(No Model.)

H. M. HANMORE.

NON-HEAT CONDUCTING FABRIC.

No. 406,644. Patented July 9, 1889.

Fig. 1

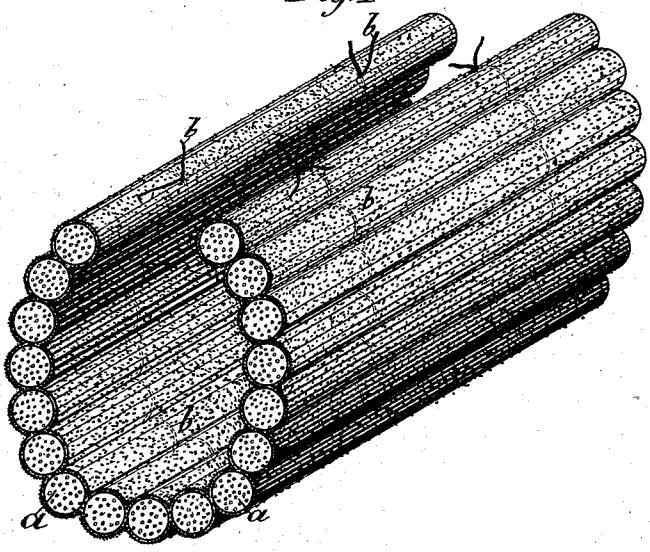
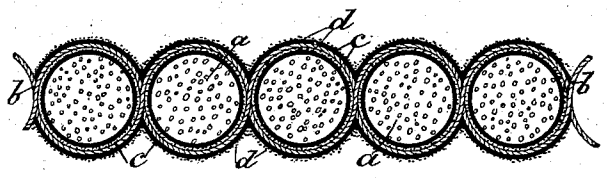


Fig. 2



Witnesses:
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UNITED STATES PATENT OFFICE.

HIRAM M. HANMORE, OF SANTA CRUZ, CALIFORNIA.

NON-HEAT-CONDUCTING FABRIC.

SPECIFICATION forming part of Letters Patent No. 406,644, dated July 9, 1889.

Application filed January 10, 1889. Serial No. 296,924. (No model.)

To all whom it may concern:

Be it known that I, HIRAM M. HANMORE, of Santa Cruz, in the county of Santa Cruz and State of California, have invented a new and useful Improvement in Non-Heat-Conducting Fabrics, of which the following is a specification, reference being had to the accompanying drawings.

I will first describe the construction of a fabric according to my improvement, and then point out its novelty in the claim.

Figure 1 represents in perspective a piece of the fabric rolled up; and Fig. 2, a section, on a larger scale, of a piece of the fabric spread out flat.

Similar letters of reference designate corresponding parts in both the figures.

In the manufacture of my improved fabric I make a mat by weaving the spires *a* of tule-grass, with the warp *b* of yarn, thread, or wire; but before the weaving I first cover the spires *a* completely with tar, asphaltum, resin, pitch, or other like adhesive substance, preferably water-proof, or a mixture of such substances, by dipping them in or washing them with said substance or substances, and while the said substance is in a soft adhesive condition I dust or sprinkle thereon dry carbonate of magnesia or calcined magnesia, lime, chalk, plaster-of-paris, ashes, or similar heat-resisting substance in a powdered state. After the weaving of the mat I again apply thereto a further coating *d* of the adhesive substance by dipping the mat in said substance, or by washing or brushing it with said substance in such manner as to cause the said substance not only to cover the exposed exterior of the mat, but to also fill up the interstices of the web thereof. I finally again apply an exterior coating of the magnesia, chalk, plaster-of-paris, ashes, or other heat-resisting substance in a state of dry powder by passing the mat through a mass of such substance, or by dusting or sprinkling the said substance on both sides of the mat. This dry substance adheres to the tar or interior coating and forms an external coating that will protect the tule-grass against heat from steam-pipes and like surfaces to which the mat may be applied.

The tar or adhesive substance helps to keep the parts of the fabric together and to prevent the tule-grass from what is termed by weavers "spewing"—that is to say, from being ejected from the warp. The tule-grass forms the most essential non-heat-conducting element.

The non-heat-conducting fabric thus constructed is flexible, and can be easily applied to the surfaces of steam-pipes, steam-boilers, or other heated surfaces of various forms very conveniently, owing to its flexibility, which enables it to be adapted to the forms of such articles. It may be applied in a single layer or in two or more layers laid upon the surfaces to be protected, or it may be wound or wrapped around them once or more times when they are of suitable form, as in the case of pipes for rotating or winding.

What I claim as my invention, and desire to secure by Letters Patent, is—

A non-heat-conducting fabric consisting of a woven foundation fabric having a weft of tule-grass, each of the spires of which is independently covered with a coating of adhesive material, an external coating of non-heat-conducting heat-proof substance covering both the warp and the weft of the fabric, and a coating of pulverulent non-heat-conducting and water-proof substance applied to the exterior of said non-heat-conducting and heat-proof substance, substantially as specified.

HIRAM M. HANMORE.

Witnesses:
WM. T. JETER,
T. V. MATHEWS.