March 3, 1931. C. E. HANDEL 1,794,684

ANCHOR FOR VENEERED CONCRETE STRUCTURES

Filed April 23, 1929

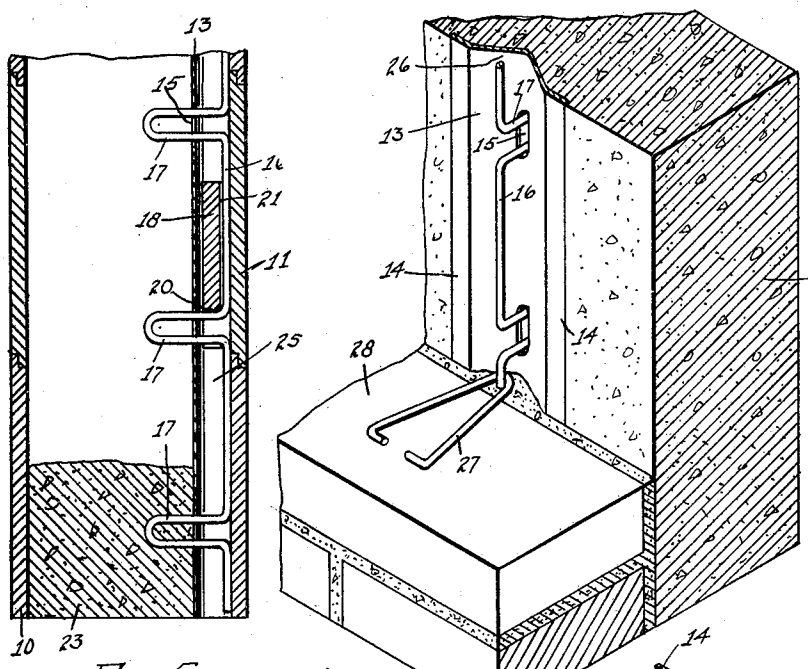


Fig. 1.

Fig. 5.

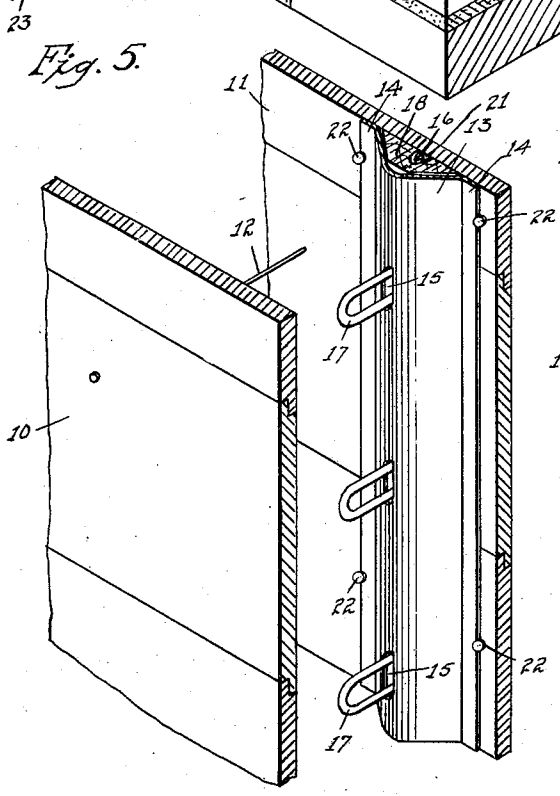


Fig. 2.

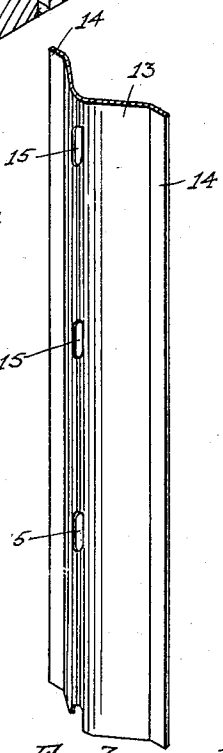


Fig. 3.

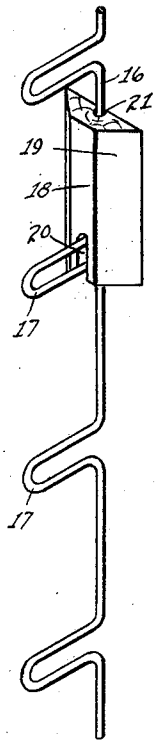


Fig. 4.

Inventor

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UNITED STATES PATENT OFFICE

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ANCHOR FOR VENEERED CONCRETE STRUCTURES

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When concrete structures are veneered with brick, tile or the like, it is desirable that the veneer be tightly bonded to the concrete structure, and this is usually accomplished by providing thin anchor devices which are placed in the mortar joints between the layers of veneer material, and securing the said anchors in the concrete wall to which the veneer is applied.

The object of my invention is to provide a simple, durable and inexpensive means whereby the said anchor devices may be easily and quickly applied to the anchor securing means, and when so applied will rigidly and firmly secure the veneer in position adjacent to the outer face of the concrete wall.

A further object is to provide an anchor securing means which may be permanently fixed in the concrete wall and so constructed that the anchors may be easily applied and adjusted to layers of veneer at various thicknesses.

A further object is to provide an anchor securing means which may be permanently secured in the concrete wall and when so secured lies within the outer surface of the wall so that the veneer may be applied without hindrance from said anchor device.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Figure 1 is a perspective view illustrating a portion of a concrete wall showing the manner in which my improved device is applied thereto and the manner in which the veneered wall is anchored to said concrete wall.

