C. F. COLLOM.

CONCRETE WHARF SUPPORT.

APPLICATION FILED JAN. 20, 1916.

1,204,946. Patented Nov. 14, 1916.

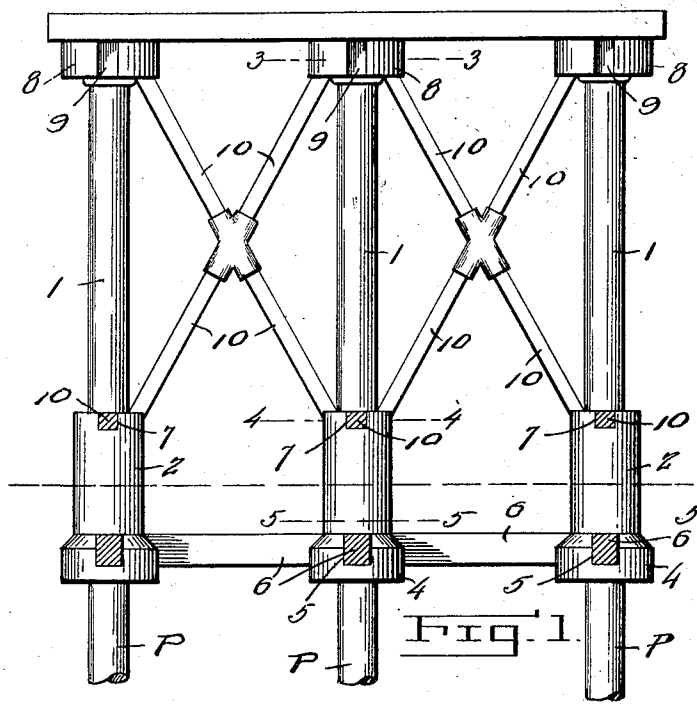


Fig. 1.

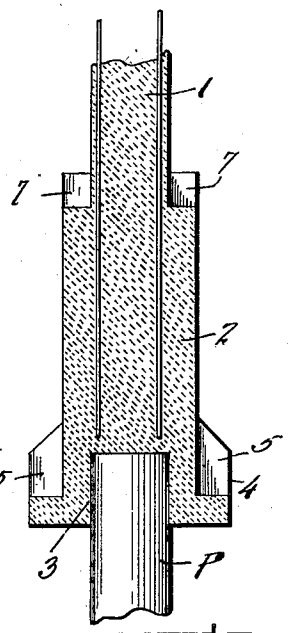


Fig. 2.

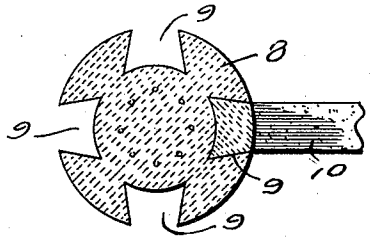


Fig. 3.

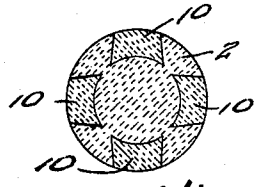


Fig. 4.

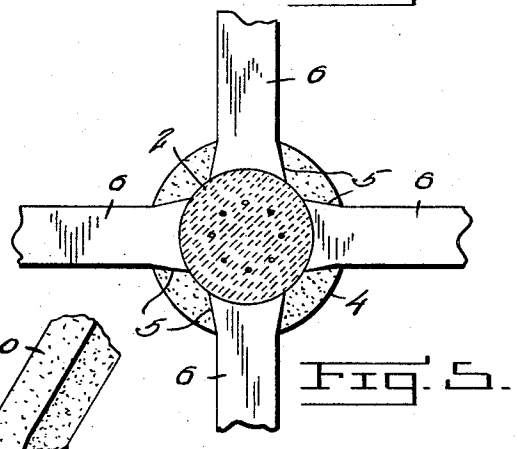


Fig. 5.

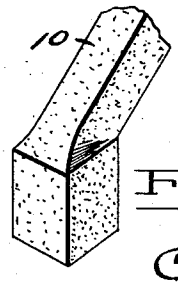


Fig. 6.

Witnesses

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CONCRETE WHARF-SUPPORT.

1,204,946. Specification of Letters Patent. **Patented Nov. 14, 1916.**

Application filed January 20, 1916. Serial No. 73,199.

To all whom it may concern:

Be it known that I, CHARLES F. COLLOM, a 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 Concrete Wharf-Supports, of which the following is a specification.

My present invention pertains to concrete means for supporting wharves, bridges and the like; and it has for one of its objects to provide a pre-cast column, constructed with a view to being mounted on a pile and to receive beams and braces, thus rendering it unnecessary to use metal in the making of a permanent connection.

Another object of the invention is the provision of a simple, easily-produced and strong support for wharves, bridges and other structures.

