

(No Model.)

T. MERRIAM.

NON-CONDUCTING BOILER COVERING.

No. 327,810.

Patented Oct. 6, 1885.

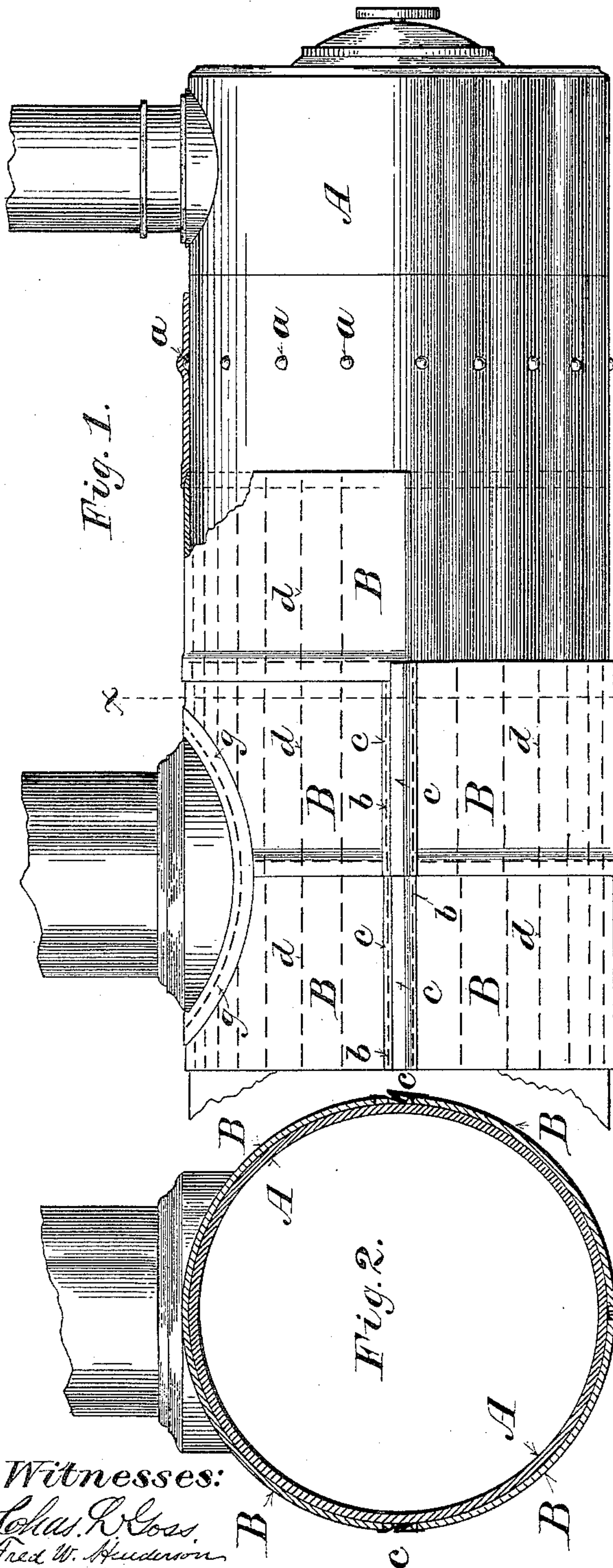


Fig. 1.

Fig. 2.

