

(No Model.)

P. CAREY.

NON-CONDUCTING COVERING AND PROCESS OF CONSTRUCTING SAME.

No. 548,743.

Patented Oct. 29, 1895.

Fig. 1.

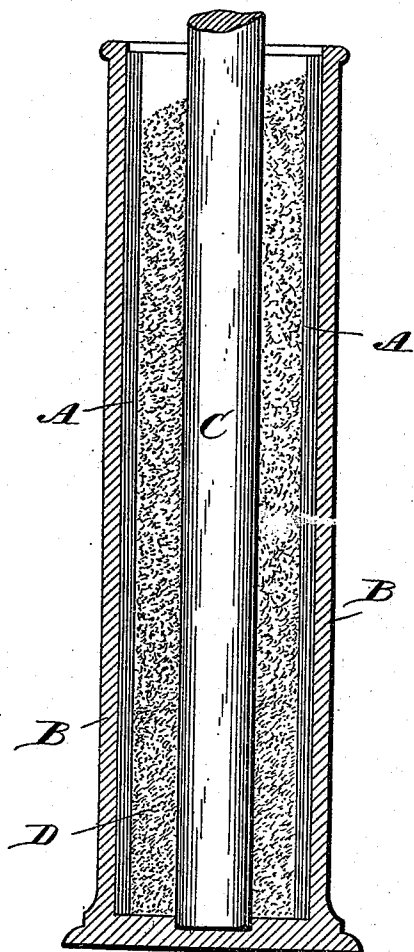


Fig. 2.

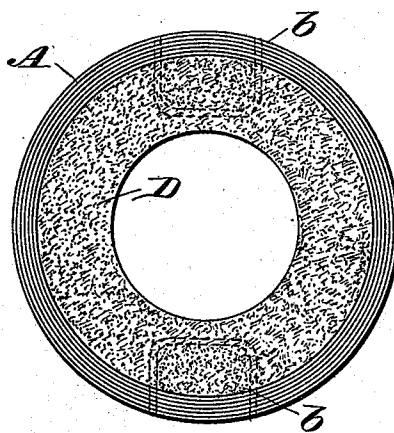
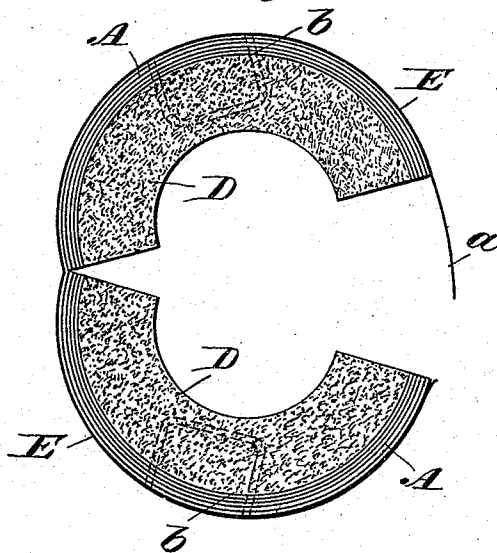


Fig. 3.



Witnesses.

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NON-CONDUCTING COVERING AND PROCESS OF CONSTRUCTING SAME.

SPECIFICATION forming part of Letters Patent No. 548,743, dated October 29, 1895.

Application filed March 1, 1894. Serial No. 501,923. (No model.)

To all whom it may concern:

Be it known that I, PHILIP CAREY, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Non-Conducting Coverings and in Processes of Constructing the Same, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of coverings for steam-pipes, boilers, and the like known as "removable" coverings, usually made and applied in sections; and it has for its object the improved construction of this class of coverings, both in the process of making the same and in the finished article, whereby greater lightness and strength are obtained and also the efficiency of their non-conducting qualities increased.

The novelty of my invention will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a central sectional elevation of a mold for carrying out my process. Fig. 2 is a transverse section, enlarged, of a completed covering as it comes from the mold. Fig. 3 is a corresponding view showing the section cut longitudinally to enable it to be opened in placing it on a steam-pipe.

The same letters of reference are used to indicate identical parts in all the figures.

Heretofore in constructing coverings of this class, which are composed of an inner porous non-conducting and fireproof material—usually asbestos fiber combined with plaster-of-paris and other ingredients, as magnesia and infusorial earth—and an enveloping cover of paper and canvas or other textile material, it has been the practice to first mold and dry the inner fireproof material and after cutting it longitudinally into halves to wrap and paste around it the paper or other envelope. This method not only entailed considerable work, with loss of time, but the resulting product was frail, and in opening it on the line of division to apply it to the pipe the envelope frequently came loose from the non-conducting fireproof material.

My present invention remedies all these de-

fects, and in constructing the covering I proceed as follows: I first form my outer envelope into solid compact tubes A of layers of paper or other porous material about a quarter of an inch thick and in lengths of about three feet each. These are placed vertically into molds B, which have a removable central core C of the same diameter as the pipe to be covered. I then pour the previously-mixed semi-fluid fireproof non-conducting material D into the space between the core and tube A until the latter is completely filled. It is then permitted to set and harden sufficiently to be lifted from the mold and is then taken to a drying-room and dried. In some cases, when the non-conducting material is very light and porous, I take the sections after they have been thoroughly dried and coat the interior surface of the non-conducting material with soluble glass, which hardens the interior surface and prevents injury by crushing when applied to the pipe. By this construction the sections of the covering of non-conducting material and the paper tube are firmly united and secured together and there is no liability of the envelope buckling or tearing loose when the sections are cut, as shown in Fig. 3, and applied to the steam-pipe. After being thus constructed and cut the outer wrapping of canvas E, Fig. 3, is applied in the usual manner, with a lap *a* at the joint to cover the same when applied to a pipe. Where extreme lightness is required and to prevent the paper tube from becoming water-soaked while the non-conducting material is setting and drying, I render its inner surface waterproof with a liquid preparation for the purpose or by applying an inner lining of waterproof paper, which is secured to and forms part of the tube. Furthermore, to give additional strength and protect the non-conducting material at or near the ends of the tubes against rough handling metal staples *b*, dotted lines, Figs. 2 and 3, may be employed. These have their ends secured in the tube, but are completely covered and concealed by the non-conducting material. There may be two of these staples at each end, set quartering to the line of division of the section.

Having thus fully described my invention, I claim—

1. A non-conducting covering having a tubu-

lar non-conducting interior portion and an exterior enveloping tube with an interior water proof surface, the two being united by being molded together, substantially as described.

2. In non-conducting coverings, the combination of the enveloping tube A having interiorly projecting staples *b*, and the non-conducting material D molded in said tube and covering said staples, substantially as described.

3. The herein described process of con-

structing non-conducting coverings consisting in first forming an enveloping tube, then pouring the plastic non-conducting material into the same around a central core and permitting it to set, then drying the same, and finally coating the interior with soluble glass, substantially as described.

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Witnesses:

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