

(Model.)

T. M. WILLEY.  
MANUFACTURE OF BED COVERINGS, &c.

No. 274,690.

Patented Mar. 27, 1883.

Fig 1.

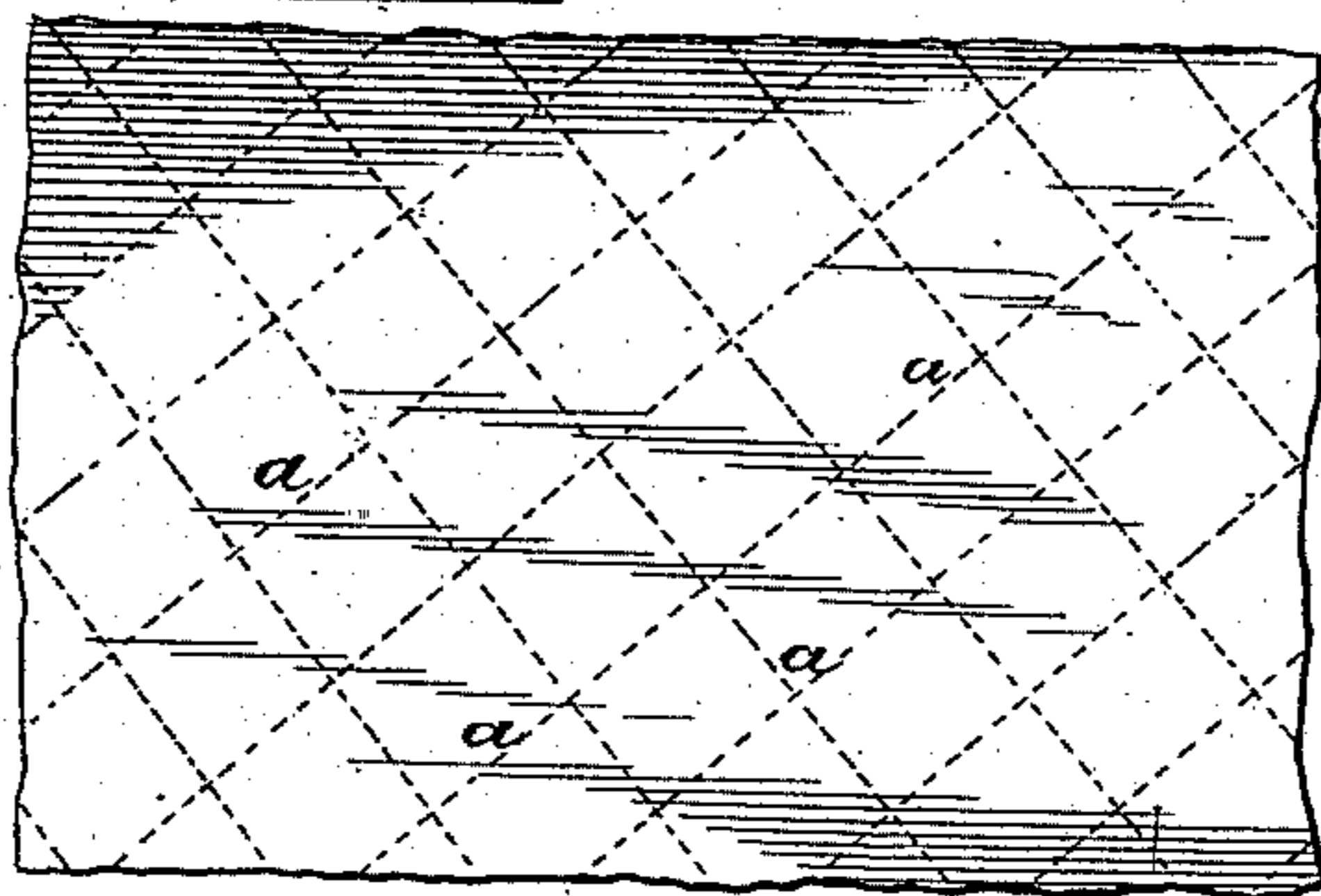