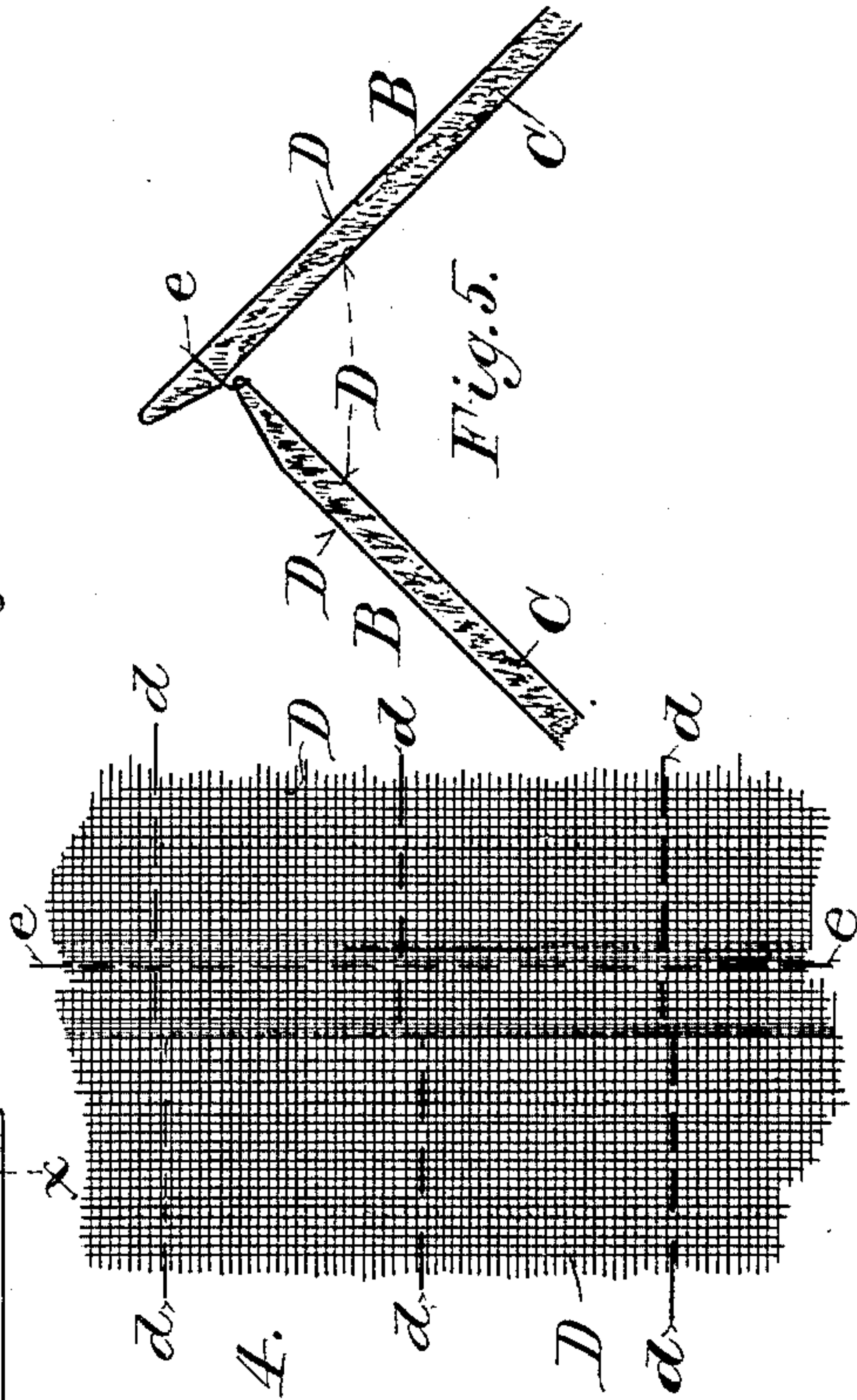


Fig. 4.

Fig. 5.

