Oct. 6, 1931. C. T. HATCH 1,826,133

STRUCTURAL DEVICE

Filed May 9, 1930 2 Sheets-Sheet 1

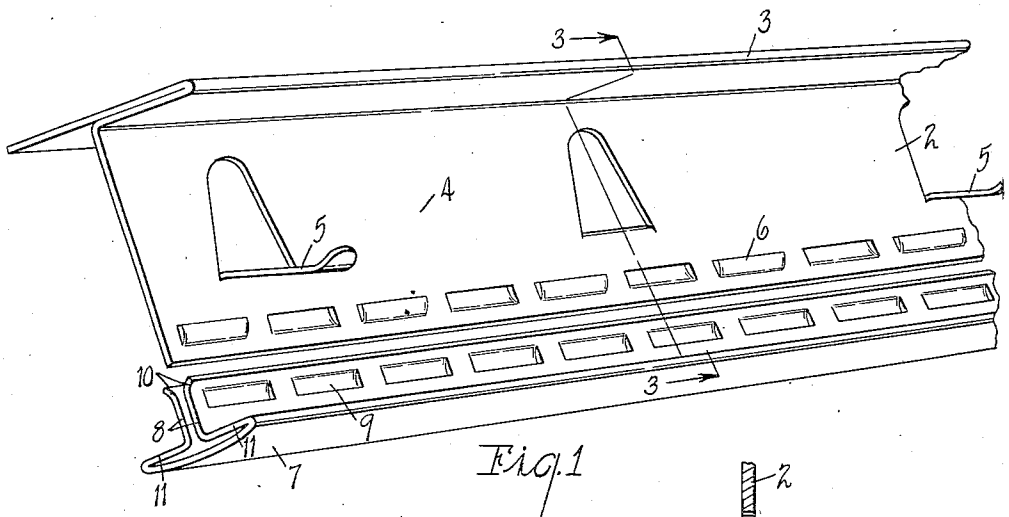


Fig. 1

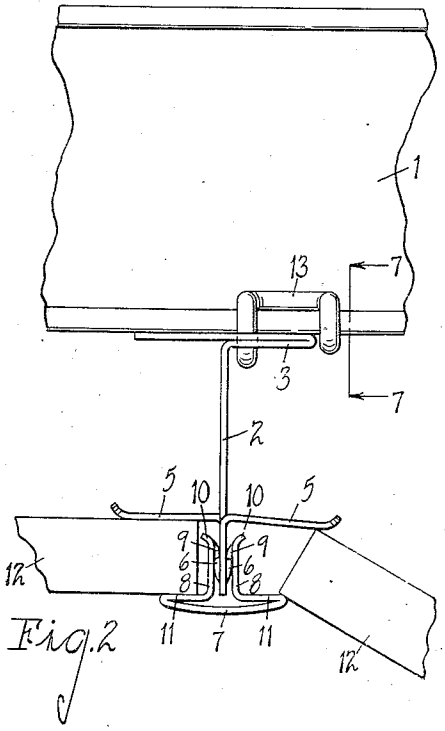


Fig. 2

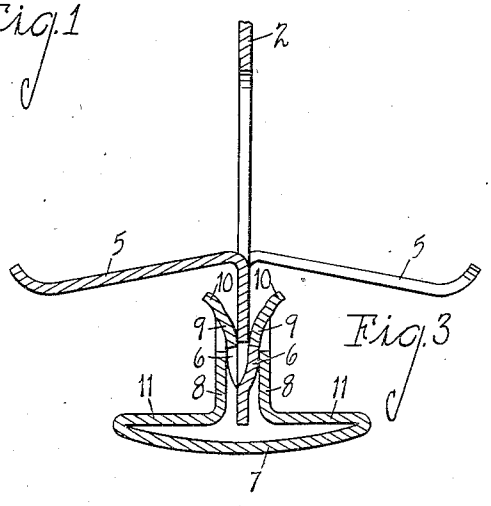


Fig. 3

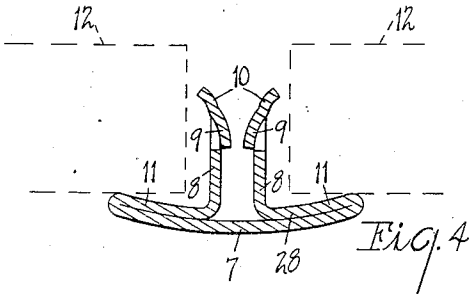


Fig. 4

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STRUCTURAL DEVICE

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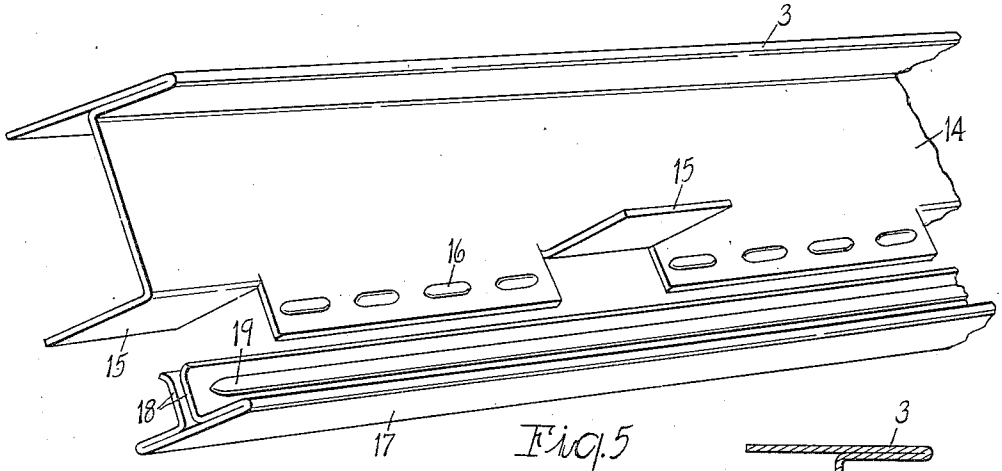


Fig. 5

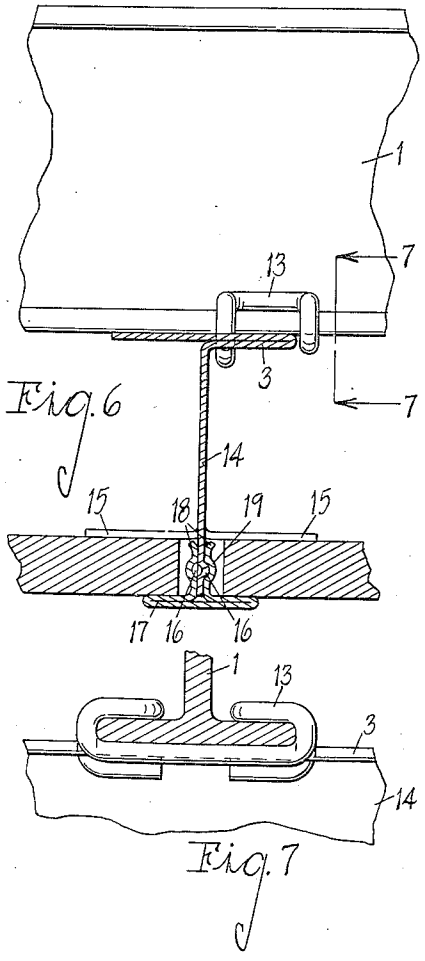


Fig. 6

Fig. 7

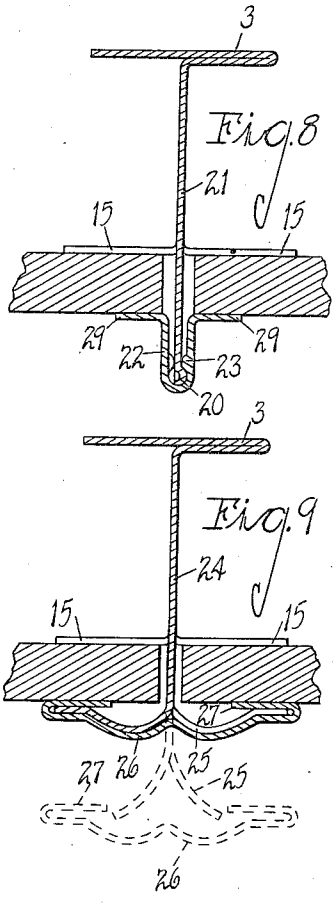


Fig. 8

Fig. 9

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1,826,133

UNITED STATES PATENT OFFICE

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STRUCTURAL DEVICE

Application filed May 9, 1930. Serial No. 450,898.

The main objects of this invention are to provide a structural device by means of which panels of wall board, plaster board or the like may be quickly and effectively attached to walls and ceilings without the necessity of puncturing or fracturing such material with fastenings.

A further object is to provide a structural device having these advantages which permits the removal of the material without injury and at the same time the wall board or the like is very securely retained.

A still further object is to provide a structural device having these advantages which constitutes a finishing or joint strip for the material supported.

Objects relating to details and economies of my invention will appear from the description to follow. The invention is defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is illustrated in the accompanying drawing, in which:

Fig. 1 is a fragmentary perspective disassembled view of coacting support and attaching member constituting a structural unit.

