This invention relates to means for mounting facing panels or tiles upon building walls; and the invention has reference, more particularly, to novel means for securing flanged metal panels or other flanged tiles to the face of a building wall.

This invention has for an object to provide novel anchoring clip means adapted to be affixed to a building wall face, the same being of such character that the flanges of panels or tiles, with which the wall is desired to be faced, may be quickly and easily engaged therewith without requiring the use of tools, and whereby, when so engaged, said panels or tiles are strongly gripped so as to be firmly secured and retained in place against accidental displacement, and yet in such manner that removal of any one or more thereof may be as quickly and easily accomplished should occasion require.

This invention has for another object to provide a very simple, economical and yet highly efficient gripping clip means for mounting flanged facing panels or tiles upon wall faces, wherein no separable fastening elements requiring tool manipulation are involved, and whereby the panel or tile flanges may be quickly pressed into the grip of said clip means so as to be frictionally gripped thereby, and thus firmly retained in operative assembled relation to and upon a building wall face.

A further object of this invention is to provide gripping clip means for the purposes stated which are very compact, being of minimum projecting dimensions, to the end that panels or tiles of minimum overall thickness may be utilized, and the overall thickness of a building wall as faced therewith likewise be reduced to a minimum.

Other objects of this invention, not at this time more particularly enumerated, will be understood from the following detailed description of the same.

Illustrative embodiments of this invention are shown in the accompanying drawing, in which:

Fig. 1 is a fragmentary front elevation of a building wall face with flanged panels mounted thereon and held thereto by gripping clip means made according to this invention; and Fig. 2 is an enlarged fragmentary view of a group of adjoining panels secured in place by the novel gripping clip means of this invention, portions of said panels being broken away to show underlying gripping clip means in elevation.

Fig. 3 is an enlarged detail sectional view, taken on line 3—3 in Fig. 2; Fig. 4 is a sectional view taken on line 4—4 in Fig. 3; Fig. 5 is an enlarged detail sectional view taken on line 5—5 in Fig. 2; and Fig. 6 is a sectional view similar to that of Fig. 3, but showing a somewhat simplified form and mounting of the gripping clip means.

Similar characters of reference are employed in the above-described views, to indicate corresponding parts.

Referring to the drawing, an illustrative form of wall facing panels or tiles therein shown comprises a sheet metal body 10 having rearwardly projecting marginal flanges 11 extending around the periphery thereof. Usually, the exterior face of panels of this type are coated with vitreous or other enamel or other suitable coating material of selected color or other desired appearance or texture modifying characteristics.

The novel panel or tile gripping and anchoring clip means according to this invention may be secured directly to a wall to be faced with the panels or tiles, but are preferably mounted on furring strips which are fastened to the wall structure. In the mounting arrangement shown in Figs. 1 to 5, inclusive, of the drawing, furring strips 12 of channel iron are provided. If the wall 13 is of masonry construction, these furring strips 12 are secured thereto by lag screws 14, and are slightly offset from the wall by interposed washers 15; the furring strips being disposed with the channeled faces thereof outwardly presented. The furring strips 12 are provided with slots 12' through which the lag screws pass, so that said furring strips may be quickly and easily matched and adjusted relative to the apertures provided in the masonry or other wall for the reception of the fastening lag screws.

A form of the novel gripping and anchoring clip means for attachment to the channel iron furring strips 12 comprises, a carrier element 16 made of sheet metal having angular end portions 17 to embrace the sides of a furring strip 12, which end portions terminate in in-turned keeper lugs 18 to engage beneath the body of said furring strip; the assembly being such that said carrier element 16 bridges across the flanges and the open side of the furring strip, and so as to be slidable adjustable along the latter whereby to position a clip means carried thereby in proper location to engage flanges 11 of applied panels or tiles, as will be subsequently more fully set forth. The clip means per se is formed from sheet metal of springy or resilient character, and comprises a flat main body or base 19, the
opposite sides of which are cut away to form spaced apart pairs of oppositely and laterally projecting tongues which are upwardly and inwardly curved or rolled, whereby the free end portions thereof provide resilient gripping jaws 22. The pairs of laterally aligned gripping jaws 23 thus provided are preferably located adjacent to the respective ends of the body or base 19, and in such manner that said pairs are spaced apart to provide an intermediate open space or gap therebetween. The body or base 19 is mounted on the carrier element 16 so as to be rotatable in the plane thereof, the rotatable connection being afforded by a central pivoting rivet 21 which joins the clip means to the supporting carrier element 16. Affixed to said body or base 19, to stand therefrom respectively intermediate each pair of laterally aligned gripping jaws 20, are stationary jaw or gripper elements 22, which also serve to space apart the margins of adjacent panels or tiles, when the latter as assembled and operatively engaged by the clip means. These stationary jaw or gripper elements 22 may comprise uprising posts or pins having their rooted ends riveted, welded or otherwise securely affixed to the body or base 19, or the same may be in the form of tongues integral with and strut upwardly out of the material of said body or base 19. Said stationary jaw or gripper elements 22 are preferably tapered toward their free ends.

