

(Model.)

I. H. BABCOCK.
Covering for Steam Pipes, &c.

No. 240,497.

Patented April 26, 1881.

Fig 1.

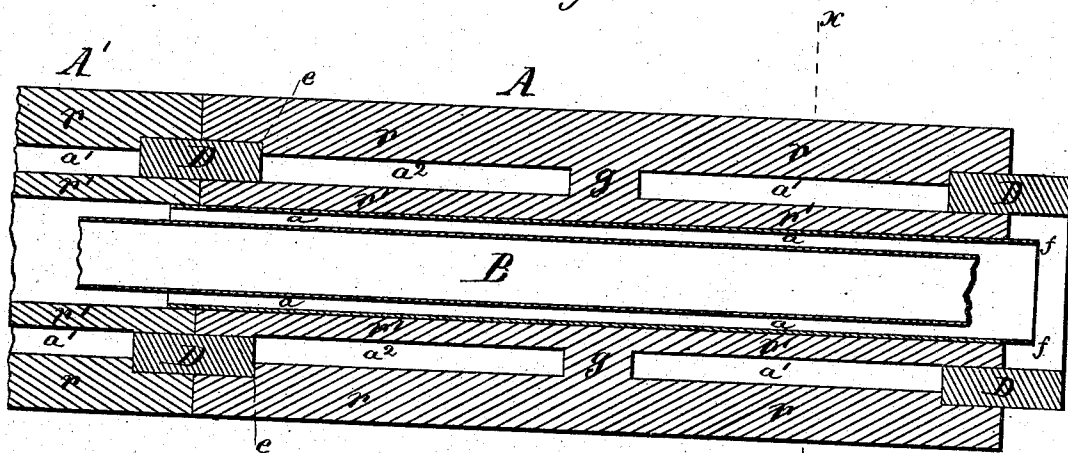


Fig 2.

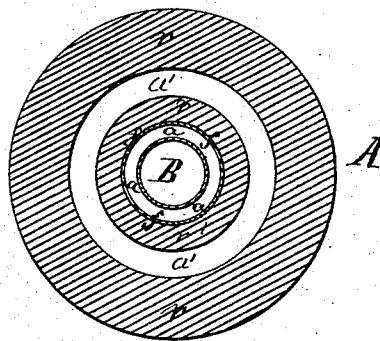
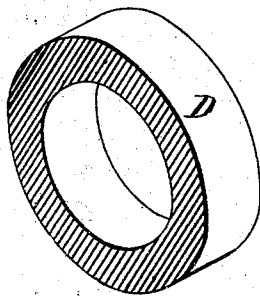


Fig 3.



Witnesses:

N. A. Hall.
J. P. Theo. Lang

Inventor:

Isaac H. Babcock
by his atty;
Mason, Rees & Co. New York

UNITED STATES PATENT OFFICE.

ISAAC H. BABCOCK, OF LOCKPORT, NEW YORK.

COVERING FOR STEAM-PIPES, &c.

SPECIFICATION forming part of Letters Patent No. 240,497, dated April 26, 1881.

Application filed October 21, 1880. (Model.)

To all whom it may concern:

Be it known that I, ISAAC H. BABCOCK, a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Wooden Coverings for either Steam or Hot-Air Metal Pipes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and letters of reference marked thereon, forming a part of this specification of my invention, and in which drawings like letters indicate like parts in the several figures.

My invention relates to an improved wooden covering for either steam or hot-air metal pipes, to prevent radiation of heat therefrom, and thereby prevent condensation and loss in said pipes.

My invention consists, in the main, in inclosing either a steam or hot-air metal pipe in a wood casing having two chambers of confined air surrounding said metal pipe, said casing or covering being constructed out of one solid log or block of wood, substantially as shown in the accompanying drawings; and also in protecting the inner surface of the wooden casing or covering, by tin or other suitable sheet metal, from injury, in consequence of the radiation of heat from the inclosed steam or hot-air pipe; and also in providing a smooth bed for the steam or hot-air pipe to impinge upon either directly or upon suitable bearings or saddles placed under said pipe, and in either case to reduce friction between said metal or iron pipe and the wooden casing during the expansion and contraction of the steam or hot-air pipe, and so prevent injury to the wooden casing by friction.

