

F. COLLOM.

PILE.

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1,044,992.

Patented Nov. 19, 1912.

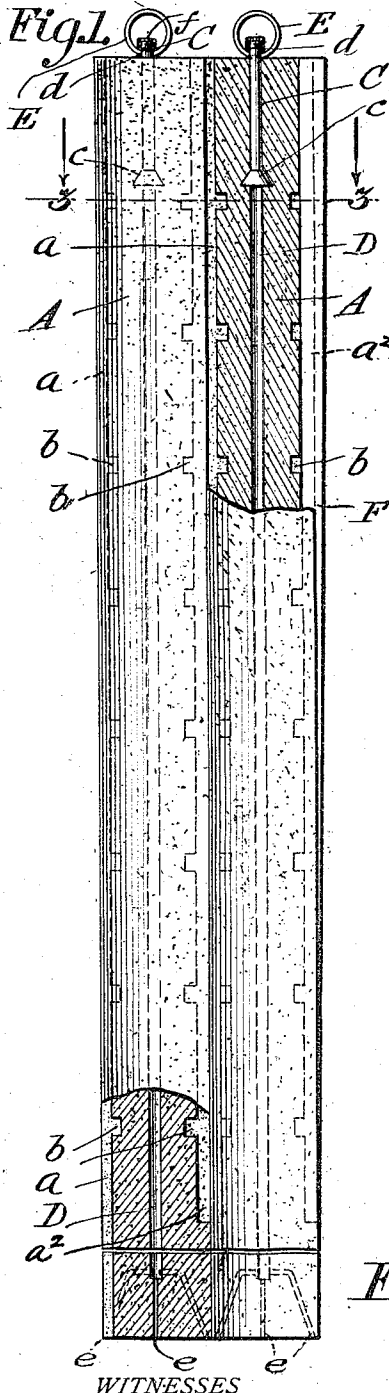


Fig. 6.

Fig. 2.



Fig. 3.

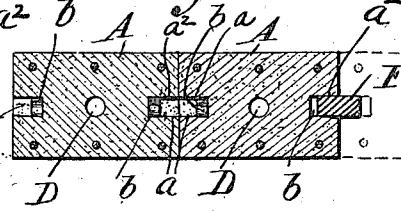


Fig. 4.

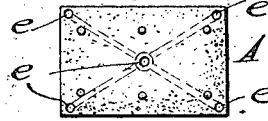
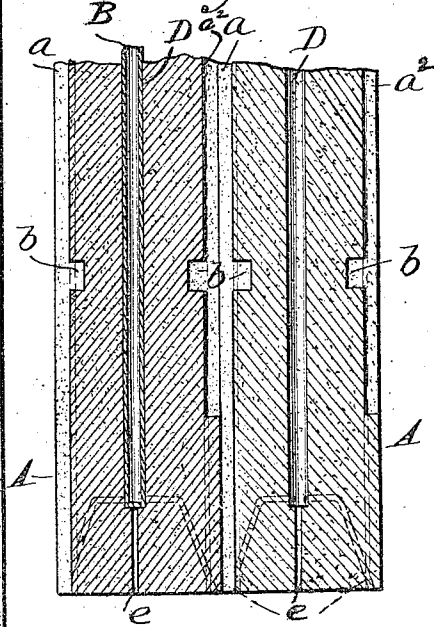


Fig. 5.



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PILE.

1,044,992.

Specification of Letters Patent,

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To all whom it may concern:

Be it known that I, FRANK COLLOM, citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented new and useful Improvements in Piles, of which the following is a specification.

My present invention pertains to piles and more particularly to piles of plastic material; and its novelty and utility will be fully understood from the following description and claim when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a view, partly in elevation and partly in vertical section, showing two piles constructed in accordance with my invention as properly arranged relative to each other, and also showing my novel guide or positioning device as properly arranged with respect to one pile in order to guide the next pile to position in alinement with the other piles when the said next pile is driven to place. Fig. 2 is an elevation of one pile taken at a right angle to Fig. 1. Fig. 3 is a horizontal section taken in the plane indicated by line 3—3 of Fig. 1. Fig. 4 is an inverted plan of the lower end of one pile. Fig. 5 is a detail vertical section illustrating portions of two piles connected together in accordance with my invention and also illustrating in one of the piles the collapsible tube hereinafter referred to which is used in the formation in the pile of the vertical-central passage for the water employed in jetting. Fig. 6 is a perspective view of the guide or pile-positioning device.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A A are the piles comprised in my invention. The said piles are identical in construction and therefore a detailed description of the construction and mode of producing one pile will suffice to impart a definite understanding of all.

