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J. H. WRIGHT
BUILDING CONSTRUCTION

2,236,082

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Fig. 1

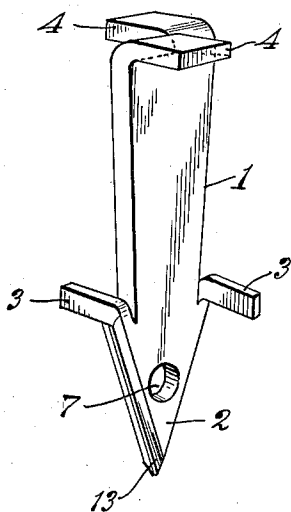


Fig. 2

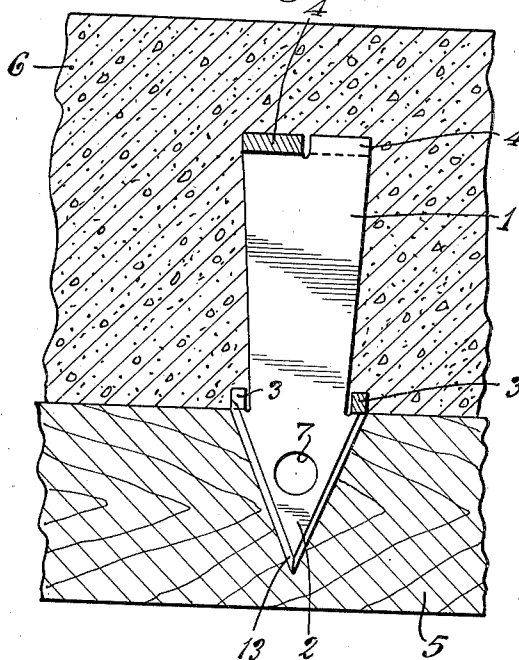


Fig. 3

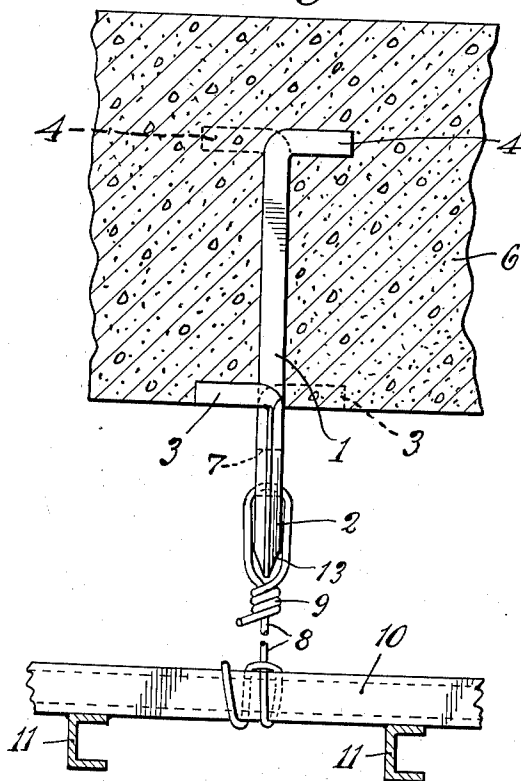
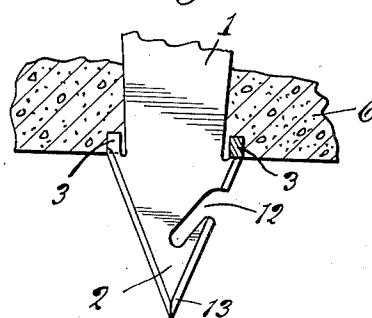


Fig. 4



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BUILDING CONSTRUCTION

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1 Claim. (Cl. 72—101)

5 This invention relates to building construction and more particularly to inserts adapted to be embedded in concrete for supporting or attaching auxiliary devices such as ceiling super-structure, metallic or other lathing, fluid or electrical conduits, electric lights, etc. to the concrete structure.

10 Heretofore concrete inserts have been made of metallic castings with a screw threaded aperture in their bottom face for receiving an attaching screw or bolt for the attachment of auxiliary devices to the insert. The screw threaded aperture is usually closed by a plug after which the insert is secured to the wooden form prior to the pouring of the concrete by means of nails or other securing means which involves a considerable number of operations.

15 In such a construction, after the concrete is poured and allowed to set it is necessary to remove the wooden form, locate the inserts, chip away the concrete to expose the plugs, remove the plugs and attach an eye-bolt or other securing means for attaching the auxiliary devices to the concrete structure.

20 It sometimes happens that the insert is not secured flush with the form, or that the form is warped and the fluid concrete flows beneath the insert and hardens so as to obscure the insert and cover the plug for the screw threaded opening. This necessitates first the locating of the positions of the inserts after which it is necessary to chip away the concrete to expose the screw plugs and then the plugs must be removed and the supporting or attaching devices assembled with the insert.

25 As can be seen from the foregoing a considerable number of operations is involved both in attaching the insert to the wooden form and in locating the insert and attaching the supporting member after the form is removed.

30 It is therefore an object of this invention to provide an insert for concrete construction in which a great number of these operations are eliminated.

35 It is another object of this invention to provide an insert which can be attached to the wooden form by a single operation and in which it is not necessary to locate the insert after the form is removed but in which the insert will be clearly visible immediately the form is removed.

40 It is another object of this invention to provide a concrete insert in which it is not necessary to chip away the concrete to expose the support attaching means.

45 It is another object of this invention to pro-

vide a concrete insert in which it is not necessary to attach a supporting device to the insert after the form is removed.

5 It is another object of this invention to provide a concrete insert in which the supporting means for auxiliary devices is permanently attached thereto and therefore not liable to be lost or misplaced.