Other advantageous characteristics of the invention will be fully understood from the following description and claims 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 section, showing my improved support. Fig. 2 is a detail section showing the base portion of one of the concrete columns mounted on a pile. Fig. 3 is a detail horizontal section taken through the head of one of the columns in the plane indicated by the line 3—3 of Fig. 1. Fig. 4 is a similar view taken through the base portion of a column in the plane indicated by the line 4—4 of Fig. 1. Fig. 5 is a detail section taken on the line 5—5 of Fig. 1 and showing the connection of tie beams to one column. Fig. 6 is an enlarged detail perspective showing one end of one of the concrete sway braces, comprised in the support.

Similar numerals and letters of reference designate corresponding parts in all of the views of the drawings.

My invention contemplates the employment on each of the piles P, which may be of wood or concrete, of a pre-cast column 1 of concrete or other plastic material, reinforced by a circular or other suitable series of vertical rods as clearly appears in Figs. 2, 3 and 5. The columns 1 are identical in construction, and therefore a detailed description of the middle column shown in Fig. 1, and also shown in Figs. 2 to 5 will suffice to impart a definite understanding of all. The column referred to is provided at its upper end with an integral head 8, and formed in said head and extending throughout the height thereof are recesses 9, of dove-tail form in horizontal section. At its lower end the column is provided with an integral base portion 2, in the lower end of which is a socket 3 to receive the upper end of a pile. It will also be noted by comparing the several figures, that the base portion 2 is provided in its upper end with a plurality of seats 7, of dove-tail form in cross-section, and that near its lower end the base portion is provided with a flange 4 having in its upper side and perimeter seats 5, of dove-tail form in cross-section. I would have it understood at this point that it is not necessary to make the seats 5 of dove-tail form, and therefore when desired the said seats 5 may be made of even width throughout without affecting my invention.

The seats 5 in the base flange of the column specifically described are designed to receive tie beams 6, after the manner shown in Fig. 5; the said tie beams being designed to be interposed between the portions 4 of the several columns with a view to bracing and lending increased strength to the supporting structure as a whole. Manifestly the beams 6 may be of wood, concrete or other material, and they are held securely in position by virtue of their interposition between the several columns.

Interposed between each pair of columns 1 are sway braces 10, of concrete or other suitable plastic material; each of said braces being preferably cruciform—*i. e.*, made up of crossed members. The said sway braces may be pre-cast, and then positioned between and keyed to the columns without departure from the scope of my invention. I prefer, however, to cast the sway braces between the columns, since this can be readily accomplished by arranging appropriate molds between the columns, pouring the plastic material in said molds, and then removing the molds subsequently to the setting or hardening of the plastic material. It will be noted in this connection that at their ends the sway braces 10 are provided with key portions, of dove-tail form in horizontal section; the upper key portions fully occupying the recesses 9 in the column

heads 8, and the lower key portions fully occupying the recesses 7 in the column bases 2. By virtue of this provision, the sway braces are strongly connected to the columns without the employment of extraneous means.

At the top of Fig. 1, I show a fender as superimposed on the column heads 8, but this forms no part of my invention.

It will be gathered from the foregoing that in my novel support it is entirely unnecessary to use bolts or other metallic connections, and this will be appreciated as a material advantage when it is stated that bolts will after the lapse of time be destroyed by corrosion, and this is particularly true where the bolts are submerged.

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

1. Concrete means for supporting wharves and other structures, comprising spaced columns each including a base portion, a head, and an intermediate portion smaller in cross-section than the base portion and head, and the base portion being provided in its upper side and edge with a seat larger at its inner end than at its outer end and open at its upper end, and the head being provided in its edge with an opening which extends throughout its length and is larger at its inner end than at its outer end, and a brace interposed between the columns and having lower key portions corresponding in horizontal configuration to and occupying the seats of the base portions and also having upper key portions corresponding in horizontal configuration to and occupying the openings of the heads.

2. A concrete column having a base portion, a head, and an intermediate portion smaller in cross-section than the head and base portion; the base portion being provided in its upper side and edge with a seat that is larger at its inner end than at its outer end, and is open at its upper end, and the head being provided in its edge with an opening which extends throughout its height and is larger at its inner end than at its outer end, whereby a brace with key portions can be placed downwardly in the head opening and base seat and held of itself against lateral disconnection from the column.

3. Concrete means for supporting wharves and other structures, comprising spaced columns each including a base portion, a flange at the lower end thereof, a head, and an intermediate portion smaller in cross-section than the base portion and head, and the base portion being provided in its upper side and edge with a dove-tail seat, and the base flange being provided in its upper side and edge with a similar seat, and the head being provided in its edge with a dove-tail opening that extends throughout its height, a brace interposed between the columns and having upper and lower dove-tail key portions disposed in the openings of the heads and the seats of the base portions, respectively, and beams interposed between the base flanges of the columns and having dove-tail end portions arranged in said flanges.

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

CHARLES F. COLLOM.

Witnesses:
O. ELSNER,
V. MEMORY.

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