I. L. MERRELL.
Boiler-Covering.

No. 205,199. Patented June 25, 1878.

Fig. 1.

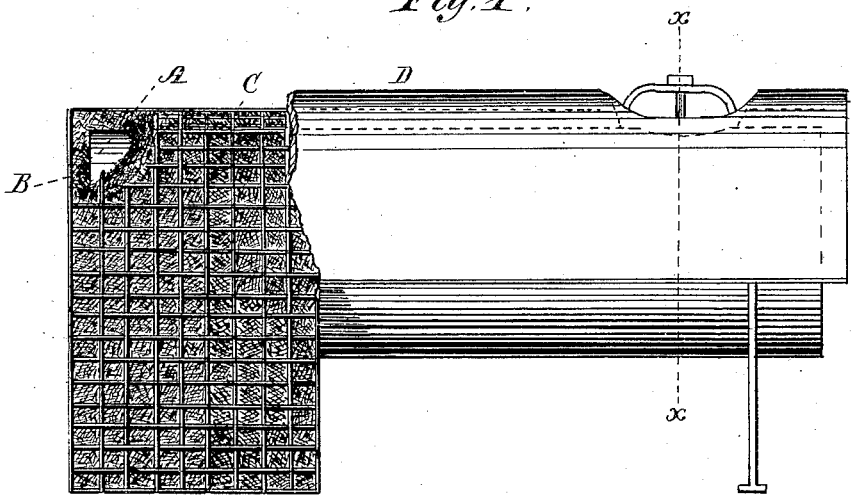
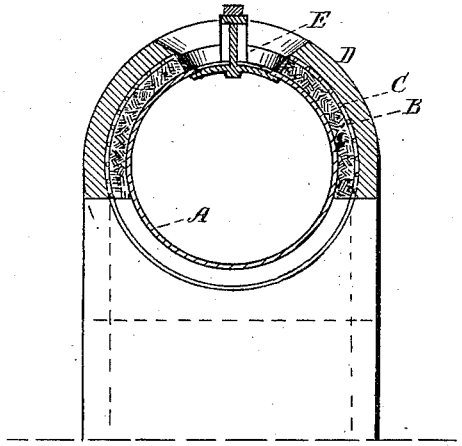


Fig. 2.



WITNESSES.
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UNITED STATES PATENT OFFICE.

ISAAC L. MERRELL, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN BOILER-COVERINGS.

Specification forming part of Letters Patent No. **205,199**, dated June 25, 1878; application filed October 22, 1877.

To all whom it may concern:

Be it known that I, ISAAC L. MERRELL, of the city and county of San Francisco, and State of California, have invented certain new and useful Improvements in Boiler-Coverings; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation, with a portion of the coverings and wire netting removed; and Fig. 2 is a vertical section taken on line *x x* of Fig. 1.

This invention relates to the means of covering boilers, steam-pipes, and other steam and heat conductors with a non-conducting covering, to prevent radiation and waste of heat.

Previous to my invention it was generally the custom to cover the boiler next to the shell with a plastic material, put on in a moist state, which was found objectionable on account of the moisture tending to corrode the metal; and the objection to the use of hair or felt next the boiler will be apparent from the fact that it deteriorates by the action of the heat, which deterioration cannot be properly observed or discovered when covered by the plastic coating, or be replaced without breaking or removing said outer coating.

The object of the present invention, therefore, is to remove, as far as possible, the above objections; and consists in covering the boiler or other steam-generator or conductor of steam and heat with dry fibrous or pulverized asbestus, and confining the covering of asbestus with a wire netting or skeleton-frame, and afterward covering the exterior of the netting or frame with a plastic material, as will be hereinafter more fully described.

In the accompanying drawings, A represents the steam-boiler, surrounded by a covering, B, of dry fibrous or pulverized asbestus. In applying this asbestus in a dry and fibrous or pulverized state it becomes necessary to have some support for the material while putting it on, and also after the boiler is covered to have the fine material supported or confined, that it may retain its position. This is accomplished by constructing a wire netting or skeleton-frame, C, and suitably placing it around the shell of the boiler, a short distance therefrom, to form a space between it and the netting or frame. The space thus formed is stuffed with fine crude asbestus, and the exterior of the netting or frame plastered over with a plastic material, which forms the confining coating or covering D, the wire netting or skeleton-frame C serving both to tie down the fibrous or loose matting of asbestus next to the boiler-shell, and also to prevent fracture of the outer crust of plastic material or covering D, and also serves as a medium to hold the material in place.

Where a covering of dry fibrous or pulverized asbestus is used for the shell of the boiler, or placed next to the same, as above described, it is found necessary to employ some means for confining the loose material in place around the man-hole, furnace-door, or other opening, and for this purpose I use a metal guard-strip, E, which connects the wire netting C with the edge of the opening, it also serving as a protection to both the edges of the wire and covering.

By the use or employment of dry fibrous or pulverized asbestus I obtain all the advantages of both the loose or fibrous coating next to the metal, and also of the plastic covering, and avoid the objections to a moist plastering directly in contact with the metal of the boiler-shell, which is liable to cause corrosion, and in time the entire destruction of the metal; and also, where hair or felt is used next to the boiler-shell, it becomes in time affected by the heat, rendering it wholly worthless as a non-conductor.

It will, therefore, be readily seen that the use of the dry or crude asbestus as a covering, placed directly in contact with the metal shell, is accompanied with many advantages, as it is not subject to rapid decay or affected by the heat; and as no moisture comes in contact with the exterior of the shell no corrosion takes place, thus producing a boiler-covering of practical and superior excellence.

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

1. A covering for boilers, steam-pipes, or other steam and heat conductors, consisting of a matting or layer of dry fibrous or pulver-

ized asbestus, secured in place around the same by a wire netting or skeleton-frame, said frame being covered by an external shell of plastic material, substantially as and for the purpose specified.

2. A covering for steam-boilers, consisting of a matting of dry fibrous or pulverized asbestus, a wire netting or skeleton-frame, and external shell of plastic material, and a metal guard-strip around the man-hole, connecting the wire of the netting or frame with the edge of the opening, substantially as and for the purpose described.

In witness whereof I have hereunto set my hand and seal.

ISAAC L. MERRELL. [L. S.]

Witnesses:
JNO. L. BOONE,
FRANK A. BROOKS.