The pile referred to is preferably formed of concrete or other plastic material, and is provided in its opposite edges with vertical grooves a , a^2 . These grooves a , a^2 are provided in turn with comparatively deep portions or recesses b which are arranged at intervals in the length of the grooves as clearly shown in Figs. 1 and 2. It will also be observed by reference to Figs. 1 and 5

that the groove a , alone, extends throughout the length of the pile, this in order that each pile can be membered on the guide, hereinafter described, located in the groove a^2 of the previously driven pile and can be driven to position while on said guide and in proper relation to said previously placed pile.

At the time of making each pile I arrange in the mold a collapsible tube B, of rubber or other suitable material (see Fig. 5), which tube is of a length to extend from a point adjacent the lower end of the pile to a point above the upper end of the pile, and around the upper portion of the said tube B I arrange a pipe section C having a "lewis" or enlargement c at its lower end, and also having its upper end exteriorly threaded, as indicated by d . The lower end of the collapsible tube is closed, and said tube is charged with air or other suitable fluid under pressure through the upper end thereof, and the fluid under pressure is retained in the tube so as to enable the same to serve as a core in forming a vertical-central passage or bore D in the molded tile of concrete or other plastic material, and then when the concrete or other plastic material is partially set, the fluid under pressure is released from the tube B, and then the collapsible tube is drawn through the pipe section C and out of the pile.

In addition to the passage or bore D, the pile A is provided with one or a plurality of comparatively small passages or jets e which extend from the passage D to the lower end of the pile, and I would here have it understood that the said small passages or jets may be formed in any manner consonant with the purpose of my invention.

The upper end of the pipe section C is threaded at d , as before stated, for the connection of a hose (not shown), to be used in jetting, and also for the connection of a ring such as E, which ring is provided with an interiorly threaded portion f to engage the threaded pipe end d , and is designed to be used when it is desired to draw the pile upward.

F, Figs. 1, 3 and 6, is the guide or positioning-device which I prefer to employ in alining each pile with those previously driven to position. The said guide or positioning-device is made of steel, hardwood or other material suitable to its purpose, and is tapered in order to facilitate its removal

from the meeting grooves a of two opposed piles. It will also be noted at this point that the grooves a^2 do not extend to the lower ends of the piles, this in order to prevent the earth while a pile is being driven, from forcing its way into the groove and tending to push the guide out of place, and also in order to prevent grouting of the grooves.

At the time of manufacture, the piles of plastic material may be and preferably are provided with longitudinal reinforcing rods G of metal or other suitable material.

In placing the piles in position for use, the guide or positioning-device F is placed in the groove a^2 of a pile that has been driven, and then the next pile to be driven is placed alongside the first mentioned pile, and so that its groove a receives the portion of the guide F that projects beyond said first mentioned pile, and is driven down until its lower end is flush with that of the first mentioned pile. The guide F is then withdrawn, after which concrete or other plastic material in a fluid state is poured into the opposed grooves a a^2 of the two piles until said grooves are filled. This concrete or plastic material will when it sets or hardens serve to hold the piles against lateral movement with respect to each other, and the portions of said concrete which enter the deepened portions or recesses b of the grooves will effectually prevent vertical movement of either pile with respect to the other.

It is obvious that the grooves a a^2 and the guide or positioning-device F may be of the shape shown in horizontal section or of any other shape consonant with the purposes of said grooves and guide.

While I have shown and described one

form of my invention, it is to be understood that I am not limited to the details or the form or relative arrangement of parts disclosed, but that modifications may be made therein without departing from the spirit thereof.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

In the placing of piles, the combination with piles each of which has a vertical groove in one edge, which groove is closed at its lower end and extends from an intermediate point in the height of the pile to the upper end thereof, and is open at its upper end, and also has comparatively deep portions in communication with said groove, and further has a vertical groove in its opposite edge extending throughout its height and open at its lower and upper ends, and comparatively deep portions communicating with the latter groove; of a guide or positioning device that is adapted to be placed in the first-named groove of one pile after the same is driven and to coöperate with the second-named groove of another pile to assure alinement of such other pile with the previously placed pile, and is then adapted to be withdrawn to permit of plastic material being poured in the opposed grooves of the pile, said guide or positioning device being sufficiently long to extend from the bottom of the first-named or shorter longitudinal groove to the top of the pile.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANK COLLOM.

Witnesses:

J. SHILBORGER,
EDWARD B. IRELAND.