In the use of the clip devices, in an illustrative form thereof as above described, the furring strips 12 having been affixed to the wall to be faced in suitable locations in accordance with the size of the panels 10 to be employed, the carrier elements 16 of the clip devices are adjustably moved along the furring strips so as to properly position the same for engagement by the flanges 11 of adjoining panels or tiles 10. To engage outer courses of panels or tiles, the furring strips and clip devices are positioned within the margins of the panels or tiles which define an exterior edge of the wall facing to be formed thereby, and the clip devices are turned to dispose their gripping elements for the reception of adjoining flanges of said outer course of panels or tiles which are angular to said exterior facing edge (see Fig. 2). Where the panels or tiles of inner courses thereof adjoin, a furring strip 12 is aligned centrally between adjoining courses thereof, so as to intersect points where the corners of four adjoining panels or tiles are contiguous, and the clip devices are arranged to straddle the four adjoining panels or tiles, whereby one set of gripping elements will receive and engage adjoining flanges of two of the four panels or tiles and the other set of gripping elements will receive and engage aligned adjoining flanges of the other two of said four panels or tiles.

From the above described disposition of the furring strip and the clip devices mounted thereon, and from an inspection of Figs. 1 and 2 of the drawing more especially, it will be obvious that the flanges 11 of each applied individual panel or tile 10 is gripped by a clip device at a point adjacent to each corner thereof, and consequently each tile is strongly and firmly held in place. This holds good for all panels or tiles with the exception of those at the corners of the wall facing as a whole, which are engaged by the described clip devices only adjacent to three corners thereof. For this reason an auxiliary, outer corner clip device for such corner panels or tiles is provided. This auxiliary clip device comprises, a carrier element 16 to engage the furring strip 12, and affixed to this carrier element is a body or base 23 having an out-turned abutment piece 24 at one end. The opposite end of said body or base 23 is cut away to form at least one tongue which is upwardly and inwardly curved or rolled, whereby the free end portion thereof provides a resilient gripping jaw 25 which is opposed to said abutment piece 24 (see Figs. 2 and 5). The auxiliary corner clip device is positioned to engage a flange 11 of a corner panel or side adjacent to the outer corner of the latter, said flange being inserted between the abutment piece 24 and the resilient gripping jaw 25, so as to be firmly gripped by and between these elements.

In applying the panels or tiles 10 to the clip devices, all that is required is to register the flanges 11 of the panels or tiles for engagement between a stationary jaw or gripper element 22 and a resilient gripping jaw 20 opposed thereto, and thereupon press home the panel or tile so as to engage the flanges thereof with each gripping jaw device. The gripping jaws 25, due to their resilience, will tensionally press the panel or tile flange portion engaged thereby strongly and firmly against the opposed side of the stationary jaw or gripper element 22, and consequently a strong frictional grip is exercised upon the thus engaged panel or tile flange portions which firmly holds the applied panel or tile in place securely against accidental displacement. To provide an enhanced grip upon the panel or tile flanges, and thus further assure against accidental displacement thereof from their proper assembled relation upon the wall face, it is preferable that the flanges 11 be somewhat inwardly pitched or inclined. It will be obvious that no special tools are required to perform this simple panel or tile assembly operation, unless perhaps the operator desires to use a hammer or like instrumentality to tap home the same. It will also be obvious that the clip devices are automatic in the exercise of their gripping function, and consequently separable or manipulable fastening devices are entirely obviated.

It will be noted that the clip device arrangement is such that the stationary jaws or gripper elements 22 are interposed between adjoining panels or tiles, thereby serving additionally as spacers for spacing the same uniformly apart, and thus leaving intervening spaces between the panel or tile margins, which, in practice, is usually filled in and pointed up with mastix, cement or like substance (not shown), whereby to provide the panel or tile wall facing with the desired joined appearance and finish. It will be apparent, since the panels or tiles are held in place merely by the strong frictional grip exercised by the clip devices upon the flanges thereof, that should it be desired for any reason to remove one or more panels or tiles at any given point in the wall facing, this may be easily accomplished by merely inserting a suitable hook-like instrumentality between adjoining panel or tile devices so as to engage a flange of the panel or tile desired to be removed, and thereupon by an outward pull to loosen and release the same from the grip of the clip devices.