In the drawings, Figure 1 is a longitudinal section of my improved steam or hot-air pipe covering, with a steam or hot air pipe inserted centrally thereof. Fig. 2 is a cross-section of the same in the line *xx* of Fig. 1. Fig. 3 is a perspective view of the sleeve or tenon by which sections of my improved wooden casing or covering for steam or hot-air pipes are united one to another.

In Figs. 1 and 2 A indicates a section or one length of the wooden casing, constructed

of one piece of wood, either round or square, externally, (round preferred,) bored out centrally and longitudinally, the bore being sufficiently large throughout the same to receive and incase a steam or hot-air pipe, B, and leave an air-chamber, *a*, around the pipe B, and also receive a tin or other proper tubular metallic lining, *f*, as represented in said figures.

a' and *a''* are annular air-chambers, formed by boring with a proper tool into each end of the log or block or casing A a suitable distance, according to the length of the same, leaving a solid portion or partition, *g*, of greater or less volume between said air-chambers, and without destroying the continuity of the one piece of timber of which the section or one length of the wooden covering is composed, and thereby forming the confined air-chambers *a'* and *a''* when the sleeves or tenons D are placed in position for uniting two lengths of the wooden covering, A and A', as shown in Fig. 1.

D, Fig. 3, is a sleeve or tenon, of annular form, as shown, properly constructed to unite two sections, A and A', of the wooden covering, and also to close the air-chambers *a'* *a''* hermetically when inserted in position, as shown in Fig. 1; and *e* is an annular mortise or shouldered recess, to hold the tenons D in position, as shown in Fig. 1, and may be made either in the outer shell, *r*, or the inner shell, *r'*, of the wooden covering A, which inclose said air-chambers *a'* *a''*, as shown.

As represented in Figs. 1 and 2, a tubular piece of tin or other smooth sheet metal, as at *f*, is fitted closely to the inner surface of the wooden casing or covering A, in order to reduce the friction between the steam or hot-air pipe B and the wooden covering A, as well as prevent said covering from charring and receiving other injury from exposure to the heat of the inclosed steam or hot-air pipe B.

a is an air-chamber between the steam or hot air pipe B and the wood casing or covering A, which will constitute a confined air-chamber by tamping asbestos, mineral-wool, or any non-conducting and indestructible substance around the pipe B in the chamber *a*, at or near each end of a section of my improved wooden covering, or at any other point along

the inclosed pipe B, as may be desired, thus making the air-chamber *a* of greater or less length at will.

Heretofore wooden coverings for steam and hot-air pipes have been constructed of more or less pieces of wood or plank joined together by confining nails or screws, and having more or less joints liable to be sprung open by the action of the heat from the inclosed steam or hot-air pipe; but by my improved covering such objection is avoided, while at the same time I produce a covering which is more "mechanical" and cheaper in construction, as well as more durable.

As an exterior finish for my improved covering for steam and hot-air pipes, I apply an outer coating of suitable pitch, and while the same is still warm I apply thereon a coating of sawdust, which, embedding itself into the pitch, forms with it an outward coating, which preserves the wooden covering from decay, and also prevents it from "checking" or "cracking."

In practice I prefer to have the metallic tubular lining *f* extend from one length or section of the wooden covering into an adjoining length or section, as indicated in Fig. 1, and thereby "break joints" at the point of junction of such lengths of said covering. I thus prevent the escape of heat through the joint made at the junction of such lengths or sections.

In place of the solid portion *g*, an annular

sleeve or ring could be substituted and serve the same purpose; but I prefer to have the partition *g* solid, as above described.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A non-conducting covering for steam and hot air-pipes, having an air chamber or chambers isolated from the central passage, through which the pipe B passes, and with its body portion constructed of a single piece of wood, substantially as described.

2. A non-conducting covering for steam and hot-air pipes constructed of a single piece of wood with air-chambers *a'* *a''*, having a solid portion or partition, *g*, intervening between said spaces, substantially as described.

3. The combination of the inner metallic lining, *f*, steam or hot-air pipe B, intervening chamber, *a*, wooden covering A A', provided with chambers *a'* *a''*, and sleeve or tenon D, substantially as described.

4. The combination of the inner metallic lining, *f*, steam or hot-air pipe B, wooden covering A A', and sleeve or tenon D, substantially as and for the purpose described.

Signed in presence of two subscribing witnesses.

ISAAC H. BABCOCK.

Witnesses:

D. F. BISHOP,

WM. D. HALL.