

(No Model.)

G. DICKSON.

BLOCK COVERING FOR STEAM BOILERS, PIPES, &c.

No. 551,369.

Patented Dec. 17, 1895.

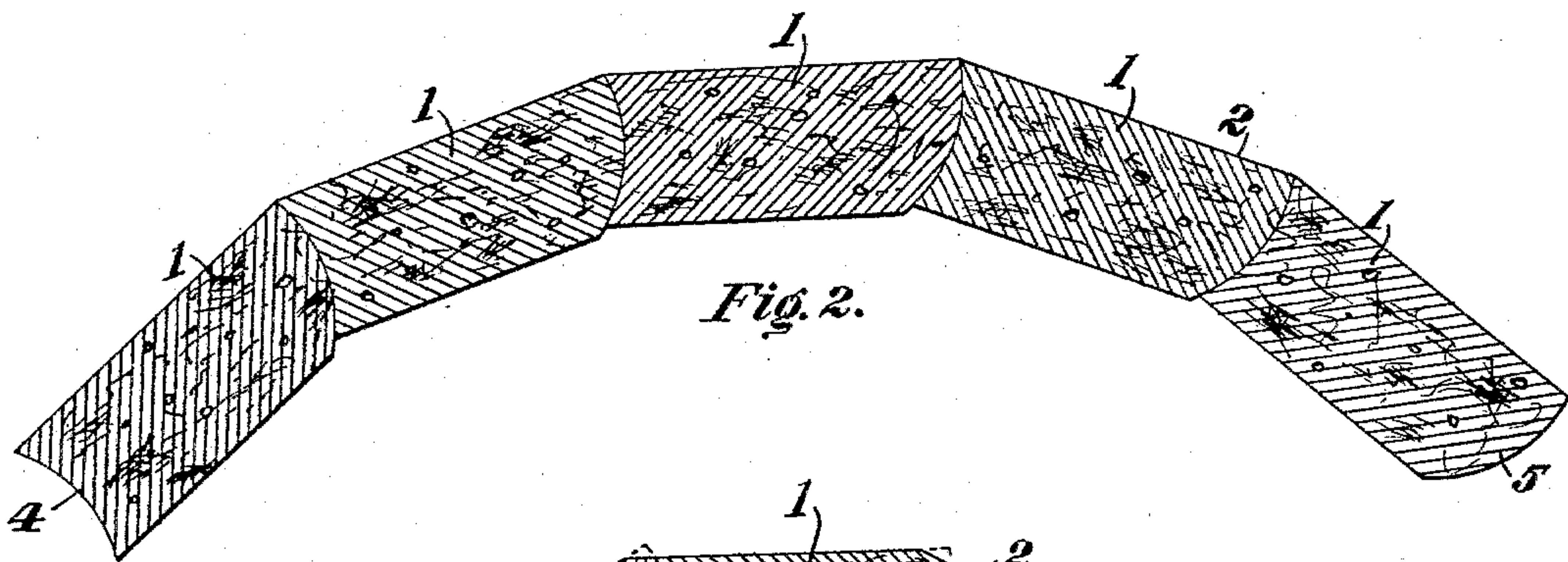


Fig. 2.

