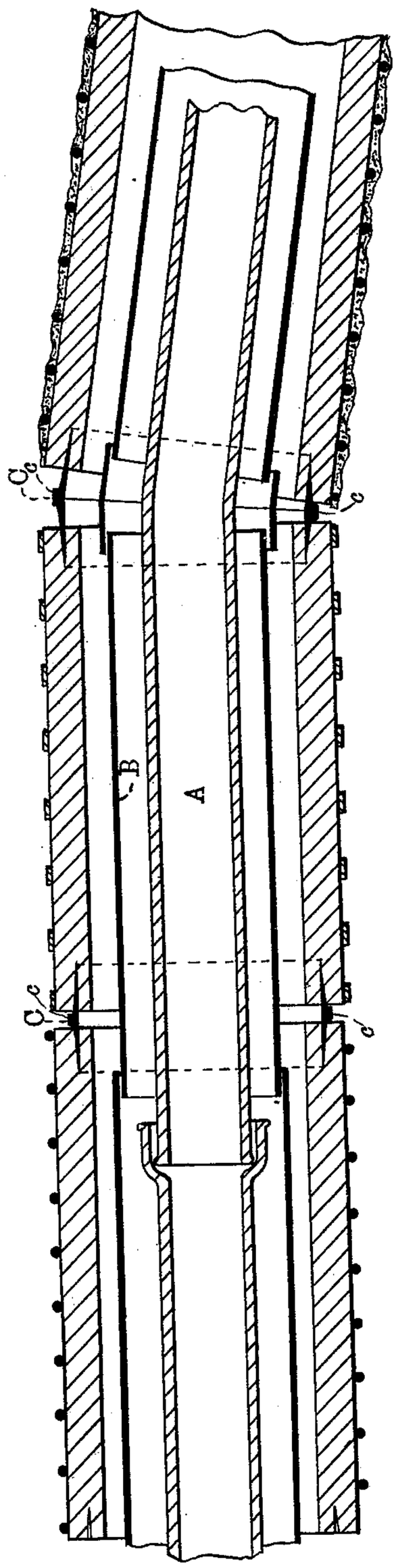
(Model.)

H. M. FITZHUGH.

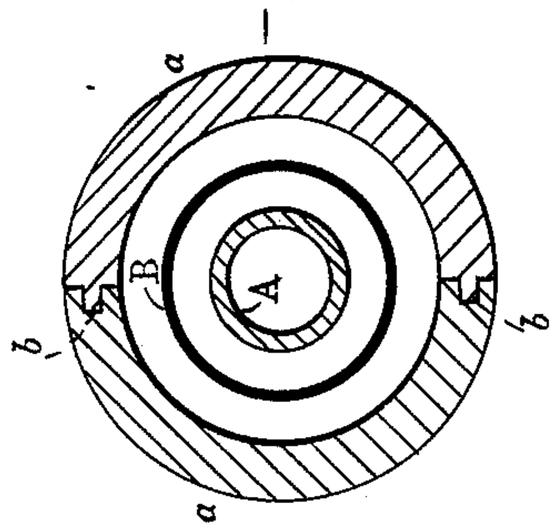
Covering for Steam and Hot Air Pipes.

No. 231,300. Patented Aug. 17, 1880.

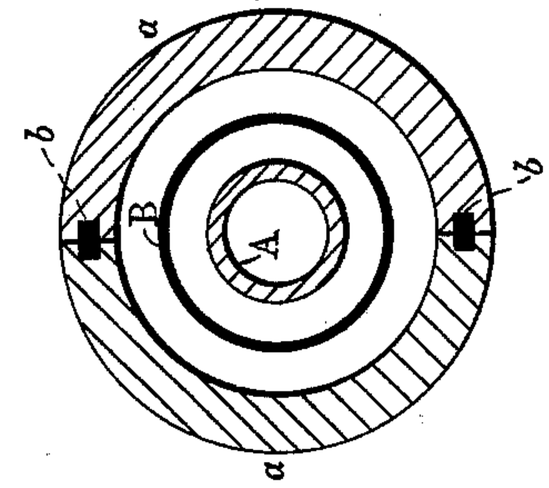
— FIG. I —



— FIG. III —



— FIG. II —



— WITNESSES: —

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UNITED STATES PATENT OFFICE.

