No. 828,469. PATENTED AUG. 14, 1906.

C. E. FOWLER.

BRIDGE PIER.

APPLICATION FILED FEB. 9, 1906.

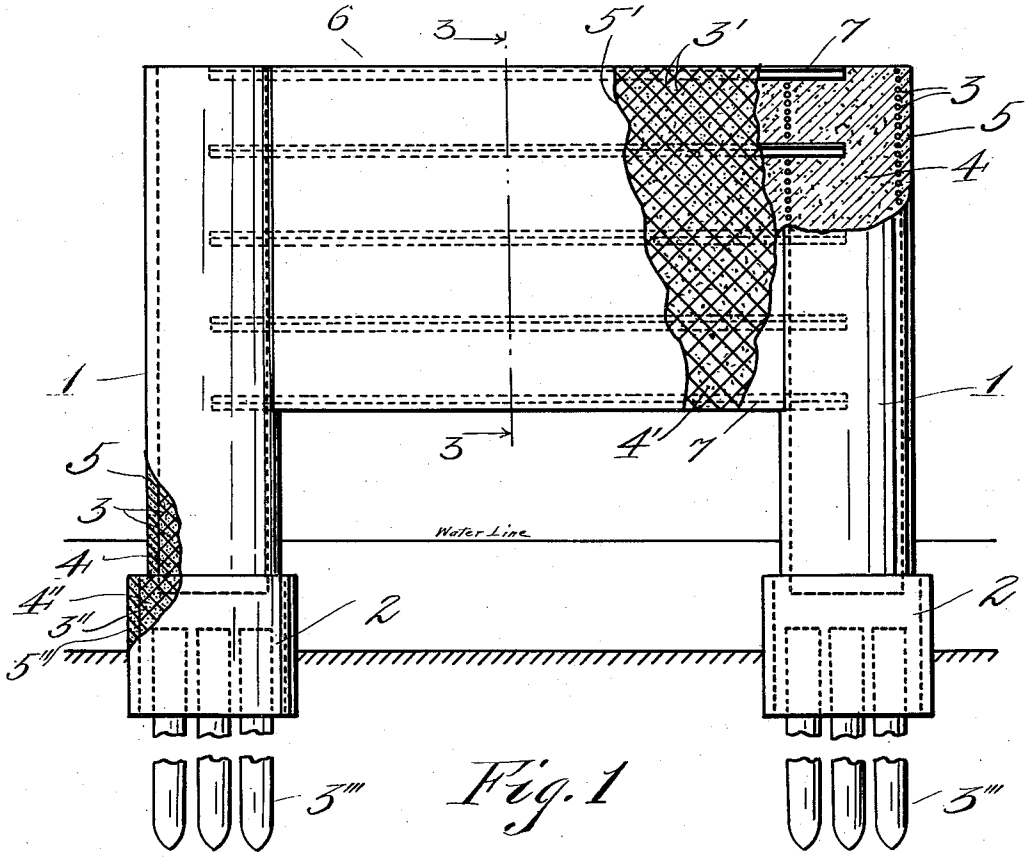
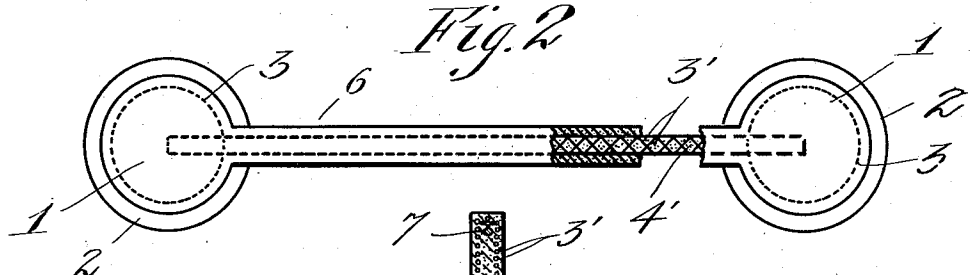


Fig. 1

Fig. 2



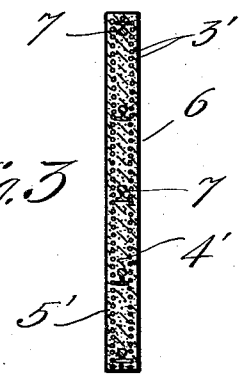


Fig. 3

WITNESSES:

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BRIDGE-PIER.

