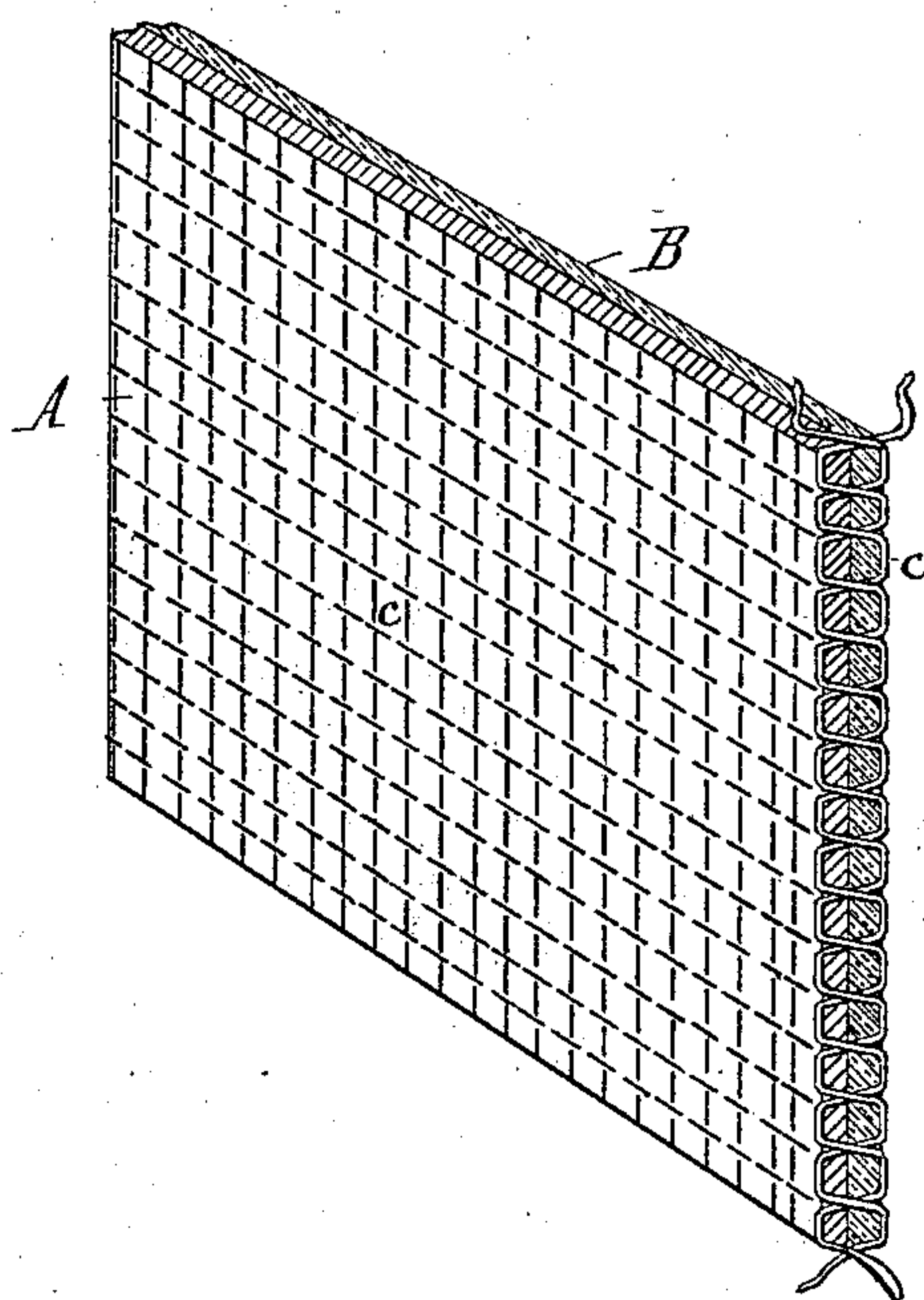


(No Model.)

J. S. BEER.
FIRE PROOF MATERIAL.

No. 290,837.

Patented Dec. 25, 1883.



Chas J Buchheit
Theo L Lopp

Witnesses.

John S. Beer. Inventor.
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UNITED STATES PATENT OFFICE.

JOHN S. BEER, OF BUFFALO, NEW YORK.

FIRE-PROOF MATERIAL.

SPECIFICATION forming part of Letters Patent No. 290,837, dated December 25, 1883.

Application filed September 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. BEER, of the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful
5 Improvement in Fire-Proof Material, of which the following is a specification.

The object of this invention is to produce a strong and durable fire-proof fabric which is adapted to be used in the manufacture of various fire-proof articles for personal wear and
10 other purposes—for instance, boots and shoes, gloves, aprons, and the like.

Heretofore asbestos has been employed in various ways in the manufacture of fire-proof
15 fabrics; but these fabrics are not sufficiently strong and durable for the purpose for which my improved fabric is designed, and the articles manufactured from such fabrics soon lose their shape and become unfit for use.

20 My invention is designed to overcome this difficulty; and it consists of the improvement in the fire-proof fabric, which will be hereinafter fully set forth, and pointed out in the claims.

25 The accompanying drawing represents a sheet of my improved fabric.

A represents a sheet of fire-proof fabric woven of asbestos, and provided, if desired, with strengthening-threads of wire or other
30 suitable material in a well-known manner.

B represents a backing, of canvas or other strong cloth, secured to the fire-proof fabric A by numerous rows of stitching, *c*, which are preferably arranged to intersect in the manner
35 of quilting. The sheets A and B may be sewed together with fine wire, but for all ordinary purposes common thread will answer, because the thread becomes embedded in the asbestos and the projecting fibers of the asbestos will
40 cover the thread and protect the same. In order to better protect the thread, the fabric,

after the two sheets have been sewed together, is passed between a pair of pressing or calendering-rollers, whereby the projecting fibers of asbestos are closed down over the seams. 45 The compound sheet of fabric so produced is very strong and durable and well adapted to be manufactured into gloves, aprons, boots, and shoes for blacksmiths, molders, firemen, and other persons exposed to fire, and into
50 flat-iron holders and other articles required to resist fire and heat. In manufacturing these articles, the sheet, A, of asbestos is arranged on the outside or the side exposed to the fire, and the sheet A protects the backing B from
55 the fire, while the backing imparts the required strength and durability to the fabric.

When the fabric is designed for the manufacture of fire-proof book-cases or portfolios, the backing B may be made of thin sheet
60 metal—copper or tin, for instance—and the fire-proof fabric A may be sewed to the metallic backing with wire, as before described; or the two sheets may be secured together by rivets, if preferred. 65

I claim as my invention—

1. A compound fire-proof fabric composed of a sheet woven of asbestos and a pliable backing of canvas or other strong material, substantially as set forth. 70

2. A compound fire-proof fabric composed of a sheet woven of asbestos and a backing of canvas or other strong material secured to the sheet of asbestos by sewing, substantially as set forth. 75

Witness my hand this 24th day of September, 1883.

JOHN S. BEER.

Witnesses:

CARL F. GEYER,
JNO. J. BONNER.