Feb. 9, 1932. S. SMILEY, JR 1,844,696

PARTITION OR WALL CONSTRUCTION

Filed June 13, 1930 3 Sheets-Sheet 1

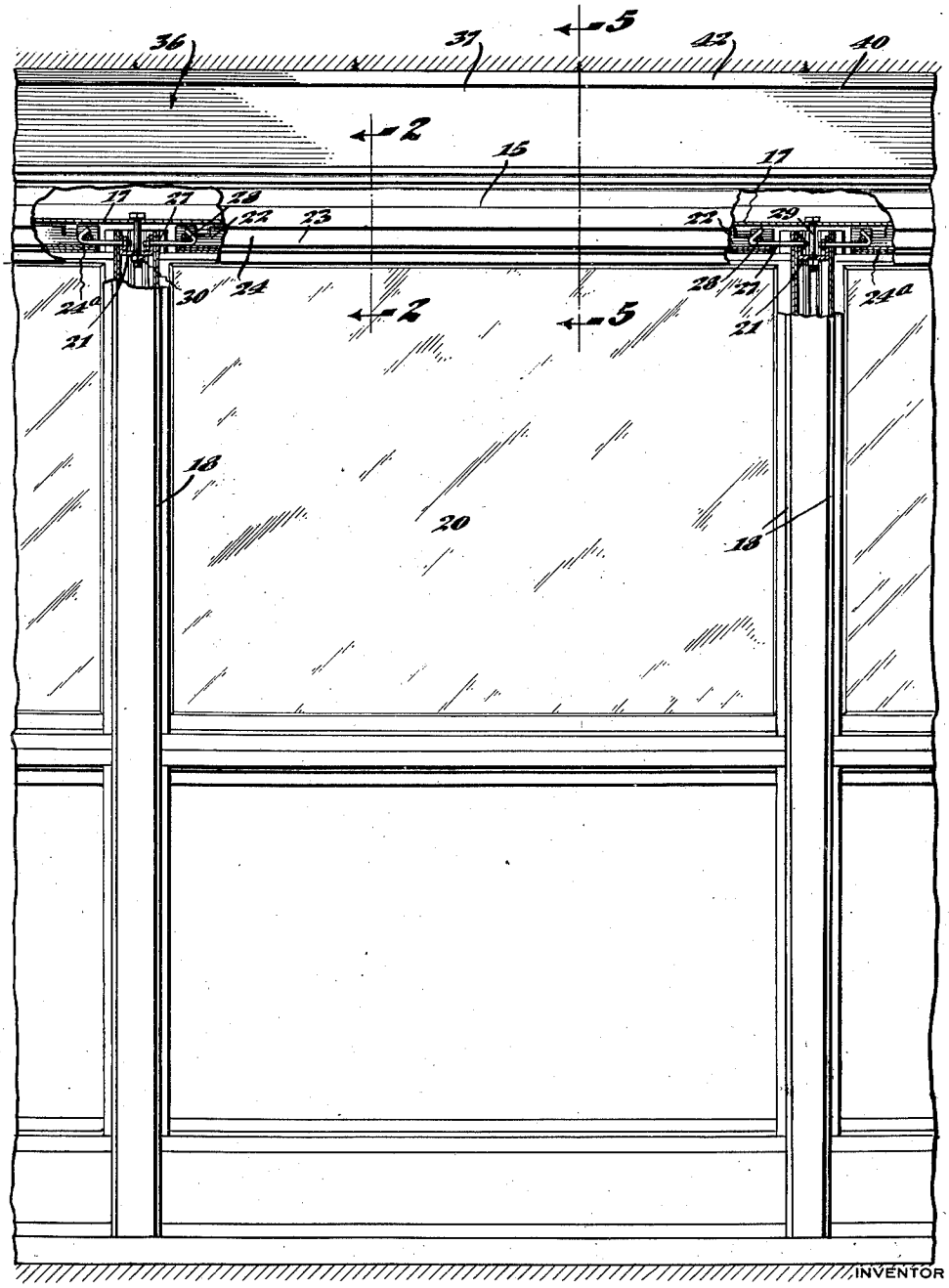

Fig. 1

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PARTITION OR WALL CONSTRUCTION

