Sept. 26, 1961 E. J. CZAPLICKE 3,001,330

CORNER GUARD ASSEMBLY

Filed April 23, 1958

2 Sheets-Sheet 1

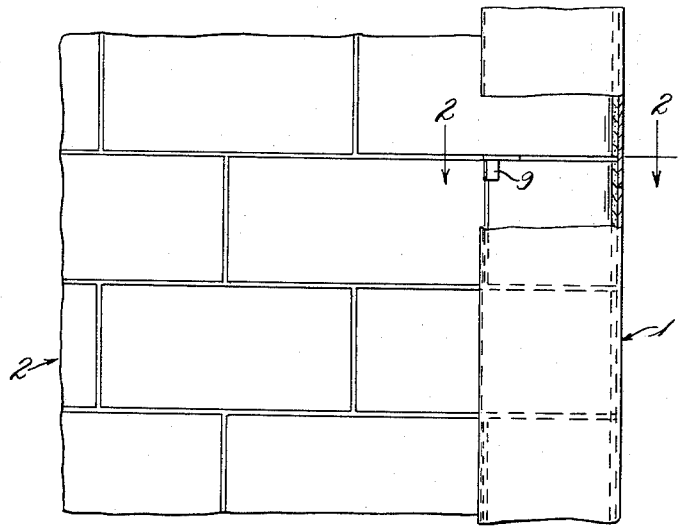


FIG. 1

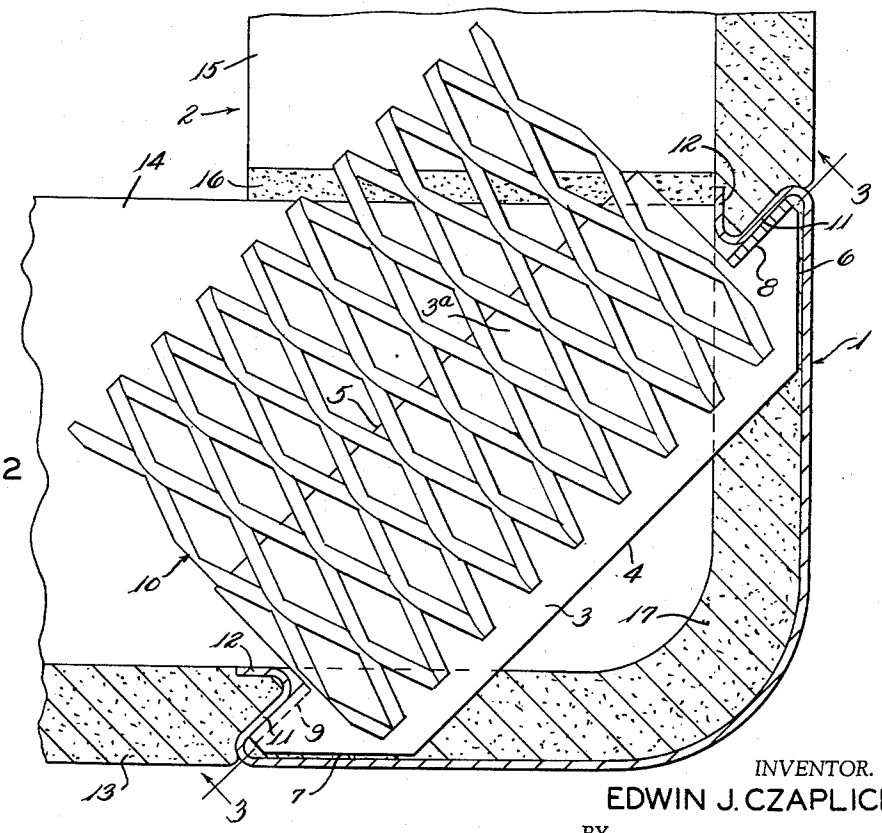


FIG. 2

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FIG. 3

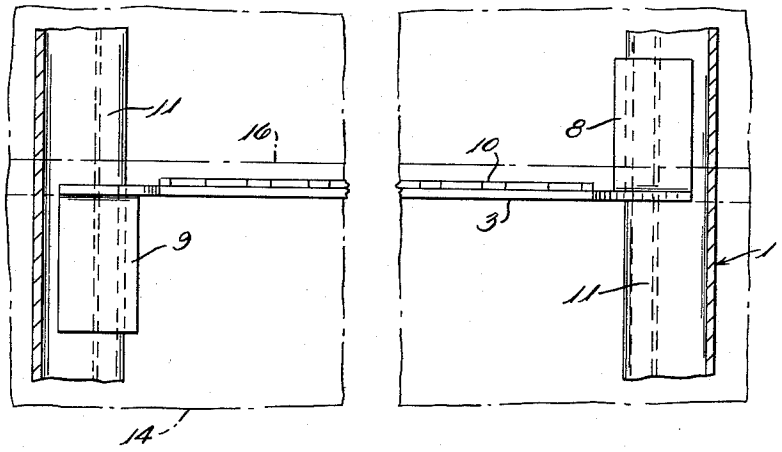


FIG. 4

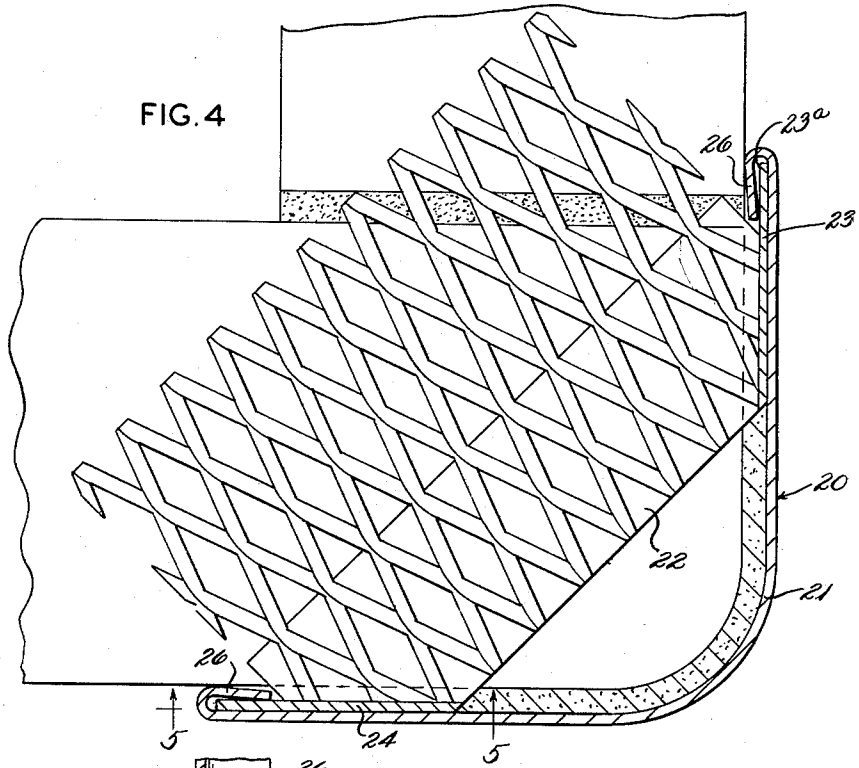
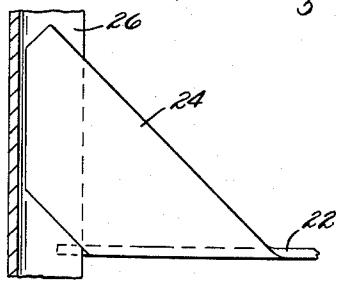


FIG. 5



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3,001,330
CORNER GUARD ASSEMBLY

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This invention relates to corner guard assemblies, especially to a metal corner guard and to positioning or anchor means therefor adapted to be located in a wall as the wall is constructed so that a permanent, fixed positioning of the corner guard in a desired, accurate location is provided.

Heretofore, corner guards as used in many buildings such as hospitals, schools and the like frequently have been made from stainless steel, or other attractive metals. These corner guards have usually had anchor bolts or studs welded thereto and extending inwardly thereof. Such anchor studs in turn engage conventional anchor nuts positioned in or secured to the wall at the corner thereof, or the wall itself, so that the corner guard is fixedly secured in position. However, when welding these positioning studs to the corner guards, some discoloration or disfiguration is produced on the outer surface of the corner guard and it does not have an attractive, uniform appearance throughout. Some other types of anchor means for the corner guards have been proposed heretofore but none of such guards, insofar as I am aware, have provided an accurate, fixed positioning of the corner guard with its associated anchoring means with no damage to the metal corner guard.