Fig. 2 is a fragmentary elevation showing one of the structural devices attaching to a supporting beam with a fragment of panel in secured position and a second panel partially engaged, illustrating the manner of assembling.

Fig. 3 is a fragmentary section on line 3—3 of Fig. 1 with the members in engaged position.

Fig. 4 is a cross section through a slightly modified form of attaching member, the relation of the panels being indicated by dotted lines.

Fig. 5 is a fragmentary perspective view of another modified form of my improvements.

Fig. 6 is a fragmentary view partially in section showing the embodiment of Fig. 5 as attached to a supporting beam and in engagement with the panels to be supported.

Fig. 7 is a fragmentary section on line 7—7 of Figs. 2 and 6 illustrating a satisfactory form of clip for attaching the support to a joist or studding or the like.

Fig. 8 is a fragmentary section of another form or modification of my invention.

Fig. 9 is a fragmentary section of still another embodiment of my improvements, the manner of assembling being illustrated by dotted lines.

In the accompanying drawing, 1 represents an iron joist or studding.

My improved structural device comprises a support member 2 preferably of T-cross section, the cross portion 3 of the support providing attaching flanges as well as stiffening the web portion 4. The support is preferably formed of sheet metal folded into the desired shape.

Finger-like panel engaging members 5 are struck out from the web portion of the support, these being preferably forwardly inclined and curved at their outer ends, as is clearly shown, to facilitate the engagement of the panels therewith, also to prevent injury to the panels, and when inclined providing a spring or yielding feature to more effectively accommodate variations in thickness of the panel or material supported.

The web 4 has a series of lugs 6 struck therefrom adjacent its outer edge, the fingers and the lugs being preferably arranged to project alternately in opposite directions.

An attaching member 7 is also formed of sheet metal folded upon itself to provide a pair of inwardly offset spaced flanges 8 adapted to receive the edge of the support 4. These flanges have lugs 9 struck inwardly therefrom and adapted to engage the lugs 6. The lugs 6 project inwardly toward the base 3 while the lugs 9 project outwardly away from the base 3 so that when engaged the parts are very securely retained, their relation being clearly illustrated in Fig. 3.

The flanges are flared outwardly at 10 to facilitate the engagement of the attaching member with the support, it only being necessary to push or drive the attaching member on the support, the flanges yielding or springing to permit the passing of the lugs and automatically springing to engaging position.

The flanges 8 being inwardly offset provide panel engaging shoulders 11 (see Fig.

2) in which the panels to be supported are shown at 12.

In erecting, the supports 2 are secured to the frame work such as the joist or studding 1 at intervals corresponding to the width of the panels as by means of clips 13 (see Figs. 1 and 7). The clips 13 are preferably made of wire as illustrated; that is, bent so as to have a portion which extends across the bottom of the I member 1, thence upwardly and over this member on both sides of the web of the I member, then in line with the I member, outwardly again, then down over the edge of the bottom of the I member through suitable openings provided in the cross portion 3 of the support member 2 and finally toward each other so as to engage the lower surface of the cross member 3 of the supporting member 2. An attaching member is then slipped onto one of the supports at one side of the space to be covered and the edge of the panel engaged therein, the manner of engaging being illustrated at the right hand of Fig. 2. The panel is then swung up against the members 5 of an adjacent support and an attaching member engaged on such support into supporting engagement with the edge of the panel, as shown at the left of Fig. 2, the operations being continued until the entire space is covered.

It will be noted that the attaching members constitute finishing strips for the panels. In practice, the panels may be of plaster board, wall board, cellotex or like material in panel or sheet form.

In the modification shown in Fig. 5, the support 14 has panel engaging members 15 struck up from the edge thereof instead of the body, as shown in Fig. 1, the lugs 16 being struck out in the form of indentations or bosses. The attaching member 17 has flanges 18 corresponding to the flanges 8, continuous beads 19 being formed on the flanges to coact with the lugs.

In the embodiment shown in Fig. 8, the lugs 20 are formed on the extreme edge of the support 21, the attaching member being in the form of a panel 22 with internal lugs 23 coacting with the lugs 20, the panel having flanges 29 engaging the panels to be supported.

In the embodiment shown in Fig. 9, the support 24 has bendable lugs 25 formed on the edge thereof, the attaching member 26 having inturned flanges 27 on its edges into which these lugs are forced as the attaching member is pushed or driven into place.

The flanges of the attaching member in the embodiment shown in Figs. 1 to 6 inclusive are preferably flared outwardly, as stated, to facilitate engagement, directing the support into the panel even though its edge may be somewhat distorted or bent. The same result is incident to the embodiment of Fig. 8.

In the embodiment shown in Fig. 4, the inturned portions 28 are folded flat against the body of the attaching member instead of being slightly spaced therefrom, as in Fig. 3.

