

No. 755,219.

PATENTED MAR. 22, 1904.

G. DAVISON, JR.

FELTED FABRIC AND PROCESS OF PRODUCING SAME.

APPLICATION FILED JAN. 21, 1904.

NO MODEL.

Fig. 1.

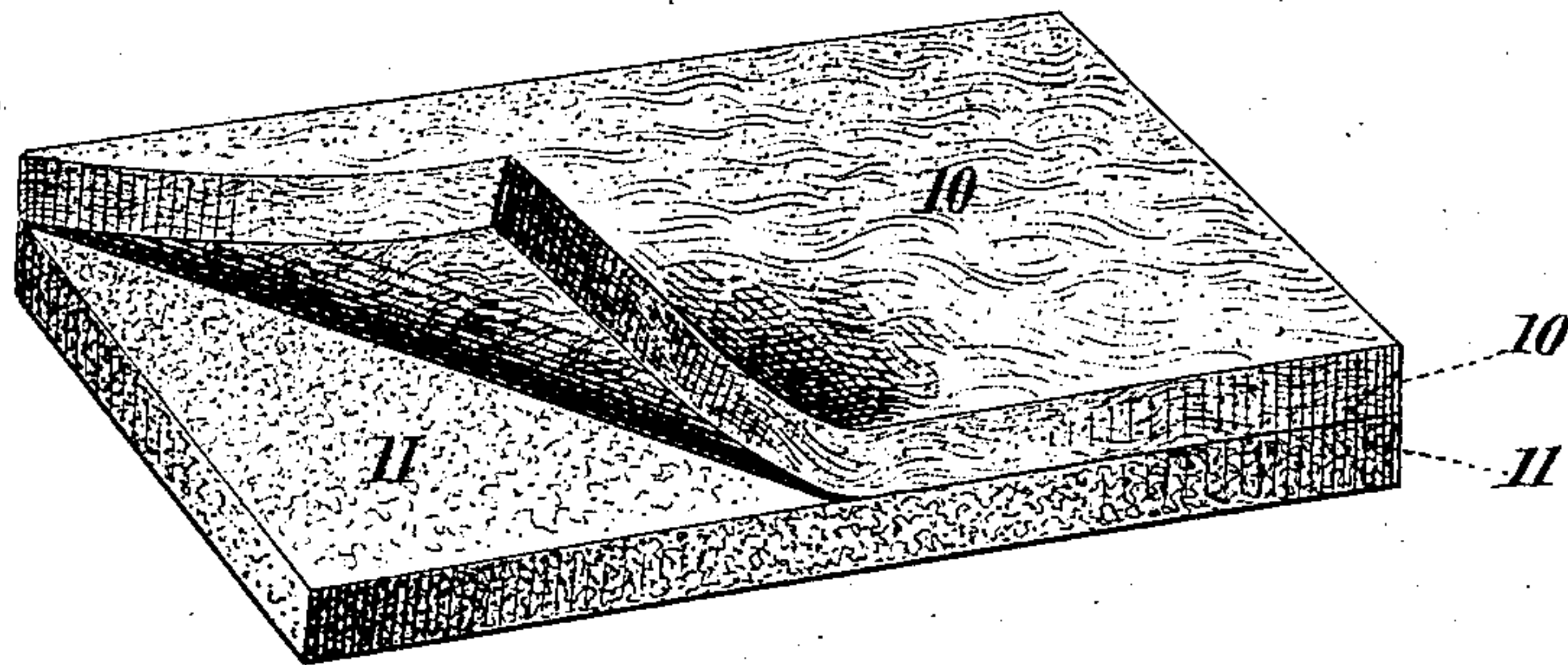


Fig. 2.

