

(No Model.)

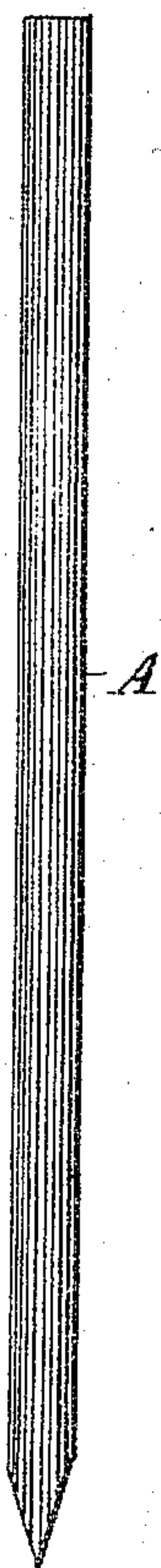
G. E. SURGI.

PILE OR TIMBER PROTECTOR AND PRESERVER.

No. 500,678.

Patented July 4, 1893.

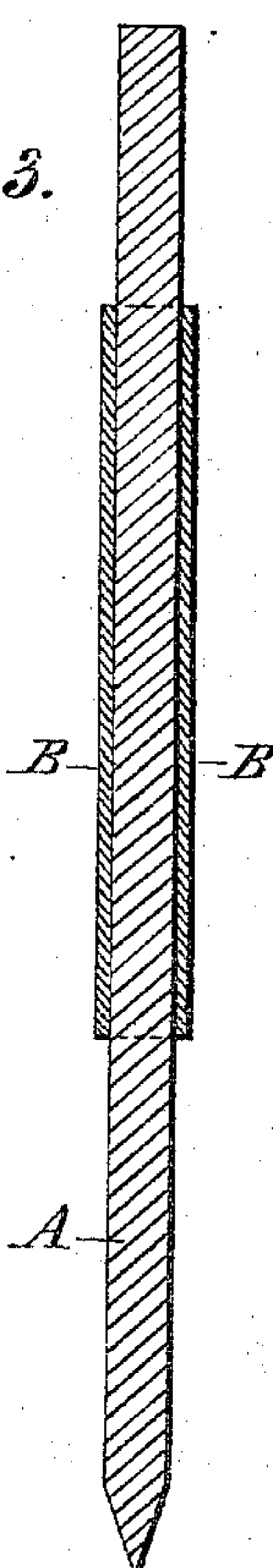
*Fig. 1.*



*Fig. 2.*



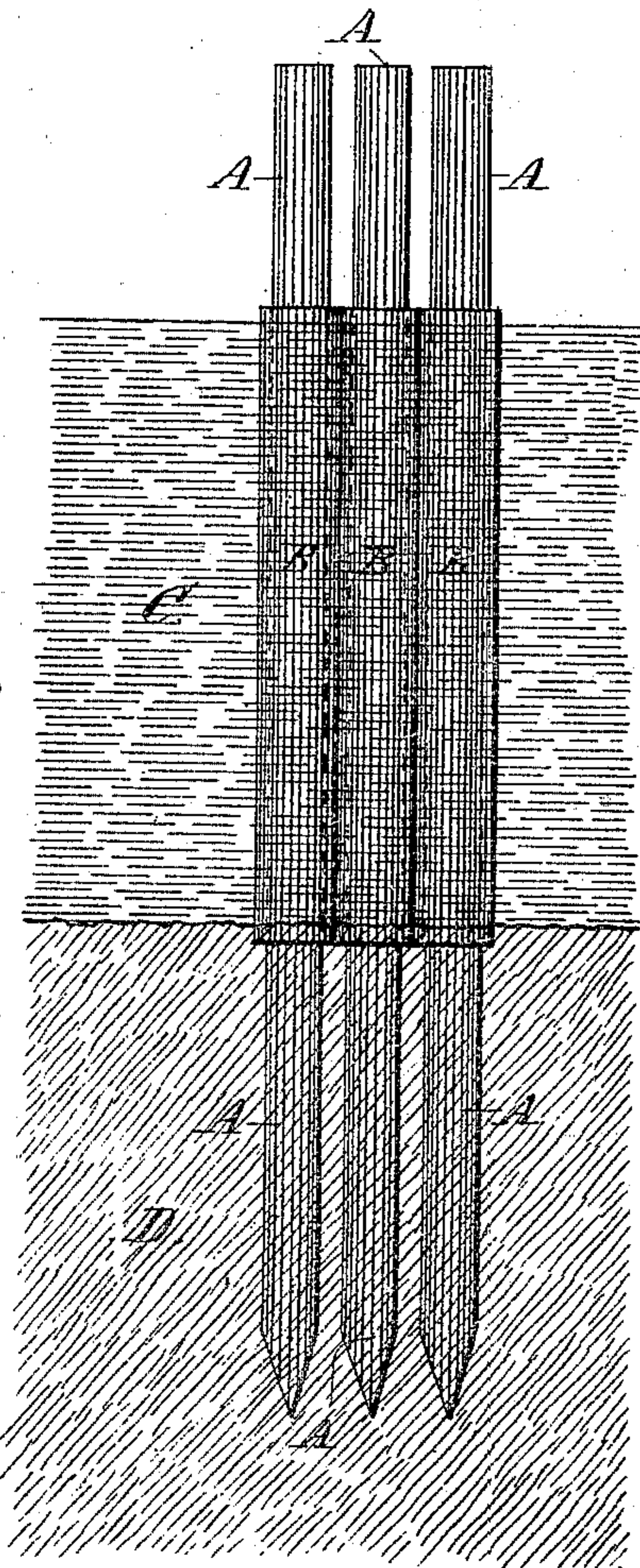
*Fig. 4.*



*Fig. 3.*



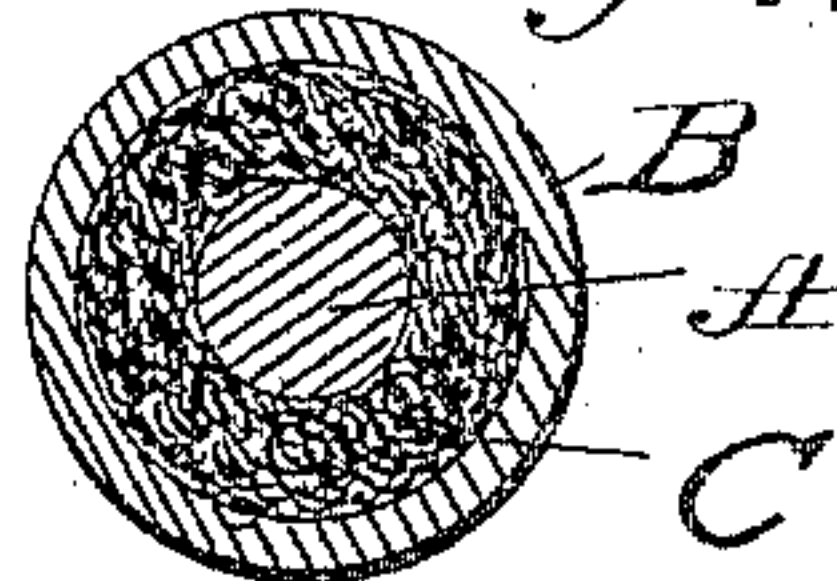
*Fig. 5.*



*Fig. 6.*



*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

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## PILE OR TIMBER PROTECTOR AND PRESERVER.

SPECIFICATION forming part of Letters Patent No. 500,678, dated July 4, 1893.

Application filed September 26, 1892. Serial No. 446,954. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE EUGÈNE SURGI, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Pile or Timber Protectors and Preservers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in piles, railway ties, &c., and it has for its general object to provide a pile of a cheap, simple, and durable construction, thoroughly adapted to withstand the ravages of teredos and other insects, and the action of water.

With the foregoing end in view, the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, in which—

Figure 1, is an elevation of a pile. Fig. 2, is a similar view of a pile embodying my invention. Fig. 3, is an elevation of the protective molding or casing removed from a pile. Fig. 4, is a longitudinal section taken through a pile embodying my invention. Fig. 5, is a view showing a number of piles in position. Fig. 6, is a transverse section of Fig. 2, and Fig. 7, is a similar view of a modification.

In order to impart a better understanding of my improved pile, railway tie, &c., I will describe the manner of constructing the same which is as follows:

I take glass, either pure or with some other substance, slag iron, aluminum or any other material capable of being fused, and after reducing the same to a molten mass, I cast or mold it around the wooden pile or tie indicated by A, in the drawings, so as to form a casing B, as illustrated. This casting or molding of the casing B, around the pile, is highly advantageous inasmuch as when the casing is so placed upon the pile or tie it tightly embraces the same so as to render the use of fastening devices unnecessary, and furthermore it prevents the entry of water and destructive worms between the pile and casing, when the tide is high, which is an important desideratum.