Fig 2

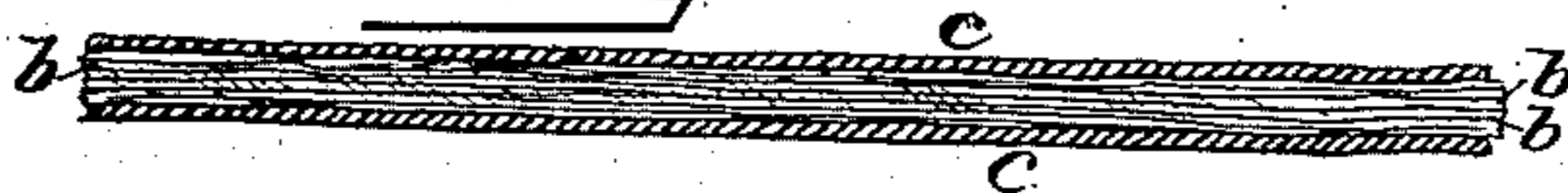


Fig 3

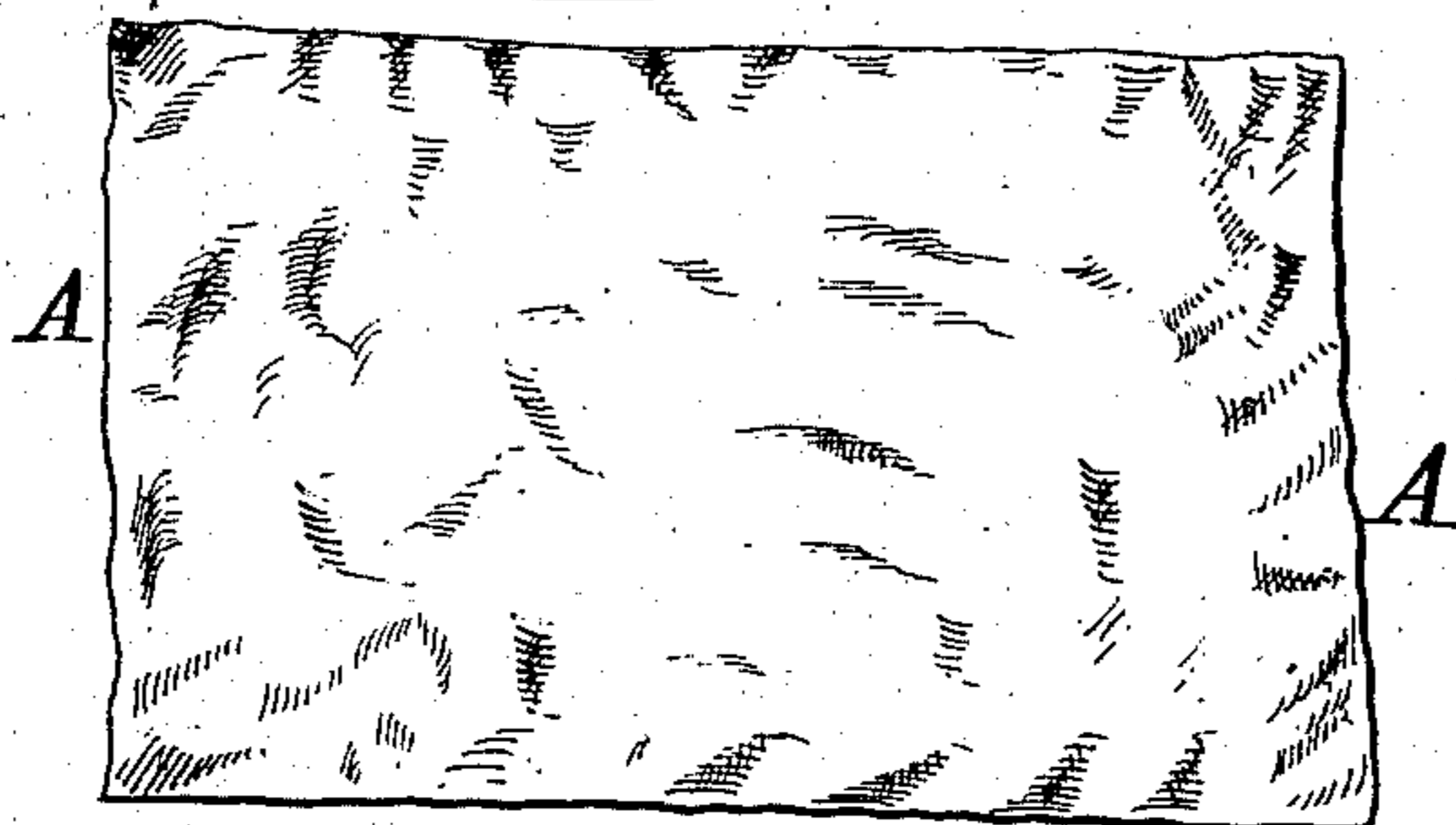