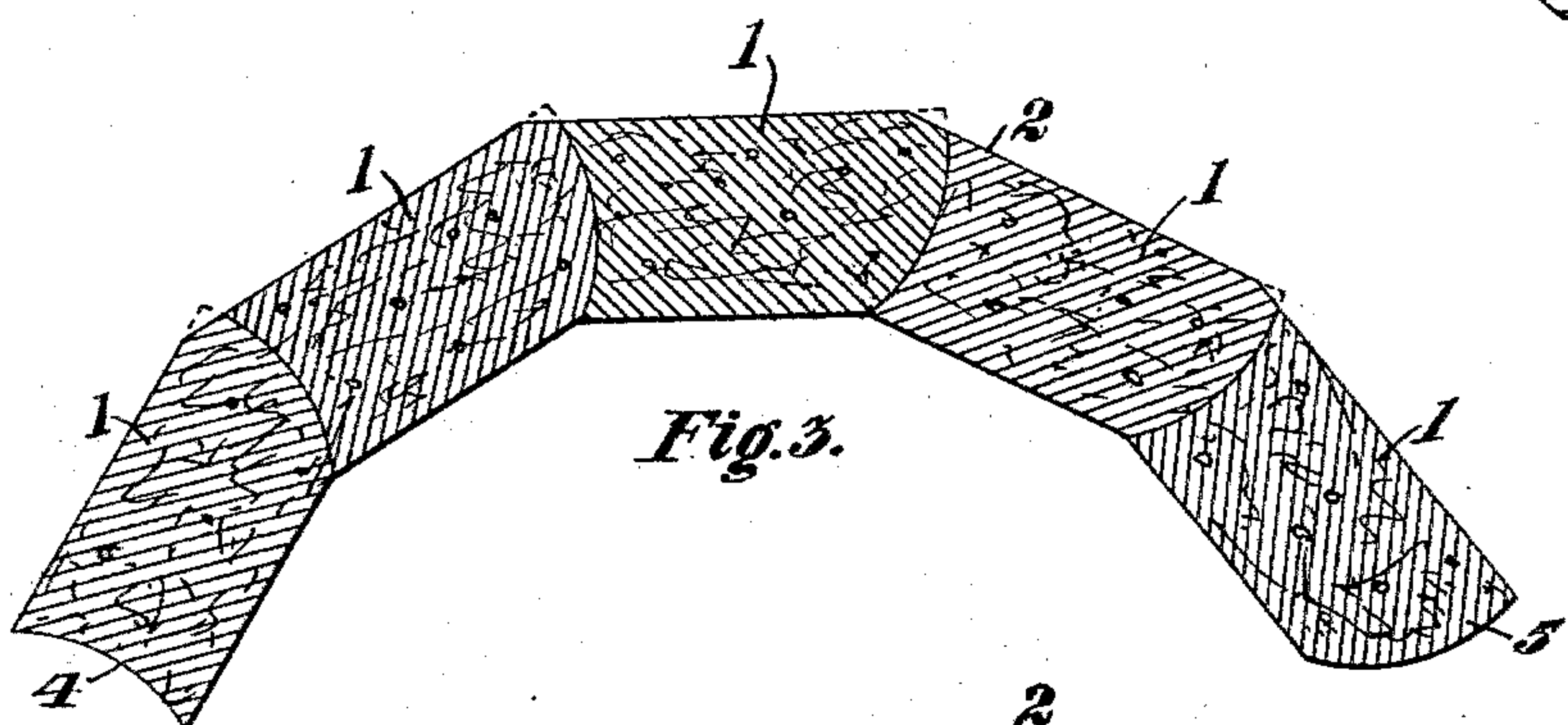


Fig. 3.

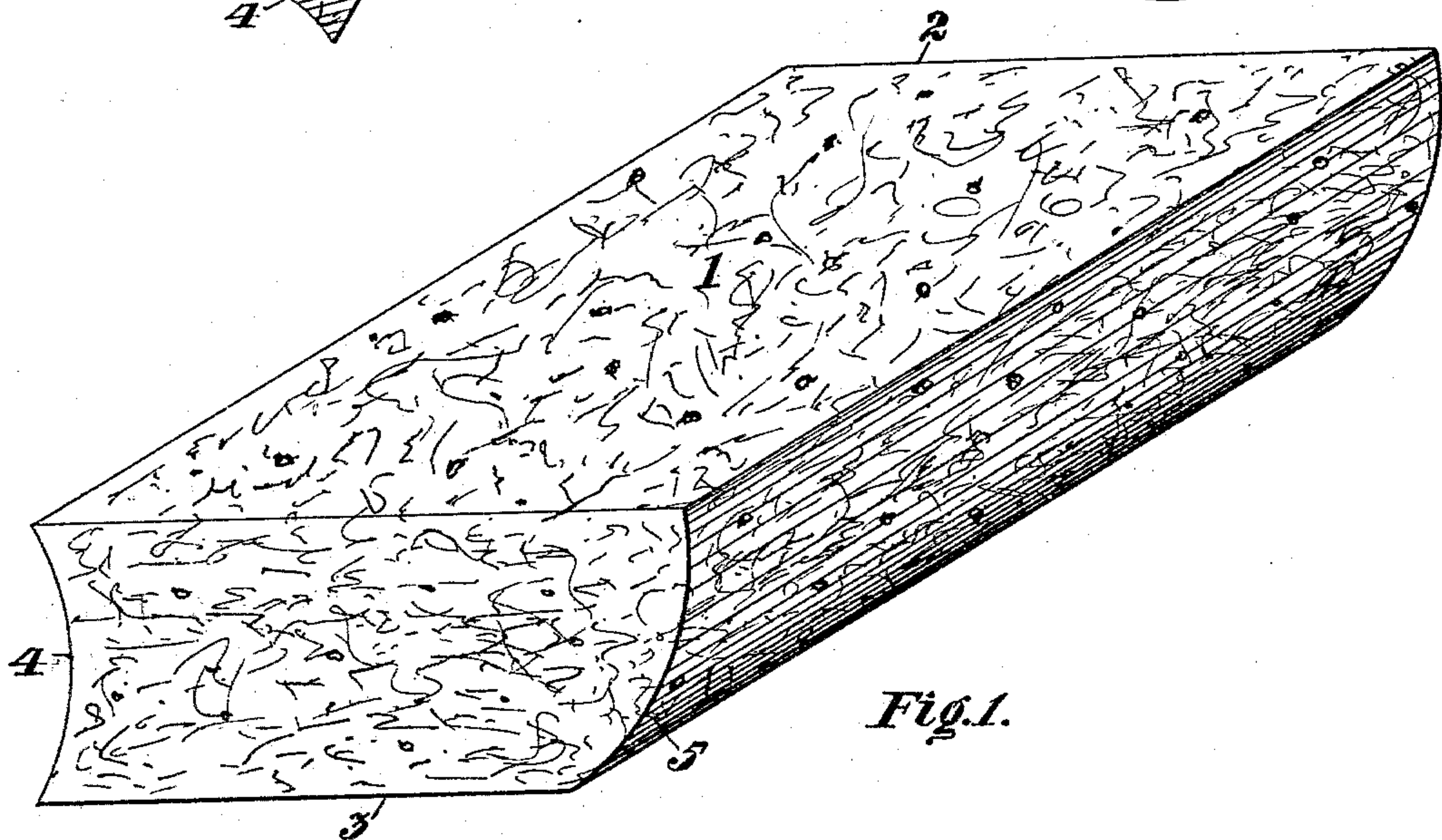


Fig. 1.

