

(No Model.)

C. C. LANE.

PROTECTING AND PRESERVING PILES.

No. 383,736.

Patented May 29, 1888.

Fig. 1.

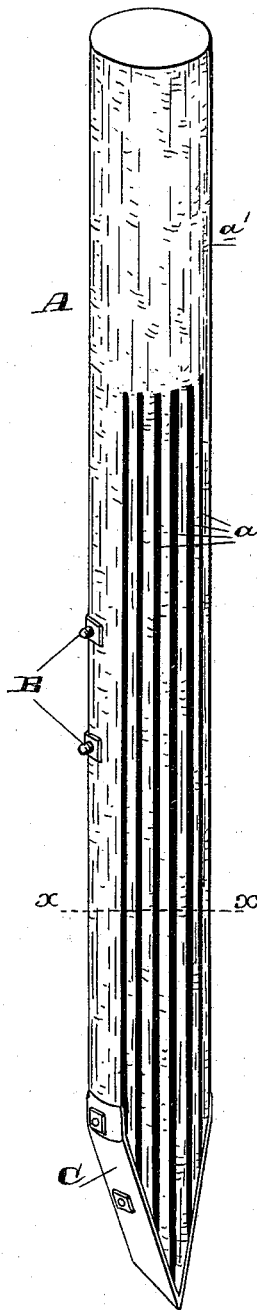


Fig. 2.

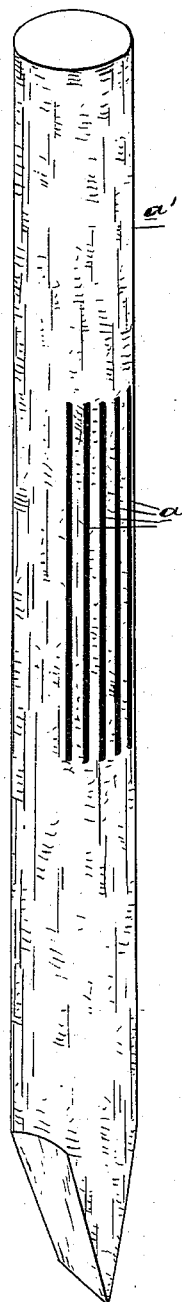
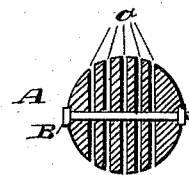


Fig. 3.



Witnesses,
Geo. H. Strong.
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Inventor,
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UNITED STATES PATENT OFFICE.

CHARLES C. LANE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO JOHN H. BOALT, OF SAME PLACE.

PROTECTING AND PRESERVING PILES.

SPECIFICATION forming part of Letters Patent No. 383,736, dated May 29, 1888.

Application filed September 14, 1887. Serial No. 249,715. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. LANE, of the city and county of San Francisco, State of California, have invented an Improvement in Protecting and Preserving Piles; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a new and useful improvement in the art of protecting and preserving piles from the ravages of marine insects, especially the teredo, and from decay; and my invention consists in splitting the pile substantially in the direction of its length and throughout that portion of it which is exposed to attack, leaving the remaining or top portion, where strength is required, unsplit, and in treating the split portion of said pile with a suitable protective or antiseptic compound, whereby said compound, entering the splits or cuts of the pile, fills them up and permeates its substance, all of which, together with details, I shall hereinafter fully describe.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of a pile prepared and treated in the manner described. Fig. 2 is a view of a pile having its splits or cuts arranged in a modified position. Fig. 3 is a cross-section on line X X, Fig. 1.

A is a pile, having made in it from its point upwardly and substantially in the direction of its length, for a distance which includes the portion of the pile exposed to decay and the attack of insects, the slits *a*. These slits are made by splitting the pile by saws or other suitable machinery. The upper portion or top *a'* of the pile is left unsplit, because the greatest amount of strength is needed there. The split or slitted portion can be properly seasoned, and is then immersed in coal-tar, asphaltum, or other materials or compounds of a protecting or antiseptic nature, after which the split portion of the pile may be spiked or pinned together, as shown at B, and the point of the pile may be protected by a metal socket or strip, C.

In Fig. 2 I show the split portion of the pile about the center, where the pile is exposed in the water, and in such case no spikes need be used.

The top of the pile is not weakened, as it

remains in its natural shape, which is an advantage, because it is that part of the pile which has to stand the greatest force of the blows in driving it.

In thus splitting the pile it is obvious that that part of it which is liable to be attacked by the teredo is placed in a proper condition to be seasoned naturally or by the use of hot water.

In practice the pile will be split into thin portions—say one inch, more or less—and this will allow the needed preservative compound to penetrate to all parts of the pile where exposed to attack, and no portion of said compound is wasted on that part of the pile which is not exposed. By thus minutely splitting up the pile there is left no space in which the teredo can work, because between each solid portion of the pile is a slit which is filled with the protective or preservative compound, which the teredo will not cross, and therefore it can work only in the solid portion, which is reduced to such a thinness as to make it impracticable for it to carry on its operations; nor can it come to maturity or even live in the narrow substance between the slits.

I am aware that piles have been immersed in preservative compounds of various natures, in order to allow the material to permeate through the pores of the wood. I also know that a central hole has been made in the pile and a preservative compound poured into it, and also that an annular socket or opening has been made near the outer circumference of a pile, thus dividing it into an outer thin shell and an inner solid core, a preservative compound being poured into the annular opening. I do not, therefore, claim merely the treating of a pile with an antiseptic compound; nor do I claim, broadly, the making of holes or sockets, cavities, or chambers in a pile for the purpose of introducing the preservative compound; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The method of protecting and preserving piles, which consists in splitting the pile in that portion of it which is exposed to attack, and in then treating the split portion with a protective or antiseptic compound, whereby the slits are filled with it and the substance

of the wood permeated, substantially as herein described.

2. The method of preserving piles, which consists in splitting, in substantially the direction of its length, that portion of the pile which is exposed to attack, leaving the upper or top portion of the pile unsplit, and in treating the split portion with a protective or antiseptic compound, whereby its slits are filled and its substance permeated, substantially as herein described.

3. The method of preserving piles, which consists in splitting, in substantially the direction of its length, that portion of the pile which is exposed to attack, leaving the top portion unsplit, in then treating the split portion with a protective or antiseptic compound, whereby its slits are filled and its substance permeated, and in then spiking or pinning the split portion together, substantially as herein described.

4. The pile provided in the direction of its

length with a number of slits extending throughout that portion which is exposed to attack, said pile having its top or upper portion unsplit, substantially as herein described.

5. A pile having a solid or unsplit upper portion, and its lower portion, which is exposed to attack, slitted or split, and its split portion spiked or pinned transversely, the slits of said portion being filled with a protective or antiseptic compound, substantially as herein described.

6. A pile having its lower portion split, its upper portion unsplit, and a metal cap for covering its point, substantially as herein described.

In witness whereof I have hereunto set my hand.

CHARLES C. LANE.

Witnesses:

S. H. NOURSE,
H. C. LEE.