HENRY M. FITZHUGH, OF BAY CITY, MICHIGAN, ASSIGNOR OF THREE-SIXTHS OF HIS RIGHT TO STEPHEN E. BABCOCK, THEODORE E. HASLEHURST, AND JESSE B. ANTHONY, OF TROY, NEW YORK, ONE-SIXTH TO EACH.

COVERING FOR STEAM AND HOT-AIR PIPES.

SPECIFICATION forming part of Letters Patent No. 231,300, dated August 17, 1880.

Application filed April 29, 1880. (Model.)

To all whom it may concern:

Be it known that I, HENRY M. FITZHUGH, of Bay City, in the county of Bay and State of Michigan, have invented certain Improvements in Coverings for Steam and Hot-Air Pipes, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to a complex covering for steam or hot-air pipes to reduce the radiation of heat therefrom, and thereby prevent to some extent the loss resulting from the condensation of the steam or hot air contained in the said pipes.

The said invention consists, first, in inclosing a steam or hot-air pipe in and by a casing having a bright metallic reflecting inner surface, which is removed from contact with the exterior of the said pipe, except at points where it is necessary to use supporting devices to equalize the air-space and retain the pipe and casing in their proper relative positions.

The second part of the said invention consists in protecting the reflecting-casing before described by means of an outer pipe or covering, which fully isolates the inner reflecting-casing from the earth or atmosphere and prevents injury to the same.

The third part of the said invention consists in the manner of constructing and applying the various members of the heat-retaining covering, as will hereinafter fully appear.

In the further description of my said invention which follows reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure I is a longitudinal section of my improved heat-retaining covering for steam and hot-air pipes. Fig. II is a cross-section of the same. Fig. III is a cross-section of the said covering, illustrating a modified construction of a part of the same.

Similar letters of reference indicate similar parts in all the views.

A is the steam or hot-air pipe, and B the inner casing having an inner reflecting-surface. This casing may be formed of tin-plate or other metal burnished, or it may be formed of non-metallic material to the inner surface of which burnished metal is attached.

The outer casing is made of any suitable material, wood being preferred, and when wood is used the casing or pipe is constructed of staves *a*, grooved at their edges, with strips *b* inserted in the said grooves.

In order to insure water-tight joints between the staves *a* the strips *b* are made of thoroughly-seasoned wood, and they are slightly compressed before being inserted in the grooves, and the edges of the staves and the strips may be treated with pitch or other suitable substance. The wooden pipe is finally wrapped or banded in any manner to give it the desired strength and to bind the staves together, and coated with pitch. The sections of the wooden pipe or outer casing are connected together by means of metal thimbles C C, which are tapered exteriorly from the center to the ends and driven into circular depressions or channels formed in the ends of the wooden sections.

To equalize the distance to which the said thimbles shall penetrate the ends of the pipes, the thimbles are provided with an annular projection or rib, *c*, which rib also serves to strengthen the thimbles. Angular or curved thimbles are used when it is desired to form a bend in the wooden pipe.

I prefer to have the tongues or strips prepared independently, as described; but, if desired, the staves may be formed with a tongue and a groove, so that they may be united after the manner of matched flooring.

This last-described mode of construction is represented in Fig. III of the drawings.

It will be understood that the heat-reflecting surface of the inner casing prevents to a great extent the said casing from conducting heat radiated from the steam-pipe, and the outer casing preserves the inner one against corrosion and the influence of the earth and the atmosphere. Further, the wooden outer

casing being in contact with moist earth when the pipes are laid in the ground, and not subjected to the drying effect of contiguous heated pipes, dry-rot—the most destructive agent to which wood is subjected—cannot occur.

I claim as my invention—

1. A heat-retaining covering for steam or hot-air pipes, consisting of an inner bright-surfaced heat-reflecting covering, which returns to the said pipe the heat radiated therefrom, substantially as herein described.

2. A heat-retaining covering for steam-pipes having an inner bright-surfaced heat-reflecting casing and an outer protecting casing, substantially as herein specified.

3. A heat-retaining covering for steam or hot-air pipes, consisting of an inner bright-surfaced heat-reflecting casing surrounded by a tongued and grooved wooden pipe, wrapped or banded, and formed in sections united by thimbles, substantially as set forth.

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Witnesses:
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