

June 22, 1943.

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2,322,657

MEANS FOR SECURING LATH FOR CHANNEL FURRING

Filed April 7, 1942

2 Sheets-Sheet 1

Fig. 1.

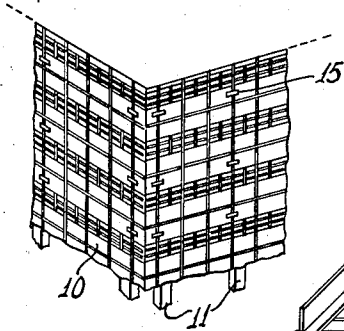


Fig. 2.

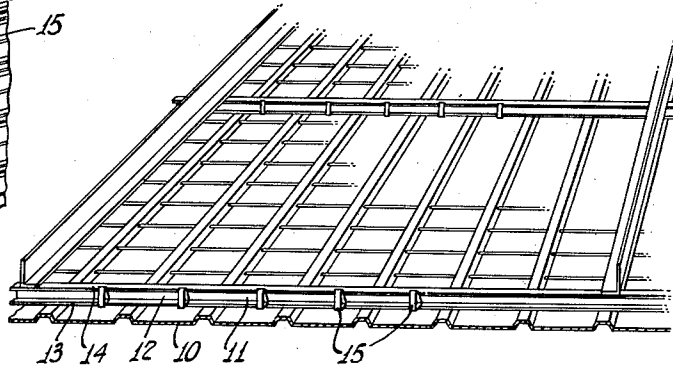


Fig. 3.

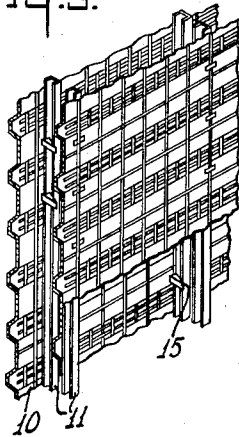


Fig. 5.

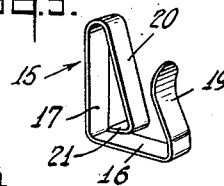


Fig. 4.

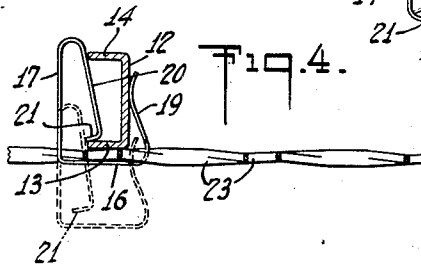
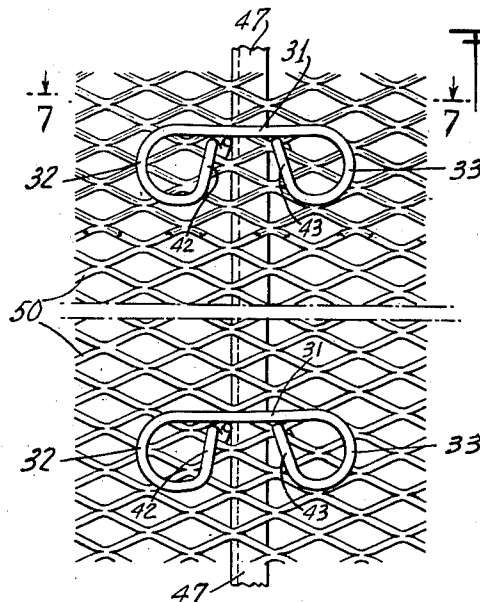


Fig. 6.