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## BLOCK COVERING FOR STEAM-BOILERS, PIPES, &c.

SPECIFICATION forming part of Letters Patent No. 551,369, dated December 17, 1895.

Application filed June 15, 1895. Serial No. 552,882. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE DICKSON, a subject of the Queen of England, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Block Coverings for Steam-Boilers, Pipes, and the Like, of which the following is a specification.

The principal object of my present invention is inexpensively, durably and efficiently to fit non-conducting covering blocks or sections together at their meeting edges in such manner that they are in effect hinged thereat and therefore may be readily and conveniently applied to and detached from boilers, pipes and other cylindrical surfaces of different diameters, and in such manner that tight, attractive, durable and efficient joints are insured in all practical positions of and between the blocks or sections.

My invention consists in the improvements hereinafter described and claimed.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1 is an isoperimetrical view illustrating a wide and narrow faced block or section of covering provided with a symmetrically-concave edge and with a beveled convex edge embodying features of my invention. Fig. 2 is a sectional view illustrating the symmetrical concave and beveled convex edges of a series of the blocks shown in Fig. 1, fitted together to form tight hinge or cup-and-ball-like joints which permit of the application of the blocks to cylindrical boilers, pipes and the like of different diameters; and Fig. 3 is a sectional view illustrating my improved blocks in application to a pipe, boiler or the like of comparatively small diameter and showing in dotted lines the portions of the beveled edges that are usually removed.

In the drawings, 1 is a block of non-conducting material that may be made as long as the boiler or pipe to which it is applied and of any convenient width. The faces 2 and 3 of this block are flat and one face 2 thereof is comparatively wide and the other face 3 thereof is comparatively narrow, so that the

blocks may be arranged in and occupy the arc of a circle. One edge 4 of each block is symmetrically concave—that is to say, is concave in cross-section upon the arc of a circle whose center lies on substantially the medial line of the block. The other edge 5 is convex and beveled from the wider face 2 toward the narrower face 3—that is, is made convex in cross-section upon the arc of a circle whose center lies substantially above the medial line of the block—for example, within the face 2 thereof. The radius of the concave edge 4 is shorter than the radius of the convex edge 5, so that the concave edge is at an angle of twenty degrees, more or less, and the convex edge is at an angle of forty degrees, more or less. In use, these blocks are fitted together, as shown in Figs. 2 and 3, and the symmetrically-concave edges 4 rest upon the beveled convex edges 5, and thus constitute a tight joint between the blocks even when they are turned so as to accommodate them to pipes and boilers of larger or smaller diameters. Moreover, these joints vary very slightly when the blocks are arranged on either comparatively large or small circles and do not require grouting in order to make them tight.

In the case of comparatively small boilers the upper portions of the convex edges may project a little, as indicated by dotted lines in Fig. 3. However, these upwardly-projecting edges may be filed off or otherwise removed in order to add a neat finish to the covering.

In cases where the blocks are applied to a comparatively large boiler, pipe or other cylindrical vessel the comparatively small projecting portions of the blocks may lie at the inside, as at Fig. 2, and consequently are not visible.

The blocks may be simply fitted together—for example, when they are applied to the top of a boiler—or they may be secured, for example, to pipes by means of encompassing bands and the like.

Obviously the above-described blocks are advantageous because their symmetrically concave and beveled convex edges when fitted together form not only durable, tight and neat but also hinge or cup-and-ball-like joints which permit of the advantageous application of the blocks to cylindrical boilers, pipes and the like of widely different diam-



eters. Moreover, these joints permit of the convenient detachment of the blocks, so that they may be removed from one cylindrical vessel to another, which may be of larger or smaller diameter—for example, in cases where plants are being moved. The fact that the blocks are so constructed and fitted together at their edges that they may be turned to accommodate them to boilers and the like of different diameters without impairing the tightness and durability of the joints between them enables very accurate estimates to be made of the number of blocks that are required to cover a boiler or other cylindrical vessel of any particular dimensions.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

In combination non-conducting blocks each

having one edge concave upon the arc of a circle whose center lies on the medial line of the block and having the other edge convex upon the arc of a circle whose center lies distant from the medial line of the block and having the respective faces of the blocks smooth and the one wider than the other to form tight joints between the blocks and to permit of their application to and removal from cylindrical surfaces of widely different diameters, substantially as described.

In testimony whereof I have hereunto signed my name in the presence of two witnesses.

GEORGE DICKSON.

Witnesses:

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K. M. GILLIGAN.