

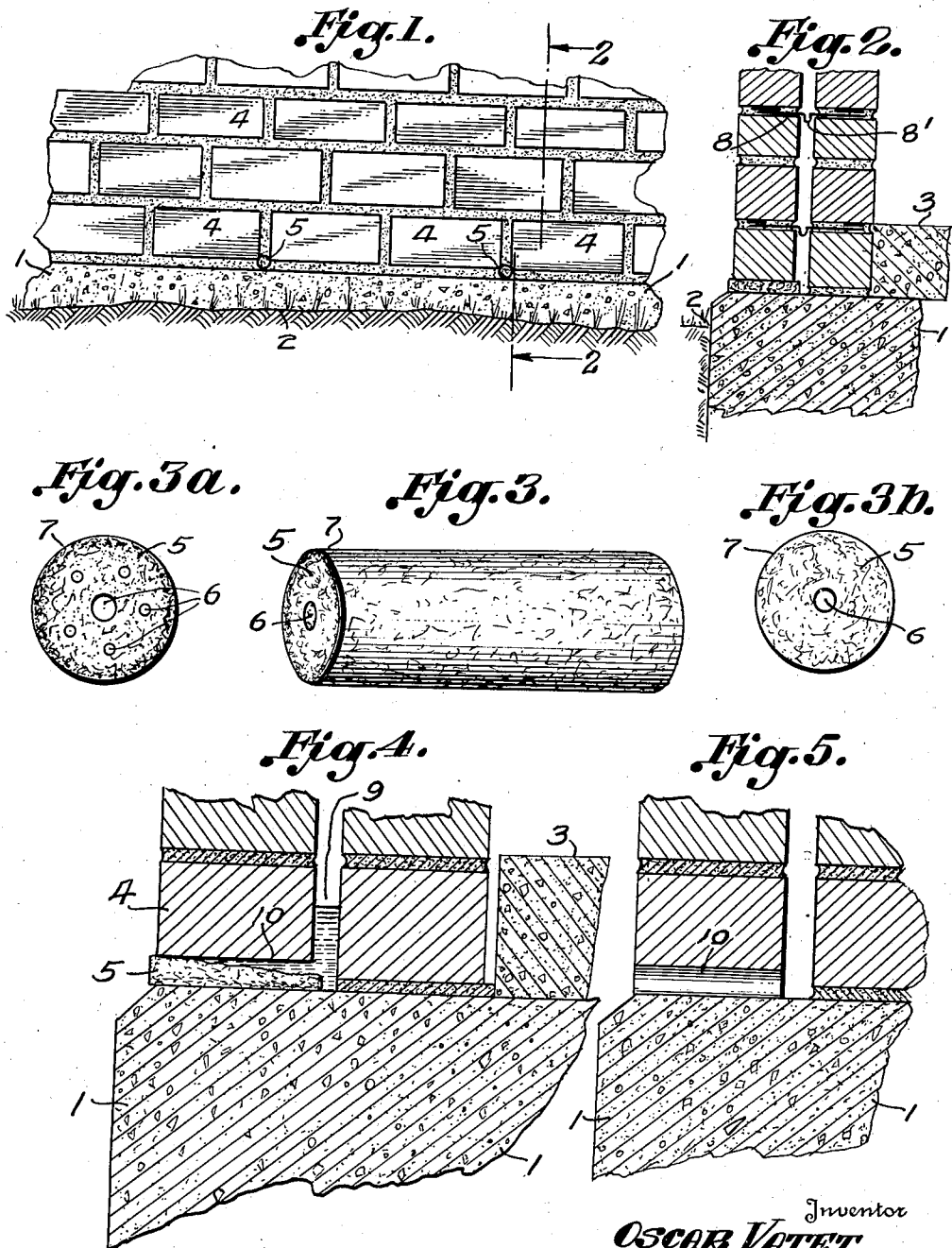
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BUILDING CONSTRUCTION

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BUILDING CONSTRUCTION

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6 Claims. (Cl. 72-127)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government of the United States for governmental purposes without the payment to me of any royalty thereon in accordance with the provisions of the act of April 30, 1928 (Ch. 460, 45 Stat. L. 467).

My invention relates to building constructions and particularly that type of building construction which embodies cavity walls.

In buildings of the prior art embodying cavity walls, there has been an accumulation of moisture within the walls, due not only to penetration of moisture from the exterior, but also due to the accumulation of moisture in the wall cavity brought about by breathing of the wall and condensation of vapor during the process of breathing. It is the object of my invention to so construct the cavity wall that whenever an accumulation of moisture occurs it will have ready access to the exterior of the wall through a channel which is normally closed by a plug which is easily and quickly disintegrated by such accumulation of water.