I prefer in the practice of my invention,

before the pile is incased by the molten glass or other substance, to surround the same with a suitable compressible substance C, as shown in Fig. 7, which compressible substance is designed and adapted to permit of an expansion and contraction of the casing B, incidental to heat and cold without the same becoming loose upon the pile, but I do not desire to be confined to the compressible substance between the pile and casing as the use of the same is only preferable and in some cases it might be dispensed with.

In the accompanying drawings, I have shown the casing B, as covering only that portion of the pile which is subjected to the action of the water, but it is obvious that if desired the entire pile or any portion thereof might be covered.

It will be seen from the foregoing description that the casing B, may be very quickly and easily placed upon the pile, and that when so placed it will retain its primary position without the employment of fastening devices.

A pile or tie constructed as herein set forth is thoroughly impregnable to the destructive action of insects and sea water, and is also very strong, whereby it will be seen that it will last for an indefinite period of time regardless of the locality where it is situated.

Having described my invention, what I claim is—

1. As a new article of manufacture, a pile or railway tie, embodying a wooden portion, and a casing cast or molded about the wooden portion so as to tightly embrace the same and render the use of fastening devices unnecessary, substantially as specified.

2. As a new article of manufacture, a pile or railway tie embodying a wooden portion, a compressible substance surrounding the wooden portion, and a casing cast or molded about the wooden portion and compressible substance, so as to tightly embrace the same and render the use of fastening devices unnecessary, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE EUGÈNE SURGI.

Witnesses:

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