Dec. 5, 1939. W. M. GOLDSMITH 2,181,885

FURRING ATTACHMENT

Filed March 2, 1938

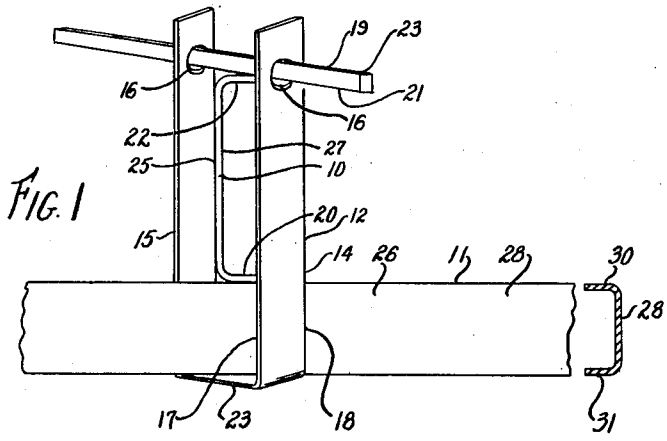


FIG. 1

FIG. 2

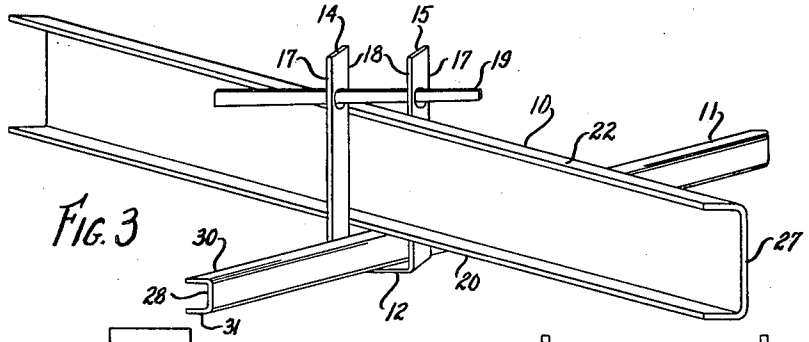


FIG. 3

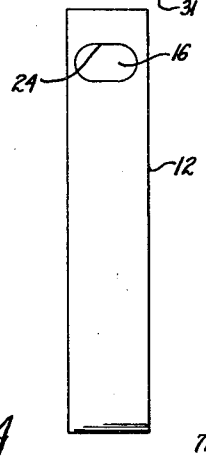


FIG. 4

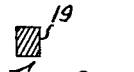


FIG. 6

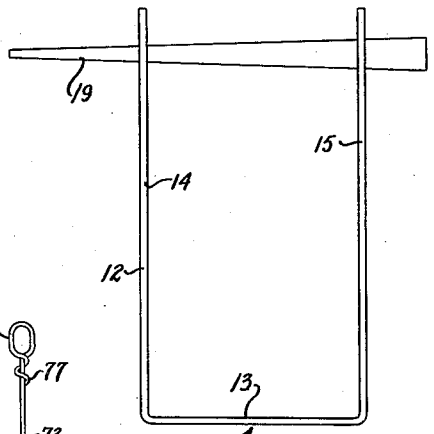


FIG. 5

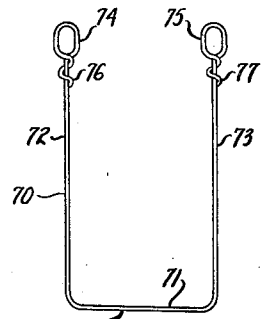


FIG. 7

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FURRING ATTACHMENT

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3 Claims. (Cl. 72—118)

This invention relates to the attachment of furring bars or rods to support channels and the like, preparatory to the mounting of plaster receiving material such as metal lath to the furring members.

An object of the invention is to provide simple and effective means for obtaining a strong and rigid mounting or connection between the furring and the support channels.

Another object is to provide means of the character and for the purpose indicated wherein the attachment means comprise simple structural elements so related as to attain inter-relationship of such means with the furring and support members as will attain positive and rigid fixation of all of the parts with a minimum of effort, time and required skill incident to the association of such elements in their assembled form or relationship.

Another object of the invention is to so relate the various parts of the assembled structure that the forces serving to hold the members in assembled relationship will be directed along lines or in planes passing through the furring and supporting channels as distinguished from the offsetting of such force as has been common in the art in devices heretofore provided for attaching furring rods and supporting members for the furring rods.

Another object of the invention is to provide attachment means which are readily fabricated from various standard materials common on the market, and which will require a minimum of fabrication and forming for adapting same to their intended use.

These and other objects are attained by the means described herein and disclosed in the accompanying drawing, in which:

Fig. 1 is an elevational view, parts shown in section and parts being broken away, and showing the method and means of attachment of furring and support members and embodying the invention.

Fig. 2 is an end view of a furring bar or rod forming a detail of the invention.

Fig. 3 is a perspective view, on slightly reduced scale, of parts shown in Fig. 1.

Fig. 4 is a side view of a strap or saddle forming a detail of the invention.

Fig. 5 is an edge view of the device shown in Fig. 4 in association with a nail or wedge member forming a detail of the invention.

Fig. 6 is a sectional view through a nail or wedge member forming a detail of the invention.

Fig. 7 is a perspective view of a modified form of clip forming a detail of the invention.

