J. P. & J. F. BARRY.

CONCRETE STRUCTURE, PILE, AND THE LIKE AND METHOD OF PRODUCING THE SAME.

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1,265,164.

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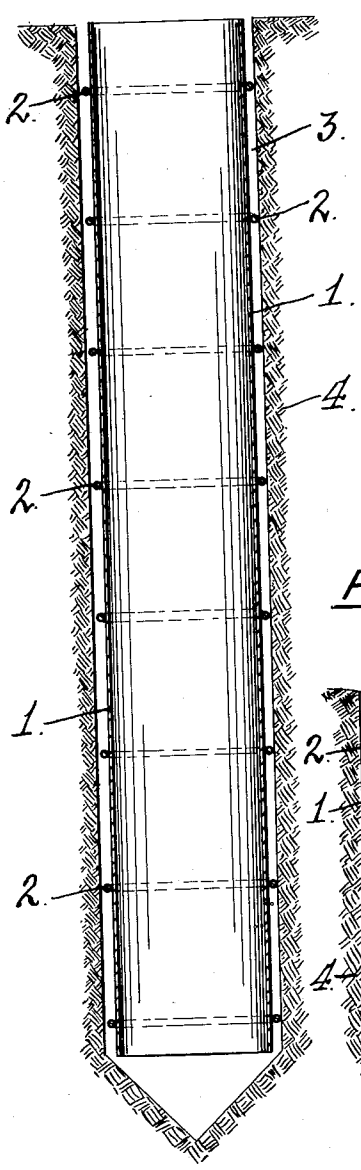


Fig. 1.

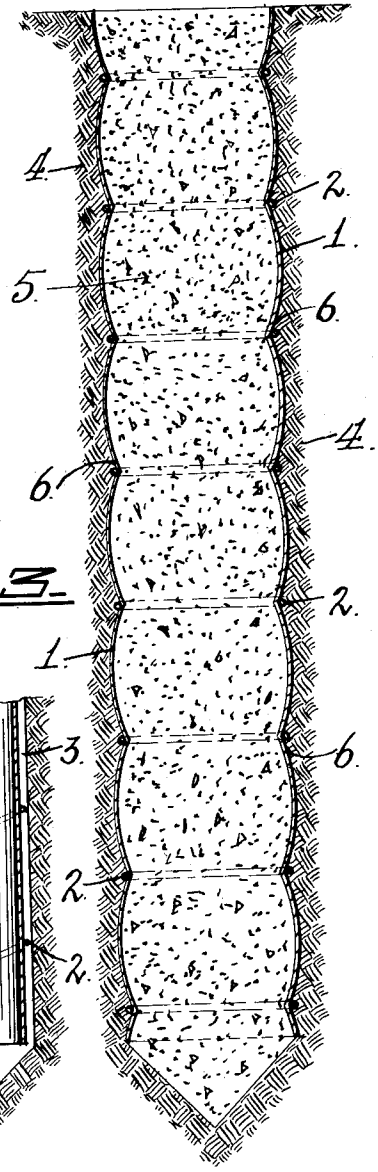


Fig. 2.

Fig. 3.

WITNESS:

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UNITED STATES PATENT OFFICE.

JAMES P. BARRY, OF PIEDMONT, AND JOHN FRANCIS BARRY, OF OAKLAND, CALIFORNIA.

CONCRETE STRUCTURE, PILE, AND THE LIKE AND METHOD OF PRODUCING THE SAME.

1,265,164. Specification of Letters Patent. Patented May 7, 1918.

Application filed December 21, 1917. Serial No. 208,206.

To all whom it may concern:

Be it known that we, JAMES P. BARRY and JOHN FRANCIS BARRY, citizens of the United States, residing the said JAMES P. BARRY at Piedmont, in the county of Alameda and State of California, and the said JOHN FRANCIS BARRY at Oakland, Alameda county, California, have invented certain new and useful Improvements in Concrete Structures, Piles, and the like and Methods of Producing the Same, of which the following is a specification.

Our invention relates to the art of making piles, walls, foundations and like structures from concrete or other plastic materials, or fluent solids like sand, and to the products of said art.

Though our method and its product may be used for a variety of purposes, such, for example, as earth embedded walls, foundations, retaining piles for unstable earth, and sustaining piles of any nature, its special object has to do with the formation and production of piles, especially those made from concrete, and for the sake of illustration we shall herein describe our invention in this connection.

The object of our invention is to produce structures such as mentioned, with a series of peripheral earth locks; and to this end, to provide a simple, economical and effective method for making such structures.

From the accompanying drawings to which reference is hereby made the nature of our invention and the manner in which it is carried out and the structure produced will be readily understood.

In these drawings—

Figure 1 is a vertical section showing the flexible, peripherally bound sheathing placed in the earth, before the body core or filling is inserted.

Fig. 2 is a similar section showing the body core or filling in place, and the effect thereof in the completed structure.

Fig. 3 is a detail view showing a modification with respect to the disposition of the peripheral bands.

A sheathing 1 is first made of some sufficiently flexible material, as for example, thin wood or metal or composition which will yield to the pressure of the filling. This sheathing may be of any shape in cross section, circular, oval, or polygonal, according to the nature of the structure. The sheathing is bound at intervals with a series of relatively non-yielding hoops or bands 2, of metal or other material. These bands may be disposed as shown in Figs. 1 and 2, in a plane at right angles to the axis of the structure or pile, or they may be helically directed, as in Fig. 3. When first made the sheathing is not distorted by the bands, and in this condition, as shown in Fig. 1, it is placed in a hole 3 in the ground 4.

Then the body core or filling 5 of concrete or other material is placed in the sheathing while it is in the earth.

Under the pressure of this filling, which may be due to its weight, or to its weight plus any ramming which may be employed, the flexible sheathing 1 yields between the peripheral bands 2 and is distorted into a plurality or series of bulging portions forming a series of exterior locks at 6, as shown in Fig. 2, for the engagement of the earth therewith.

It will be understood that if desired any suitable reinforcement of the concrete filling may be employed.

We claim:—

1. The improved method of making structures of the described character which consists in first sinking a flexible sheathing encircled by peripheral, spaced bands relatively non-yieldable; and then inserting in said bound sheathing a body filling and causing the sheathing between the bands to bulge peripherally under pressure.

2. A structure of the described character, comprising a flexible sheathing; spaced, peripheral bands relatively non-yieldable, encircling the sheathing; and a body filling in the sheathing, said filling and sheathing being bulged between the bands.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES P. BARRY.
JOHN FRANCIS BARRY.

Witnesses:
WM. F. BOOTH,
D. B. RICHARDS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."