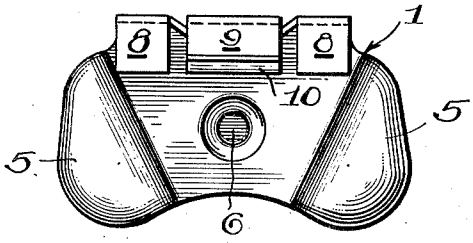
April 1, 1952 K. E. KNOTT 2,591,361

ATTACHING CLIP FOR WALL SURFACING

Filed Feb. 9, 1946

Fig. 1



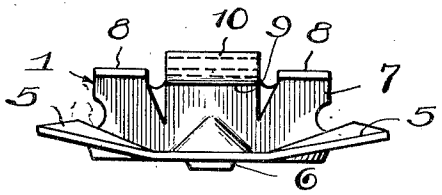


Fig. 2

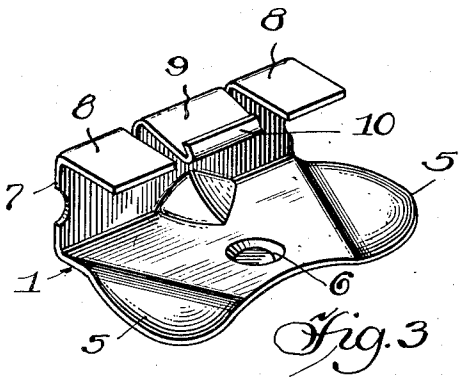


Fig. 3

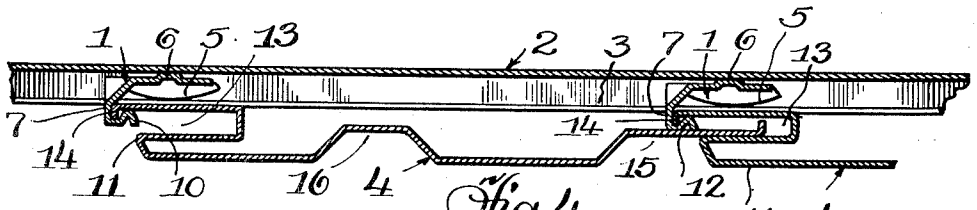


Fig. 4

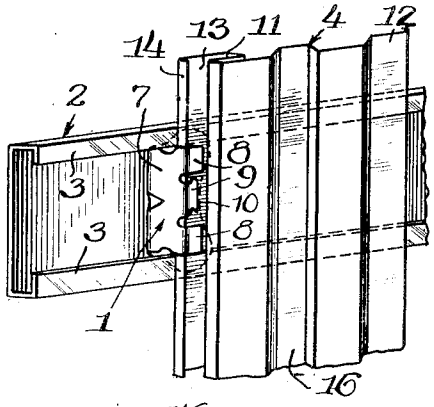


Fig. 5

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ATTACHING CLIP FOR WALL SURFACING

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6 Claims. (Cl. 189—86)

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The present invention relates to a novel attaching means and especially to a novel self-locking clip for installing metal siding or wall surfacing composed of interengaging or interlocking panels, as disclosed, for example, in Miller Patent No. 2,511,074 and in Ketchum application Serial No. 725,404, filed January 30, 1947.

Among the objects of the present invention is to provide a novel construction and arrangement of clip or lug for attaching and retaining panels forming a wall surfacing. This clip or lug construction permits the ready assembly, removal or replacement of one or more of the panels without disturbing the remainder, and when assembled, locks or fastens adjacent panels together in such manner as to provide a flexible joint that is weather tight and rattle proof, but which at the same time permits a quick adjustment of the panels to compensate for variations in the width or dimensions of a surface to be covered or faced.

The invention further comprehends a novel self-locking clip or lug construction for quickly and adjustably mounting metal siding for surfacing the interior or exterior walls of buildings, as well as the surfacing of signs or other structural members.

Further objects are to provide a construction of maximum simplicity, efficiency, economy and ease of assembly and operation, and such further objects, advantages and capabilities as will later more fully appear and are inherently possessed thereby.

The invention further resides in the construction, combination and arrangement of parts illustrated in the accompanying drawing, and while there is shown therein a preferred embodiment, it is to be understood that the same is susceptible of modification and change, and comprehends other details, arrangements of parts, features and constructions without departing from the spirit of the invention.

In the drawings:

Figure 1 is a plan view of the present novel attaching clip or lug.

Fig. 2 is a front view of the attaching clip with the central anchor tab in elevated position.

Fig. 3 is a perspective view of the attaching clip showing the central anchor tab thereof in depressed position.

Fig. 4 is a fragmentary view in horizontal cross-section showing the manner of installing or mounting adjoining metal siding or wall surfacing panels and retaining them in interlocked adjusted position.

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Fig. 5 is a fragmentary view in perspective showing one of the novel attaching clips in operative position.