Filed June 13, 1930 3 Sheets-Sheet 2

Fig. 2

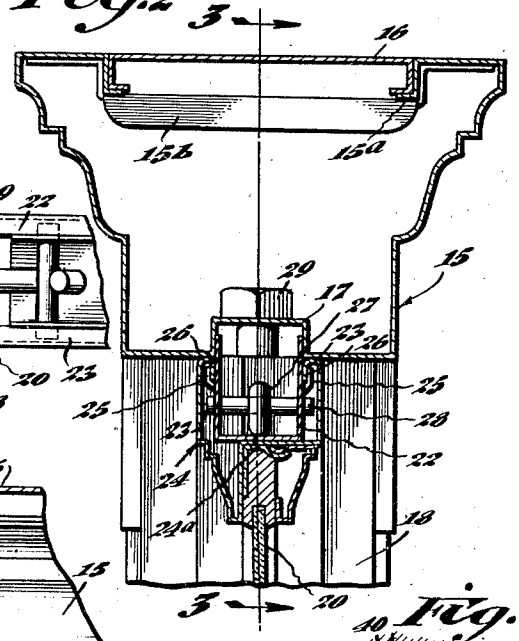
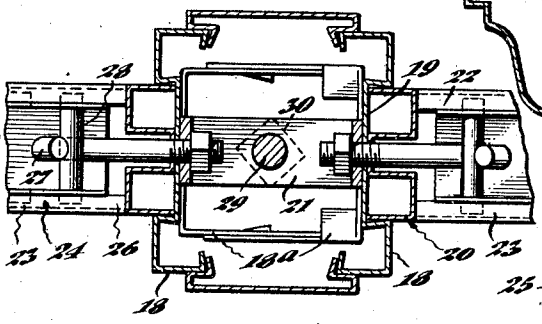


