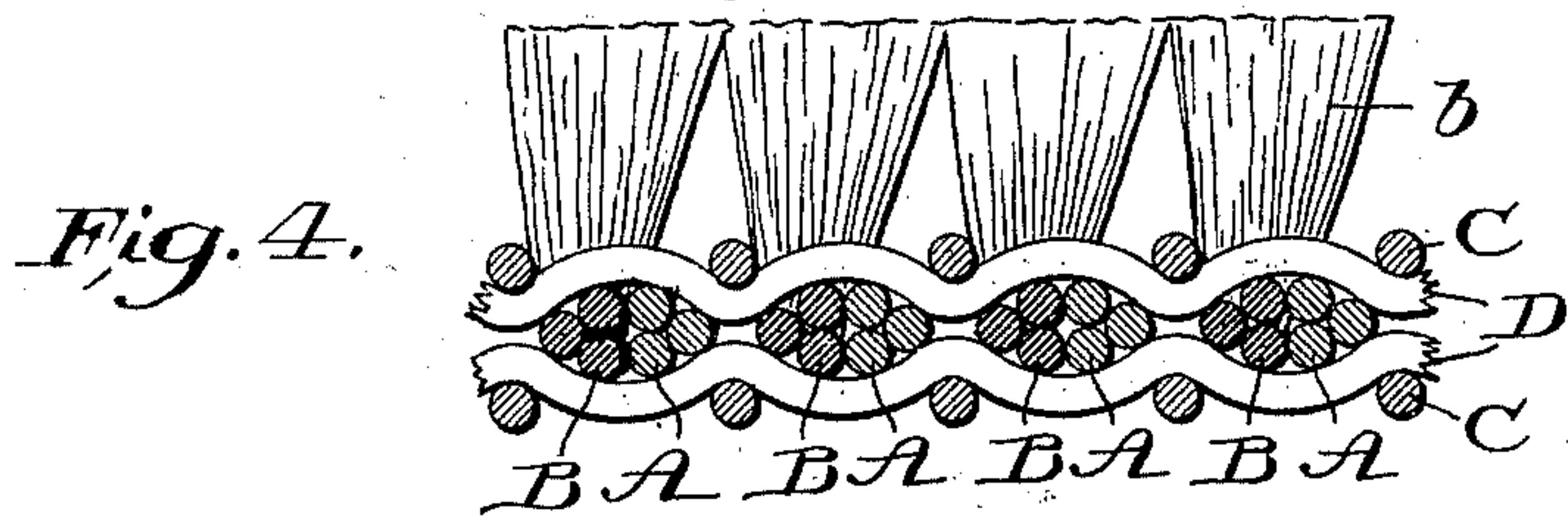
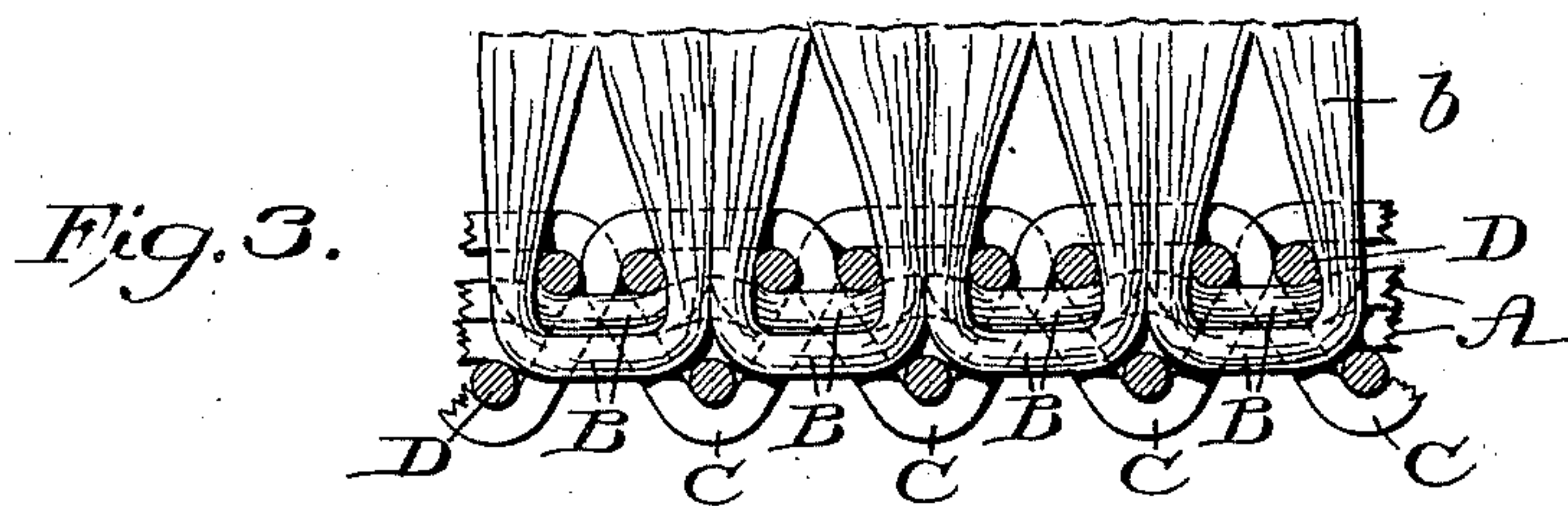
