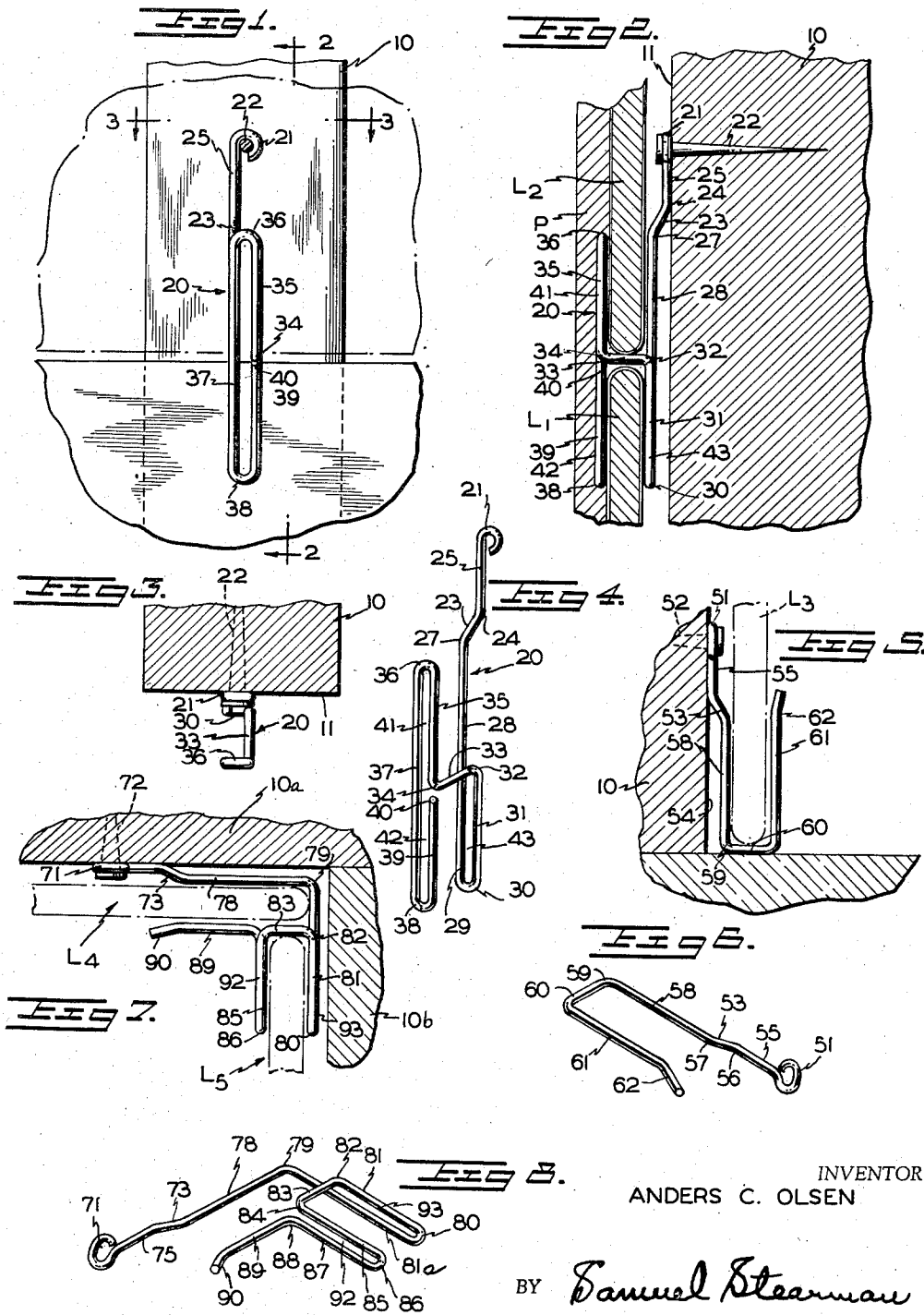


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DEVICES FOR SECURING LATH PANELS OR THE
LIKE TO SUPPORTING MEMBERS
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DEVICES FOR SECURING LATH PANELS OR THE LIKE TO SUPPORTING MEMBERS

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This invention relates to partition construction, more particularly to interior partitions of buildings, wherein the partitions are constructed by applying plaster over lath panels supported by wooden studs.

The invention is concerned more particularly with devices for securing lath panels, such as gypsum lath, to the supporting studs.