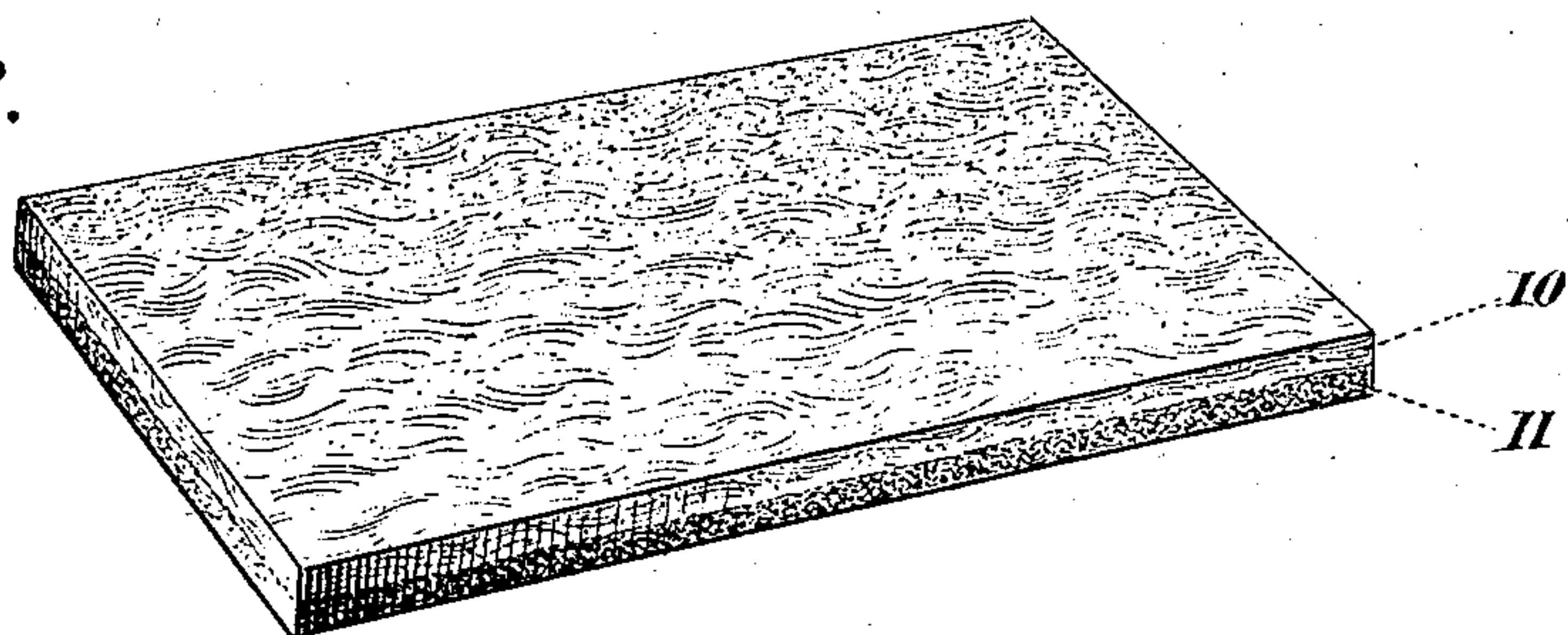


Fig. 3.