Fig. 4



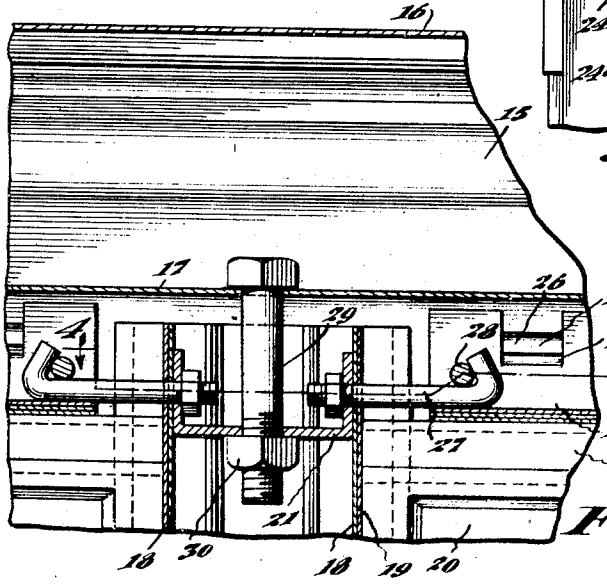


Fig. 3

Fig. 6

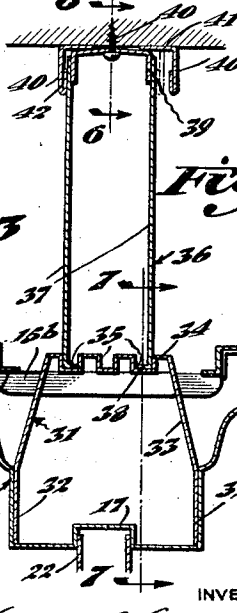


Fig. 5

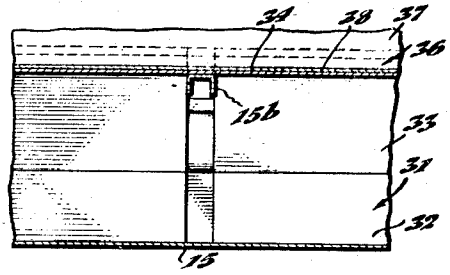


Fig. 7

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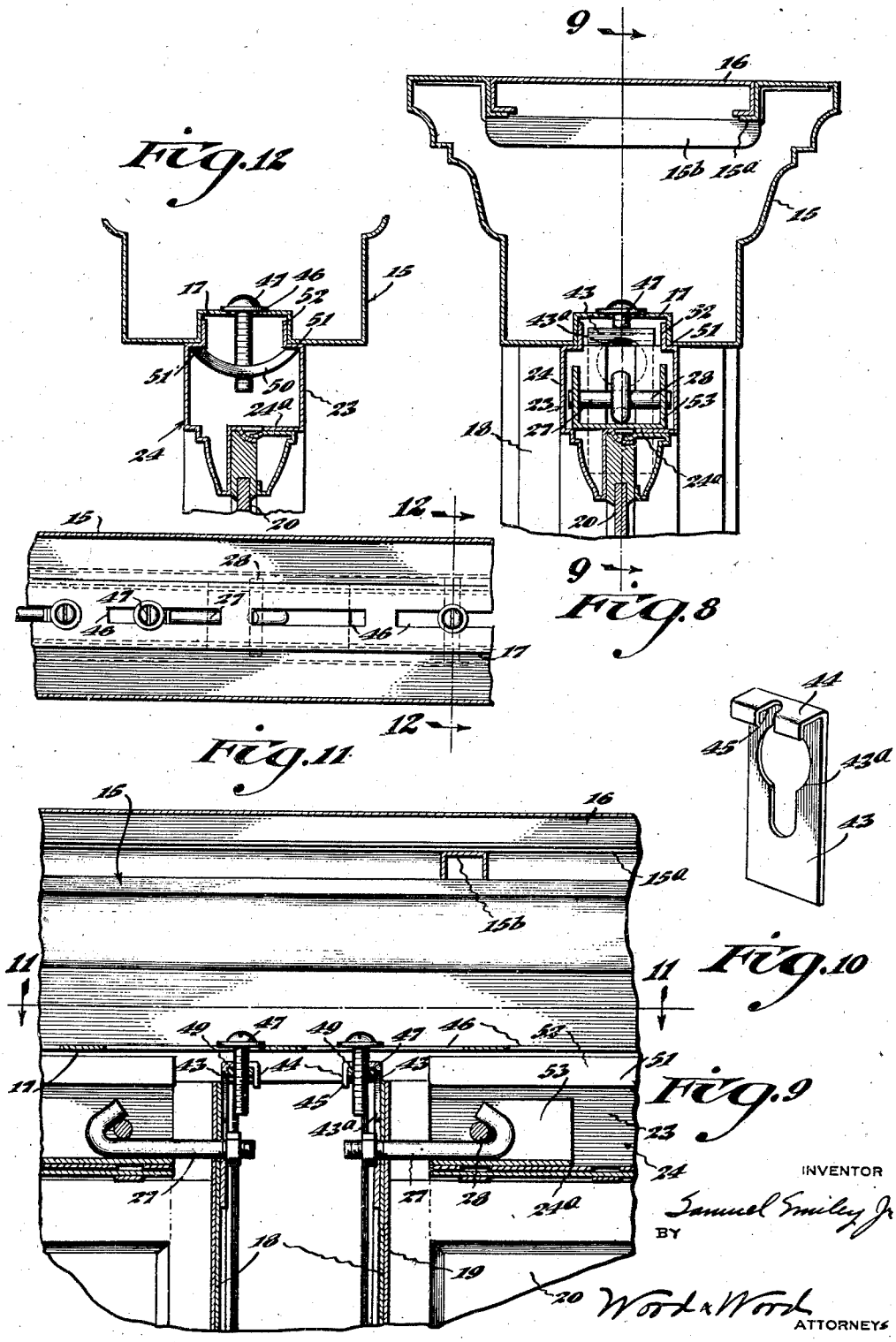
Feb. 9, 1932. S. SMILEY, JR 1,844,696