Various forms of anchoring devices have heretofore been utilized for this purpose and to a large extent have replaced direct nailing as well as the wire-tying of the panels to the studs.

During recent years, much emphasis has been placed upon the importance of reduction of sound transmission through plastered interior partitions and ceilings. The sound transmission loss is far from sufficient in plaster partitions and walls as presently constructed. In specific terms, the sound-isolating characteristics in these constructions is usually not greater than about 40 decibels sound transmission loss at a frequency of 512 cycles per second, or an average of more than 45 decibels over a frequency range of 128 to 4,096 cycles.

Plaster partitions and ceilings wherein clips of the form shown in my prior Patent No. 2,307,899 are used for mounting lath panels on wood as well as steel framing members exhibit sound-isolating values of the order above-mentioned.

However, even with the use of such clips, the retardation of transmission of sound through the plastered partition or ceiling is considerably less than is desirable in many instances.

The principal object of the invention is to provide a form of clip for use in the construction of plastered partitions, walls, ceilings, and the like, which will serve effectively for holding lath panels properly in place on the studs and at the same time impart to the finished plastered partition or ceiling sound-isolating properties of greatly enhanced value.

Another object of the invention is to provide a fastening clip for lath panels, as aforesaid, which will also serve to prevent or reduce objectionable cracking of the finished plaster surface arising from settling of the structure or movement of the studs or other supporting members.

Still another object is to provide a fastening clip, as aforesaid, so formed as to enable it to be used with lath panels of varying thickness, e. g., with gypsum lath panels of standard $\frac{1}{2}$ " thickness as well as those of $\frac{3}{8}$ " thickness.

Still a further object of the invention is to provide a clip as aforesaid, so designed that when a number of them are packaged for shipment to the job, they will not become entangled one with another.

The invention and the advantages thereof will be more fully understood from the detailed description given below, and from the accompanying drawings in which:

Fig. 1 is a fragmentary view, in front elevation, showing a clip embodying the invention, in place on a wood stud, for mounting gypsum board lath thereon;

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Fig. 2 is a fragmentary view taken along line 2—2 of Fig. 1;

Fig. 3 is a similar view taken along line 3—3 in Fig. 1;

Fig. 4 is a view in perspective, of the clip shown in Figs. 1 to 3;

Fig. 5 is a fragmentary view, partly in section and partly in side elevation, showing a modified form of the clip for use as a starter clip;

Fig. 6 is a view in perspective showing the clip of Fig. 5;

Fig. 7 is a fragmentary view, partly in section and partly in plan, showing still another modified form of the clip of my invention, for use as a corner clip;

Fig. 8 is a view in perspective of the clip of Fig. 7. Referring now in detail to the drawings, the numeral 10 indicates one of the wood studs constituting the framing of a partition or the like, and the numeral 11 indicates the face thereof lying generally in a plane parallel to the plane of the lath panels which are to receive the plaster coats.

In accordance with the invention, there is provided a clip by means of which the lath panels may be held in place on the studs in such a manner as to result in greatly improved sound reduction properties in finished partition or wall, and serving also to minimize cracking tendency in the finished structure.

As will be seen from the drawings, the clips themselves are secured to the face 11 of the studs or supporting members.

In the embodiment shown in Figs. 1 to 4, the clip, indicated generally by the numeral 20, is composed of a single piece of wire, suitably of No. 10 to No. 14 gauge.

The clip comprises an eye or loop 21 at one end thereof, for receiving a nail or screw 22 in fastening the clip directly to the face 11 of the stud.

Spaced by the portion 25 from the nailing eye 21, at a distance of approximately $\frac{3}{4}$ of an inch from the latter is an angularly extending portion 23, this portion being bent at 24 so as to extend at an angle of approximately 135 degrees to the portion 25 in a plane at an angle of preferably ninety degrees to the plane of the nailing eye 21.

The angular portion 23 is bent at its opposite end, as indicated at 27, in a direction opposite that of the portion 25, to provide an elongated portion 28 lying in substantially the same plane as the portion 25. Portion 28 may suitably be approximately one and one-half to two inches in length, forming at its opposite end 29 one arm of a U-shaped bend indicated at 30, the other arm of which constitutes one end of a portion 31 extending parallel to the portion 28 and lying in the same transverse plane therewith. The portion 31 may suitably be of a length approximately one-half that of the portion 28, and at its other end is bent at an angle of approximately ninety degrees as indicated at 32, in a direction opposite that of the plane in which the loop 21 extends with respect to the plane of portion 28.