It also is desirable to provide corner guards of different shapes inasmuch as various wall finishes have different thicknesses and the corner guard should be adapted to engage whatever particular finishing means are provided on a given wall surface.

The general object of the present invention is to provide a novel and improved type of a corner guard and assembly means therefor wherein the corner guard is characterized by the fixed, or definite locating action of the anchor means for the corner guard when engaged with a corner guard of the invention.

Another object of the invention is to provide a contoured anchor means or equivalent assembled to and protruding from a wall at the corner thereof and being engaged with a corner guard as the wall is being built.

A further object of the invention is to provide anchor means for corner guards wherein such anchor means have vertically extending tabs or wings thereon that engage the corner guard, and where other contoured means are provided in the anchor bars that engage the corner guard for positioning it in an exact vertical position with relation to a wall surface.

Another object of the invention is to provide anchor means for a corner guard that can be engaged with the corner guard intermediate the ends thereof by being inserted into the corner guard and being twisted down into full engagement with the corner guard.

Another object of the invention is to provide several models of a corner guard with different types of end flanges thereon for engaging positioning anchor means placed in a wall so that the corner guard is flush with the finished wall surfaces.

Further objects of the invention are to provide anchor bars on means that have integral wings or tabs thereon extending normal to the anchor bars for improved corner guard engagement, to provide anchor bar means that float with relation to a corner guard to facilitate engaging any level mortar joint, and to eliminate any obstructions to the mason as are encountered when anchor means are permanently fastened to a corner bracket.

The foregoing and other objects and advantages of the invention will be made more apparent as the specification proceeds.

The corner guards to which the present invention relate are those that usually extend up three or four feet on the wall from the bottom thereof so that the usual bumps and abrasions to which the wall is subjected will be taken by the corner guard.

Reference now is particularly directed to the accompanying drawings, wherein:

FIG. 1 is an elevation of a corner of a wall and with part of a corner guard thereon being broken away and shown in section;

FIG. 2 is a horizontal section taken on line 2—2 of FIG. 1 and illustrating a corner guard of the invention but with a plaster finish being shown on the wall;

FIG. 3 is a fragmentary vertical section taken on line 3—3 of FIG. 2 and showing further details of the improved corner guard of the invention;

FIG. 4 is a horizontal section, like FIG. 2, of a modified type of corner guard of the invention; and

FIG. 5 is a fragmentary vertical section taken on line 5—5 of FIG. 4.

When referring to corresponding parts shown in the drawings and referred to in the specification, corresponding numerals are used to facilitate comparison therebetween.

Generally speaking, the invention relates to a corner guard adapted to be engaged with a building wall at the corner thereof by means of a plurality of anchor means secured to vertically spaced portions of the wall. These anchor means comprise an anchor bar having front and back edges and ends and with the ends extending inwardly of the metal bar towards the front end thereof to form a trapezoidal shape anchor bar and with each anchor bar having vertically extending wings thereon adjacent the ends thereof, anchor means secured to the anchor bars and extending in a horizontal plane axially inwardly of a corner from the anchor bars, which anchor means are adapted to be positioned between courses in a wall as the wall is built to be secured or anchored therein and secure the anchor bars in vertically spaced portions of the wall but protruding therefrom in vertical alignment, and a metal guard of generally V-shape in horizontal section engaged with the anchor bars by means of edge flanges on the corner guard shaped complementary to the protruding portions of the anchor bars to tightly secure the metal guard to the anchor bars with the longitudinal axis of the corner guard being vertically directed.

With reference to the details of the structures shown in the accompanying drawings, a corner guard 1 is shown in association with a wall 2 made from a plurality of horizontal courses of suitable blocks or bricks. This corner guard 1 is normally made from metal, such as stainless steel, and only extends a portion of the height of the wall 2 under normal use conditions, being positioned at the bottom several feet of the corner in the wall 2 to protect it against bumps by small carts, wheel trucks, or the like passing along the corridor or other portion of the building in which the wall 2 forms a part. This corner guard 1 is positioned by a plurality of anchor units secured to vertically spaced portions of the wall 2 and protruding therefrom for fixed engagement with the corner guard 1. Thus, FIG. 2 shows the details of the corner guard assembly and a T-shaped anchor bar 3 having a rectangular stem 3*a* and a cross bar of generally trapezoidal shape is shown. This anchor bar 3 is made from suitable strap or sheet metal and it has a front edge 4, a back edge 5 and end, or side edges 6 and 7 that extend inwardly of the trapezoid from the front edge thereof towards the back edge to diverge from each other and extend the depth of the cross bar in the anchor bar 3.

