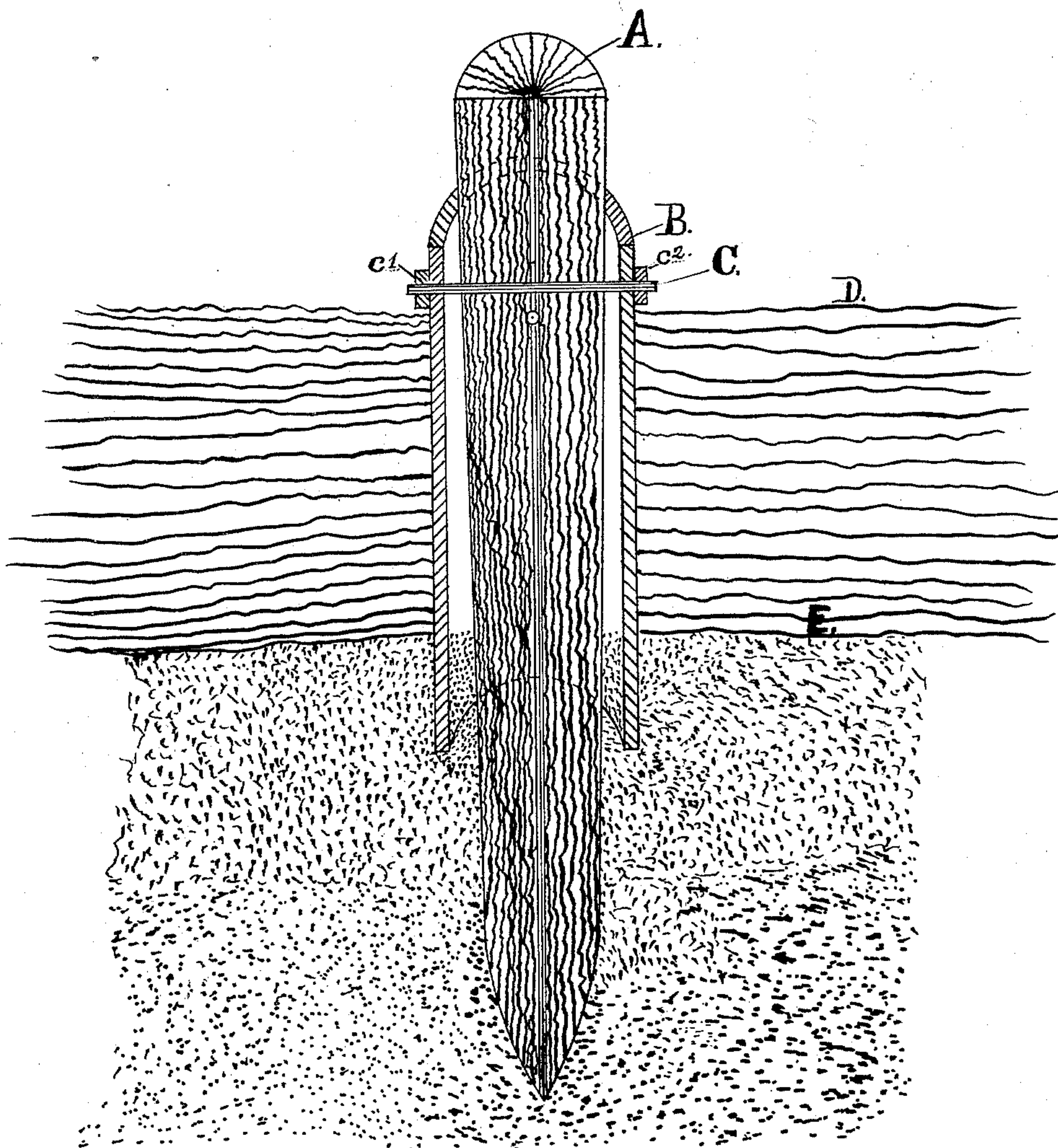


(No Model.)

G. W. BEDBURY & E. F. BADGLEY.
PILE ARMOR OR CASING.

No. 468,291.

Patented Feb. 2, 1892.



Witnesses.

W. R. Doane.

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UNITED STATES PATENT OFFICE.

GEORGE W. BEDBURY, OF ALAMEDA, AND EUGENE F. BADGLEY, OF SAN FRANCISCO, CALIFORNIA; SAID BEDBURY ASSIGNOR TO SAID BADGLEY.

PILE ARMOR OR CASING.

SPECIFICATION forming part of Letters Patent No. 468,291, dated February 2, 1892.

Application filed April 30, 1891. Serial No. 391,169. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. BEDBURY, of Alameda, county of Alameda, and EUGENE F. BADGLEY, of San Francisco, county of San Francisco, State of California, citizens of the United States, have invented a new and useful Pile Armor or Casing, of which the following is a specification.

Our invention relates to improvements in pile armor or casing for the protection of piles in salt water against the inroads of the teredo and other destroying insects. It is well known that many so-called pile-armors have been invented and many of them tested. In most all known instances of this kind it has been proven that any substance used which has the solidity to resist the destroying insects could not be applied to the pile before driving and retain its adhesion under the process of driving the same. It can therefore readily be seen that if the coating so applied to the pile shall have opened in one or more places the pile will then be at the mercy of destroying insects nearly as much so as those without coating.

Our invention consists of an armor or casing composed of any material which may resist the penetration of the teredo or other destroying insect, and may be composed of iron, burnt clay, composition, or any other matter. We construct our pile-armor in pipe shape and in any length necessary for the pile that is to be protected. After the wooden pile shall have been driven to its place the armor or casing is to be placed in its position surrounding the wooden pile and may be settled in the mud, should there be mud, or rest upon sand or hard earth, as the case may be, at the bottom. The armor or casing is provided with bolt-holes in its upper end, so that

the armor or casing may be suspended to the pile by means of two or more bolts crossing each other at right angles, one a short distance below the other, thereby preventing the armor or casing settling out of place in case the mud or sand bottom might recede.

We would recommend treating the outer row of piling or wharves as follows: When the armor or casing shall be in position, fill in between the pile and armor or casing with concrete or other hardening material for the purpose of solidifying the armor or casing to the pile, that it may resist breakage by the concussion of vessels striking it in making landing, or by force of storms. We attain this object by the plan illustrated in the accompanying drawing.

A represents the wooden piles.

B represents the armor or casing; C, the bolt or bolts for suspending the armor or casing to the pile A.

C' and C² are nuts for holding bolt C in place.

D represents the water-line; E, the earth-line.

What we claim as our invention, and desire to secure by Letters Patent, is--

A pile armor or casing independent of the pile itself, with bolts passing through armor or casing and pile, suspending armor or casing to the pile, and filling in between the armor or casing with concrete or other hard substance, all substantially as set forth in the above specification.

GEORGE W. BEDBURY.
EUGENE F. BADGLEY.

Witnesses:

F. A. ELLSWORTH,
T. W. COSGROVE.