The right angular portion 33 is preferably of a length of approximately $\frac{3}{8}$ inch, and at its other end is bent at right angles, as indicated at 34, forming a portion 35 substantially parallel to the portions 28 and 31 and in the same plane with the portions 31 and 33. The portion 35 may suitably be of a length approximately one-half that of the portion 28, and is formed at its other end with a return bend indicated at 36, to constitute one member of a gripping jaw 41, the other member of which comprises a similar length of the portion 37. At its opposite end, the portion 37 is formed with a return bend, as indicated at 38, forming one member of a gripping jaw 42, the other member of which comprises the return bent portion 39 which extends in a common plane with the portion 37.

As will now be seen, the jaw 42 lies in a common plane with the jaw 41, the former being spaced by the angular portion 33 from the oppositely disposed gripping jaw 43 constituted by the return bent portion 31 and a substantially equal length of the portion 28. Likewise, the jaw 41 is spaced by the angular portion 33 from the portion 28 serving as a gripping jaw.

As will be seen, the clip thus formed from the single length wire consists, essentially, of the attaching loop or eye 21, the angular portion 23, one pair of gripping jaws 42, 43, and a second pair of gripping jaws 41, 28, with the gripping jaws 28, 43 lying in a common plane offset outwardly with respect to the plane of the attaching loop 21 by the angular portion 23, and with the gripping jaws 41, 42 spaced from the jaws 28, 43 by the portion 33 and lying in a common plane parallel to the plane of the jaws 28, 43 on the side thereof opposite the plane of the attaching loop 21.

Referring again to the jaw member 39, the inner end 40 thereof, constituting one end of the piece of wire of which the clip is formed, preferably is disposed closely adjacent the bend 34 and in alignment with the portion 35.

It is a feature of the clip of my invention that it may be nailed, as shown at 22, to the face 11 of the stud 10, i. e., the face which is parallel to the plane of the lath panels. The clips may readily be positioned in gripping engagement with a marginal portion of a lath panel, such as indicated at L-1, and after the clip is nailed to the stud, an adjacent lath panel L-2 may then be readily positioned so as to have the opposite marginal portion thereof received between the jaws 41, 28 of the clips already in position on the opposite margin of the previously applied lath panel L-1.

Thus, by reason of the angularly bent portion 23, the clip of my invention makes it possible for the lath panels L-1, L-2 to be positioned in spaced relationship to the studs, thereby to provide greatly improved sound reduction properties in the finished partition after the plaster coats P have been applied over the lath. In actual practice, the angular portion 23 may be of a length and angularly disposed so that this spacing will be approximately one-eighth to three-sixteenths of an inch.

Furthermore, the resiliency imparted by the angular portion 23 enables the panels to yield in response to movement of the studs, thereby minimizing the occurrence of cracks in the finished plaster due to such movements.

At the same time, the clip being arranged for nailing the same to the face of the studs which is parallel to the plane of the panels, precise location of the nailing places is not necessary, as is the case with clips which must be nailed to one or the other of the side edges of the studs, in order to insure their proper location for receiving the edges of the panels.

Still further, by reason of the resiliency between the opposed gripping jaws 41, 28 and likewise between the opposed gripping jaws 42, 43, it becomes possible to furnish the same size clip for use with plaster board lath of standard half-inch thickness as well as the standard three-eighths inch thickness.

It will be noted also that in the clip herein described and illustrated, there are no freely projecting ends which may cause the clips to become entangled with one another when a number of them are placed loosely in packages for shipment.

The clip in the form shown in Figs. 1 to 4 may also serve as a connector clip, for holding in a common plane, the abutting marginal ends of two adjacent lath panels in one row, and the marginal portion of a lath panel in the adjacent row, wherever this occurs at places between studs or the like. In this use, the loop 21 is, of course, not utilized, but the aforesaid connection at the joints between abutting edges of the panels in one row and a panel of an adjacent row is brought about by reason

of the presence of the spaced members 35, 37 composing jaw 41, and likewise the spaced members 37, 39 composing jaw 42 and spaced members 28, 31 composing jaw 43.

