

[54] WIRE FURRING HANGERS
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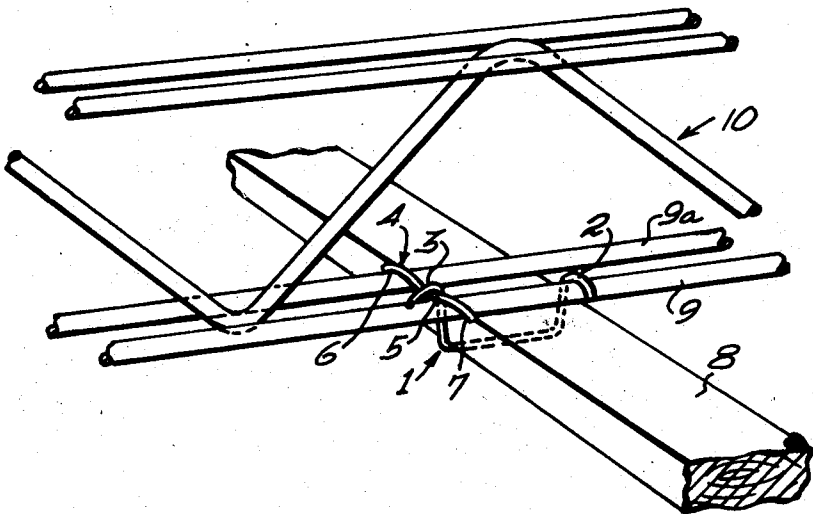
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[57] ABSTRACT

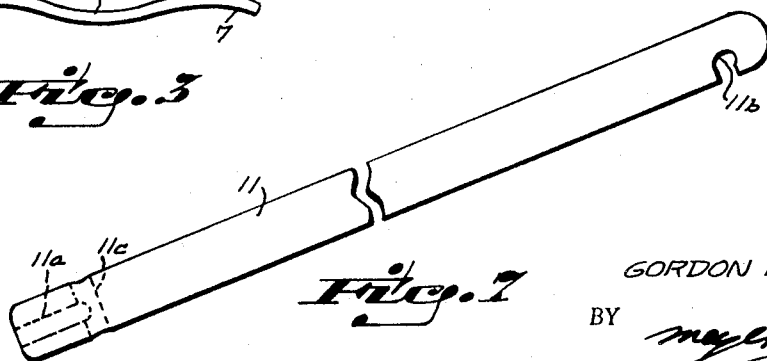
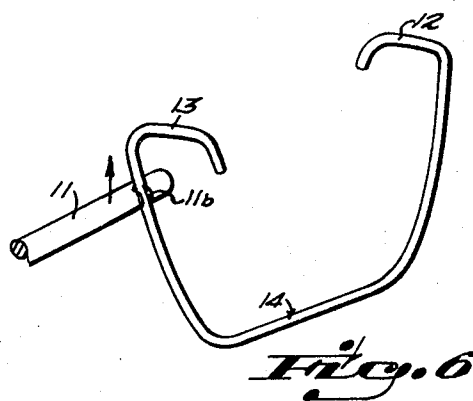
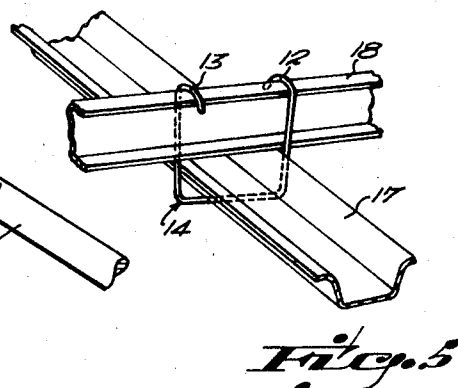
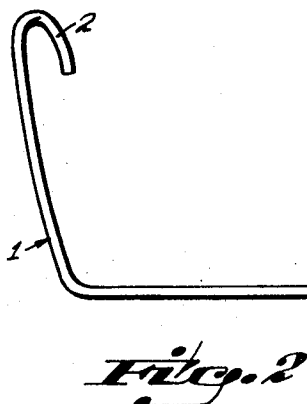
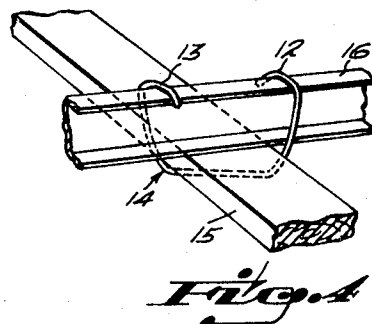
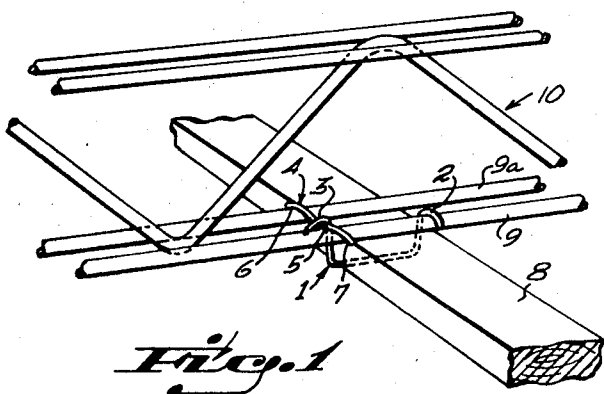
A wire furring hanger attaching means adapted to save time, material and labor in the hanging of furring strips to support plaster or false ceilings, made of acoustical or other material, from the supporting members of the roof of a building.

