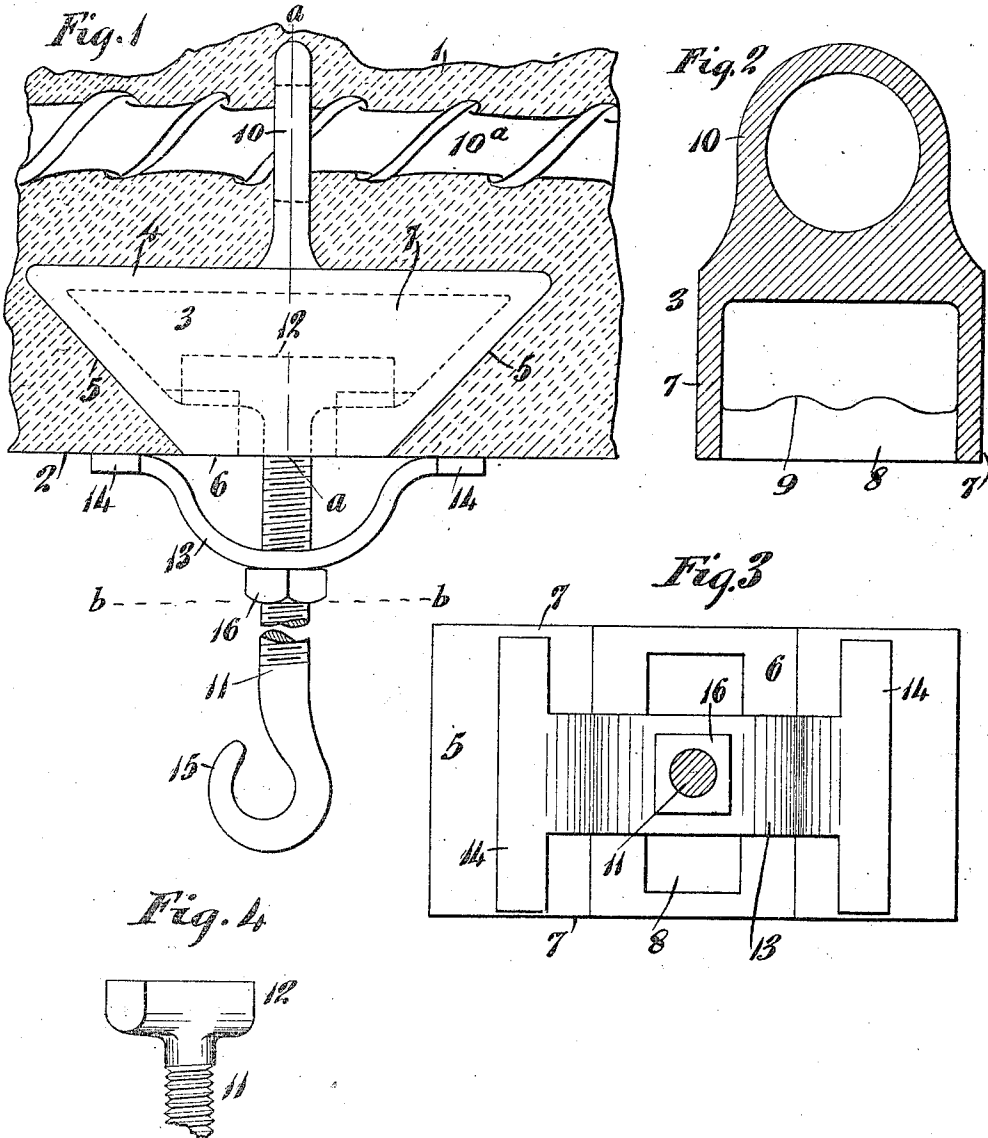


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ANCHOR OR BOLT INSERT FOR CONCRETE STRUCTURES.
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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LEVI P. HAZEN, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Anchors or Bolt-Inserts for Concrete Structures, of which the following is a specification.

10 This invention relates to anchors or bolt-inserts for concrete structures and one object thereof is to provide a device, preferably of hollow, truncated wedge-shape that is adapted to be buried in the concrete with
15 the truncated face having an elongated opening or slot therein on the same plane as that of the outer face of the concrete, whereby the heads of bolts, blocks of wood, or like devices used in attaching objects to the concrete are engaged and held in said anchor.

20 Another object of the invention is to produce a device that is easily placed in the molds for surrounding it with the concrete and whereby a strong and secure hold or
25 anchorage is maintained.

30 Another object of the invention is to provide an anchor having internal shoulders provided with corrugated or irregular surfaces upon which the T-head of a bolt rests
35 or engages for the seating of same and adapting the bolt to hang or project at the desired angle.

The novel features of the invention will be fully hereinafter described and particularly pointed out in the claims.