In Fig. 6 of the drawing is shown a somewhat simplified form of panel or tile holding clip device which embodies the general principles of this invention. In this modified form and arrangement of clip device, the same comprises a main
body or base 18' having the curled or rolled tongues which form the resilient gripping jaws 20'. The main body or base 18' may be secured, as by fastening screw 21', or otherwise, directly to a furring strip 26. The main body or base 18' may be provided with upstanding stationary jaw or gripper elements, such as already above described, which are rigidly secured thereto intermediate the resilient gripping jaws 20', or as an alternative thereto (as shown in Fig. 6), a separable combined stationary jaw or gripper element and panel or tile spacer means may be provided in the form of an integral wedge key 27, adapted to be driven between two adjoined panels or tiles 19 so as to engage the respective flanges 11, and cause the same to be gripped by the resilient gripping jaws 20'.

It will be understood that various changes could be made in the above described constructions and that different embodiments of this invention could be made without departing from the scope thereof as defined in the following claims. It is therefore intended that all matter contained in the foregoing description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. Attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges comprising, a clip means adapted to be mounted on the wall to be faced so as to engage a plurality of adjoining panels, said clip means including a flat lying base portion having oppositely extending tongues each inwardly curled upon itself to form the free end portion thereof into a resilient gripping jaw, said jaws being oppositely arranged and spaced to provide intermediate outwardly open space adapted to receive insertion of the flanges of adjoining panels, and wedge-like means intermediate said jaws adapted to engage between outer sides of said flanges of adjoining panels and so as to thrustingly engage said flanges against said jaws, whereby to engage outer sides of said panel flanges in opposition to said jaws, and means intermediate said pairs of jaws to centrally pivot support said base portion whereby the clip means may be rotatively adjusted to selected positions for operatively engaging either two or four adjoining panels.

2. Attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges comprising, a clip means adapted to be mounted on the wall to be faced so as to engage a plurality of adjoining panels, said clip means including a flat lying base portion having oppositely extending tongues each inwardly curled upon itself to form the free end portion thereof into a resilient gripping jaw, whereby to frictionally grip said flange when the same is engaged between said means and said jaw.

3. Attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges comprising, a clip means adapted to be mounted on the wall to be faced so as to engage a plurality of adjoining panels adjacent to the meeting corners thereof, said clip means including a flat lying base portion having spaced apart pairs of oppositely and laterally extending tongues, each tongue being inwardly curled upon itself to form the free end portion thereof into a resilient gripping jaw, pairs of said jaws being oppositely arranged and spaced to provide intermediate outwardly open space and being respectively adapted to receive insertion of the flanges of four adjoining panels adjacent to meeting corners of said panels, and wedge-like means intermediate opposed jaws adapted to engage between outer sides of inserted panel flanges so as to thrustingly engage the latter with tensionally flexing effect upon said jaws, whereby to frictionally grip said panel flanges and so as to relatively space the thus engaged panels.

4. Attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges comprising, a clip means adapted to be mounted on the wall to be faced so as to engage a plurality of adjoining panels adjacent to the meeting corners thereof, said clip means including a flat lying base portion having oppositely and laterally extending tongues, each tongue being inwardly curled upon itself to form the free end portion thereof into a resilient gripping jaw, pairs of said jaws being oppositely arranged and spaced to provide intermediate outwardly open space and being respectively adapted to receive insertion of the flanges of adjoining panels adjacent to meeting corners thereof, and upstanding combined stationary tapered gripper and panel spacing elements affixed to said base portion intermediate the jaws of each pair thereof, whereby to engage outer sides of said panel flanges in opposition to said jaws, and means intermediate said pairs of jaws to centrally pivot support said base portion whereby the clip means may be rotatively adjusted to selected positions for operatively engaging either two or four adjoining panels.

5. In attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges, the combination with a furring strip adapted to be secured to a wall to be faced of a carrier element slidably adjustable along said furring strip, and a clip means mounted on said carrier element, said clip means including a base portion having a tongue extending therefrom, said tongue being curved upon itself to form the free end portion thereof into a resilient gripping jaw adapted to engage the inner side of a panel flange, and means engageable with the outer side of said flange in opposition to said jaw, whereby to frictionally grip said flange when the same is engaged between said means and said jaw.