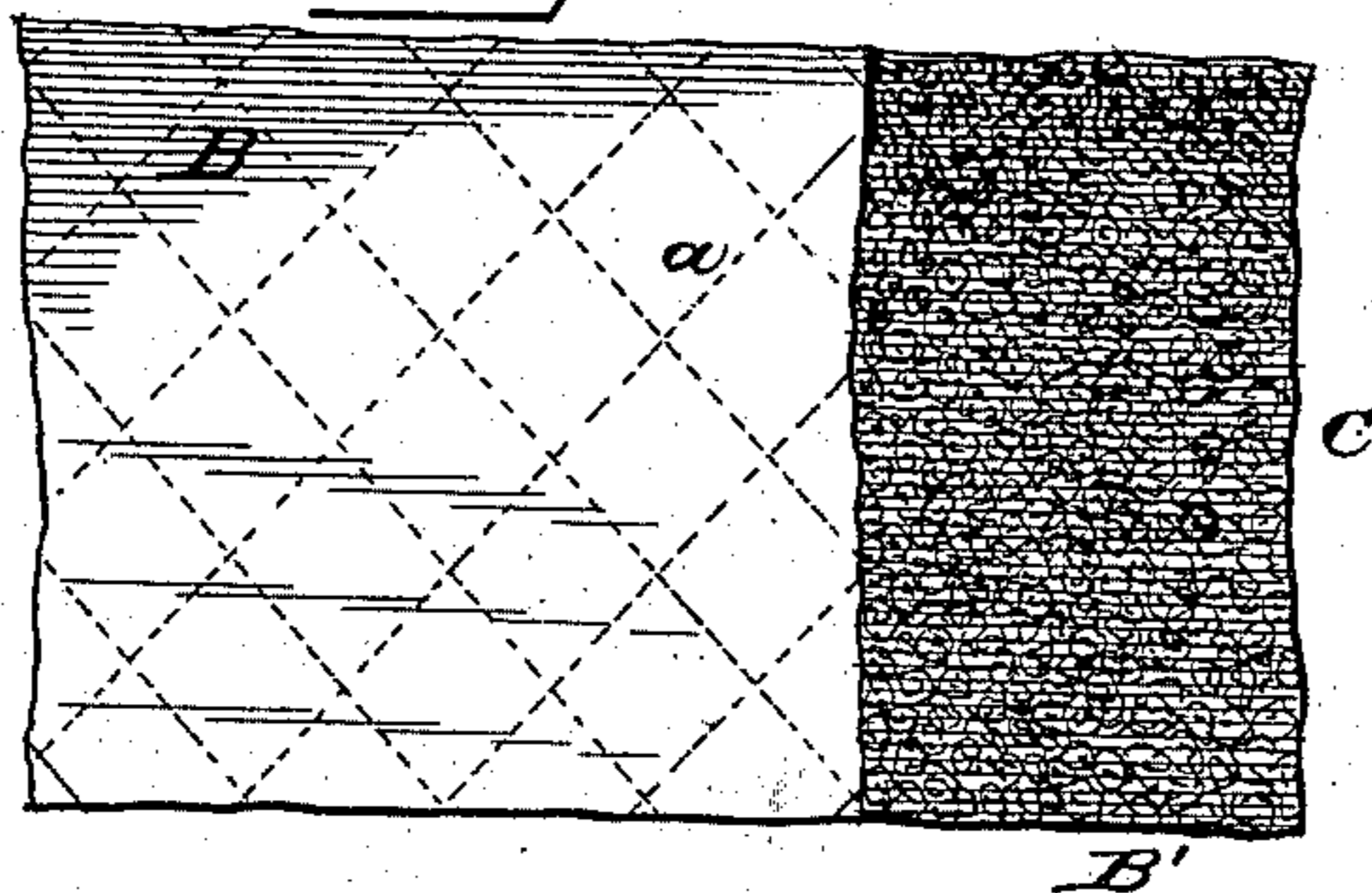


Fig 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

THOMAS M. WILLEY, OF EAST HADDAM, CONNECTICUT.