PARTITION OR WALL CONSTRUCTION

Filed June 13, 1930 3 Sheets-Sheet 3



Patented Feb. 9, 1932 1,844,696

UNITED STATES PATENT OFFICE

SAMUEL SMILEY, JR., OF CINCINNATI, OHIO, ASSIGNOR TO THE GLOBE-WERNICKE COMPANY, OF NORWOOD, OHIO, A CORPORATION OF OHIO

PARTITION OR WALL CONSTRUCTION

Application filed June 13, 1930. Serial No. 461,004.

This invention relates to metal partitions and is particularly directed to the construction of cornices for partitions, to the devices for attachment of the cornices to the partition and the ceiling, and to a device for joining the wall sections.

It is an object of this invention to provide a cornice for use with that type of partition including sections joined by posts or pilasters along its length, the cornice disposed along the upper edge of the joined sections and pilasters of the wall, and conveniently and adjustably attachable to the assembled partition.

Another object is to provide improved devices facilitating the connection of the adjustable cornice to the upper ends of the posts or pilasters.

Another object is to provide a partition or wall construction in which the cornice is disposed intermediate the total height of the room and spaced slightly down from the ceiling, and wherein wall panels are secured between the cornice and the ceiling by means of improved devices embellishing the connection of these panels to the ceiling, which devices are exceedingly conveniently installed.

Another object pertains to an improved construction for a cornice wherein extreme rigidity is present.

It is another object of this invention to provide a means for rigidly securing the upper portions of the wall sections together or relative to the posts or pilasters.

Other objects relate to the general construction of the partition and cornice for the above purposes, which objects along with certain other objects and advantages will be more fully apparent from the description of the accompanying drawings, in which:

Figure 1 is a general side view of a wall including the present improvements.

Figure 2 is a vertical sectional view taken on line 2—2, Figure 1 through the cornice and partition connection looking toward a post omitting the panel above the cornice.

Figure 3 is a sectional view taken on line 3—3, Figure 2, illustrating the connection of the cornice to the top of a post or pilaster and the attachment means between the post and the wall sections.

Figure 4 is a sectional view taken on line 4—4, Figure 3.

Figure 5 is a vertical sectional view taken on line 5—5, Figure 1, transversely through the form of wall construction wherein the cornice is spaced down from the ceiling.

Figure 6 is a sectional view taken on line 6—6, Figure 5, showing the connection of the panels, above the cornice, to the ceiling.

Figure 7 is a sectional view taken on line 7—7, Figure 5, detailing the construction of the cornice.

Figure 8 is a vertical sectional view taken similar to Figure 2 but showing a different form of attachment means for connecting the cornice to the wall.

Figure 9 is a sectional view taken on line 9—9, Figure 8, further detailing the adjustable connection of the cornice.

Figure 10 is a perspective view of one of the connecting clips for attaching the cornice to the posts of the wall.

Figure 11 is a longitudinal sectional view taken horizontally through the cornice and illustrating a modified form of device for connecting the cornice to the wall.

Figure 12 is a sectional view taken on line 12—12, Figure 11, further illustrating the modified form of connection.

Referring to Figures 2 to 4 of the drawings, the cornice is generally indicated at 15. This cornice is of channel form having an opening along its upper side, which opening is arbitrarily closed by means of a filler or cap strip 16. The side walls of the cornice may be molded in any manner to provide the proper æsthetic quality. The lower wall of the cornice is provided with a longitudinal groove

or channel 17 which is disposed upwardly in this wall and constitutes the portion of the cornice functioning to maintain the wall against lateral displacement or disalignment.

The metal along the edges of the opening in the top of the cornice is bent downwardly and inwardly as at 15[a] to form ledges upon which the cap strip 16 rests. These edges are joined by a series of cross rails 15[b] of channel form between the edges and having flat attaching ends welded to the inner upper corners of the cornice. This longitudinal opening in the cornice permits access to the interior thereof for applying fastening devices and for other purposes which will be apparent later in the description.

