and a half section lug 17 is shown inserted in the edge of a sheet 18 of material which abuts against a wall structure 19 at right angles to the wall structure 16.

Where it is desired that the sheet material shall withstand greater pressure against its surface than would be permitted by the construction shown in Fig. 1, a construction such as shown in Fig. 3 is provided. In this case the metal strip secured to the wall 20 is formed to present braces 21 extending from the base 22 parallel with the fin and with the edges of these braces abutting the inner faces 23 of the sheets 24. Thus it will be seen that the sheets throughout their perimeter are braced against inward pressure.

When the sheets of material are of such size as to require fastening to the wall or ceiling at points intermediate their areas, additional strips may be secured to the wall or ceiling to cooperate with lugs engaged with the sheets at intermediate points. For this purpose, as shown in Fig. 4, the sheet of material 25 may be grooved lengthwise and lugs 26 slid into the grooves.

The interlocking feature of the two fins, exemplified by the rib 6 of the one fin and the opposed grooves 9 of the other fin, it will be observed is located outside the thick sheet of wallboard material and therefore between the wallboard material and the base of the metal strip attached to the wall or ceiling.

It will be obvious that a wide variety of arrangement and positioning of the strips and lugs may be employed, depending upon the dimensions

of the sheets of material and the structure of the wall or ceiling. In Fig. 5 a section of wall is shown in which the strips 30 indicated in dotted lines extend in both directions and in which the lugs 31 are inserted in the sheets at all four edges. In Fig. 6 a construction is shown in which the strips 32 all run in one direction and in which lugs 33, such as shown in Fig. 4, are employed midway the area of the sheets.

While a simple and preferred form of construction of strip and lug has been shown and described in detail, it will be understood that a wide variety of pressure-interlocking devices may be employed, one element being permanently secured to the wall or ceiling of the building construction and the other inserted in the sheet material in any suitable manner. The element secured to the wall or structure is readily secured in place preferably by nailing and renders unnecessary the use of any furring strip. This element may be nailed directly to the studs, beams or rafters or, in the case of old or repair work, directly to the flat surface of the old wall or ceiling.

After the strips or a portion of them are in place, the sheets of material are fitted with the lugs at the required points and then simply by pressing these lugs against the strips, the two elements interlock and the sheets are firmly and rapidly secured in position.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is:

1. A building construction comprising spaced beams for a wall or ceiling, a metal strip secured to said beams and presenting a projecting fin, thick sheets of material having their opposed edges presenting longitudinal grooves, metal lugs each presenting a flat base fitting into said grooves and a fin projecting centrally from said base between and inward of the opposed edges of said sheets, and cooperating means on the strip and lug fins acting to interlock between the metal strip and the sheets of material when the lugs are pressed against the strip and thus to secure the sheets in place.

2. A building construction comprising a metal strip presenting a base secured to the wall or ceiling and a fin projecting centrally from and longitudinally of the base, a thick sheet of wallboard material, and a metal lug presenting a base inserted in the thick sheet between the surfaces thereof and a bifurcated fin projecting centrally from the base straddling the first fin and interlocked therewith on the outside of the sheet.

3. A building construction comprising a metal strip presenting a base secured to the wall or ceiling and a fin projecting centrally from and longitudinally of the base, a rib on said fin extending longitudinally thereof, thick sheets of wallboard material having their edges abutting, and a metal lug presenting a base inserted in the sheets of material between the surfaces thereof and at the abutting edges thereof and presenting a bifurcated fin projecting centrally from the base with the bifurcations of said fin having opposed grooves extending longitudinally thereof and outside the sheets of material, whereby, when the metal lug is pressed into engagement with the metal strip, the bifurcated fin will straddle the first fin and interlock therewith on the outside of the sheets of material and hold the said sheets engaged with it in position.

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