W. W. WHITE.

SELF ALIGNED INSERT.

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1,405,372. Patented Jan. 31, 1922.

Fig. 1.

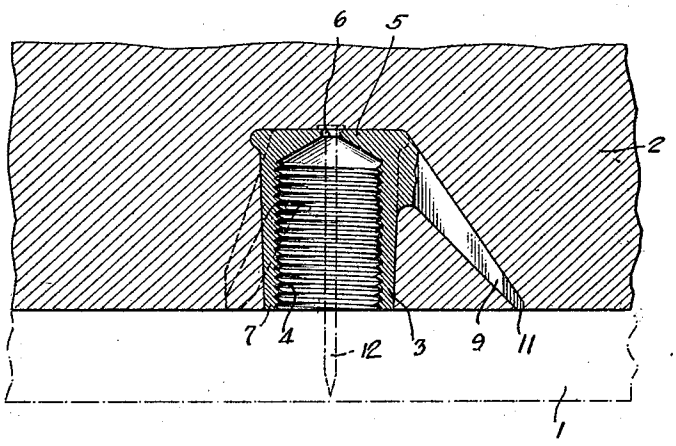


Fig. 2.

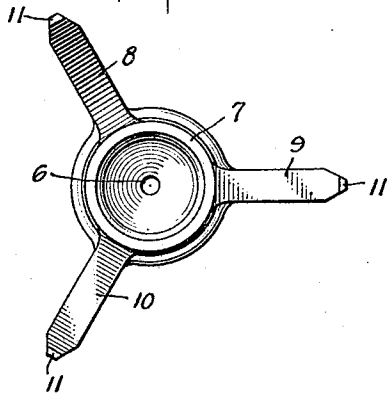
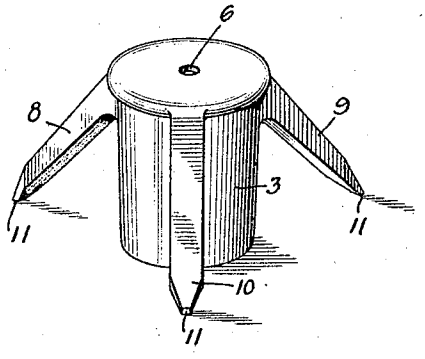


Fig. 3.



WITNESSES

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SELF-ALIGNED INSERT.

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To all whom it may concern:

Be it known that I, WALTER W. WHITE, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Self-Aligned Insert, of which the following is a full, clear, and exact description.

This invention relates to inserts, and has particular reference to metallic or other inserts used in connection with concrete or cementitious body portions.

An object of the invention is to provide a simple, economically manufactured, compact insert which when placed within a mold to be embedded in a concrete body portion aligns itself properly and maintains its alignment thereafter.

Another object resides in the provision of means whereby this insert can be very readily attached to the mold board.

A further object resides in the provision of an insert which can be cast or made in one piece.

In general, the invention comprises an insert having a body portion and a surface which is to be placed into a body of cementitious material in such manner that said surface will be flush with the surface of the cementitious material. It is proposed to provide projections or aligning members connected to the body portion and having end portions which are disposed around the insert in a plane parallel to the above-mentioned surface of the insert, so that when this insert is placed on the mold board, which represents the surface of the cementitious material about to be formed, the insert will be aligned with the flush surface in the proper position, and this position of the surface will be maintained during the pouring and formation of the cementitious body.

The invention is illustrated in the drawings, of which—

Figure 1 is a longitudinal section taken through the body of cementitious material showing the insert in place;

Figure 2 is an inverted plan view of the insert; and

Figure 3 is a perspective view of the insert.

The preferred embodiment of my invention, as shown in the drawings, is adapted to be applied in the construction of concrete walls or ceilings or other similar cementitious body portions. In Fig. 1 I represent a mold board 1 which is placed in position enclosing or adjacent the space in the mold to be ocupied by the body of cementitious material, such as 2. In buildings and similar structures it is necessary to provide suitable supports for such devices as pipes or fixtures, and for this purpose inserts have been used. In Fig. 1, 3 represents a metallic insert in the form of a hollow plug having an interior threaded bore 4 one end of which is open. The other end is closed by a core 5 in which an aperture 6 is disposed. The open end of the insert has an annular surface 7 which, in Fig. 1, is shown as disposed flush against the surface of the mold board 1. During the pouring and formation of the concrete body portion 2, this insert should be maintained in its proper position; and after the concrete has formed and the insert is provided with the fixture or other device which it is adapted to support, it is sometimes found that the inserts work out of place because no particular means are provided to maintain them in alignment. However, in accordance with my invention, I have provided as a preferred form of my invention a plurality of aligning members or projections, such as 8, 9 and 10, which in the form shown assume the shape of slightly tapered leg portions which project from the upper surface of the plug 3 outwardly and downwardly. The under surface, such as 11, of these leg members are so constructed as to be disposed in the plane of the annular end surface 7 of the plug 3.

Since, in accordance with the well-known laws of geometry, three points determine a plane, it therefore results that, as the surfaces 11 are disposed in the same plane with the surfaces 7, whenever this insert is placed on a platform or a surface these three end surfaces 11 will automatically align the surface 7 in the plane of the supporting surface, such as the mold board 1, and that after the insert has been surrounded by the cementitious material 2 these leg portions or aligning members will tend to maintain the insert in its proper alignment as well as to strengthen its burial in the cementitious material.

The legs 8, 9 and 10 are shown tapered to facilitate their being properly cast and molded, and the ends are shaped as nearly to a

point as possible in order that, since they are flush with the surface of the wall or ceiling in which the insert is embedded, no more of their surfaces than necessary will be apparent to mar said wall or ceiling.

In order firmly to apply the insert to the mold board 1 in Fig. 1, I have shown a nail, such as 12, which can be passed through the aperture 6 and thereafter into the mold board 1.

It will, therefore, be apparent that I have provided a simple, strong and economically manufactured insert provided with aligning members, preferably formed therewith, which will automatically align itself with the plane of the surface upon which it is temporarily supported during the time in which it is being embedded in cementitious material.

Minor modifications may, of course, be made in the construction and arrangement of the parts without departing from the spirit of the invention.

What I claim is:

1. An insert for cementitious structures which comprises a hollow metallic cylinder closed at one end, said closed end having an aperture therein to receive means for fastening the insert on a support, the opposite end of the insert being open, said open end having a surface adapted to be disposed flush with the surface of the cementitious material, and at least three aligning legs extending outwardly and downwardly from the body portion, the ends of said leg members being disposed in the plane of the open-ended surface of the insert.

2. An insert for cementitious structures which comprises a hollow metallic cylinder closed at one end, said closed end having an aperture therein to receive means for fastening the insert on a support, the opposite end of the insert being open, said open end having a surface adapted to be disposed flush with the surface of the cementitious material, and at least three aligning leg members projecting outwardly and downwardly from the body portion at equal distances around the surface of the insert, the ends of said leg members being disposed in the plane of the open-ended surface of the insert.

3. An insert for concrete structures, which comprises a hollow plug having an open end adapted to be disposed flush with the concrete surface, and a plurality of legs extending in different directions from the upper end of the body portion downwardly and outwardly, the ends of the legs lying in a plane coincident with the open end of the body portion.

WALTER WARREN WHITE.