One form of post embodied in this construction is of the nature disclosed and claimed in a copending application Serial No. 333,588. For the purpose of the description of this invention it is sufficiently described as composed of a pair of channel uprights 18—18 held together in spaced relation by means of clips 18[a] extending from the respective uprights and interlocking. These post uprights or sections have longitudinal depressions 19 in their main walls, in which depressions the edges of the respective sections 20 of the wall are adapted to fit (see Figure 4).

At the upper end of each post an attaching element 21 is disposed between the respective uprights of the post. Between the fabricated posts, channel strips 22 are disposed. Each strip 22 fits between the upwardly extending spaced walls 23 of the topmost frame 24 of the wall section upon a cross wall 24[a] and is locked between spaced walls by means of the engagement of upwardly extending hooks 25 on the channel strip sides, with reversely extended longitudinal hook flanges 26 turned on the inner sides of the upper longitudinal edges of the frame walls 23 (see Figure 2). The hooks on the channel strips are formed by notching the walls of the strip 22 removing a portion of the metal between the slits forming the notch, and striking the lower part outwardly to provide a space within which the longitudinal hook flanges of the frame may be inserted.

Each strip is attached to the respective sections at its ends by means of hook bolts 27 having their hook ends engaged about cross pins 28 mounted transversely through the walls of the strip 22, the bolts having their screw-threaded ends extending through the uprights and the arms of the U-shaped attaching element 21. When the nut is screwed upon the screw-threaded end of hook bolt the result is to draw the strip and the post sections together. The strip is of less length than the section width. This constitutes the channel strip 22, a strut by means of which the wall sections are clamped between the respective posts at the upper ends thereof. The side flanges of the inverted channel strip 22 extend up beyond the plates 23 of the frame and are engaged in the channel 17 of the cornice, thereby constituting the connection of the cornice to the wall.

The hook bolts 27 also secure the attaching element 21 in position between the uprights of the post binding the same together. The main or horizontal cross wall of the U-shaped attaching element 21 is utilized as an attaching means for connecting the post and cornice together. This attachment is accomplished by means of a bolt 29 extending down through an opening in the channel of the cornice centrally of the post and through an opening in the attaching element. The screw-threaded end of the bolt is disposed downwardly and a nut 30 therein engages the underside of the attaching element for rigidly clamping the cornice in position on the partition. These foregoing attachment means for joining the sections of the wall at the upper portion thereof and for securing the cornice to the wall are illustrated but not claimed in copending application Serial No. 333,588. The panel construction for the wall is not elaborated upon for the reason that it is not a part of this invention.

Referring to Figures 5 to 7 inclusive, one form of cornice construction is illustrated. In this instance the cornice is of the same construction as that previously described herein with the following addition. An inverted channel strip 31 is placed within the confines of the cornice through the upper side thereof. This channel element includes straight sides 32 bearing against the straight sides of the main cornice and inclined continuing sides 33 extending upwardly to the base web 34 of the channel.

The base web is provided with a series of longitudinal depressions 35, the purpose of which will be more fully apparent hereinafter. This upper web, which is aptly described as corrugated due to the depressions therein, engages upon the cross ribs or rails 15[b] attached between the respective sides of the cornice channel element, the sides of the channel being slotted to permit insertion thereof over these cross ribs. The inverted channel element provides the support for the upper wall panel 36 above the cornice.

The upper wall panel 36 is set up or fabricated as it is built into the wall. It consists of side plates 37 having inwardly turned flanges 38 on their lower ends, the lower flanged ends of these plates adapted to fit and rest in depressions 35 of the inverted channel element.

