(No Model.)

J. RILEY.

Non-Conducting Jackets for Steam-Pipes.

No. 230,059. Patented July 13, 1880.

Fig. 1.

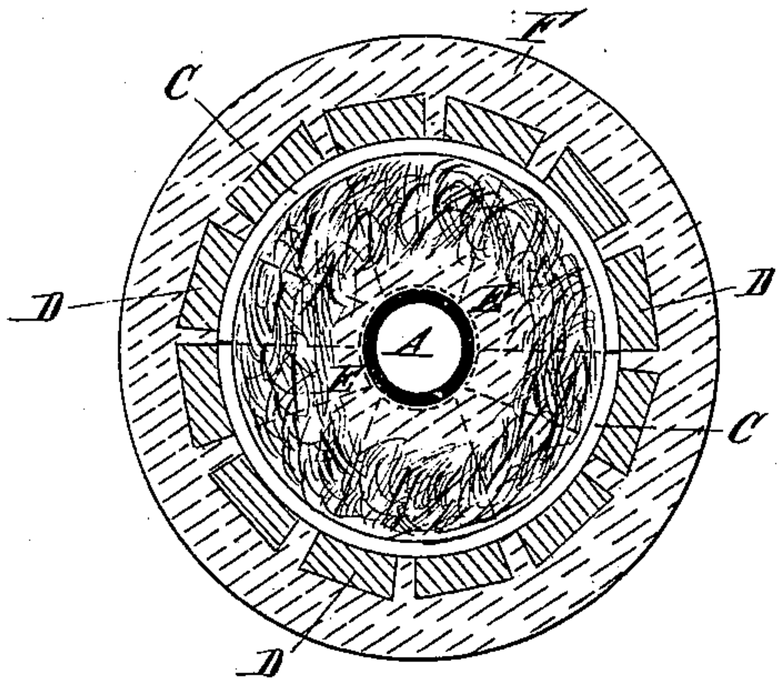


Fig. 2.