My improved structural device is particularly desirable for use in temporary buildings where it is desired to salvage the material when the buildings are torn down and also to provide an attractive and economical wall finish. The panels of material such as mentioned are effectively secured, the joints covered and provided with a finishing strip. Where it is desired to remove the paneling, the operations described for placing is reversed. After the attaching member at one side of a wall space has been removed, the others may be quite easily removed.

The body portion of the attaching member is preferably curved not only for the sake of appearance but blows upon the central portion thereof will result in springing out the flanges sufficiently to disengage the lugs or part of them at one end of a strip, affording access for suitable tools or implements to further disengage the lugs.

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

1. In a structural device, the combination of a support member of T cross section having a series of lugs struck from the web portion thereof adjacent its outer edge with adjacent lugs projecting oppositely, said web portion also having a plurality of laterally projecting fingers struck therefrom with adjacent fingers projecting oppositely, said fingers being rearwardly curved at their ends, and an attaching member having a transversely curved body portion and spaced support member engaging flanges inwardly offset from its edges, each of said flanges having a plurality of lugs struck inwardly therefrom to coact with the lugs on said support member.

2. In a structural device, the combination of a support member having a series of lugs struck therefrom adjacent its outer edge with adjacent lugs projecting oppositely, said web portion also having a plurality of laterally projecting fingers struck therefrom with adjacent fingers projecting oppositely, and an attaching member having a body portion and spaced support member engaging flanges inwardly offset from its edges, each of said flanges having a plurality of lugs struck inwardly therefrom to coact with the lugs on said support member.

3. In a structural device, the combination of a support member having a series of lugs struck therefrom adjacent its outer edge with adjacent lugs projecting oppositely, said web portion also having a plurality of laterally projecting fingers struck therefrom with adjacent fingers projecting oppositely, and an attaching member having a body portion and spaced support member engaging flanges inwardly offset from its edges, each

of said flanges having a plurality of lugs struck inwardly therefrom to coact with the lugs on said support member, the edges of said flanges being oppositely flared facilitating engagement of said attaching member with said support member.

4. In a structural device, the combination of a support member having a series of lugs struck therefrom adjacent its outer edge with part of the lugs projecting at each side of said member, said support member also having lateral projections at the inner side of said lugs adapted to engage the part to be supported, and an attaching member having a pair of spaced flanges inwardly offset from the edges thereof and having lugs coacting with the lugs on said support member and engaging therewith under spring tension, the edges of said flanges being outwardly flared facilitating engagement with said support member.

5. In a structural device, the combination of a support member having a series of lugs struck therefrom adjacent its outer edge with part of the lugs projecting at each side of said member, said support also having lateral projections at the inner side of said lugs adapted to engage the part to be supported, and an attaching member having a pair of spaced flanges inwardly offset from the edges thereof and having lugs coacting with the lugs on said support member and engaging therewith under spring tension.

6. In a structural device, the combination of a support having a series of lugs struck therefrom adjacent its outer edge with adjacent lugs projecting oppositely and also having a plurality of laterally projecting panel engaging members struck therefrom with adjacent members projecting oppositely, said members being rearwardly curved at their ends, and an attaching member having inwardly offset flanges spaced to receive said support between them, said flanges having lugs struck inwardly therefrom coacting with said lugs on said support, the edges of said flanges being flared facilitating engagement of said attaching member with said support.

7. In a structural device, the combination of a support having a series of lugs struck therefrom adjacent its outer edge with adjacent lugs projecting oppositely and also having a plurality of laterally projecting panel engaging members struck therefrom with adjacent members projecting oppositely, and an attaching member having inwardly offset flanges spaced to receive said support between them, said flanges having lugs struck inwardly therefrom coacting with said lugs on said support.

In a structural device, the combination of a support provided with laterally projecting lugs, and an attaching member having spaced flanges adapted to receive the edge of said support and to engage with said lugs thereon, said attaching member having panel engaging parts extending laterally from said flanges.

9. In a structural device, the combination of a support having integral lugs adjacent the edge thereof and laterally projecting members at the inner sides of said lugs, and an attaching member having a longitudinal opening adapted to receive the edge of said support member and having parts engaging with the said lugs thereon.

10. In a structural device, the combination of a support having lugs adjacent its outer edge and lateral projections at the inner side of said lugs adapted to engage a part to be supported, and an attaching member having a longitudinal channel adapted to receive the edge of said support and provided with lug parts coacting with said lugs on said support.

11. In a structural device, the combination of a support having lugs adjacent its outer edge, and an attaching member having a longitudinal channel adapted to receive the edge of said support and provided with lug parts coacting with said lugs on said support.

In witness whereof I have hereunto set my hand.

CHARLES T. HATCH.