An inverted channel strip 39 is attached to the ceiling by means of screws 40 and is disposed in alignment with the wall. The upper ends of the plates 37 lie against the side webs of this upper channel strip 39. For the purpose of securing the walls against the chan-

nel, angle iron strips 40 are used. Each angle iron strip 40 has a plain flange 41 disposed against the ceiling and a turned or hemmed flange 42 disposed downwardly. They are driven or inserted between the channel and the ceiling until the depending flanges snugly engage against the respective plates at each side of the wall. These frictionally secured angle strips maintain the plates against the channel and fully embellish the connection.

In the construction shown in Figures 8 to 10 inclusive, an adjustable form of attaching means for the cornice is provided enabling the workmen, installing the wall, to shift a length of the cornice along the top of an assembled wall. For this purpose, in place of the attaching element 21 described in the first form, a pair of connecting clips 43—43 is used at each post. These clips lie against the inner walls of the respective post uprights 18 and have keyhole openings 43ª therein which are traversed by the hook bolts joining the sections of the wall. These plates are drawn upwardly to dispose the narrow portion of the keyhole opening for traversal by the hook bolts. Hook flanges 44 are included at their upper ends, these hook flanges being transversely slotted as at 45 (see Figure 9). The cornice has a series of longitudinally aligned slots 46 formed in its lower wall, through which slots screws 47 are disposed after the cornice has been adjusted to the correct position. Each of these screws extending through a particular slot in the cornice is disposed through the slot 45 in the connecting clip and a nut 49 on the screw is engaged thereon within the hook flange of the connecting plate. The hook flange is of the proper internal width to permit the nut to fit snugly therein to prevent its rotation as the screw is being drawn up.

The construction embodying the aforesaid style of clips also embodies a somewhat varied form of connection between the wall sections and the post uprights and between the wall sections and the cornice. The horizontally extending upper portion of the frame 24 of each section includes the spaced walls 23 described in relation to Figures 1 to 3. In this instance, however, these spaced walls or plates are offset inwardly as at 51 abutting the cornice and the upwardly extending flanges 52 from the offset are engaged against the side walls of the longitudinal groove or channel 17 in the cornice (see Figure 8).

The strut or connecting draw piece between the post is omitted and the hook bolts 27 are directly connected to the frame. This connection is accomplished by means of the cross pins 28 mounted in channel strips 53 welded between the spaced walls of the frame upon the cross wall 24ª thereof.

In Figures 11 and 12 the cornice is of the same construction including longitudinal slots and the screws 47 extending therethrough, but in place of the nut and clips an arcuate cross piece or lug 50 is engaged upon the screw-threads and has its upwardly curved ends engaging under the shoulders 51 formed by offsets on each wall of the frame. These shoulders 51 of the frame thus formed abut the underside of the cornice and the continuing flanges 52 extend upwardly into the longitudinal depression of the cornice.

Having described my invention, I claim:

1. A wall construction, comprising, hollow posts having longitudinal grooves in opposite side walls, wall sections disposed between respective posts and having their edges disposed in adjacent grooves of the respective posts, a strut disposed along the upper edge of each wall section, means connecting the respective ends of the struts to the adjacent posts, and said wall sections having hollow upwardly opened upper edges within which said struts are locked.

2. A wall construction, comprising, hollow posts, wall sections disposed between respective posts, a strut of less length than the wall sections disposed along the upper edge of each wall section and connected thereto, draw bolts connecting the respective ends of the struts to the adjacent posts, connecting elements mounted within the posts at the upper ends thereof, a cornice disposed along the upper edge of the struts and posts, and bolts extending between said cornice and said connecting elements for securing the cornice to the posts.

3. A wall construction, comprising, posts, wall sections disposed between respective posts, a strut disposed along the upper edge of each wall section and connected thereto, means connecting the respective ends of the struts to the adjacent posts, a cornice disposed along the upper edges of said posts and wall sections, and fastening devices for connecting said cornice along the upper edge of said joined posts and wall sections.