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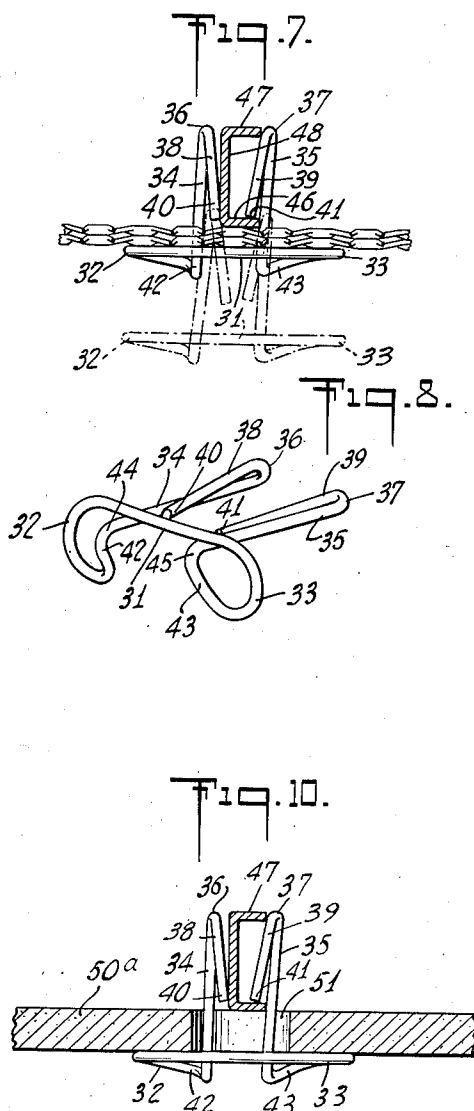
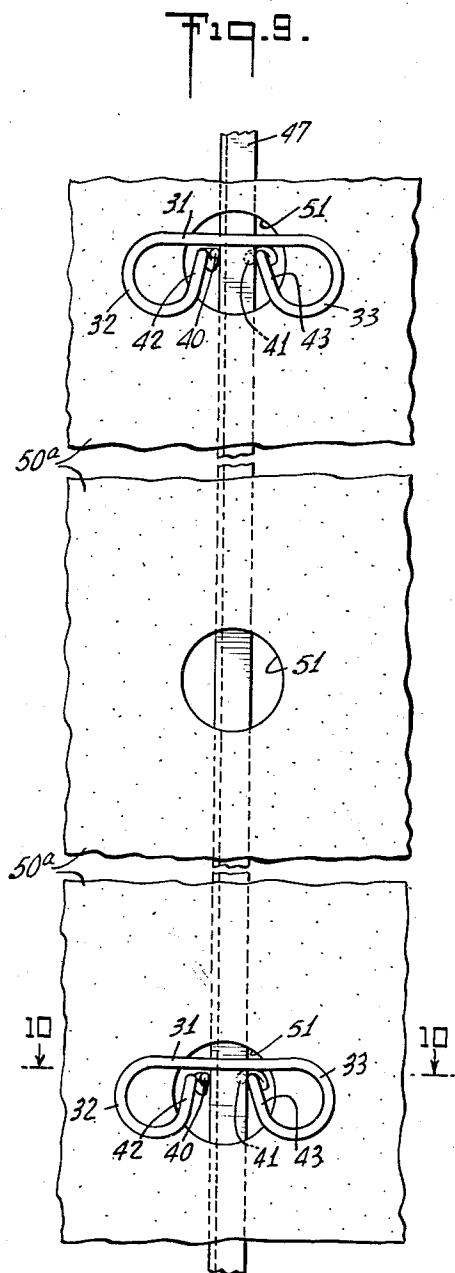
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2 Sheets-Sheet 2



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MEANS FOR SECURING LATH TO CHANNEL FURRING

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Application April 7, 1942, Serial No. 437,935

8 Claims. (Cl. 72-118)

This application is a continuation-in-part of my co-pending application Serial No. 291,803, filed August 25, 1939.

This invention relates to an improved means for erecting lath on channel furring strips. More particularly, my invention relates to novel forms of clips for securing paper backed wire lath, expanded metal lath and other commercially available lath to channel furring.

Prior to my invention it has been customary to secure expanded metal lath, paper backed wire lath and wire-cloth to channel furring by wire tying the lath to the furring. This procedure requires considerable skill and is time-consuming, thus making the installation of the lath costly.

The principal object of my invention is therefore concerned primarily with an improved means for installing and erecting paper backed wire lath, expanded metal lath, and other plaster base materials on channel furring strips.

Another object of the invention is to provide novel forms of resilient clips adapted to secure various commercial forms of lath, including wire lath, expanded metal lath, paper backed lath and perforated gypsum lath, to channel furring strips.

According to my invention, I provide resilient clips which can be manually applied in rapid succession to secure the lath to the channel furring, the clips being designed so as to be capable of use somewhat in the fashion of snap-fasteners, one part of the clip being arranged to bear against the outer side of the lath and another part being arranged to extend into the furring channel and bear against the inner surface of the leg thereof against which the lath is placed, thereby drawing the lath into and holding it in tight engagement with the outer surface of said leg of the channel.