As an important feature of the invention to aid in exactly vertically positioning the corner guard 1, a pair of vertically extending wings or tabs 8 and 9 are formed integrally with the anchor bar 3 adjacent the end edges 6 and 7 thereof. These wings 8 and 9 lie parallel to the longitudinal axis of the corner guard but are intermediate the front and back edges thereof. The drawings clearly bring out that one of these wings 8 extends vertically upwardly from the anchor bar 3 whereas the other wing 9 at the opposite margin of the back edge of the cross bar extends downwardly of the assembly. By such a construction, one can tilt the anchor bar 3 and insert it into the corner guard 1 from the back thereof. The anchor bar 3 and associated means then can be twisted down into engagement with the flanges on the corner guard.

The anchor bar 3 has an extension thereon which may be an integral, or a separate member, such as an expanded metal screen 10, secured, as by welding or other conventional means, to the anchor bar to extend inwardly of the wall therefrom to provide increased surface area in the anchor unit for being bonded intermediate the courses in the wall 2 to the mortar used for initially securing such wall courses together.

FIG. 2 of the drawings best shows that the corner guard 1 has a pair of inwardly extending edge flanges 11 that have reversely, or outwardly bent end sections 12 provided thereon. In general, these edge flanges 11 extend inwardly of the corner guard so that a wedging or bonding action can be secured between the corner guard 1, at the edge flanges 11 thereof, and a coat of finished plaster, indicated at 13, applied to the wall 2. Normally the end sections 12 of the flanges 11 lay flush against the brick members used in forming the wall 2. It will be seen that the ends 6 and 7 of the anchor bar 3 and the wings 8 and 9 formed thereon define an edge structure on the anchor bar complementary to the corner guard 1 at the flanged end section thereof so that positive engagement can be secured between the anchor bar 3 and the wings, or tabs 8 or 9 thereon, and the corner guard. Thus an exact vertical position can be established for the corner guard 1 when engaged with a plurality of the vertically aligned anchor bar assemblies of the invention as the wings or tabs 8 and 9 lie flush against the inner surfaces of the flanges 11.

FIG. 2 shows that the wall 2 is made from bricks 14 and 15 having a mortar joint 16 therebetween. The space between the inner surface of the corner guard 1 and the outer edges of the bricks 14 and 15 is filled in by mortar 17 when the wall 2 is built to secure the corner guard permanently in its fixed vertical position. Usually the corner guard 1 is placed in engagement with the wall 2 as soon as the first one or two courses thereof are laid. The anchor bars 3 are positioned in the wall 2 by being embedded in the mortar between vertical courses in the wall. Only the end portions of such anchor bars will protrude from the wall as it is built. Such anchor bars 3 are made from sufficient gage metal sheet as to be sturdy and firmly position the corner guard when engaged therewith.

When it is desired to use corner guards of the invention with walls that do not have a relatively thick finish plaster coat thereon, the corner guard can be of the design, and be positioned in the manner, shown in FIG. 4. Thus a modified corner guard assembly is indicated by the numeral 20 and it is made from a metal corner guard 21 secured in place by an anchor bar 22. In this instance, the end portions of the anchor bar 22 are both turned vertically upwardly to form end tabs or wings 23 and 24 on the anchor bar, which wings usually protrude to the rear as well as upwardly from the remainder of the anchor bar 22. Any suitable anchor means, such as an expanded screen, can be secured to the anchor bar 22 and extend back into the wall therefrom. The anchor bar 22 is of generally trapezoidal shape, and has a front edge, a back edge longer than the front edge, and side edges, which

side edges have parallel rear portions and converging front portions connecting to the front edge. Again, such wings 23 and 24 are adapted to form a surface with the edge portions of the anchor bar 22 for snug engagement with the corner guard 21 and specifically with doubled back end flanges 26 provided thereon so that the corner guard 21 will be vertically and snugly positioned by its tight engagement with the wings 23 and 24 and associated parts of the anchor bar 22.