6. In attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges, the combination with a furring strip adapted to be secured to a wall to be faced of a carrier element slidably adjusted along said furring strip, and a clip means adapted to engage a plurality of adjoining panels, said clip means including a base portion pivotally connected with said carrier element whereby the clip means may be rotatively adjusted to a desired operative position, said base portion having oppositely extending tongues each inwardly curled upon itself to form the free end portion thereof into a resilient gripping jaw, said jaws being oppositely arranged and spaced and being respectively adapted to engage inner sides of the flanges of adjoining panels, and means intermediate said jaws adapted to engage outer sides of said flanges in opposition to said jaws, whereby to frictionally grip said flanges when the
same are engaged between said means and said jaws as well as to space the adjoining panels from which said flanges spring.

7. In attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges, the combination with a furring strip adapted to be secured to a wall to be faced of a carrier element slidable adjustable along said furring strip, and a clip means adapted to engage a plurality of adjoining panels, said clip means including a base portion pivotally connected with said carrier element whereby the clip means may be rotationally adjusted to a desired operative position, said base portion having spaced apart pairs of oppositely and laterally extending tongues each inwardly curled upon itself to form the free end portion thereof into a resilient gripping jaw, pairs of said jaws being oppositely arranged and spaced and being respectively adapted to engage inner sides of the flanges of adjoining panels adjacent to corners thereof, and an upwarding combined stationary gripper and panel spacing element affixed to said base portion intermediate the jaws of each pair thereof, whereby to engage outer sides of said panel flanges in opposition to said jaws.

8. In attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges, the combination with a furring strip adapted to be secured to a wall to be faced of a carrier element slidable adjustable along said furring strip, and a clip means adapted to engage a plurality of adjoining panels adjacent to meeting corners thereof, said clip means including a base portion pivotally connected with said carrier element whereby the clip means may be rotationally adjusted to a desired operative position, said base portion having spaced apart pairs of oppositely and laterally extending tongues, each tongue being inwardly curled upon itself to form the free end portion thereof into a resilient gripping jaw, pairs of said jaws being oppositely arranged and spaced and being respectively adapted to engage inner sides of the flanges of adjoining panels adjacent to corners thereof, and means intermediate each pair of jaws adapted to engage outer sides of said flanges in opposition to said jaws and so as to relatively space the thus engaged panels.

9. In attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges, the combination with a furring strip adapted to be secured to a wall to be faced of a carrier element slidable adjustable along said furring strip, and a clip means adapted to engage a plurality of adjoining panels adjacent to meeting corners thereof, said clip means including a base portion pivotally connected with said carrier element whereby the clip means may be rotationally adjusted to a desired operative position, said base portion having spaced apart pairs of oppositely and laterally extending tongues, each tongue being inwardly curled upon itself to form the free end portion thereof into a resilient gripping jaw, pairs of said jaws being oppositely arranged and spaced and being respectively adapted to engage inner sides of the flanges of adjoining panels adjacent to corners thereof, and means intermediate each pair of jaws adapted to engage outer sides of said flanges in opposition to said jaws and so as to relatively space the thus engaged panels.

10. In attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges, the combination with a furring strip adapted to be secured to a wall to be faced of a clip means adapted to engage a plurality of adjoining panels, means for slidably mounting said clip means on said furring strip, said clip means having oppositely extending tongues each inwardly curled upon itself to form the free end portion into a resilient gripping jaw, said jaws being oppositely arranged and spaced and being respectively adapted to engage inner sides of the flanges of adjoining panels, and a wedge-like means intermediate said jaws adapted to engage outer sides of said flanges in opposition to said jaws, whereby to frictionally grip said flanges when the same are engaged between said means and said jaws as well as to space the adjoining panels from which said flanges spring.

11. In attachment means for mounting wall facing panels having rearwardly projecting peripheral flanges, the combination with a furring strip adapted to be secured to a wall to be faced of a clip means adapted to engage a plurality of adjoining panels, means for slidably mounting said clip means on said furring strip, said clip means having oppositely extending tongues each inwardly curled upon itself to form the free end portion into a resilient gripping jaw, said jaws being oppositely arranged and spaced and being respectively adapted to engage inner sides of the flanges of adjoining panels, and means intermediate said jaws adapted to engage outer sides of said flanges in opposition to said jaws, whereby to frictionally grip said flanges when the same are engaged between said means and said jaws as well as to space the adjoining panels from which said flanges spring.

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