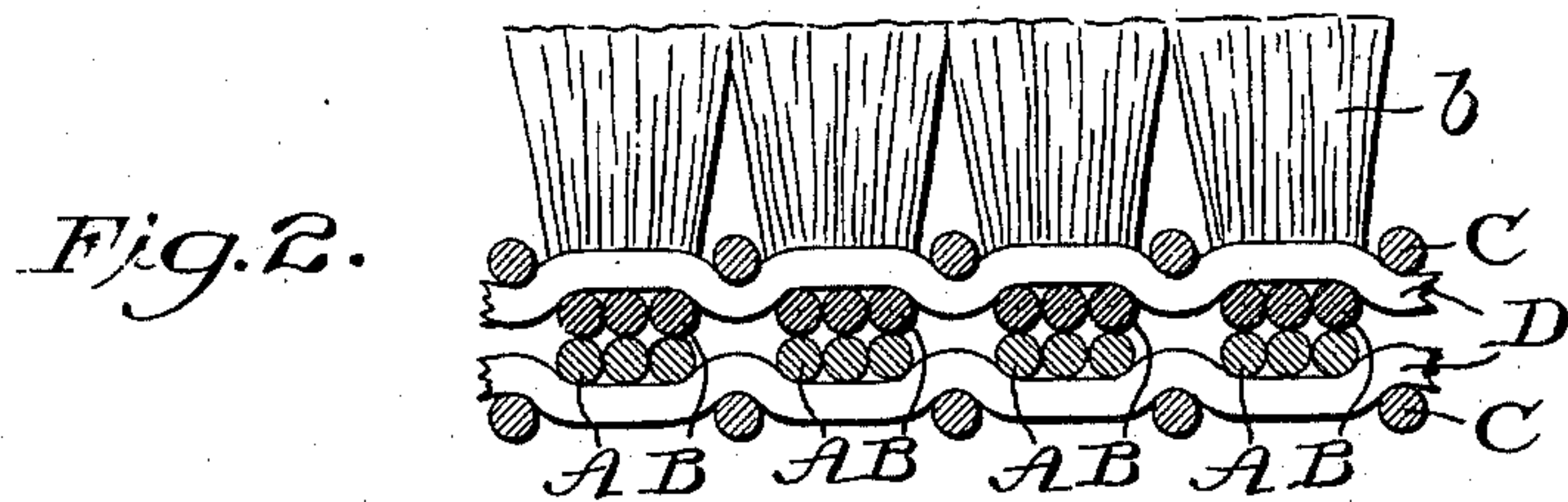
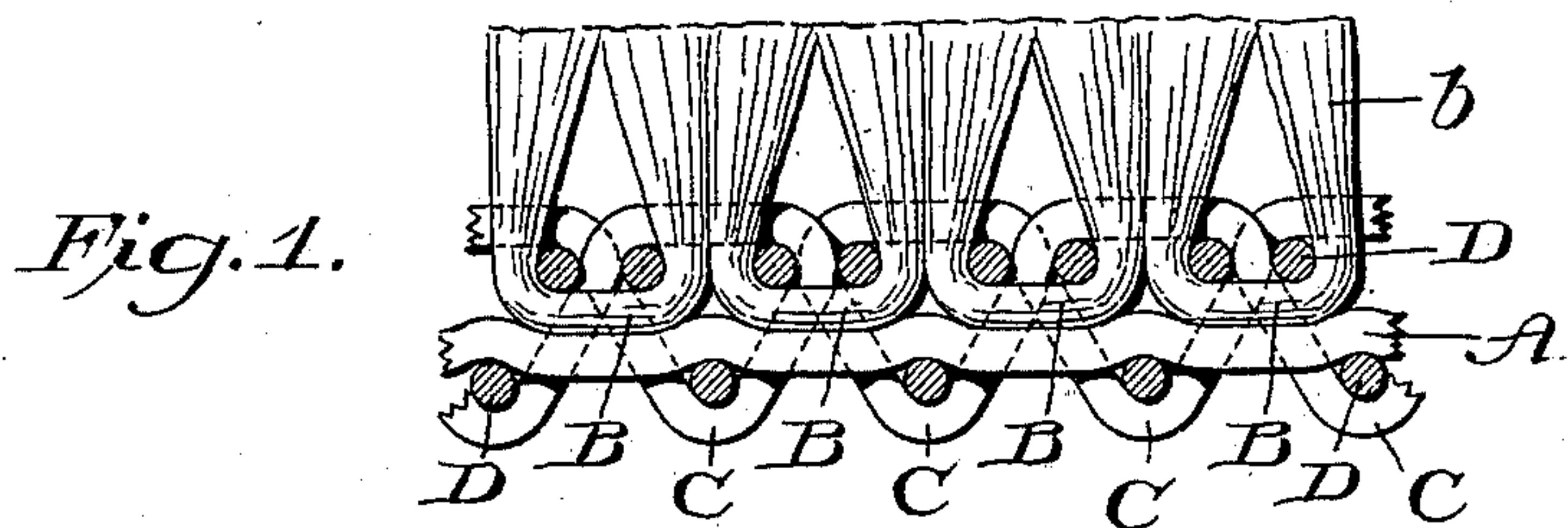