In the structural arts, various devices have heretofore been used for attaching metal lath and the like to suitable supporting structures. These supporting structures generally comprise metal bars generally referred to as furring members or bars which are disposed in parallelism and which are attached at intervals to supporting members. The supporting members generally comprise U-shaped channel bars and are disposed in parallelism and at right angle to the furring bars.

The supporting members or channels are secured to the under faces of concrete ribs, joists and the like, in various manners and the particular arrangement for so attaching the supporting channels does not constitute part of the present invention. By way of reference to attachment of such supporting channels, attention is directed to such patents as Venzie, 2,055,759. In some instances the supporting channel members may be attached to metal I-beams, wherefore the invention is not to be understood as being restricted in its application to concrete structures, or any particular type of structure.

In the accompanying drawing, the supporting channel 10 is to be understood as being one of a number of similar channel members extending in parallelism with one another and being supported or attached in a suitable manner to a suitable structure.

The furring member 11 is to be understood as being similar to a plurality of such members disposed in parallelism and intended to be related to the various support members such as 10 in the manner in which the elements 10 and 11 are shown in Fig. 1. At each intersection of a support channel 10 and a furring channel 11, there is provided an attachment clip 12. Each of the clips is of substantially U shape and accordingly comprises a base 13 and arms 14 and 15. Each of the arms is provided, adjacent its free end, with an aperture or eye 16. The apertures so provided in the arms 14 and 15 of each clip 12, are substantially aligned and are substantially equidistant from the base 13 of the clip. The clip is made of sheet metal and the width thereof is such that when a clip is passed about a furring member 11 and a supporting channel 10 so as to straddle them or to have the arms of the clip astride the structural elements the opposite edges such as 17 and 18 of each of the arms, contact the members 10 and 11. The apertures 16 are spaced at such a distance from

the base 13 of the clip, that by inserting a wedge 19 through such apertures, the member 10 will be drawn tightly and securely against the outer face of the arm 20 of the support channel 10. As shown in Fig. 1, the lower face 21 of the wedge 19 contacts the upper face of the arm 22 of the support channel 10 and the upper face 23 of the wedge 19 contacts the upper walls 24 of the openings 16 provided in the arms of the clip.

From the foregoing disclosure and explanation, it is obvious that the only tool required by a workman for assembling furring bars, support bars, clips, and wedges, in the manner shown herein, is a hammer or an equivalent tool. As the wedge is driven through the openings 16 in the clip, the furring bar 11 is drawn into closer or more secure contact or relationship with the support channel 10.

By reason of the angular disposition of the arms of the clip between and in contact upon the outer faces 25 and 26 of the bases 27 and 28, respectively, of U-shaped channel members 10 and 11, the force applied to the assembly of parts is operative in planes extending parallel with and between the arms of the clip. In other words, the clamping force applied by means of the clip and the wedge is operative directly through the support member 10 and furring member 11, as distinguished from the offset disposition of such force as occurs in such patents as Venzie aforesaid.

While the invention is not restricted in its application to the attachment together of channel iron furring and support bars, there are certain specific advantages and functional reactions incident to inherent characteristics of channel iron members, and which cooperate for attaining rigidity of attachment of the various parts, not attainable with other structural forms heretofore used in this art. Particularly, the flexibility of the arms 20 and 22, and 30 and 31 of the respective channel irons, about their respective web or base portions 27 and 28, permits accommodation of the contacting parts of the various elements to one another, thus providing substantial bearing of the various elements upon one another. The flexible characteristics also enhance the grip or frictional contact that the elements exert on one another.

In Fig. 7 is shown a wire U-shaped clip 70 comprising a base 71, arms 72 and 73, and having eyes 74 and 75 formed at the free ends of the arms by looping or turning and twisting the material upon itself in any suitable manner. The twisted portions of the clip arms are made sufficiently long to assure sufficient grip of the metal or wire portions so as to avoid opening of the eyes by reason of strain or pressure that may be exerted thereon, incident to driving a wedge 19 into the eyes for clamping a pair of channel iron members together, in the fashion shown in Figs. 1 and 3. If desired, the said twisted portions 76 and 77 may be spot welded to prevent separation. The eyes are to be so related to other parts of the assembly as to attain the same results attained by use of clips, such as 12.

What is claimed is:

1. The combination with a pair of channel irons extending at an angle to one another and having an arm of each in contact with an arm of the other, of a U-shaped clip having its base in contact upon a free arm of one of the channel irons, the arms of the clip being perforated at their free ends and at a distance from the base thereof, approximating the combined width of said channel irons, the arms of the clip straddling the channel irons, and a wedge extending through the apertures in said clip arms and frictionally securing the channel irons between the wedge and the base of the clip.

2. The combination with a pair of channel irons extending at an angle to one another and having an arm of each in contact with an arm of the other, of a U-shaped clip having its base in contact upon a free arm of one of the channel irons, the arms of the clip each having an eye at its free end and at a distance from the base thereof, approximating the combined width of said channel irons, the arms of the clip being disposed astride the channel irons, and a wedge extending through the eyes in said clip arms and frictionally securing the channel irons between the wedge and the base of the clip.

3. The combination of a pair of structural elements having contact upon one another and extending at an angle to one another, a sheet metal U-shaped clip having greater width than thickness and having its arms astride both said structural elements, the clip arms being perforated at their free ends at a distance from the clip base approximating the combined width of said structural elements, the lateral edges of said clip arms contacting the structural elements, and a wedge extending through the apertures in said clip arms and frictionally securing the structural elements between the wedge and the base of the clip.

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