In Figs. 5 and 6 there is shown a modified form of the clip embodying the invention, for use at the lower end of a partition, for holding to the stud the lower margin of the panels L-3 in the lowermost row. As there illustrated, the clip comprises a single piece of wire bent at one end to form the nailing eye or loop 51 for fastening it, as by nails 52, to the outer face 54 of the studs. Here, as in the form illustrated in Figs. 1 to 4, the wire is bent angularly as indicated at 56 at a distance of, say one-half inch, from the loop 51, to provide the portion 53 for spacing the panels L-3 from the studs a distance of say one-eighth inch, as in the case of the clips of Figs. 1 to 4. This form of clip comprises also a gripping portion 58 bent at an angle to the opposite end 57 of the portion 53, and being formed at its other end with a right-angular bend 59, to provide a portion 60 preferably of the same length as the member 33 in the form of clip shown in Figs. 1 to 4. The other end of portion 60 is bent at substantially a right angle to provide a gripping portion 61 substantially parallel to the gripping portion 58 and terminating in an outwardly flared portion 62.

As will be seen especially from Fig. 5, the jaws 58, 61 in this form of clip serve to grip the margin of the panel L-3 at the lower end of the partition, in spaced relation to the outer face of the studs and in yielding relationship thereto.

The form of clip shown in Figs. 7 and 8 is intended for use in holding lath panels such as indicated at L-4, L-5 adjacent a corner of intersecting studs 10a, 10b. In this form, as in those previously described, the clip, constituted of a single length of wire, is formed adjacent one of its ends with an eye or loop 71 for securing the clip, as by nails 72, to the outer face of one of the corner studs, for example stud 10a. Likewise, the clip in this instance is formed with an outwardly extending angular portion 73 at the other end of the portion 75 to provide the offset portion 78.

The portion 78 is bent at a distance of, say one inch, as indicated at 79, in a direction at a right angle thereto. Beyond the bend 79, the wire extends for a distance of approximately one inch in a common plane with portion 78, and is formed at its other end with a return bend 80, to provide a portion 81 extending parallel to, and in a common plane with, the portion 81a, a distance approximately three-fourths of an inch to the point 82, where it is bent outwardly at substantially a right angle to form the cross-member 83.

This cross-member is preferably of a length substantially the same as the length of the member 33 in the clip of Figs. 1 to 4 and the cross-member 60 in the clip of Figs. 5 and 6. At the opposite end of the portion 83, the wire is bent at a right angle as indicated at 84, to form the outwardly extending portion 85, the outer end of the latter being formed with a return bend 86. As will be seen, the portions 85, 87 lie in a common plane, parallel to and spaced from the plane of the portions 81, 81a.

The other end of the portion 87 is bent outwardly at 88 substantially at a right angle to provide a portion 89 lying in substantially a common plane with the cross-member 83, and terminating in a slightly outwardly flared portion 90.

In using this form of clip as a corner clip for holding lath panels to studs at a corner, the clip may be nailed, as at 72, through the loop 71 to a stud 10a. Lath panels L-4 may be received and firmly gripped along a margin of the panels between the portion 78 and the opposed portions 83, 89 when the panels are inserted therebetween. The panels L-5 disposed adjacent the intersecting stud 10b are gripped along the margins thereof between the gripping portions or jaws 92, 93, the former being constituted of the portions 85, 87 lying in one common plane, and the latter being constituted of the

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portions 81, 81a also lying in a common plane, parallel to and spaced from the plane of the portions 85, 87.

Clips constituting my present invention are capable of reducing the transmission of sound through the plastered partitions to the extent of showing an average sound transmission loss of the order of 50 or more decibels.

In addition to the foregoing important advantage of clips embodying the invention, they possess the concomitant advantage of eliminating or minimizing (by reason of the yieldable mounting of the panels due to resiliency of the clips along the angular portion 23 in the embodiment of Figs. 1-4, or the corresponding portion 53 in the embodiment of Figs. 5 and 6, and 73 in the embodiment of Figs. 7 and 8) the formation of cracks in the finished plaster.

Moreover, by reason of the spacing which the clips provide between the lath panels and the supporting members to which the latter are applied, so-called "breathing" is eliminated through the finished surface in the areas along the joints between adjacent panels, especially in the case of ceilings, where such "breathing" readily manifests itself in discoloration of the surface from dust-entrained air, etc.