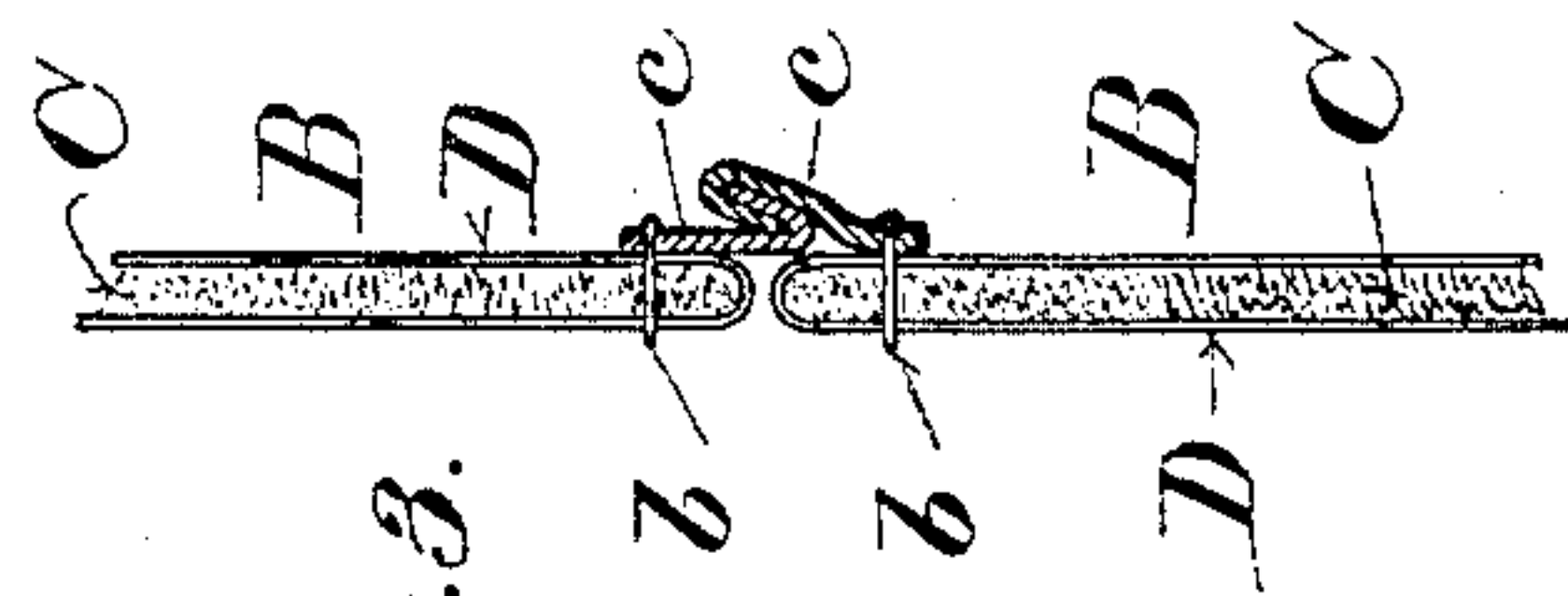


Fig. 3.

Witnesses:  
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# UNITED STATES PATENT OFFICE.

TRUMAN MERRIAM, OF MILWAUKEE, WISCONSIN.

## NON-CONDUCTING BOILER-COVERING.

SPECIFICATION forming part of Letters Patent No. 327,810, dated October 6, 1885.

Application filed October 30, 1884. Serial No. 146,858. (No model.)

*To all whom it may concern:*

Be it known that I, TRUMAN MERRIAM, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Non-Conducting Coverings for Steam Boilers, Pipes, &c.; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is a non-conducting covering for steam boilers, pipes, &c., which can be easily applied, and which will retain its form and place when applied.

It consists, essentially, of a filling of mineral wool or some other suitable non-conductor of heat, inclosed within a casing of wire-netting stitched or quilted together, and formed in sections which overlap each other when applied.

In the accompanying drawings, like letters refer to the same parts in each figure.

Figure 1 is a side elevation of a portion of a locomotive-boiler partially covered with my improved covering. Fig. 2 is a vertical cross-section of the same on the line *x x*, Fig. 1. Fig. 3 is a sectional detail showing the method of joining the ends of the sections which are partially cut away. Fig. 4 is a detail view, on an enlarged scale, of a portion of two contiguous sections of the covering; and Fig. 5 is a sectional detail showing the method of overlapping and fastening the edges of the sections in laying the covering.