## MANUFACTURE OF BED-COVERINGS, &c.

SPECIFICATION forming part of Letters Patent No. 274,690, dated March 27, 1883.

Application filed January 15, 1883. (Model.)

*To all whom it may concern:*

Be it known that I, THOMAS M. WILLEY, a citizen of the United States, residing at East Haddam, in the county of Middlesex and State of Connecticut, have invented a new and useful Improvement in the Manufacture of Waddings, Quiltings, Battings, &c., of which the following is a specification.

The object of my invention is to furnish a novel, cheap, and desirable article of batting for quiltings, linings, &c., made of a material new as to such purposes, as a substitute for the ordinary woolen or cotton battings, quiltings, &c., now in use. This I accomplish by using paper as the base or non-heat-conducting portion of this quilting or batting. It is desirable that such quiltings or battings should have a low degree of heat conductivity and be light, pliable, and noiseless. In the manufacture of this substitute I cause the paper to be so treated or manipulated that it shall be pliable and noiseless, and in such condition use it separate from or between exterior confining fabrics or attached to one as woolen or cotton battings are now used; and my invention may be said thus in general terms to consist in a new article of quilting or batting formed from paper, as more specifically herein-after set forth and claimed.

In the drawings are given conventional representations of several of the many ways in which the invention may be reduced to practice, Figures 1, 4, and 3 being plan views of these ways, while Fig. 2 is a cross-section of the form shown in Fig. 1.

In Figs. 1 and 2, *b b* are sheets of paper secured by the lines of stitching *a a* between exterior protections—say of cloth *c c*. For the lines of stitching *a a* there may be used any method of attachment—as, for instance, glue, paste, mucilage applied over the entire surface or in lines or spots only. The sheets of paper *b b*, which may be as many more in number as the thickness of the desired fabric demands, should be of some strong, tough thin paper, preferably quite fibrous and with little sizing. When it is desirable to use only one thickness of paper as a substitute for the several of Figs. 1 and 2 a thicker, heavier paper, A of Fig. 3, may be used, preferably tough and fibrous, which should be subjected to squeez-

ing, twisting, rolling, or such other process or manipulation as will thoroughly crumple it, as shown in Fig. 3, and render it pliable and noiseless. A convenient way of doing this is to pass the paper once or several times in each of its directions between finely-corrugated rollers or wheels which will crinkle or buckle it without breaking or tearing it. The sheets then, so prepared, may be used between the exterior fabrics, *c c*, or may be put upon the market for use in those relations where other materials will furnish the exterior fabrics, as in coat linings or waddings.

In Fig. 4, *B B'* are the exterior fabrics, *B* being partly removed to show the paper material *C* confined between them in the same manner as *b b* between *c c* in Figs. 1 and 2. In this instance the paper is shredded or clipped, and the shreds or clippings are rolled, crinkled, or curled, and then matted together and secured in position between *B B'*, as indicated.

By any of these means a novel substitute for woolen or cotton quiltings, battings, or waddings may be prepared, which will be economical in cost, light, pliable, noiseless, and of low heat conductivity, adapted for use in most, if not all, the situations and relations in which the present battings, waddings, and quiltings are used.

I am aware that the non-heat-conducting properties of paper have long been known; but I am not aware that any invention has ever before been made for utilizing it for that property in a new article of manufacture, such as I have herein shown and described.

What I claim is—

1. As a new article of manufacture, a batting, wadding, or quilting made of paper, substantially as set forth.

2. A fabric for battings, waddings, quiltings, &c., consisting of exterior protection and an interior filling of paper, substantially as set forth.

3. A filling for waddings, battings, quiltings, &c., consisting of crinkled or curled paper, substantially as set forth.

THOMAS M. WILLEY.

Witnesses:

ALFRED R. THORNETT,  
WILLIAM L. MARCY.