No. 691,889.

Patented Jan. 28, 1902.

W. BENHAM.  
WOVEN PILE CARPET.  
(Application filed May 22, 1901.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## WOVEN PILE CARPET.

SPECIFICATION forming part of Letters Patent No. 691,889, dated January 28, 1902.

Application filed May 22, 1901. Serial No. 61,446. (No model.)

*To all whom it may concern:*

Be it known that I, WALTER BENHAM, a citizen of the United States, residing at the city of Philadelphia, State of Pennsylvania, have  
5 invented certain new and useful Improvements in Woven Pile Carpets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.  
10 cation.

My invention relates to woven pile carpets; and it consists of an improvement in that class of such carpets known as "tapestry" and "tapestry-velvets," as hereinafter described.

15 It has for its object to produce such a pile carpet by a new arrangement, relatively, of the pile-warp with the ground or body warp and of both of said sets of threads with the usual weft-threads and binder warp-threads  
20 for the double purpose of making a more compact woven body and of better securing the pile-warp in the weave, and incidentally of producing a tapestry or a tapestry-velvet carpet, showing the face pattern and its colors on  
25 the back thereof.

In this class of carpets, known as "tapestry" and "tapestry-velvets," which differ from each other only that in the former the pile warp-threads are left uncut in the weaving  
30 while in the latter they are cut, the pile face is formed from printed pile warp-threads and the back of plain body or ground warp-threads with the usual binding-warp and the usual filling weft-threads; but in the weaving of such  
35 carpets the pile warp-threads are so thrown in the reeding that they lie in a horizontal plane above and are superposed upon the ground or body warp-threads; but in my improved carpet of the class mentioned I bring  
40 down the pile warp-threads into a lower horizontal plane, so that they lie alongside of the ground or body warp-threads, and are thereby more compactly and firmly held in the woven web, the change in the relative position of  
45 the body warp and weft threads to the pile-warp being as hereinafter described.

In the accompanying drawings, Figure 1 is a longitudinal section, enlarged, of a piece of tapestry-velvet carpet in which printed pile-

warp is employed, woven in the manner as  
50 heretofore and usually practiced; and Fig. 2 is a transverse section of the same. Fig. 3 is a longitudinal section, enlarged, of the like class of carpets, woven according to my invention; and Fig. 4 is a transverse section  
55 thereof.

A clearer understanding of the construction of my improved carpet and of its advantages will best be obtained by a comparison with that now in use, as illustrated by Figs. 1 and  
60 2, in which A represents the set of ground or body warps; B, the pile warp-threads, and b the cut pile ends thereof; C, the binder-warps, and D the transverse weft-threads. It will be observed that the base of the pile warp-  
65 threads lies in a horizontal plane midway in the woven web, entirely above and superposed upon the body or ground warps and of course entirely above the under face of the fabric  
70 which, as seen in said Fig. 1, is composed exclusively of the ground-warps A, weft-threads D, and binder-warps C. In my improved fabric, however, as will be seen by reference to  
75 Figs. 3 and 4, I draw down the pile-warp B, so that a greater length of it will be within the woven web, and these pile-threads are thus brought to a position alongside of the  
80 body or ground warps A, between the weft-threads D, the whole bound into the fabric by the transverse binder-warps C. The result of this method of forming the fabric is to  
85 give a greater body and depth of pile-warp within the woven web, as seen in Fig. 3, producing necessarily a thicker carpet, with greater softness and elasticity, while at the  
90 same time the pile-threads are more compactly and firmly held relatively to the body or ground warps by the transverse binder warp-threads. This weave also gives as a necessary incident to its method of reeding substantially a double-faced pile fabric in that  
95 the face pattern is accurately reproduced both in design and color on the back of the carpet, an effect which for certain purposes may be most desirable and useful entirely apart from the intrinsic merit and utility above described of this new weave as a fabric.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

5 A pile carpet comprising printed pile warp-threads, body and binder warp-threads and weft-threads, the said pile warp-threads being arranged in sets side by side with sets of body warp-threads between the same weft-threads and binder warp-threads and appearing on the back of the fabric to reproduce thereon

the face-pattern of the fabric both in design 10 and color.

In testimony whereof I have hereunto affixed my signature this 11th day of May, A. D. 1900.

WALTER BENHAM.

Witnesses:

C. K. SORBER,  
H. T. FENTON.