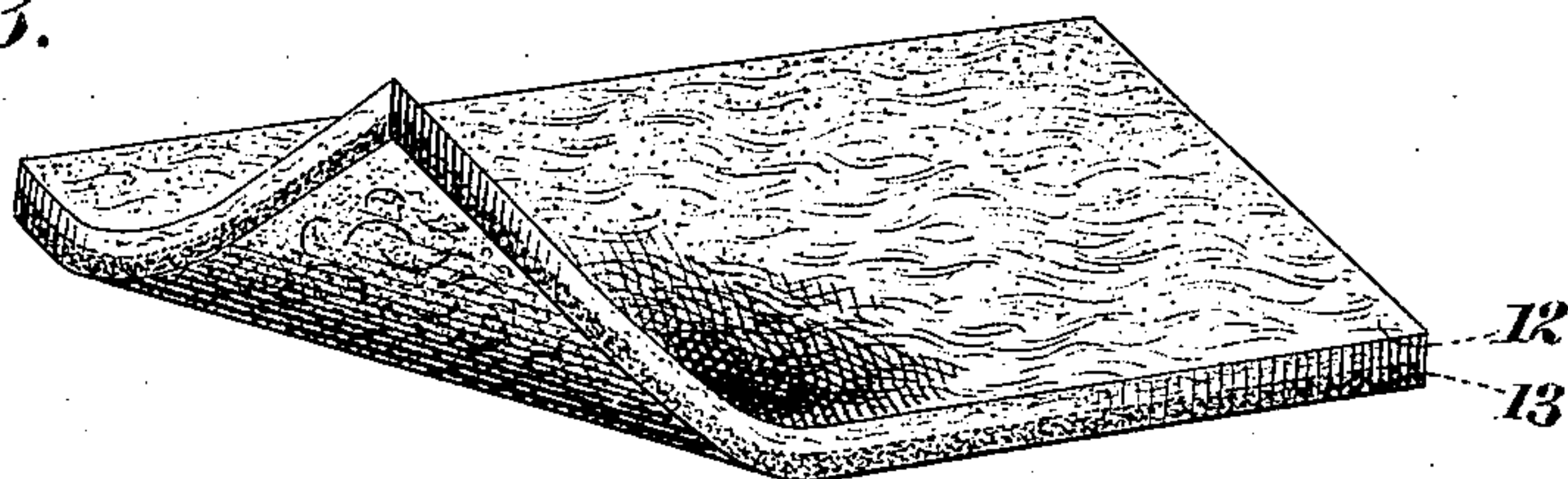
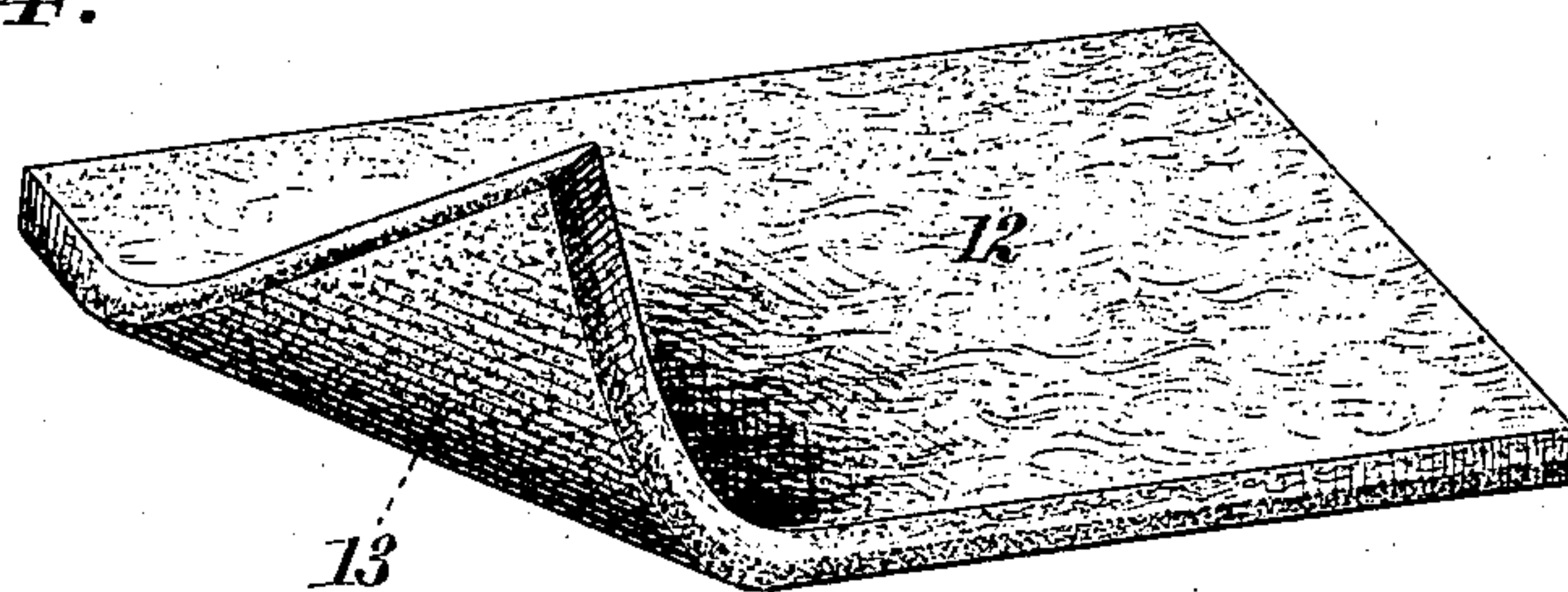