Further objects, features and advantages of the invention will become apparent from the following detailed description and from the accompanying drawings, wherein several embodiments or modifications of the invention are set forth.

In the accompanying drawings,

Fig. 1 is a fragmentary perspective view illustrating the side walls at a corner of a room having erected, on metal channel furring strips, paper backed wire lath by means of clips embodying my invention;

Fig. 2 is a fragmentary perspective view, looking down from above, of a ceiling construction having paper backed wire lath secured by the clips of Fig. 1 to the furring strips of the ceiling construction;

Fig. 3 is a fragmentary perspective view from the side opposite that shown in Fig. 1, illustrating a partition construction having paper backed wire lath secured by the clips of Fig. 1 to the channel furring;

Fig. 4 is a view, partly in section and partly in plan, illustrating expanded metal lath secured to a furring channel by a clip of the form shown in Figs. 1 to 3;

Fig. 5 is a perspective view of the clip shown in Figs. 1 to 4;

Fig. 6 is a view in elevation illustrating expanded metal lath secured to a metal channel furring by clips comprising another embodiment of the invention;

Fig. 7 is a view taken along line 7-7 of Fig. 6 and showing, in dotted lines, an initial stage of the application of the clip;

Fig. 8 is a perspective view of the form of clip shown in Figs. 6 and 7;

Fig. 9 is a view illustrating perforated gypsum lath secured to metal channel furring by means of a clip of the form illustrated in Figs. 6 to 8, and

Fig. 10 is a view taken along line 10-10 of Fig. 9.

Referring to Figs. 1 to 3, the numeral 10 indicates paper backed metal lath secured to metal channel furring members 11 comprising a base portion 12 and leg portions 13 and 14. The channel furring may be employed in the construction of the ceiling, as indicated in Fig. 2, and also in the vertical walls or partitions as illustrated in Figs. 1 and 3. These furring members are of well known construction, and may vary in size and be spaced apart at various distances, according to the requirements of building codes. According to my invention, the lath is secured to these channel furring members by means of specially designed clips. One form of such clips is indicated generally by the numeral 15 in Figs. 1 to 3.

The clip 15 of Figs. 1 to 3 is more clearly depicted in Figs. 4 and 5. As will be seen from these figures, this form of clip is of general U-shape and comprises a base portion 16, an outwardly extending resilient leg portion 17 and an outwardly extending arcuate and resiliently formed leg portion 19. The leg portion 17 has a resilient, reentrantly formed portion 20 which is adapted to spring inwardly, allowing the outwardly bent terminal portion 21 thereof to seat or rest and bear upon the leg 13 of the channel furring member 11 when the clip is forced into position over the channel, with the lath positioned between the outer face of the leg 13 of the furring and the inner face of the base portion 16 of the clip.

As illustrated in Fig. 4, it is preferred that the upper or outer ends of the resilient leg portion 17 and the reentrant portion 20 shall extend slightly above or beyond the upper or outer leg member 14 of the furring, as illustrated. The resiliently formed leg portion 19 of the clip may or may not extend to the same height as the leg portion 17. It is obvious that the clip 15 may be so formed that it may be adapted for use with certain sizes of furring so that the number of sizes of the clips may be reduced in order to standardize the clips; that is, a clip 15 may be adapted to be used both with a $\frac{3}{4}$ " and 1" channel, and another size of clip may be adapted to be used with a 1" and $1\frac{1}{2}$ " channel.

The clip 15 is formed from flat spring steel wire so that there will be marked resiliency between the various leg portions and reentrant portions of the clip. The clip may be either galvanized by dipping or electro-plating or have other forms of rustproofing applied thereto. The clip is so formed that the base 16 will be spaced from the leg 13 of the furring channel 11 a distance sufficient to accommodate the lath therebetween and permit the clip, after it has been snapped into proper position, as shown in full lines in Fig. 4, to draw and hold tightly the lath against the outer surface of the leg portion 13.