4. In a wall construction, posts, wall sections secured between said posts, the upper portions of said wall sections, comprising, spaced plates open at the top, a channel strip disposed between said plates, the respective spaced plates having inwardly downwardly turned hook flanges along their upper inner edges, reversely turned hooks formed on the channel hooked under said longitudinal flanges, a cross pin at each end of said channel strip, bolts at each end of said strip, each having a hook end engaging a cross pin and the screw-threaded end disposed into the post, and a nut on the inner screw-threaded end for drawing the channel strip tightly between the posts and clamping the wall section between the posts.

5. A wall construction, comprising, posts, wall sections attached between said posts, a cornice disposed along the upper edge of said joined posts and wall sections, fastening de-

vices at the upper end of each post, and said cornice having longitudinally disposed aligned slots therein traversed by said fastening devices.

6. In a wall construction, hollow posts, wall sections connected between respective posts, connecting clips secured to the inner walls of each post and having inwardly and downwardly turned flanges on their upper ends, a cornice mounted along the upper edge of the joined posts and wall sections, said cornice having a longitudinally slotted lower wall, screws traversing said slots and said inward flange of said connecting clips, and nuts disposed between the downward flanges and the body of the clip and engaged upon the threads of the screws.

7. A cornice attachment means including a post, wall sections attached to the respective sides of said post, draw bolts attached to the wall sections and extending through the sides of the post into the interior thereof, nuts on said draw bolts within the post, attaching clips having keyhole openings therein engageable over and under the nuts of said bolts, a cornice disposed along the upper edge of said wall sections and post, and attaching elements extended between the cornice and the upper ends of said clips.

8. A device of the class described, comprising, hollow posts, a cornice disposed along the upper ends of said posts, a cross web secured within the upper end of each of said posts, and clamping bolts extending between the cornice and the respective web for clamping the cornice to the posts.

9. In a wall construction, hollow posts, wall sections connected to and between the respective posts, connecting clips secured to the walls of the posts and having right angle flanges on their upper ends, a cornice mounted along the upper edge of the joined posts and wall sections, said cornice having a longitudinally slotted lower wall, screws traversing said slots and said flanges of said connecting clips, and nuts for securing the screws between the flanges and cornice.

10. In a cornice attachment means, a wall section terminating in spaced plates along its upper edges, the extreme upper edges of the plates inwardly offset, a cornice disposed along said upper edges and having an upwardly formed groove in its base, flanges on said plates of the wall extending upwardly from the offset against the sides of the channel formed in the cornice, said cornice having a longitudinal slot formed in the channel thereof, a screw extended through said slot, and a cross piece engaging between and under the respective offsets of the wall section engaged upon said screw.

11. A metal cornice, comprising, a base wall, molded side walls, a longitudinally slotted upper wall, cross pieces joining the sides of the cornice across said slot, an inverted channel element slotted to fit over the cross pieces, disposed within the cornice, and having its base web resting upon said cross pieces, said inverted channel element having longitudinal grooves in its base web, and spaced upper panels having their lower edges disposed in said grooves.

12. A wall construction, comprising, a main wall, a cornice disposed along the upper edge of said wall, a panel extended from said cornice to the ceiling consisting of spaced plates having their lower edges secured along said cornice, a channel rail mounted along the ceiling, said plates each adapted to rest against a respective side of said channel, and angle iron strips having corresponding flanges driven between the channel rail and the ceiling for frictional engagement disposing the depending flanges of the angle iron strips against the respective plates for holding the same against the channel rail.

13. A wall construction, comprising, spaced wall plates, a rail mounted along the ceiling, said plates each adapted to rest against a respective side of said rail, and an angle iron strip on each side of said rail adapted to have a flange driven between the rail and the ceiling for frictional engagement disposing the depending flange of the angle iron strip against the plate for holding the same against the respective side of the rail.

14. In a sheet metal cornice construction, a main tubular element including a base wall, side walls and a longitudinally slotted upper wall, cross pieces disposed across the slot and connecting the respective portions of the upper wall at the sides of the slot, and an inverted channel element having its side walls disposed in and fitting tightly within the cornice and its upper wall disposed flush with the upper wall of the main element.

In witness whereof, I hereunto subscribe my name.

SAMUEL SMILEY, JR.