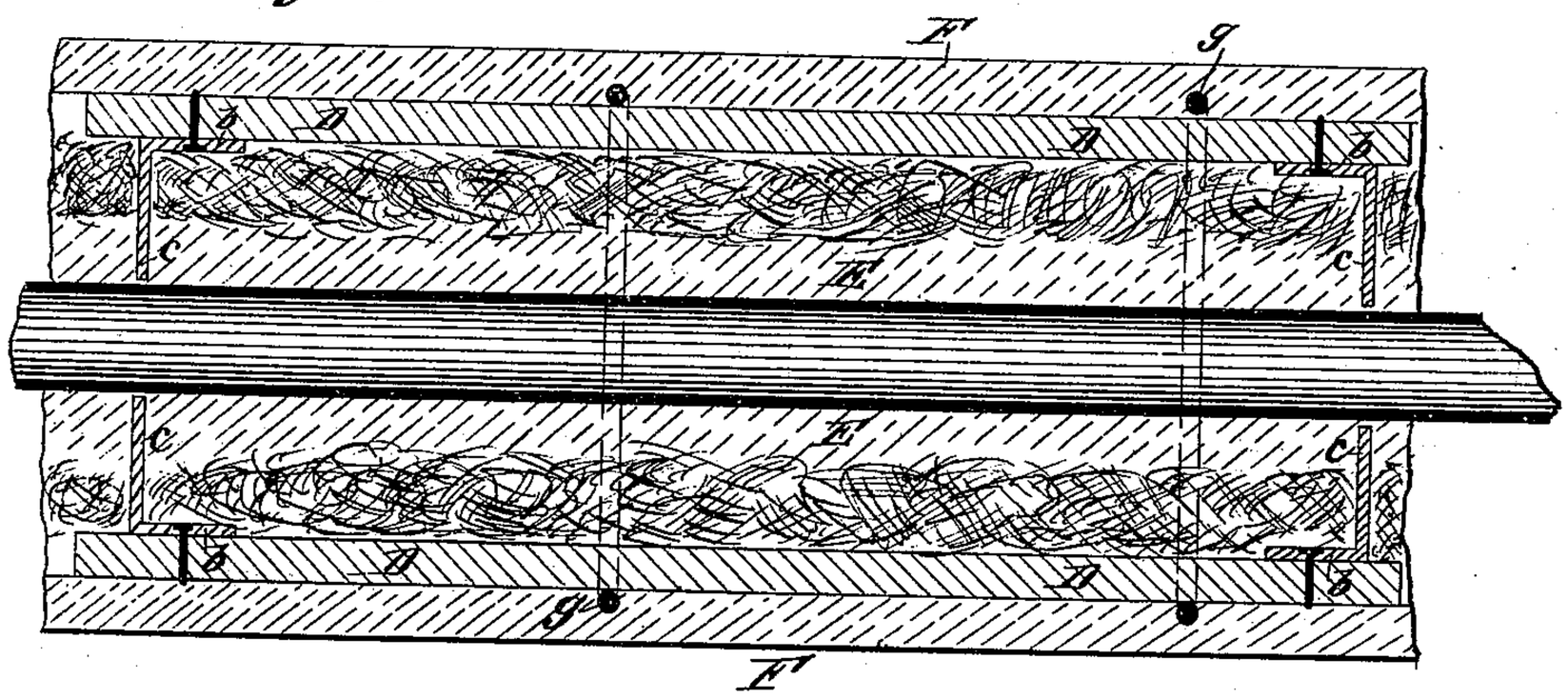
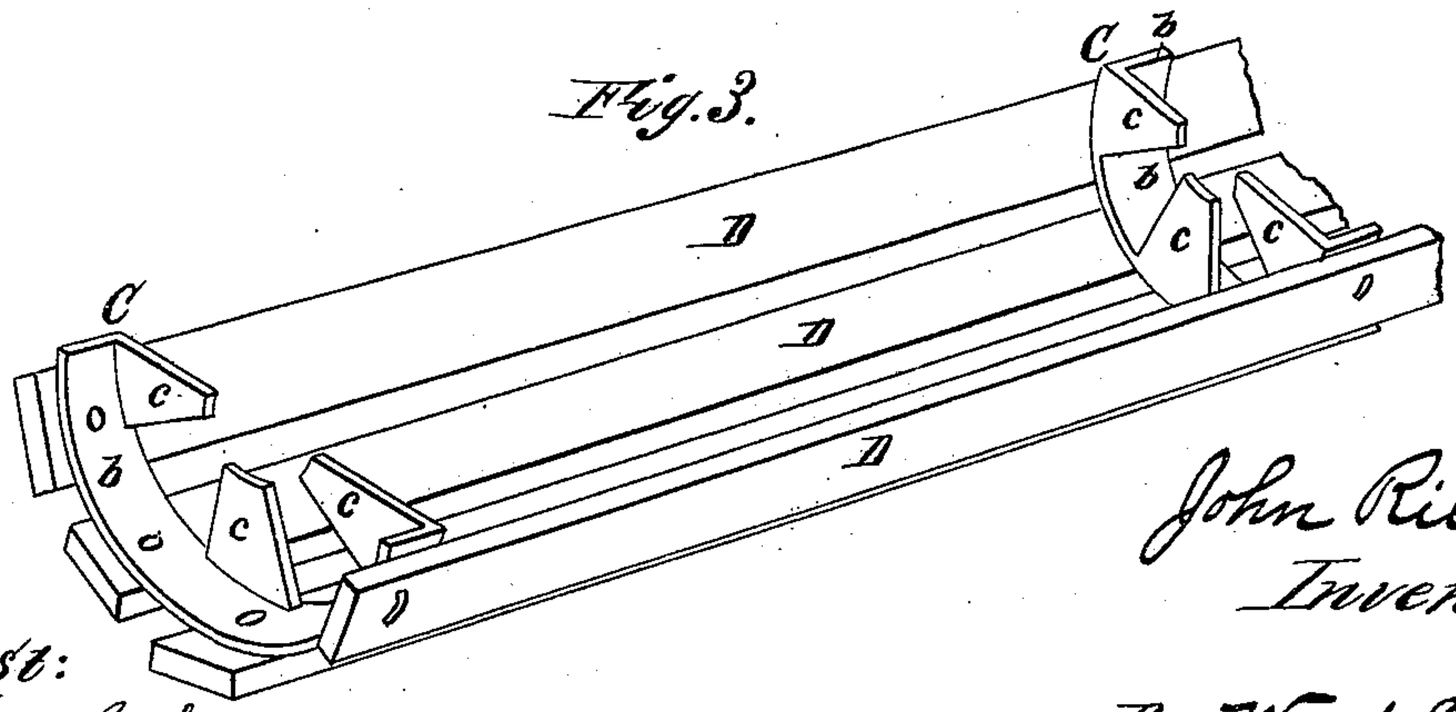


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN RILEY, OF TROY, ASSIGNOR TO THE SALAMANDER FELTING COMPANY, OF NEW YORK, N. Y.

NON-CONDUCTING JACKET FOR STEAM-PIPES.

SPECIFICATION forming part of Letters Patent No. 230,059, dated July 13, 1880.

Application filed March 26, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN RILEY, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Non-Conducting Jackets for Steam-Pipes, Boilers, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon, the same not having been, to my knowledge, heretofore patented in any foreign country.

