

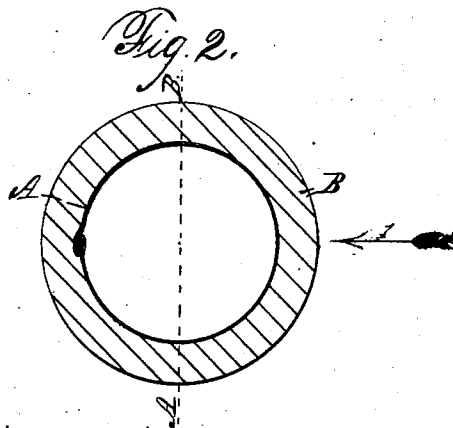
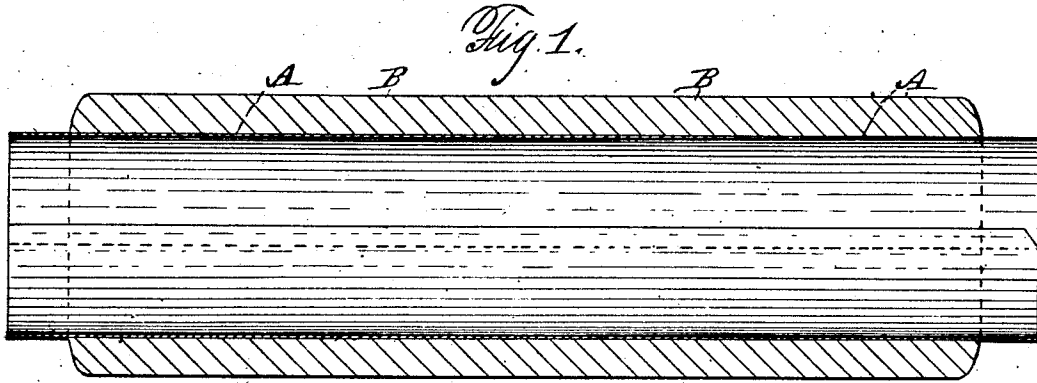
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J. McCABE.

NON-CONDUCTING COATING FOR PIPES, &c.

No. 178,015.

Patented May 30, 1876.



WITNESSES;  
*Julia F. Hitchcock*  
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INVENTOR;  
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178,015

XR

## UNITED STATES PATENT OFFICE.

JOHN McCABE, OF FITCHBURG, MASSACHUSETTS, ASSIGNOR TO HIMSELF  
AND ALFRED O. HITCHCOCK, OF SAME PLACE.

## IMPROVEMENT IN NON-CONDUCTING COATINGS FOR PIPES, &amp;c.

Specification forming part of Letters Patent No. **178,015**, dated May 30, 1876; application filed  
April 15, 1876.

106-91

*To all whom it may concern:*

Be it known that I, JOHN McCABE, of Fitchburg, in the county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Non-Conducting Coating or Covering for Pipes, and for other similar articles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a longitudinal central section, and Fig. 2 represents a cross-section, of a section of pipe incased with a coating or covering made according to my present invention.

To enable those skilled in the art to which my invention belongs to make and use the same, I will now proceed to describe it more in detail.

In the drawings, the part marked A represents a section of a metallic pipe, in this instance made of sheet metal, covered with a coating, B, which coating is made by mixing the substances hereafter named in about the proportions, by weight, as follows: Cement, ten pounds; clay, seven pounds; cow (or kine) manure, two pounds; asphaltum, one-half pound; tar, (coal or other,) one pound; hair, one pound.

The mode of mixing the above-named substances is as follows: A suitable tank or receptacle having been provided, the clay is put in, and a sufficient quantity of water added to reduce the clay when properly stirred and mixed with water to produce a thin mortar, after which the hair is put in and thoroughly stirred up with the clay; then the cow (or kine) manure is put in and stirred up with the clay and hair; then the cement is introduced and stirred up with the other materials already in the tank or receptacle, after which the asphaltum and tar, having previously been mixed and brought to a boiling-heat in a suitable vessel, are poured into the receptacle or tank, and the whole thoroughly stirred up together into a mortar of such consistency as to be easily spread upon the piping, or other articles to be covered, with a trowel.

I recommend, in covering steam-pipes, or

other articles which are ordinarily kept at a high temperature, that the first coating be applied to the pipe or other article while cold, or with the steam or hot water shut off, and such coating allowed to dry somewhat, after which other coatings may be applied until the desired thickness of covering or coating is obtained, and which thickness may be varied according to circumstances.

I have found that good results are produced by a coating or covering of from an inch to an inch and a half in thickness.

It is always best to permit the covering or coating to dry gradually; consequently, I advise that the steam and hot water should not be admitted into the pipes while the coating or covering is fresh, and before it has "set."

It will be understood that the operator will use proper discretion in applying water during the operation of mixing the substances, so that when ready for use the plastic material, or mixture, will be of the desired consistency, as above explained.

In lieu of the kine-manure, wood-moss may be employed; but in which case I recommend that one pound, by weight, be mixed with the other substances in the proportions named.

My invention has been subjected to severe practical tests during the past winter, and has proved highly successful in preventing the escape or radiation of heat from steam and hot-water pipes; and it has also been tested and found to prevent water freezing in a pipe, when such pipe was placed in the most exposed position, with only a covering of one and one-half inches.

Having described my improvements in non-conducting covering or coating for steam and water pipes, and for other similar purposes, what I claim therein as new, and of my invention, and desire to secure by Letters Patent, is—

A coating or covering for steam and water pipes, and for other similar purposes, composed of cement, clay, kine-manure, asphaltum, tar, and hair, taken in the proportions substantially as above described.

JOHN McCABE.

Witnesses:

JULIA F. HITCHCOCK,  
ADDIE F. LEONARD.