Fig. 4.



WITNESSES:

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FELTED FABRIC AND PROCESS OF PRODUCING SAME.

SPECIFICATION forming part of Letters Patent No. 755,219, dated March 22, 1904.

Application filed January 21, 1904. Serial No. 189,966. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE DAVISON, Jr., a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Felted Fabrics and Processes of Producing the Same, of which the following is a specification.

The invention relates to improvements in felted fabrics and processes for the production of the same, and pertains more especially to a novel composite felted fabric composed of wool and mohair and presenting on one side a smooth finished wool effect and on the other side a shaggy mohair effect, whereby the fabric has two finished surfaces differing essentially from each other and either of which may be employed as the right side or outside surface to be exposed.

The fabric of my invention is especially useful in the manufacture of ladies' hats, in which the brim portion should be of finished appearance on both sides and in which it is desirable that the shaggy mohair should not be on the under side of the brim, where it might by its contact with the forehead irritate the wearer.

With the fabric of my invention the under surface of the brim of the hat may be of smooth finished wool effect and the upper surface of shaggy mohair effect, and thus a hat-brim may be produced of highly-attractive appearance and affording comfort to the wearer.

Heretofore in the production of shaggy-surfaced mohair fabrics for ladies' hats the fabric has had the shaggy surface on both its sides, and hence the lower surface of the brim has of necessity been rough and uncomfortable to many persons, and no choice has been afforded in the matter of using either side of the fabric as the outer side.

The fabric of my invention is formed of sheep's wool and mohair, each separately treated by the usual preliminary processes fitting it for use in the production of felted fabrics.

In carrying out my invention I form the wool into a layer or bat of proper thickness and likewise form the mohair into a layer or bat of suitable thickness, the mohair having, however, a suitable percentage of wool mixed in with it to create a bat of desirable tensile

strength and insure the effectual felting of the fabric. Mohair does not felt together as firmly as wool, and hence in the formation of the mohair bat I mix in the wool to create a firm body for the bat and effectually hold or bind the mohair.

In carrying out my invention I have found that forty per cent. of wool with sixty per cent. of the mohair produces what I term the "mohair bat" of a character fitted for the production of the best quality of the finished fabric. It is obvious, however, that my invention is not limited to any special relative proportions of the wool and mohair in the production of the mohair bat, since these proportions will vary in accordance with the character of the wool and mohair used in the result sought.

Having prepared the bats of wool and the bats of mohair, (mohair and wool combined,) I then place these bats into face to face contact and subject them to the action of usual hardening-plates in the presence of heat and moisture, as is customary with felting processes, one of said plates being against the outer side of the mohair bat and the other against the outer side of the wool bat, the effect of this hardening step being to unite and harden the two bats and produce a composite single layer or sheet, which is then subjected to the usual felting processes and finally finished by dyeing, pressing, shearing, and re-pressing.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the bats of carded mohair and wool placed together and ready to be subjected to the action of the hardening-plates. Fig. 2 is a like view of same after leaving the hardening-plates. Fig. 3 is a corresponding view of same after the material has been felted and before being subjected to the finishing treatment, and Fig. 4 is a like view of the finished fabric having a smooth wool side and a shaggy mohair side ready for immediate use in the manufacture of ladies' hats or for other purposes.