10 It is another object of this invention to provide a concrete insert which can be attached to the wooden form in a single operation without the necessity of auxiliary attaching means.

15 It is another object of this invention to provide a concrete insert which is easy to manufacture, simple to install, and which will not pull out of the concrete under extreme loads.

20 It is another object of this invention to provide a concrete insert which can be manufactured by a single stamping operation.

25 More particularly it is an object of this invention to provide a concrete insert of stamped construction having a body portion with a pointed end adapted to be driven into a wooden form with support attaching means on the pointed end adapted to be uncovered when the form is removed, positioning means struck out from the body portion for positioning the support attaching means relative to the finished concrete structure, and means struck out from the body portion adapted to serve as an impact member for driving the pointed end into the wooden form and also as an anchoring member for anchoring the insert in the set concrete.

30 Other objects and advantages of the invention will become apparent as the description proceeds when taken in connection with the accompanying drawing in which:

35 Figure 1 is a perspective view of the invention.

40 Figure 2 is a sectional view depicting the device of the invention driven into a wooden form and concrete molded thereabout.

45 Figure 3 is a view depicting the invention embedded in the concrete structure with an auxiliary device such as ceiling super-structure attached thereto, and

Figure 4 is a modified form of the invention.

50 Referring to the drawing, the numeral 1 represents the body portion of the device, 2 the pointed end, 3 the positioning lugs and 4 the combined impact and anchoring members.

55 The pointed end 2 is driven into the wooden form 5 until the positioning lugs 3 contact the top of the form 5. The outstruck portions 4 serve as an impact member for receiving the blows of a hammer while the device is being driven into

the form as well as anchoring means for holding the insert into the molded concrete.

A number of the devices are driven into the form in suitably spaced relationship to support the particular auxiliary devices necessary, after which the concrete 6 is poured and allowed to set. The form 5 is then removed exposing the aperture 7 which is adapted to receive a supporting rod or wire.

As shown in Figure 3, the device is specially adapted for supporting a ceiling super-structure. A heavy supporting wire or rod 8 is threaded through the aperture 7 and twisted about the body of the wire or rod as shown at 9. The wire or rod 8 is then wound about a channel iron 10 so as to firmly secure it thereto. Similar channel irons 11 are positioned transversely of the first channel iron 10 and suitably secured thereto. Metallic or other lathing can then be secured to the channel irons 11.

It is to be understood that the device is not limited to supporting or attaching a ceiling structure as shown in Figure 3 but could obviously be used for supporting or attaching fluid or electrical conduits, electric or other lights or any other auxiliary devices necessary in the construction of concrete structures of any kind.

Figure 4 is a modified form of the invention in which the aperture 7 is replaced by an open ended slot 12 whereby it is not necessary to thread the supporting wire through the aperture but an eye can be preformed on the supporting wire or rod 8 and slid into the slot 12 during the assembly operation.

In the manufacture of the device a blank is stamped from sheet metal delineating the outline of the body portion 1 and the pointed end 2. The same stamping operation forms the aperture 7, separates the lugs 3 from the body portion 1 and splits the body 1 so as to form the anchoring and impact members 4. After this operation the lugs 3 are bent at right angles to the body 1 to form stops for the device when driven into the wooden form so as to position the aperture 7 at the correct distance from the finished concrete. The members 4 can then be bent at right angles to the body 1 to form impact members for receiving the blows of a hammer for driving the device into the wooden form as well as anchoring means for anchoring the device into the finished concrete. If desired, the pointed end 2 may be chamfered as shown at 13.

If desired, the lugs 3 and the members 4 can be bent to the position shown in the drawing during the stamping operation so that only a single operation is necessary in the manufacture of the device.

If desired, the lugs 3 can be replaced by a single portion struck from body 1 either from the central portion thereof or from one edge.

If desired, the portions 4 can be replaced by the body portion being bent to one side to form

the combined impact and anchoring portion of the device.

If necessary, the device can be plated, electrochemically or otherwise, with a corrosive resistant coating to resist the corrosive action of the concrete.

As can be seen from the foregoing the device of this invention provides a concrete insert which can be manufactured by a single operation, which can be attached to the wooden form by a single operation, and which can be attached by inexperienced workmen without instructions as to the depth the insert has to be driven into the form, since the lugs 3 will position the device at the correct position relative to the finished concrete.

It can also be seen that the device of this invention provides an insert in which it is unnecessary to search for, or to chip concrete away from the inserts after the form is removed in order to attach the auxiliary devices to be supported.

It is also readily apparent that this invention provides a concrete insert in which the impact member or members also forms the anchoring portion of the device for anchoring the insert into the finished concrete.

While I have shown but two embodiments of my invention, it is to be understood that these embodiments are to be taken as illustrative only and not in a limiting sense. I do not wish to be limited to the exact structure shown but to include all equivalent variations thereof except as limited by the scope of the claim.

I claim:

An article of manufacture comprising, a flat elongate body member adapted to be embedded in a molded structure, said body member having a pointed end to be driven into a penetratable form which forms the outline of said molded structure and which is to be removed therefrom after the molding operation, said body member having a combined impact and anchorage element at its upper end and having portions struck out therefrom along the length and from the opposite edges thereof between the impact and anchorage element and the pointed end whereby the body member is of reduced width between the pointed end and the impact and anchorage element to increase the anchoring effect of the body member, said struck out portions extending in opposite directions transversely of the length of the body member, said pointed end having means thereon positioned a definite distance below the struck out portions for supporting an auxiliary structure, whereby the pointed end may be driven into the penetratable form and the struck out portions will form a stop having a large area independent of the thickness of the body member to position the supporting means a definite distance below the molded structure when the form is removed.

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