Figure 2 is a perspective view of a segmented portion of the mold or form in which the concrete wall is built, showing the manner in which my improved device is applied to said wall before the concrete is poured.

Figure 3 is a perspective view of one of the members of my improved device.

Figure 4 is a perspective view of another one of the members of my improved device; and

Figure 5 is a detail sectional view of the concrete form and of my device applied thereto.

The numeral 10 indicates the inner wall of a concrete form, and 11 the outer wall of said form, which is spaced therefrom and tied with the usual ties 12.

My improved device comprises a somewhat channel shaped form plate 13, of substantially V-shaped cross section, having its outer edges provided with laterally projecting flanges 14, said flanges lying in a common plane and parallel with the body of the member 13, the apex edge of the member 13 having a series of elongated openings 15 which are spaced apart a considerable distance.

Another member of my device comprises what I shall term an anchor support, which is formed of a single piece of wire or rod 16, having a series of U-shaped loop portions 17. The body member of the anchor support 16 is in a common alinement, while the loop portions 17 are spaced apart a distance equal to the spacing of the openings 15 in the member 13, and are supported in a common plane, showing that the loops 17 may be inserted in the opening 15 with the body portion 16 mounted within the channel of the member 13, in the manner clearly illustrated in the drawings.

Spacing blocks 18 are provided for retaining the body member 16 at the desired distance from the member 13. The blocks 18 have beveled faces 19 designed to fit the inner faces of the member 13, and the lower end of the block 18 is provided with a groove 20 for receiving one of the looped portions 17 of the member 16, in the manner clearly illustrated in Figure 4. This provides means for retaining the block in position while the body member 16 is being placed in position within the form plate, the groove 20, together with the member 17 mounted therein, serving to prevent the block from turning or rotating about the member 16, the outer face of the block 18 having a groove 21 for receiving the member 16.

After the members 13, 16 and 18 have been

assembled, the member 13 is then placed in an upright position adjacent to the inner face of the form 11, and temporarily secured in position by means of nails or other suitable devices 22, the nails being driven through or adjacent to the outer edges of the flanges 14, with a portion of the nail heads overlapping the said members 14. Any number of these members 13 may be secured to the inner face of the wall.

The concrete 23 may then be poured into the space between the walls 10 and 11, portions of which will pass through the inwardly projecting ends of the loops 17, in the manner illustrated in Figure 5, thereby providing means for anchoring the member 16 permanently to the end of the channel of the member 13, said member 13 being cast into the wall 24.

By referring to Figure 5 it will be seen that the members 16 are mounted adjacent to the inner face of the wall 11, while the inner edge of the member 13 is supported within the wall a considerable distance, so that the spaces 25 are provided between the members 16 and the said member 13.

After the form wall 11 has been removed, vertical grooves 26 will be provided in the outer face of the wall 24, in which the vertical members 16 are mounted, so that anchor devices 27, which are preferably of V-shaped formation and made of wire or other suitable material, may be inserted through the openings 25 with the body of the anchor 27 resting on the top surface of the veneer block or brick 28, after which mortar may be covered over the anchor 27 and a new course of block laid.

By this arrangement it will be seen that any number of the anchors 27 may be used, so that the veneer wall may be rigidly supported in position, the vertical members 16 providing means whereby the mason laying the veneer blocks need pay but little attention to the alinement of the blocks relative to the anchor devices, inasmuch as the anchors 27 are slidably mounted on the member 16 and may be easily and quickly adjusted to blocks of various thicknesses.

Thus it will be seen that I have provided an anchor for veneered concrete structures, of simple, durable and comparatively cheap construction, which may be easily and quickly applied to the forms of the mold for forming the concrete wall, and when so applied the device will be permanently and rigidly fixed in said wall and provide means whereby anchor devices may be quickly and easily applied as the veneer wall is laid.

I claim as my invention:

1. An anchor supporting device comprising a substantially V-shaped form plate having a series of openings in its apex edge, an anchor support formed of a rod or wire provided with U-shaped and laterally extending bent portions projected through the openings of said plate, with the body member of said support within the angular groove of said plate, and spacing blocks between said support and the inner face of said plate.

2. An anchor supporting device comprising a substantially V-shaped plate having a laterally extending flange on each of its side edges, and a central portion provided with spaced and elongated openings in common alinement and longitudinally of said plate, an anchor support formed of a wire or rod provided with a series of U-shaped and laterally projecting loops in a common plane, the loops being supported within and projecting through the openings of said plate with the body portion of said support within the groove of said plate, so as to form spaces between the inner face of the groove of said plate and the body members of said support, said body members being supported substantially parallel with the face of said plate, and a series of anchor devices mounted on said body portions.

3. An anchor supporting device comprising a substantially V-shaped plate having a laterally extending flange on each of its side edges, and a central portion provided with spaced and elongated openings in common alinement and longitudinally of said plate, an anchor support formed of a wire or rod provided with a series of U-shaped and laterally projecting loops in a common plane, the loops being supported within and projecting through the openings of said plate with the body portion of said support within the groove of said plate, so as to form spaces between the inner face of the groove of said plate and the body members of said support, said body members being supported substantially parallel with the face of said plate, a series of anchor devices mounted on said body portions, and a series of spacing blocks mounted between said body portions and said plate.

CHARLES E. HANDEL.