In the drawings, 10 designates the carded mohair bat, and 11 the carded-wool bat, while in respect of the felted product 12 denotes the

mohair side of the fabric, and 13 the smooth wool side thereof.

The bat 10 is composed of mohair held together by an admixture of wool, there being, 5 say, about forty per cent. of wool and sixty per cent. of mohair in the bat.

The bat 11 is composed wholly of carded wool, and the bats 10 11 about equal each other in thickness, as shown in Fig. 1.

10 The bats 10 and 11 having been prepared, I place them into face to face contact with each other, as represented in Fig. 1, and subject them to the well-known hardening action between metal plates in the presence of heat and 15 moisture, this step of the process being the familiar hardening practiced with respect to processes of felting wool alone, and therefore not new and requiring no special description. The effect of the hardening process is to harden and unite and reduce the thickness of the 20 bats 10 and 11 and to render them into the condition of being practically a single composite bat, (represented in Fig. 2,) which I then subject to the customary felting by 25 means of a fulling-mill, the product being a felted fabric. (Represented as nearly as possible in Fig. 3.) This product (shown in Fig. 3) is then subjected to the finishing steps of the process, which comprise, first, the pressing of the fabric; second, shearing off the 30 wool side of the fabric to remove any projecting mohair and wool therefrom and smooth-finish the same; third, napping up the mohair side of the fabric, and, fourth, re-pressing the fabric, the latter then being the completely-finished product. (Represented in Fig. 4.)

In the felting of the bats 10 and 11 I produce a fabric in which in its unfinished state (represented in Fig. 3) the wool predominates 40 at one side of the middle line of the thickness thereof and the mohair predominates at the other side of said line, and some of the mohair projects through said wool side and is exposed on the surface thereof, the mohair thus being 45 very firmly bound in and held by not only the wool originally in the bat 10, but also by the wool in the bat 11 and the entire fabric being rendered of desirable texture and very durable. It is not intended, however, that the 50 fabric shall have mohair exposed at the wool

side thereof, and hence the surface of said side of the fabric is sheared off to finish said side and especially remove all projecting mohair therefrom, so that the finished fabric shall have a smooth wool side and a shaggy mohair 55 side, both of said sides being completely finished, so that either or both of said sides may be freely exposed in the goods manufactured from the fabric.

What I claim as my invention, and desire to 60 secure by Letters Patent, is—

1. As a new article of manufacture, a felted fabric having a smooth wool side and a shaggy mohair side, said fabric being composed of wool and mohair with the wool predominating 65 at one side and the mohair at the other side of the middle line of the thickness thereof; substantially as set forth.

2. As a new article of manufacture, a felted fabric having a smooth wool side and a shaggy 70 mohair side, said fabric being composed of wool and mohair with some of the mohair extending to but not beyond the surface of said wool side; substantially as set forth.

3. The process of producing a felted fabric 75 composed of wool and mohair consisting in forming a bat of wool and a bat of wool and mohair mixed together, placing these bats into face to face contact with each other, subjecting the composite bat thus formed to hardening treatment and then felting the same; substantially as set forth. 80

4. The process of producing a felted fabric composed of wool and mohair consisting in forming a bat of wool and a bat of wool and 85 mohair mixed together, bringing these bats into face to face union with each other and felting the same together to form a fabric, shearing the wool side of the fabric to smooth-finish the same and remove any protruding 90 mohair, and napping up the surface of the mohair side of the fabric; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 20th day of 95 January, A. D. 1904.

GEORGE DAVISON, JR.

Witnesses:

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FRED W. HALL.