A represents a portion of the boiler of a locomotive to which my improved covering is particularly adapted, although it may be conveniently applied to any kind of steam pipes and boilers.

B B represent sections of the covering, which are preferably formed about two feet wide, and are placed around the boiler, as shown in Fig. 1, in the direction of the hoops of a barrel. By thus forming the covering in sections which are detachable any part of the boiler may be reached and repaired without removing the whole covering. These sections B B are composed of a casing of wire cloth or netting, D,

as shown in Figs. 3, 4, and 5, and of a filling, C, of mineral wool, (or any other convenient non-conductor of heat,) which is inclosed in said wire casing, and bound in place by wires *d d*, coarsely stitched or quilted through and through said casing and filling horizontally across each section, as seen in Figs. 1 and 4.

To prevent the detachment of particles of the loose mineral wool and contact between the same and boiler, the sections B B are coated with fire-proof cement or any similar adhesive substance applied thereto over the wire casing D, so as to fill the meshes between the wires. Thus coated and bound together by the wires *d d*, the said sections B B are rendered firm and capable of withstanding the constant jar of a locomotive without detriment thereto or the displacement of the loose filling. The sections are bound together side by side by wires *e e*, so as to overlap, as shown in Fig. 5. The joints thus formed are stuffed with the mineral wool or other suitable filling when the covering is laid, and then coated with cement or any like suitable material. The ends of the sections B, which are cut away to fit about the domes upon the boiler, are provided with metallic strips *c c*, stitched or riveted thereto by wire or rivets *b b*, and hooked in opposite directions, as shown in Fig. 3, so as to interlock and form a strong tight connection or coupling. The edges of the sections thus cut into to fit about the domes or mountings upon the boiler may be bound with metallic strips *g g*, stitched thereto with wire, as seen in Fig. 1.

Where there are rows of rivet-heads, as *a a*, the covering is bulged out, forming an annular channel around the boiler, through which any leakage about the rivets will be conducted off at the under side of said boiler.

The cement coating of the covering not only prevents the disintegration and detachment of particles of the filling, but also separates the mineral wool from the boiler, and thereby prevents the formation of rust upon said boiler.

I do not broadly claim the wire casing with a non-conducting filling; but the method of forming the covering in overlapping sections, of binding and filling in place by coarsely stitching or quilting the same with wire, and of covering the surface with an adhesive coating is new; and



I claim as my invention—

1. A non-conducting covering for steam  
boilers, pipes, &c., composed of the wire casing  
D and the non-conductor-of-heat filling C,  
5 coarsely stitched or quilted together through  
and through said casing and filling and coat-  
ed with fire-proof cement or some similar ad-  
hesive substance, applied thereto over said  
wire casing D so as to fill the meshes of said  
o casing, substantially as and for the purposes  
set forth.

2. A non-conducting covering for steam  
boilers, pipes, &c., formed in sections B B, each  
composed of a wire casing, D, and a non-con-  
5 ductor-of-heat filling, C, said sections being  
coated with fire-proof cement and bound to-  
gether with overlapping edges by wire *ee*, sub-  
stantially as and for the purposes set forth.

3. In a non-conducting covering for steam  
o boilers, pipes, &c., the combination of the sec-

tions B B, each composed of a wire casing, D,  
and a non-conductor-of-heat filling, C, with  
binding-strips *g g*, whereby said sections are  
strengthened and fitted about projections on  
the surfaces to be covered, substantially as 25  
and for the purposes set forth.

4. A non-conducting covering for steam  
boilers, pipes, &c., formed in sections B B, each  
composed of a wire casing, D, and a non-con-  
ducting filling, C, said sections being laid with 30  
overlapping edges, and provided at their ends  
with metallic couplings *cc*, substantially as and  
for the purposes set forth.

In testimony that I claim the foregoing as  
my own I affix my signature in presence of two 35  
witnesses.

TRUMAN MERRIAM.

Witnesses:

CHAS. L. GOSS,

E. H. BOTTUM.