When the clip is applied, as indicated by the dotted lines in Fig. 4, the reentrant portion 20 is forced outwardly and rides over the edge of the leg portion 13 and then springs back inwardly as its free end passes by the leg portion 13, thus causing the portion 16 to snap into place in engagement with the inner face of the leg 13. Since the spring action of the clip is such that the reentrant portion 20 engages and bears against the edge of the other leg 14, and since the portion 16 engages the lath located between it and the leg 13 of the furring channel, the resiliently formed leg 19 therefore firmly engages the base portion 12 of the furring channel and firmly locks the clip in place on the furring channel, thereby securing the lath to the channel. Furthermore, as the clip is constructed of flat spring steel wire, the flattened portion of the base 16 and of the reentrant portion 20 tends to keep the clip in an upright position. It is obvious therefore, when the clip is placed in position over the paper backed wire lath 10 of Figs. 1 to 3 or the expanded metal lath 23 of Fig. 4, that the lath is firmly affixed to the furring channel where the clip is applied.

Another form of clip embodying my invention is shown in Figs. 6 to 10. This form of clip is made from a single piece of wire which may be either hard drawn basic wire or spring steel wire and of say 13 to 15 gauge, depending upon the degree of strength desired in the clip.

This form of clip comprises essentially, a base portion 31 having open loops 32 and 33 at the ends thereof, and spaced arms formed integrally with the loops and extending substantially at a right angle to the general plane of the loops. The arms comprise portions 34, 35 return bent at 36, 37 to provide terminal portions 38, 39.

The wire is preferably twisted laterally inwardly adjacent the return bends 36, 37 so that the terminal portions 38, 39 will converge toward each other in the direction towards the base portion 31, the ends 40, 41 of the terminal portions being spaced apart a distance substantially less than the distance between the bends 36, 37.

In forming the loops 32, 33, the wire is twisted,

near the open parts of the loops, so that the portions 42, 43 of the loops are offset at a slight angle from the plane of the remaining or closed parts of the loops, and lie on the side of the loops opposite to that from which the arms 34, 35 extend. The bends 44, 45 at the open ends of the loops thus form a slight bulge which functions to increase materially the spring action of the clip. This spring action enables the clip to be rapidly applied to a channel furring in the manner illustrated in Fig. 7. As will be seen from Fig. 7, slight pressing of the clip onto the furring in a direction at right angles to the plane of the legs of the channel causes the transversely extending arms 34, 35 with their converging terminal portions 38, 39 to spread apart from their normal position and slide over the channel, and when the free end of one of the converging terminal portions has reached the plane of the inner surface of the leg 46 of the channel, the resiliency of the clip will restore the arms 34, 35 to normal position, thereby causing such terminal portion to snap into the channel, with the end 41 of the portion 39 seated and bearing against the inner surface of the leg 46. When the clip is thus properly positioned, the outer end 37 of the arm 35 bears against the outer free edge of the opposite leg 47 of the channel and the lower end 40 of the other terminal portion 38 bears against the outer surface of the base 48 of the channel, thereby restraining any substantial rocking or other movement of the clip.

The length of the wire is such that when bent into the form of clip illustrated and described, the free outer ends 40, 41 of the wire will be spaced from the portion 31 a distance sufficient to accommodate therebetween the thickness of the lath 50 to be fastened to the channel plus the thickness of the leg of the channel against which the lath is applied. An important feature, however, of this form of clip is that by reason of the resiliency imparted by the outward bending of the portions 42, 43 of loops 32, 33, the clip possesses sufficient resiliency to enable it to function properly even though the spacing of the ends 40, 41 of the wire is somewhat less than the sum of the thickness of the channel and of the lath. Under such conditions it is necessary only to apply slightly more pressure to, or strike a light sharp blow at, the portions 42, 43 in order to spring the clip into proper position. Such may be the case, for example, where expanded metal lath is to be secured to the furring and adjacent sheets of the lath overlap one another as shown in Figs. 6 and 7.

The clip of Fig. 8 may also be employed for securing the commercial forms of perforated gypsum lath to channel furring. As shown in Figs. 9 and 10, the lath 50* is positioned against the outer face of one of the legs of the furring in the usual manner. The clip is then inserted through any desired number of the perforations 51 of the lath which overlies such leg of the channel, and by applying slight pressure to the clip, it may be brought into proper position in association with the channel in substantially the same manner as described with reference to Figs. 6 to 8, thereby securely holding the lath to the furring. By reason of the resiliency imparted by the manner in which the portions 42, 43 of the clip are twisted, this form of clip is suitable for use with gypsum lath of the various thicknesses in which this type of lath is produced commercially, i. e., as well with $\frac{1}{2}$ " lath as with $\frac{3}{8}$ " lath.