No. 823,469. Specification of Letters Patent. Patented Aug. 14, 1906.

Application filed February 9, 1906. Serial No. 300,314.

To all whom it may concern:

Be it known that I, CHARLES E. FOWLER, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Bridge-Piers, of which the following is a specification.

My invention has special reference to improvements in reinforced concrete structures of the above nature, and I have for the object thereof to simplify and improve constructions of this type.

With the above and other objects to be referred to in the following in view my invention resides in the construction, combination, and arrangement of parts, as hereinafter set forth, and pointed out in the appended claims.

With reference to the accompanying drawings, in which similar numerals of reference designate corresponding parts throughout, Figure 1 is a view in elevation of a bridge-pier constructed in accordance with my invention, the same being shown in partial broken section. Fig. 2 is a plan view likewise shown in partial broken section; and Fig. 3 is a transverse section of the web or tie-wall, taken on line 3 3 of Fig. 1.

In the drawings reference-numerals 1 1 designate shafts or columns which are spaced apart and erected upon any suitable foundation. In the present instance I have shown each shaft or column supported by a base 2, which rest upon piling 3'''. It is obvious, however, that the foundation for the shafts or columns will vary in accordance with the natural formation existing at the points of installation. The shafts or columns 1 are formed from concrete or other suitable plastic composition and metallic reinforcing members, as sections of wire rods 3, spaced apart and conveniently embodied in the form of tubular sections of network. As shown in the drawings, the metallic reinforcing members 3 lie adjacent to the exterior surfaces of their respective shafts or columns between the main body or core 4 thereof and a shell or facing 5. It is obvious, therefore, that the main body or core 4 may be formed of a composition of one grade and the shell or facing 5 of a composition of another grade.

In constructing the shafts or columns the main body or core 4 and the shell or facing 5 may be formed simultaneously or the former first formed and the latter applied subsequently. In either case, however, the metallic reinforcing members employed are first placed in position and suitably secured to prevent displacement and the composition employed for the shell or facing preferably applied before the main body or core has dried, so that the facing and core will be firmly bound together when the materials have set.

Connecting the shafts or columns 1 is a web or tie-wall 6, formed from concrete or other suitable plastic composition, and metallic reinforcing members, as 3' and 7, the latter conveniently consisting of bars of metal, as rail-sections, and the former being similar to the reinforcing members 3 and conveniently embodied in the form of network. The reinforcing members 7 have their end portions embedded in the bodies or cores of shafts or columns 1 and extend through the main body or core 4' of the web or tie-wall 6, while the members 3' lie between this core and a shell or facing 5', formed from concrete or other suitable plastic composition.

The core of the web or tie-wall is built up simultaneously with the cores of the shafts or columns, the members 7 being set in place successively and the composition for forming the body or core 4' applied as the work progresses. The members 3' may be placed in position during the building up of the cores, and the composition for forming the shell or facing 5' applied simultaneously or subsequently, as desired.

The bases 2 are constructed in substantially the same manner as the shafts or columns 1, each being formed with a body or core 4'' of plastic composition, a shell or facing 5'' of similar material, and metallic reinforcing members, as 3'', interposed between the body or core and the facing.

A structure formed in accordance with the foregoing is comparatively inexpensive of construction and strong and durable.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

1. In a reinforced structure of the nature specified, a structural member comprising a body or core formed of plastic composition, metallic reinforcing means consisting of bars embedded in said body with their end portions projecting therefrom, a facing formed from plastic composition and metallic reinforcing means consisting of members spaced apart and interposed between said body and the facing.

2. A structure of the nature specified comprising shafts or column, spaced apart, a web extending therebetween having a body or core formed of plastic composition, metallic reinforcing members embedded in said body and extending into said shafts or columns, a facing formed from plastic composition, and metallic reinforcing means interposed between said body and the facing.

3. A reinforced structure of the nature specified comprising shafts or columns spaced apart, and a web extending therebetween, each of said parts having a body or core formed from plastic composition, and a facing formed from plastic composition, metallic reinforcing members embedded in the body or core of said web and extending into the bodies or cores of said shafts, and metallic reinforcing means interposed between said bodies or cores and their respective facings.

Signed at Seattle, Washington, this 26th day of January, 1906.

CHARLES E. FOWLER.

Witnesses:
P. J. CHURCH,
DAVID D. LONG.