I have illustrated the preferred form of my invention in the attached drawing in which Figure 1 is a front elevational view showing a wall having drainage passageways normally closed by water soluble plugs;

Figure 2 is a sectional view taken on line 2-2 of Figure 1;

Figure 3 is a perspective view of a plug embodying my invention;

Figures 3A and 3B are modifications of the plug illustrated in Figure 3;

Figure 4 is a view similar to Figure 2, in which the accumulated moisture within the wall cavity has partially disintegrated or dissolved the plug; and

Figure 5 is a similar section showing the plug completely disintegrated or dissolved and washed away by the accumulated moisture within the wall.

Like numerals refer to like parts throughout the several figures.

In the drawing, by way of example, I have illustrated the footings or subsoil walls 1 terminating at or near ground level 2, and carrying a floor illustrated in the form of a concrete slab 3 with the understanding that my invention may be applied to a subsoil wall provided with a drain at or near the footing without departing from the spirit of my invention as set forth in the appended claims. In constructing a cavity wall I insert at or near the footing and between the bricks 4 a porous plug 5 having a composition

such that it readily dissolves or disintegrates upon contact with water or passage of water there-through.

The preferred form of plug or porous member is illustrated in Figures 3, 3A and 3B and consists of a porous water soluble substance pierced with holes 6 as desired, or one which readily disintegrates or decays in contact with water. These plugs may be made of non-staining, non-corrosive, inorganic salts such as rock salt, compressed into a porous plug and covered with a moisture resistant envelope, or these plugs may have a vegetable core such as corn, sugar, refined or unrefined, spun into a spongy structure and extruded into the form of a cylinder, which cylinder as it passes from the extrusion machine may be passed through an acid bath to form a tough exterior surface whose rate of solution would be much slower than the interior portion of the plug. Either the inorganic or vegetable matter plugs may be provided with a coating which deteriorates rapidly in the alkali fluids permeating the mortar of the wall. Such casing, for example, may be made from casein powder and applied in many different ways without departing from the spirit of my invention.

These members have a coating 7 which is impervious to water for a short period of time to permit the mortar in which they are laid to set. The coating, however, is of a composition such that it soon disintegrates due to the action of the chemicals in the mortar. Upon any accumulation of water 9 in the cavity of the wall, the courses of which are cross-tied by tie members 8 having depressed portion 8' to prevent moisture being carried across the cavity by the tie member it will seep into the plug dissolving or disintegrating the same as illustrated in Figure 4, with the final result that an obstruction-free passage 10 is formed as illustrated in Figure 5.

While I have illustrated the cavity wall formed of brick, cross-tied with members diagrammatically illustrated as expanded sheet metal, and the floor and footings of concrete, the walls, floor and footings may be formed of other materials and the cross-ties made of perforated sheet or reinforcing rod construction without departing from the spirit of my invention as defined in the claims appended hereto.

Having thus described my invention what I claim is:

1. A cavity wall construction having near the base thereof a plurality of porous members extending from the exterior of said wall to within the cavity thereof, said porous member consist-

ing of a porous substance, which dissolves and disintegrates immediately upon contact with water.

2. A cavity wall construction having near the base thereof a plurality of porous members extending from the exterior of said wall to within the cavity thereof, said porous member consisting of a porous substance, which dissolves and disintegrates immediately upon contact with water, coated with a substance relatively impervious to water but readily decomposable by chemicals inherently present in said wall.

3. In an article of manufacture a substantially cylindrical member, of a length appreciably greater than its diameter, having a porous interior readily dissolving and disintegrating in contact with water and a relatively water impervious exterior having a composition readily decomposable by the chemicals inherently present in mortar.

4. As an article of manufacture, an insert adapted to be placed in the joints of a masonry or like structure to form drain holes within the mortar thereof, said insert consisting of an elongated

body portion of porous material readily soluble in the alkali seepage accumulating within said structure.

5. As an article of manufacture, an insert adapted to be placed in the joints of a masonry or like structure to form drain holes within the mortar thereof, said insert consisting of an elongated body portion of porous material readily soluble in the alkali seepage accumulating within said structure, the surface of said body having an exterior layer of slower solubility than that of said body portion.

6. As an article of manufacture, an insert adapted to be placed in the joints of a masonry or like structure to form drain holes within the mortar thereof, said insert consisting of an elongated body portion of porous material readily soluble in the alkali seepage accumulating within said structure, the surface of said body having an exterior layer of slower solubility than that of said body portion, said body portion having one or more holes longitudinally therethrough.

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