Referring more particularly to the drawings and to the novel illustrative embodiment selected therein to disclose the invention, the present clip 1 is so constructed and designed as to permit its being installed within the channel of a furring strip 2 having a flat back wall with opposite side flanges 3 thereon, with inwardly extending lips on the flanges 3 for anchoring thereto interlocking panels 4. These furring strips or channel members are suitably spaced apart and secured or anchored upon a wall surface or other backing by any suitable attaching means.

Each clip is preferably made of resilient metal, such as stainless steel, although any other metal or material suitable for the purpose may be employed, and is provided with oppositely projecting ears or wings 5 and an emboss 6 on its bottom or base facilitating turning of the clip when inserted and assembled in the channel. As shown more clearly in Figs. 1, 2 and 3, these ears or wings are so contoured or bent as to engage and seat under the lips of the flanges 3 and resiliently retain the clip in a desired adjusted position, but permitting sliding movement thereof to locate and position it for mounting adjoining panels. Upon the upper surface of the clip there is provided a leg 7 formed with inturned end tabs 8, 8 and an intermediate tab 9, the latter provided with an upstanding tongue or projection 10.

The purpose or function of the present novel clip is to permit the ready installation of a plurality of adjustable, interlocking panels 4 and to securely mount adjoining panels in their adjusted positions and to facilitate removal and replacement of a damaged panel. As will be clear from Figs. 4 and 5, each panel is provided with a female leg 11 and a male leg 12, the female leg having a longitudinally extending channel 13 for the reception of a male leg on the adjoining panel. These panels are adapted to provide a facing for a wall or other surface, and due to their interlocking engagement may be adjusted laterally to compensate for any variations in the width of the surface to be covered. They may be made in several standardized widths, and due to their flexibility of adjustment will cover any size or configuration of surface. Also, although these panels are shown as extending vertically, they may extend horizontally, in which case the furring channels will be disposed or extend vertically. In fact, these panels or sections of siding may be positioned and mounted at any desired angle, in which event the furring channels will

be disposed transverse of the position of the panels.

These panels may be of porcelain enamel, enameled or plated steel, bronze, stainless steel, aluminum or any other preferably non-ferrous metal which is suitable for use as a surfacing material.

In the assembly of these novel clips, each clip 1 is placed in its furring channel 2 with the tabs 8 and 9 projecting outwardly and then rotated through approximately 90° with the ears or wings 5 thereof disposed beneath the lips of the flanges of the furring strips or channels. In this position, the tabs or prongs of the clip are disposed adjacent the female leg 11 of the panel. The clip is then slid into engaging position with the tabs or prongs 8 and 9 thereof projecting over the upstanding flange 14 of the female leg of the panel, and thereby locking the panel to furring channel or strip. The middle tab 9 of the clip is an anchor tab arranged to be depressed so as to interlock with this upstanding leg or flange 14. Next the male leg 12 of the adjacent panel is moved or slid into the female leg 11 of the panel previously installed until the spacing of the groove or longitudinal recess 15 is of such width as to suit the panel spacing. In this connection it is to be noted that each panel is shown provided with a longitudinally extending channel or groove 16. Additional panels may be added by inserting the male leg of the next panel into the longitudinally extending channel 13 of the female leg 11, and this may be continued until a sufficient number of the panels have been installed to cover the desired surface.

As stated above, the intermediate anchor tab 9 by reason of its interlocking engagement with the upstanding flange 14 of the female leg 11 retains the latter in adjusted position. At the same time, the end tabs 8, 8 provide a spring tension against the rear surface of the male leg 12 of the adjoining panel and thereby retain the latter in a predetermined position and against rattle.

One of the important features of this novel clip construction is that it is self-locking with the upstanding tongue or projection 10 on the intermediate prong or anchor tab 9 coming in contact with the male leg 12 of the adjoining panel, thereby preventing the clip from unhooking should any undue strain be placed on the panels. In other words, when the second panel has been installed, the intermediate anchor tab or prong 9 which has initially been pushed down over the flange 14 by a screw driver or other tool, is held down by the male leg of the panel.

The present novel construction of clip allows for the removal and replacement of any panel or section without tearing down the material from the top of the surface covered. This is a distinct advantage in that in porcelain installations as now assembled, it is necessary to start at the top and remove all of the panels until the damaged panel or section is reached. With the present construction of clip, the damaged panel or siding may be slid out and by raising the center tab 9 from interlocking engagement with the flange 14, this panel can be completely removed, replaced and slid back in position.

