(No Model.)

J. M. RILEY.

COVERING OR JACKET FOR STEAM BOILERS, &c.

No. 394,398. Patented Dec. 11, 1888.

Fig. 1.

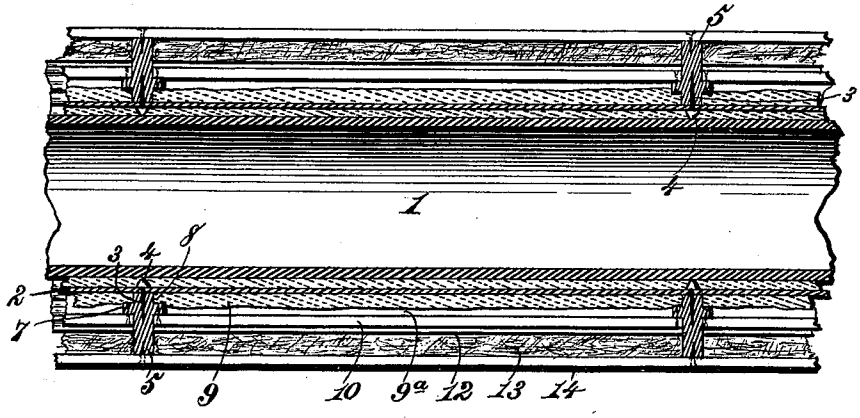


Fig. 2.

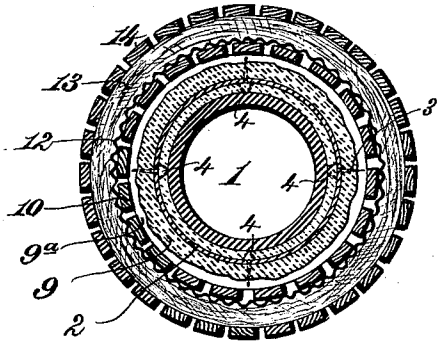
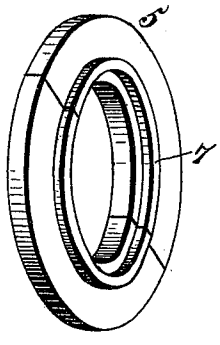


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES M. RILEY, OF TROY, NEW YORK.

COVERING OR JACKET FOR STEAM-BOILERS, &c.

SPECIFICATION forming part of Letters Patent No. 394,398, dated December 11, 1888.

Application filed June 14, 1888. Serial No. 277,082. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. RILEY, a citizen of the United States, residing at Troy, in the county of Rensselaer and State of New York, have invented new and useful Improvements in Coverings or Jackets for Steam-Boilers, Superheaters, Steam-Pipes, and other Heat-Conveyers, of which the following is a specification.

My invention relates to coverings or jackets for steam-pipes, superheaters, boilers, and other heat-conveyers in which it is desirable to retain the heat and avoid condensation of moisture caused by sudden reductions of temperature.

It is the purpose of my invention to provide a simple and improved construction of non-conducting jackets wherein the conveyer shall be centered and supported within the adjacent concentric covering or sheathing by metallic heads having engagement with an exterior sectional annulus and provided with a concentric shoulder for the support of an auxiliary layer of non-conducting material, with an outer concentric layer of suitable material resting upon the peripheries of said annuli, the space between the outer and auxiliary layers being filled with hair or other suitable material.

It is my further purpose to provide a sectional jacket for pipes and other conveyers where radiation of heat is to be prevented, wherein the conveyer is centered within an outer sheath by cheap and simple means, in combination with a series of segmental rings, forming, in series, a continuation of cylindrical chambers inclosed externally by longitudinal slats or other suitable devices, within which the non-conducting packing is arranged.

The invention consists in the several novel features of construction and new combinations of parts hereinafter fully set forth, and then definitely pointed out in the claims which follow this specification.