The resilient character of the clip shown in Figs. 6 to 10, provides also sufficient play so that while it effectively holds the lath to the channel furring, there is nevertheless sufficient freedom of movement so that when plaster has been applied to the lath, the tendency for the plaster layer to crack, as when subjected to the strain of slight movement of the structure, is greatly minimized.

It will be apparent from the foregoing that by my invention I have provided several forms of clips that can be made at very low cost and that can be rapidly applied in use for securing various commercial varieties of plastering base material, such as expanded metal lath, paper backed wire lath and gypsum lath to channel furring strips. Moreover, the clips are of such form and design as to be capable of being rapidly applied by unskilled workmen and without requiring the use of any special tools in order properly to position the clips in their correct functional relationship with the channel furring.

I claim:

1. A clip adapted for securing a plastering base to a furring channel, said clip comprising a portion adapted to bear against the outer surface of the plastering base, and resilient arms extending at an angle to the first-named portion, one of said arms having a reverse bent portion, the free end of said reverse bent portion being adapted to seat against the inner surface of one of the legs of the channel and an intermediate portion adapted to bear against the outer edge of the other leg of the channel, and the other of said arms being adapted to engage and bear against the outer surface of the base of the channel which extends in a plane at a right angle to the plane of the plastering base.

2. A clip adapted for securing a plastering base to a furring channel, said clip comprising a portion adapted to bear against the outer surface of the plastering base, and resilient terminal portions extending substantially at right angles to the first-named portion, one of said terminal portions being reversely bent to provide a free end portion adapted to snap into engagement with the inner surface of a leg of said channel and an intermediate portion to bear against the outer edge of the other leg of the channel, when the clip is brought into position with the plastering base positioned against the outer surface of said first-named leg and the other of said terminals being adapted to have frictional engagement with the outer surface of the base of the channel which extends in a plane at a right angle to the plane of the plastering base.

3. A clip adapted for securing a plastering base to a furring channel, said clip comprising a transverse portion adapted to bear against the

plastering base, and resiliently formed terminal portions extending laterally of the first-named portion, one of said terminal portions being reversely bent so that its free end is adapted for snap-lock engagement with an inner surface of one leg of the channel and its intermediate portion is adapted to bear against the outer edge of the other leg of the channel, the other of said terminal portions being adapted to frictionally engage a surface of the web of the channel which connects the legs thereof.

4. A clip adapted for securing a plastering base to a furring channel, said clip comprising a single piece of wire bent to form a pair of spaced loops lying substantially in a common plane and arms extending from each of said loops in a direction substantially at right angles to the plane of said loops, said arms each having return-bent portions converging in a direction towards the plane of said loops.

5. A clip adapted for securing a plastering base to a furring channel, said clip comprising a single piece of wire bent to form a pair of spaced loops lying substantially in a common plane and arms extending from each of said loops in a direction substantially at right angles to the plane of said loops, said arms each having return-bent portions converging in a direction towards the plane of said loops, the wire being twisted adjacent the open end of each of said loops into a plane offset from the plane of the loops and on the side thereof opposite that from which said arms extend.

6. As an article of manufacture, a clip comprising a wire bent at its midportion to form a pair of spaced open loops, and resiliently formed arms extending transversely from the open end of each of said loops, each of said arms having a return-bent portion, said return-bent portions being twisted so as to converge in the direction toward the said loop portions and terminating at points spaced from said loops.

7. As an article of manufacture, a clip U-shaped in form and having resiliently formed leg portions, one of said leg portions being reentrantly formed, the reentrant portion having a terminal portion inclined thereto and extending laterally toward said leg portion.

8. As an article of manufacture, a clip substantially U-shaped in form, comprising resiliently formed leg portions, a transverse portion therebetween, a portion of one of said leg portions resiliently and reentrantly formed and directed toward the transverse portion, the end portion of the reentrant portion being formed at an angle to the reentrant leg portion and directed toward the said leg with respect to which it is the terminal portion but spaced from said leg and the transverse portion.

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