40 In the accompanying sheet of drawings, Figure 1 is an elevation of my device in vertical view and showing a fragmentary embedding mass of concrete and showing, also,
45 a T-headed hook projecting from the device; Fig. 2, a vertical section of the anchor only taken on the dotted-line *a, a*, of Fig. 1; Fig. 3, a bottom plan of Fig. 1, but omitting the concrete and showing the hook in cross-section taken on the dotted-line *b, b*, of Fig. 1;
50 and Fig. 4, a fragmentary elevation showing the T-head of the bolt or hook seen in Fig. 1.

1 indicates a concrete mass having a plane bottom face 2 and, in this instance, representing the horizontal ceiling and next floor portion of a structure. It is obvious that said fragmentary portion of the concrete is illustrative as well of the vertical wall portion of a structure to which my device is
55 equally well adapted.

3 indicates the body portion of my anchor

or bolt-insert herein. This body portion is made hollow and comprises a flat back or base 4, inwardly-sloping ends 5, and a flat, narrow or reduced outer face 6. Taken longitudinally, the body portion is of truncated wedge-shape and its longitudinal sides 7 are parallel and flat.

8 indicates an elongated opening made in the outer face of the body portion 3, and 9, 9 are shoulder portions at either side said elongated opening 8 within the body portion 3. The shoulders 9 are each preferably corrugated or irregularly constructed, as best seen in Fig. 2; for the purpose hereinafter referred to.

10 indicates an integral eye-formation projecting centrally from the back 4 of the body portion 3 and adapted to form a secure anchorage in the concrete and with the reinforcement 10^a when the device is in position and, also, adapted for use in readily handling the device when putting in place or otherwise. The sloping ends 5, 5, of the device permit the use and presence of such a quantity of concrete in the front of it, that a more secure hold is effected and an increased resistance is also presented by said quantity of concrete in front of the device to extend its anchoring power.

11 indicates a vertical hook having at its upper end a T or transverse head 12, as best seen in Figs. 1 and 4. The said T-head is inserted lengthwise in the elongated opening 8 and then turned a quarter of a revolution so as to bring the opposite ends of the T into engagement with the corrugations of the shoulders 9, the said corrugations adapting the hook to be held either perpendicularly or without danger of slipping along the shoulders. An arched-plate 13 having laterally-projecting feet 14 at its opposite ends is provided for properly alining or disposing said hook in position, as best seen in Fig. 1. The arched-plate 13 is centrally pierced or orificed so that the outer bent end 15 of the hook can be passed therethrough. The nut 16 is then passed over said bent end 15 of the hook 11 and turned along the screw-threaded portion of the hook. When the nut 16 is turned home, the feet 14 of the arched-plate 13 bear against the outer face of the concrete and the spread of such feet is of such proportions as shall approximately correspond to the width of the body portion 3 of the anchor, and suitable portions of the concrete intervene between said feet and the sloping sides

or ends of the body portion 3 to render the anchorage still more effective and secure for the bolt-insert.

Instead of using hooks in the anchor, other devices used for attaching objects in place on the ceiling or walls of a structure can be readily applied and duly engaged within the hollow of the anchor. Window and door frames can be readily applied to such anchors and, in the original work of putting up a concrete-structure, these anchors are adapted to receive blocks of wood or the like in the elongated openings 8 for use in attaching any of the frame-work temporarily thereto and, when such frame-work is removed, there are no nails or the like projecting from the anchor or the concrete after said blocks of wood or the like have been removed from said elongated openings, and the outer face 6 of the device is left perfectly clear and clean, ready for the application of the hook or other device to be used for pipes, shafting, fixtures of any kind, elevator track-slides and many other uses, too numerous to mention herein, without any material dressing of the concrete being required.

I claim:

1. A bolt-insert for concrete-structures comprising a hollow elongated shell or body portion having beveled or oppositely-sloping ends and flat fore and rear faces, a transverse elongated opening or slot of continuously equal width pierced in the front

face of the shell and having plane-faced side-edge walls, corrugated or waved inner shoulders constructed along the opposite sides of the said elongated opening or slot and facing inwardly and adapted to form a series of retaining-seats within said shell opening for retaining the T-head of the bolt to be held in position and a rearwardly-projecting anchor loop or eye provided on the center of the flat back of the shell and adapted to engage a reinforcing rod or the like in the concrete-structure.

2. A bolt-insert device for concrete-structures comprising a T-head bolt, a hollow elongated shell having oppositely-sloping ends with a short flat fore face and a long rear face, a transverse elongated opening of continuously equal width pierced in the said short flat fore face of the shell and having plane-faced side-edge walls, corrugated or waved inner shoulders constructed along the opposite sides of the said elongated opening and facing inwardly and adapted to form a series of seats within said shell opening for retaining the T-head of the bolt to be held in position, an anchor-plate or arched clamp on said bolt and a jam or locking nut on said bolt adapted to engage the clamp and to draw and retain the T-head of the bolt in said seats against accidental displacement.

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