Having thus disclosed the invention, I claim:

1. The combination, with a furring strip having a flat back wall, side flanges along the opposite sides of said back wall and inwardly extending lips at the upper edges of said side flanges spaced from the back wall and forming an open channel therewith; of a fastening clip having a base portion within said channel with a central emboss bearing against the back wall of the strip, a pair of spring retaining wings integral with the base portion and extending upwardly and outwardly therefrom; said wings having curved ends with smooth convex friction surfaces bearing against the under surfaces of the inwardly extending lips of the furring strip at points spaced away from their inner edges and adjacent the side flanges of the strip and holding the clip in place with firm frictional engagement; the width of the clip being substantially less than the span between the opposite edges of the lips on the flanges of the furring strip, so that the clip may be freely inserted between the lips and rotated to secure the wings thereunder; said clip including a leg projecting from the base with a laterally extending anchor tab thereon; said anchor tab having an upwardly extending locking projection carried thereby; and panel members secured to the furring strip by said clips; with the anchor tab engaging an edge of one of the panels, and an inside surface of an adjacent panel engaging the locking projection and holding said tab locked against accidental release.

2. The combination, with a furring strip having a flat back wall, side flanges along the opposite sides of said back wall and inwardly extending lips at the upper edges of said side flanges spaced from the back wall and forming an open channel therewith; of a fastening clip having a base portion within said channel with a central emboss bearing against the back wall of the strip, a pair of spring retaining wings integral with the base portion and extending upwardly and outwardly therefrom; said wings having curved ends with smooth convex friction surfaces bearing against the under surfaces of the inwardly extending lips of the furring strip at points spaced away from their inner edges and adjacent the side flanges of the strip and holding the clip in place with firm frictional engagement; the width of the clip being substantially less than the span between the opposite edges of the lips on the flanges of the furring strip, so that the clip may be freely inserted between the lips and rotated to secure the wings thereunder.

3. The combination of a furring strip having a flat back wall, side flanges along the opposite sides of said back wall and inwardly extending lips at the upper edges of said side flanges spaced from the back wall and forming an open channel therewith; of a fastening clip having a base portion within said channel with spring retaining wings integral with the base portion and bearing against the under surfaces of the inwardly extending lips of the furring strip and holding the clip in place between the lips of the furring strip; said clip including a leg projecting from the base with a laterally extending anchor tab thereon; said anchor tab having an upwardly extending locking projection carried thereby; and panel members secured to the furring strip by said clips; with the anchor tab engaging an edge of one of the panels, and an inside surface of an adjacent panel engaging the locking projection and holding said tab locked against accidental release.

4. As an article of manufacture, a fastening clip having a base portion with at least one emboss positioned thereon and projecting thereunder; a pair of spring retaining wings integral with the base portion and extending upwardly and outwardly therefrom in angularly divergent

directions with respect to each other; the width of the clip being substantially less than the span between the outer edges of the wings so that the clip may be freely inserted between inwardly extending lips on a furring strip and rotated to secure the wings under said lips; said wings having curved marginal edges and smooth convex friction surfaces on the upper sides thereof adapted to slidably engage the under surfaces of the lips of the furring strip and hold the clip in position therein with firm frictional engagement, yet permit it to be forced longitudinally of the furring strip without binding; said clip including a leg projecting from the base portion and provided with an anchor tab extending laterally therefrom; said anchor tab having an upwardly extending locking projection thereon.

5. As an article of manufacture, a fastening clip having a base portion with at least one emboss positioned thereon and projecting thereunder; a pair of spring retaining wings integral with the base portion and extending upwardly and outwardly therefrom in angularly divergent directions with respect to each other; the width of the clip being substantially less than the span between the outer edges of the wings so that the clip may be freely inserted between inwardly extending lips on a furring strip and rotated to secure the wings under said lips; said wings having curved marginal edges and smooth convex friction surfaces on the upper sides thereof adapted to slidably engage the under surfaces of the lips of the furring strip and hold the clip in position therein with firm frictional engagement, yet permit it to be forced longitudinally of the furring strip without binding.

6. As an article of manufacture, a self-locking fastening clip comprising a main body of generally flat oblong shape and consisting of a single thickness of sheet metal having a right angled bend along one side thereof interconnecting said main body with a short, wide, upright leg portion integral with said body and extending in a direction substantially perpendicular to said body; said body having a base portion intermediate the ends thereof with at least one emboss formed on the underside of said base; the opposite ends of said body comprising a pair of spring retaining wings, each integral with the base portion of the body but on opposite sides thereof and inclined outwardly and upwardly at an obtuse angle with respect to each other; said wings having curved marginal edges around the ends thereof and having smooth, convex frictional surfaces on the upper sides thereof; the width of the body of the clip being substantially less than the span between the outer edges of the wings, so that the clip may be freely inserted between inwardly extending lips on a furring strip and rotated to bring the upper surfaces of the wings in frictional engagement under said lips and hold the clip in position therein with firm frictional contact yet permit it to be forced longitudinally of the furring strip without binding, with a plurality of tabs extending perpendicularly from the upright leg and in a position spaced from but parallel with the base portion of the clip.

KENNETH E. KNOTT.

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