Referring to the accompanying drawings, Figure 1 is a longitudinal central section showing my invention. Fig. 2 is a transverse section of the parts shown in Fig. 1. Fig. 3 is a detail view of one of the inclosing disks or rings.

In the said drawings the reference-numeral 1 denotes the pipe or conveyer, which may be of any desired form and material. Surrounding this pipe, with a suitable intervening space, is a jacket, 2, of metal or other material, through the walls of which are forced pins 3, having heads 4, which lie in the space between the jacket and the conveyer. I prefer for these devices to use a headed nail similar to those sometimes employed in upholstering, having a conical or rounded end and a broad base. These nails or pins are forced through openings in the sheath or jacket, and their ends enter the edges of rings 5, which surround said sheath, while their heads 4 lie in the space between the said sheath and the pipe, the latter resting against their pointed or rounded heads, as shown in Fig. 2.

The space between the sheathing or jacket 2 and the conveyer 1 is filled with any material of a plastic nature and which is fire-proof—such, for example, as plaster-of-paris.

Upon the sheath or jacket 2 are slipped rings 5 at proper intervals. These rings may be made of metal or of any other suitable material, and to facilitate their application and removal they may also be constructed in sections, which are fastened together after they are applied to the sheath. Upon each ring is formed or mounted an annulus, 7, projecting from each vertical face and concentric with the axis of the conveyer or sheath, or substantially so, said annuli being so arranged as to leave an annular chamber, 8, between it and the sheath or jacket 2. I may fill the space between the sheath 2 and the outer edges of the annuli 7 with fire-proof plastic material 9; or I may use any other material adapted to prevent convection of heat. The annular spaces 9^a are inclosed between the adjacent disks or rings, the sheath 2, and short slats 10, laid upon and fastened to the outer edges of the annuli 7.

Surrounding the slats 10, I may arrange a layer of paper, 12, either corrugated or otherwise. Outside this layer hair is placed, forming a concentric layer, 13, which is inclosed by a series of parallel slats, 14, attached to the peripheries of the rings 5. If desired, these outer slats may be covered with a layer of any suitable plastic material of fire-proof composition.

In place of the slats, I may employ any suit-

able wire-cloth or other foraminous material.

The paper lining 12 may be wholly omitted, or other substances may be substituted for it.

What I claim is—

1. The combination, with a conveyer, 1, of the sheath 2, a fire-proof filling between the sheath and conveyer, the series of separated rings 5, mounted on the sheath, the pins 3, secured to the rings, extending through the sheath, and having heads 4, centering the conveyer, a fire-proof material, 9, on the sheath, longitudinal slats 14, connecting the rings, and a filling between the slats and the fire-proof material on the sheath, substantially as described.

2. In a covering for steam and other pipes, the combination, with the conveyer having an outer sheath, of a series of rings or disks mounted on said sheath and having concentric annuli of non-conducting material concentrically arranged and inclosed by short slats resting upon the outer edges of the annuli carried by the rings, substantially as described.

3. In a covering for steam and other pipes, the combination, with the conveyer, of an outer concentric sheath having a filling of any suitable plastic material, a series of rings mounted upon said sheath at proper intervals, each ring having annular projections upon its opposite vertical faces, a series of short slats secured upon these projections between adjacent rings and having a paper covering, and a series of slats or other similar material resting upon the rings and secured thereto, substantially as described.

4. In a covering for steam and other pipes, the combination, with a conveyer, of a concentric sheath or covering, a plastic material filling the intermediate space, a series of headed nails passing through the sheath into surrounding rings or disks, formed in segments and embracing the sheath, the heads of said nails centering the conveyer, a series of short slats attached to concentric rings or shoulders on said disks, one or more thicknesses of paper overlying said slats, an outer foraminous material mounted upon the peripheries of the rings, and a layer of hair or other non-conducting material lying between the outer foraminous material and the short slats supported by the projections of the rings, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JAMES M. RILEY.

Witnesses:

HENRY C. SALISBURY,

THOMAS S. FAGAN.