3 Claims, 7 Drawing Figures



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WIRE FURRING HANGERS

BACKGROUND OF THE INVENTION

1. Field of the Invention.

Supporting hanger attaching means for furring strips, false ceilings and the like.

2. Description of the Prior Art

The current standard procedure in hanging furring strips, for acoustical or false ceilings of materials, from the supporting beams of the roof of a building at present consists of manually bending and forming strips of wire to loop over the beams and support the furring strips. In performing this procedure the mechanic or installer must measure the proper length of each wire, twist it, and cut it, on the job, from a straight piece of long wire. Generally this elongated wire is carried on a large spool or reel.

In the invention, disclosed herein, the furring hangers are each pre-cut and shaped in a factory, away from the job, so that the mechanic or installer merely has to locate and install each furring hanger in its proper predetermined place, preferably with the aid of a simple tool. In this manner each furring strip is precisely installed and held in predetermined position and distance below the beam which supports it by the use of the pre-formed furring hanger which was manufactured off the job.

This invention is particularly adapted for hanging furring strips to support false ceilings, whether they be made of acoustical or other materials, which are to be placed in snug contact with the lowest portion of the beams of the building.

The result of this invention is a great saving in time and money and improvement in the quality of the installation.

In the prior art, such as U. S. Pat. No. 499549 to Hunter et al, a pipe hanger is shown made of bent wire which will fit over the lower flange of an I beam to hold a pipe. Another type of attachment for holding metal bars and beams together is shown in U. S. Pat. No. 749222 to Purdy et al, in which a complex wire arrangement is used to hold bars below I beams. U. S. Pat. No. 3276800 to Loudon et al, shows a beam clip for stringing telephone wires from the bottom flange of an I beam. U. S. Pat. No. 796468 to Streeter discloses a sheet metal clip.

None of this prior art anticipates this invention. No special assembly tool is shown in any of said prior art. No problem of lowering or creating a false ceiling is present. No spring steel wire furring hanger is disclosed. Most of the prior art relies, at least in part, on "sliding" fit arrangements, some are designed for stringing telephone wires, and some stress great strength and security obtained by bulk and rigidity, as in Loudon et al, and Streeter, neither of which disclose applicant's strong spring steel clip clamping action.

SUMMARY OF THE INVENTION

The present invention is shown in two forms.

In one form a hanger is composed of two pieces of spring steel wire, a larger and smaller piece. The larger piece consists of a U-shaped hanger having one end in the form of a hook which is disposed at right angles to the plane of the U, and the other end in the form of a hook which extends in a plane parallel to the U. The smaller portion of this two piece hanger consists of a piece of wire having a small dip or notch in the middle

adapted to fit under the hook-end which is parallel to the U.

The other form of the invention consists of a one piece U-shape, spring steel wire hanger in which both ends are formed in a hook shape, both of said ends being arranged in planes at right angles to the plane of the U, except that the hook on one end faces in the opposite direction from the hook on the other end of the hanger.

By use of a simple special tool both forms of the wire furring hangers attaching means of the present invention can be readily placed into position without cutting or forming by the installer or mechanic on the job, all of the cutting and forming of the wire hanger attaching means having been pre-formed in a factory away from the job site.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1, shows a perspective view of the first form of this invention in place holding a furring strip under a bar joist.

FIG. 2, shows an enlarged perspective view of the larger portion of the first form of this invention with the special tool in position for installing the hanger.

FIG. 3, shows an enlarged perspective view of the smaller portion of the first form of this invention.

FIG. 4, shows a perspective view of the second form of this invention holding a furring strip in position under a channel iron.

FIG. 5, shows another perspective view of the second form of this invention holding a formed metal strip in position under a channel iron.

FIG. 6, shows an enlarged perspective view of the second form of this invention with the special tool in position for installing the hanger.

FIG. 7, shows a perspective view of the special tool used to facilitate the installation of both forms of wire hangers of this invention.

DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION

Referring to the drawing, the two piece hanger of the first form of this invention is shown in FIGS. 1, 2, and 3. The first piece of said hanger is designated in general by the numeral 1. Hanger 1 is formed in a general U-shaped configuration with one end 2 in the form of a hook which is disposed at right angles to the plane of the U. The opposite end 3 of hanger 1 is in the form of a hook which extends in a plane parallel to the plane of the U. The entire hanger 1 is made preferably of spring steel or some substance having both great strength and elasticity. The second and separate part of hanger 1 is indicated in general by the numeral 4, see FIGS. 1 and 3, and comprises a piece of strong spring steel of the same composition as the rest of the hanger 1, but has a slightly curved center portion 5, which can also be notched, and is preferably formed in a slight reverse curve at the ends, 6 and 7, as clearly shown in FIG. 3.

In operation the U-shaped hanger, indicated in general by the numeral 1, see FIG. 1, is placed under a furring strip 8, to which can be fastened a portion of a false or acoustical ceiling, not shown in the drawings. The hook 2 is placed over one of the horizontally disposed bars 9 of a bar joist indicated generally by the numeral 10. The opposite hooked end 3 is installed by placing it in a central axially disposed hole 11a formed

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in one end of the special tool, which hole 11a will snugly receive the end of the hook 3, and then by applying a lifting motion, indicated by the direction of arrow in FIG. 2, the spring steel hook 3 is lifted sufficiently against its natural spring action so that the second and separate wire piece 4 can be slipped under said hook 3 with its ends 6 and 7 resting on the horizontally disposed lower bars 9 and 9a of bar joist 10 as shown in FIG. 1. The end 3 is then lowered so that it bears on the middle section 5 of the piece 4, and the hanger 1 is held in place firmly by the spring clip reaction between hook 3 and the second and separate piece 4, thus holding the furring strip 8 in firm contact with the lower bars 9 and 9a of bar joist 10 by the spring action of hanger 1 after the tool 11 is withdrawn. Since the hanger 1 is made of spring steel there is limited amount of flexibility or movement possible if it is necessary to make adjustments in the position of the furring strip 8.

The second form of my invention is shown generally as 14 in FIGS. 4, 5, and 6. The body of the hanger 14 has a hook 12 shaped in a plane at right angles to the plane of the U, the other end has a hook 13 which is also shaped in a plane at right angles to the plane of the U, but is faced in the opposite direction from the hook 12. See FIGS. 4, 5, and 6.

In FIG. 4, the hanger 14 is shown in assembled position holding a furring strip 15 in snug clamped contact with a horizontally disposed channel iron 16.

In FIG. 5, the hanger 14 is shown in assembled position holding a formed metal strip 17, in snug clamped contact with a horizontally disposed channel iron 18. In each case the disposition into operative clamped position of the oppositely facing hooked ends 12 and 13 of hanger 14, which comprises the second form of this invention, is effected by engagement of the tool 11 with the hooked end 13 of the hanger 14 and lifting it in the direction indicated by the arrow. Tool 11 could equally well be used on the hooked end 12 of the wire hanger 14 to thus lift either of the hooked ends 12 or 13 against its inherent spring tension over either channel iron 16 or 18 to effect the desired clamping of the furring strip 15 to channel iron 16, as in FIG. 4, or the clamping of formed metal strip 17 snugly in position under channel iron 18, as in FIG. 5.

Tool 11 contains a diametrically disposed open sided slot 11b which can be used to grasp either the hooked

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end 3 of hanger 1 or the hooked ends 12 or 13 of hanger 14 as shown in FIG. 6. Under some circumstances it may be more convenient to use slot 11b instead of hole 11a, since the use of slot 11b would enable the tool 11 to be more easily disengaged after the hanger is in place.

A diametrically disposed hole 11c may also be contained in tool 11 as shown in FIG. 7. Hole 11c has the same inside diameter as diametrically disposed hole 11a and provides the same fit as hole 11a to snugly receive the end of either form of hanger wire 1 or 14 and may be used in place of hole 11a or slot 11b. Slot 11b preferably should have a slightly larger inside diameter than either hole 11a or 11c.

What is claimed is:

1. In a ceiling framework, a bar joist having spaced parallel bars as the lower chord thereof, furring strips and the like disposed beneath said joist and extending transversely thereof, attaching means securing said furring strips to said joist comprising a two piece pre-formed spring steel hanger in combination:

a. A transverse piece positioned to bridge the space between the said two bars, with the ends of said transverse piece resting upon the said spaced parallel bars;

b. A second relatively larger U-shaped piece shaped to fit snugly around said furring strips and the like, having one end shaped in the form of a hook disposed at a right angle to the overall plane of said U-shaped piece, said hook resting on one of the bars of said bar joist; the other end of said U-shaped piece being shaped in the form of a hook extending in a plane parallel to the overall plane of said U-shaped piece and resting on said transverse piece.

2. An attaching means for securing furring strips false ceilings and the like, as described in claim 1 in which said transverse piece is curved in its center portion so that said center portion is dipped below the axis of said transverse piece.

3. An attaching means for securing furring strips, false ceilings and the like as described in claim 2 in which the ends of said transverse piece have a slight reverse curve at its ends relative to said curved center portion.

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