The anchor means of the invention permit corner guards to be positioned in buildings without any disfiguration or marring of the surface of the corner guard in any manner. Furthermore, the corner guards 1 and 21 do not have any portions or members thereon that permanently protrude inwardly therefrom to interfere with a workman as he builds the wall 2. Thus if an attractive stainless steel corner guard is used, for example, there are no welded spots or other anchor means required to be secured to this corner guard and it will have a smooth unmarred finish visible in the finished building.

The anchor bars 3 and 22 themselves are embedded in mortar joints in a wall with ends of the bars protruding from the wall for anchor action. Thus use of means such as the expanded mesh screen 10 or integral anchor means or sections are provided to improve the securing of the anchor bars to the wall.

The wings or tabs 8 and 9 preferably are of square or rectangular shape and extend from the anchor bar 3 the same distance as the center stem 3*a* thereof. Hence the anchor bar 3 can be made from a metal strip with a minimum of waste as only the triangular parts of the original strip removed to form the inwardly slanted ends 6 and 7 are cut from a strip or sheet and discarded.

The tabs or wings 23 and 24 likewise are formed with a small amount of waste metal as they are formed from a metal strip or piece initially having a longer front edge than rear edge. Folding over the roughly triangular front end sections of the metal piece on diverging angles forms the anchor bar 22 with a smaller front edge than a rear edge. A rear edge 23*a*, for example, of the wing 23 is vertically directed and usually engages snugly with the flange 26.

From the foregoing, it should be seen that these corner guard means of the invention can be readily assembled in a building wall as it is constructed and portions of such anchor members protrude from a wall as it is built to engage and position a corner guard. The invention provides a permanent, attractive corner unit that is resistant to disfiguration, or loosening by ordinary abuse to which the corner guard is subjected, and one that is readily secured to the wall as it is built. Hence, it is believed that the objects of the invention have been achieved.

While two complete embodiments of the invention have been disclosed herein, it will be appreciated that modification of these particular embodiments of the invention may be resorted to without departing from the scope of the invention as defined in the appended claims.

I claim:

1. In combination, a pair of walls each formed from a plurality of superimposed courses of blocks, which walls are in angular relation to each other and combine to form a corner; said walls having flat vertically extending outer surfaces; and a corner guard assembly comprising a horizontally positioned anchor bar of generally trapezoidal shape and having a front edge, a back edge longer than the front edge, and side edges; the side edges having parallel rear portions and converging front portions connecting to said front edge, said anchor bar having integral vertically and laterally extending wings thereon connected to said side edge front portions and lying parallel to but outwardly of said vertical wall surfaces, said wings protruding laterally beyond parallel rear portions of said side edges, said anchor bar being positioned between courses of blocks in said wall to secure said anchor bar

to and to position said side front edges protruding from said walls at said corner, and a vertically extending guard of generally V-shape in horizontal section shaped complementary to said wall outer surfaces at said corner, said guard having reversely extending edge flanges thereon extending inwardly thereof shaped complementary to the inner surfaces of and engaging said wings to secure said guard to said anchor bar by telescopic engagement of said anchor bar by said guard, the space between said guard and said walls being fillable with mortar or the like, said edge flanges of said guard abutting on said wall outer surfaces.

2. A corner guard assembly for positioning at a corner formed by a pair of walls each made from a plurality of superimposed courses of blocks and where the walls are in angular relation to each other and have flat vertically extending outer surfaces; the corner guard assembly comprising an anchor bar of generally trapezoidal shape and having a front edge, a back edge longer than the front edge, and side edges; the side edges having parallel rear portions and converging front portions connecting to said front edge, said anchor bar having integral vertically and laterally extending wings thereon extending from said side edge front portions and adapted for positioning parallel to but outwardly of the vertical wall surfaces in which the anchor bar is assembled, said wings protruding laterally beyond parallel portions of said side edges, said anchor bar being adapted to be horizontally

positioned between different vertical courses of blocks in the walls to secure said anchor bar to but to protrude from vertically spaced portions of the walls at a corner in spaced vertical alignment when a plurality of said anchor bars are used between different vertical courses of the wall blocks, and a vertically extending guard of generally V-shape in horizontal section adapted to conform to the wall outer surfaces with which the guard is to be assembled, said guard having reversely extending edge flanges thereon extending inwardly thereof shaped complementary to the inner surfaces of and engaging said wings to secure said guard to a positioned said anchor bar by telescopic engagement of said anchor bar by said guard, said edge flanges of said guard being adapted to abut on wall outer surfaces at a corner formed thereby.

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