Further, as will be evident, the clips are of simple construction, and being formed from a single length of wire, may be manufactured and shipped at low cost. They are easy to use, and enable gypsum lath or other lath panels to be rapidly and properly installed for the erection of plaster partitions, ceilings, walls, or the like.

Although several embodiments of my invention have been described in detail above, it will be understood that various modifications may be made therein. Accordingly, the invention is not intended to be confined to the precise form and arrangement of the several embodiments referred to above, but to include any modifications within the scope of the appended claims.

Having described the invention, what I claim is:

1. A clip for mounting lath panels on a stud or like supporting member, said clip comprising a single length of wire bent to provide at one end only thereof a loop adapted for attaching the clip to a face of the supporting member which is parallel to the plane of the panels, a panel-gripping jaw spaced from said attaching loop and lying in a plane substantially parallel to the first-named plane and offset therefrom by a portion of the wire extending at an angle between the upper end of said jaw and said attaching loop, and an opposed panel-gripping jaw in a plane substantially parallel to the first-named plane, said second-named jaw being spaced from the first-named jaw by a portion of the wire extending in a plane lying at an angle of substantially ninety degrees to the first-named plane, and in the same direction with respect thereto as said first-named jaw, said last-named portion being of a length to enable said jaws to grip the opposite faces of the panels along substantially the marginal edge portions thereof.

2. A clip as defined in claim 1, wherein the portion of wire composing each of said jaws is of a length sufficient to provide a resiliency therebetween to enable the clip to be used selectively for gripping the marginal portions of lath panels of a thickness varying from one predetermined value to a value approximately one-third greater than the first-named value.

3. A clip as defined in claim 1, wherein one of said gripping jaws is composed of a bent U-shaped portion of the wire, the legs of said U-shaped portion being spaced from one another a distance sufficient to span the distance between adjacent edges of two adjoining lath panels in a row thereof, whereby to enable the clip to be used selectively for mounting such lath panels or for con-

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necting such adjoining panels along the joint therebetween with a panel of an adjoining row.

4. A clip for mounting lath panels on a stud or like supporting member, in the construction of plastered partitions or the like, said clip comprising a single length of wire bent to provide at one end only thereof a loop adapted for attaching the clip to a face of the supporting member which is parallel to the plane of the panels, a pair of panel-gripping jaws spaced from one another and from said attaching loop and having the gripping surfaces thereof lying in parallel planes parallel to the first-named plane and offset therefrom by a portion of the wire extending at an angle between the upper end of one of said pair of jaws and said attaching loop, a second pair of panel-gripping jaws spaced from one another and from said attaching loop and having the gripping surfaces thereof lying in parallel planes offset from the first-named plane, said second pair of jaws being connected with the first-named pair by a portion of the wire extending in a plane lying at an angle of substantially ninety degrees to the first-named plane and joining the lower end of one of the jaws of the first-named pair with the upper end of the opposite jaw of the second-named pair.

5. A clip as defined in claim 4, wherein the gripping surfaces of the first-named pair of jaws are substantially in alignment with those of the second-named pair thereof.

6. A clip as defined in claim 4, wherein the gripping surfaces of the first-named pair of jaws extend substantially at right angles to those of the second-named pair thereof.

7. A clip as defined in claim 4, wherein the gripping jaws of each of said pairs of jaws are of a length to provide sufficient resiliency with respect to one another to enable the clip to be used selectively for gripping marginal portions of lath panels of a thickness varying from one predetermined value to a value approximately one-third greater than the first-named value.

8. A clip as defined in claim 4, wherein the portion of the wire by which said gripping jaws are offset from the plane of said attaching loop extends at an angle of approximately 135° between the upper end of said first-named pair and the attaching loop, whereby to render said gripping jaws resilient with respect to said attaching loop.

9. A clip as defined in claim 4, wherein said portion by which the gripping jaws are offset from the plane of said attaching loop extends at an angle and for a distance to enable the panels to be mounted by the clips on the supporting member in such resilient relation thereto that the resultant plastered partition will exhibit sound reduction properties of the order of not substantially less than 50 decibels sound transmission loss therethrough.

10. A clip as defined in claim 5, wherein said portion by which the gripping jaws are offset from the plane of said attaching loop extends at an angle and for a distance to enable the panels to be mounted by the clips on the supporting member in such resilient relation thereto that the resultant plastered partition will exhibit sound reduction properties of the order of not substantially less than 50 decibels sound transmission loss therethrough.

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