My invention has relation to such coverings or jackets as are employed about steam generators, boilers, and heat-conducting pipes or tubes for the purpose of preventing radiation of heat therefrom, that loss of heat may be obviated and communication of heat to any surrounding objects may be prevented.

The object of the invention is to simplify the construction of such non-conducting jackets, rendering them cheap and easy to be applied in sections, as may be desired, while at the same time their non-heat-conducting properties are improved. To accomplish all of this the invention involves certain peculiarities of construction and novel and useful combinations or arrangements of parts, all of which will be hereinafter first fully described, and then pointed out in the claims.

In the drawings, Figure 1 is a section and elevation of my improved covering or jacket upon a plane at right angles to the pipe or other object, and showing the same as applied for use. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a perspective view of one of the frames for the covering, showing clearly the form of metallic braces employed, and indicating the construction of the frame-work ready for the reception of the non-conducting substances.

Like letters of reference, wherever they occur, indicate corresponding parts in all the figures.

A is the steam-pipe or other object, of any size and length which it may be desired to cover.

At C C are shown metallic braces, which form an essential part of the structure, said braces being composed essentially of a semi-cylindrical flange, *b*, having suitable perforations therein, and within which project the radial arms *c c*, these latter being formed at their inner ends so as to bear against the pipe, tube, or other object A. Upon these braces are secured any suitable wooden or other strips D D, such as common laths, preferably by use of nails, which pass through the perforations in the flange or rim *b*. These braces are preferably made of cast-iron, as being cheaper and easier to construct than if made of other material, though any material would answer the purpose if strong enough. The strips D might also be made of metal, if desired.

The strips and the braces make strong and convenient frames for the support of the non-conducting material.

Several of the crates or frames being made up, substantially as indicated at Fig. 3, of any desired length, and of a size to correspond with the size of the pipe or object to be covered, the improved jacket is made and applied substantially as follows: The interior of a pair of the crates is filled with hair, and over this is spread a layer of plastic cement or similar non-conducting and fire-proof material—such, for instance, as plaster-of-paris or asbestus. One of the crates thus prepared is placed upon the under side of the pipe or other object A and forced against it until the radial arms *c c* bear against the pipe or other object. This crate is then revolved around the pipe to its upper side and the mate thereto brought up to place, as in the case of the first section. The two crates are then bound together by any cord or wire *g*.

The interior layers of cement or plaster (indicated at E) adhere to each other and completely surround the pipe or other object, the hair or other filling being confined between the cement at E and the strips D D.

Instead of the hair, any fibrous or equivalent substance may be used.

The whole or desired portion of the pipe or other object is covered in this manner, the crates being placed end to end, or so as to break joints, and in close contact. Then outside of the circular covering so formed is a coating, F, of suitable plaster or cement, laid on in the usual manner, and rounded or smoothed off to suit the taste and convenience of the user.

The particular kind of plaster or cement employed is no essential portion of the invention; but I prefer to use what is now commonly known as the "salamander felting," either inside or outside, or in both locations, as affording the most satisfactory results in the way of a non-conductor.

For pipes varying only a little in diameter the one size of braces will be found sufficient, as no accurate fitting is required; but for the extra sizes of course other braces may be provided.

The two layers of cement with the interior filling of hair will be found to afford a very efficient non-conductor; and the ease with which the jacket may be applied, its manifest economy of cost and application, and its adaptation to pipes or other objects of various lengths and sizes will recommend it for use in all situations where its numerous characteristics can be of advantage.

The drawings indicate the application of my improved jacket to an object of about the size of a steam-pipe; but obviously, by following the above-described principles of construction and application, it may be applied to boilers, steam-generators, and any object of any size or shape.

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

1. The herein-described metallic braces for the frames, the same being composed of semi-cylindrical or other sectional flanges and radial arms projecting inwardly therefrom and adapted to bear against the pipes or other object, the flanges being made to carry the longitudinal strips, substantially as shown and described.

2. In a frame for a pipe or other covering or jacket, the combination, with the longitudinal strips, of the metallic braces having perforated flanges and radial arms, the strips being mounted and secured upon the flanges, substantially as set forth.

3. In a pipe or other covering or jacket, the combination of the two frames secured to each other, said frames maintaining the two layers of plaster or cement and the hair filling, and being composed of strips mounted upon braces, substantially as shown and described.

4. The herein-described improved pipe or other covering or jacket, composed of the two independent frames or crates, each having the metallic braces with radial arms, the two layers of plaster or cement, and the hair filling, all constructed and arranged substantially as herein shown and set forth.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

JOHN RILEY.

Witnesses:
LEWIS E. GRIFFITH,
RANDOLPH STICKNEY.