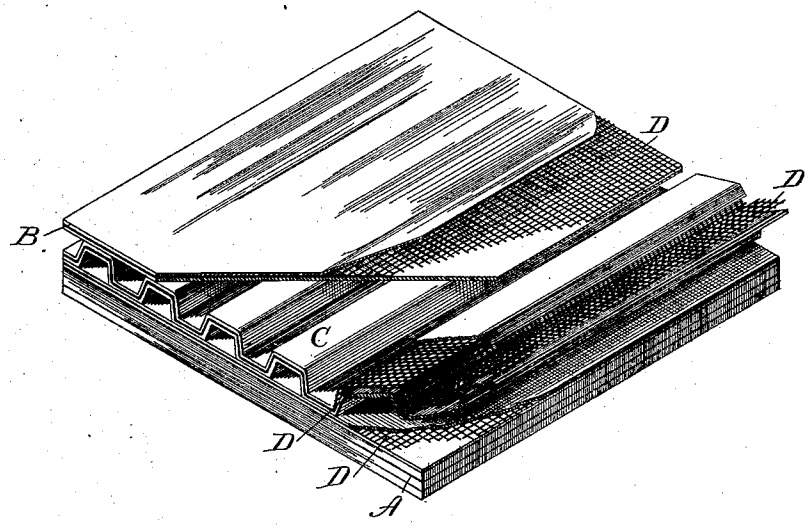
(Model.)

H. C. BRADLEY.

NON-CONDUCTING COVERING FOR STEAM PIPES, BOILERS, &c.

No. 389,542. Patented Sept. 18, 1888.



Witnesses:
Benj. K. Miller Jr
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Inventor,
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UNITED STATES PATENT OFFICE.

HENRY C. BRADLEY, OF MILWAUKEE, WISCONSIN.

NON-CONDUCTING COVERING FOR STEAM-PIPES, BOILERS, &c.

SPECIFICATION forming part of Letters Patent No. 389,542, dated September 18, 1888.

Application filed January 2, 1883. Serial No. 80,634. (Model.)

To all whom it may concern:

Be it known that I, HENRY C. BRADLEY, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented certain new and useful Improvements in Coverings for Steam-Pipes, Boilers, and other Heated Surfaces, of which the following is a specification.

This invention relates to improvements in coverings for steam-pipes, boilers, and other heated surfaces, which coverings consist of a series of non-conducting plain or corrugated sheets composed of paper, felt, asbestus, or other similar fibrous material, the sheets of the series being all of the same material, or made up of sheets one or more of which are of different material from the others composing the series.

The objects of this invention are to increase the durability and materially strengthen such coverings without destroying the requisite flexibility necessary to enable them to be readily bent and conformed to the surface to which they are to be applied; to stiffen the coverings to a degree sufficient to provide for staying and bracing the sheets of which the coverings are composed, when corrugations in the sheets are of such dimensions that they would otherwise break down owing to the normal flexibility of the sheets; and to provide one or more layers of a flexible stiffening adapted to retain a variety of forms given to the layers individually or collectively, whereby corrugations may be conveniently made in or the covering be bent to conform to a particular configuration in or locality of the device to be covered.

Referring to the accompanying drawing, in which is illustrated in perspective view a covering embodying my invention, A designates a number of plain sheets composed of paper, felt, asbestus, or other similar fibrous material; and B, similar sheets forming opposing sides of a covering having one or more intermediate corrugated sheets, C, of similar material.

D represents a sheet of wire fabric, which, as shown, is placed between the two plain sheets of fiber on each side of and next the corrugated sheets, which in turn have a similar sheet of fabric between them.

By the employment of the wire fabric between two or more sheets of a covering the requisite flexibility to enable a covering to conform to the surface to be covered is maintained, although as a whole the covering is considerably stiffened, and, besides this, the character of the wire fabric is such that it will retain whatever form is given it.

My invention is not limited to the application of wire fabric to the particular covering shown, but includes coverings which are composed wholly of plain, indented, or corrugated sheets of non-conducting fabric either alone or combined, the form of corrugations or indentations also being immaterial, for by employing the wire fabric upon the inner face or between two or more of the several sheets of any of the coverings I have described the covering as a whole has not only the requisite flexibility to enable it to be bent to and retain the desired form, but to prevent the charring of the inner layers of the covering, which would diminish the effectiveness of the covering as a whole after having once been applied; and it would also be within the spirit of my invention to combine with a wire fabric corrugated or plain sheets of asbestus paper to the exclusion of sheets of other material when the essential object is to have a strong and durable fabric possessing to a maximum degree non-conducting qualities and indestructibility by fire or heat, combined with a minimum degree of lightness and thickness.

It is well known that when these coverings have been for some time in use upon highly-heated surfaces some of the inner layers become charred, and, having nothing to stay them, crumble, fall away, and hence destroy the effectiveness of the covering; and also that if these charred layers are in their charred state maintained intact they are substantially as effective as before.

Among the advantages of my invention is that the wire fabric serves to sustain the charred layers, and this is true whether but one layer of the fabric is upon the face of the covering or between two or more sheets thereof, the advantage thus obtained by the wire fabric therefore more than compensating for any properties of conduction of heat it may have. To this end the best effects are attained by employing a wire fabric the meshes of which are not smaller than is sufficient to support and maintain the charred layers intact.

Coverings intended for flat surfaces may be

rolled in concentric layers for convenience in shipping and storage, in which case it is obvious that the employment of the wire fabric materially facilitates the after flattening or straightening out of the cover upon the surface to which it is to be applied, or of bending and maintaining its surfaces in various angles.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A covering the outer layers on both sides of which are composed of plain sheets of non-conducting fabric and the inner layer of corrugated non-conducting fabric adapted to support and hold in position the outer and plain sheets, substantially as described.

2. A covering the outer layers on both sides of which are composed of plain sheets, one or both of which is lined with wire fabric and the intermediate layer or layers of one or more corrugated sheets with or without a lining of wire fabric, substantially as described.

3. A non-conducting and fire-proof fabric consisting of a wire fabric combined with sheets of asbestus paper, substantially as described.

H. C. BRADLEY.

Witnesses:
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