

(No Model.)

2 Sheets—Sheet 1.

U. S. S. DAHLERUP.  
COTTON WOOL MATTRESS.

No. 568,240.

Patented Sept. 22, 1896.

Fig. 1.

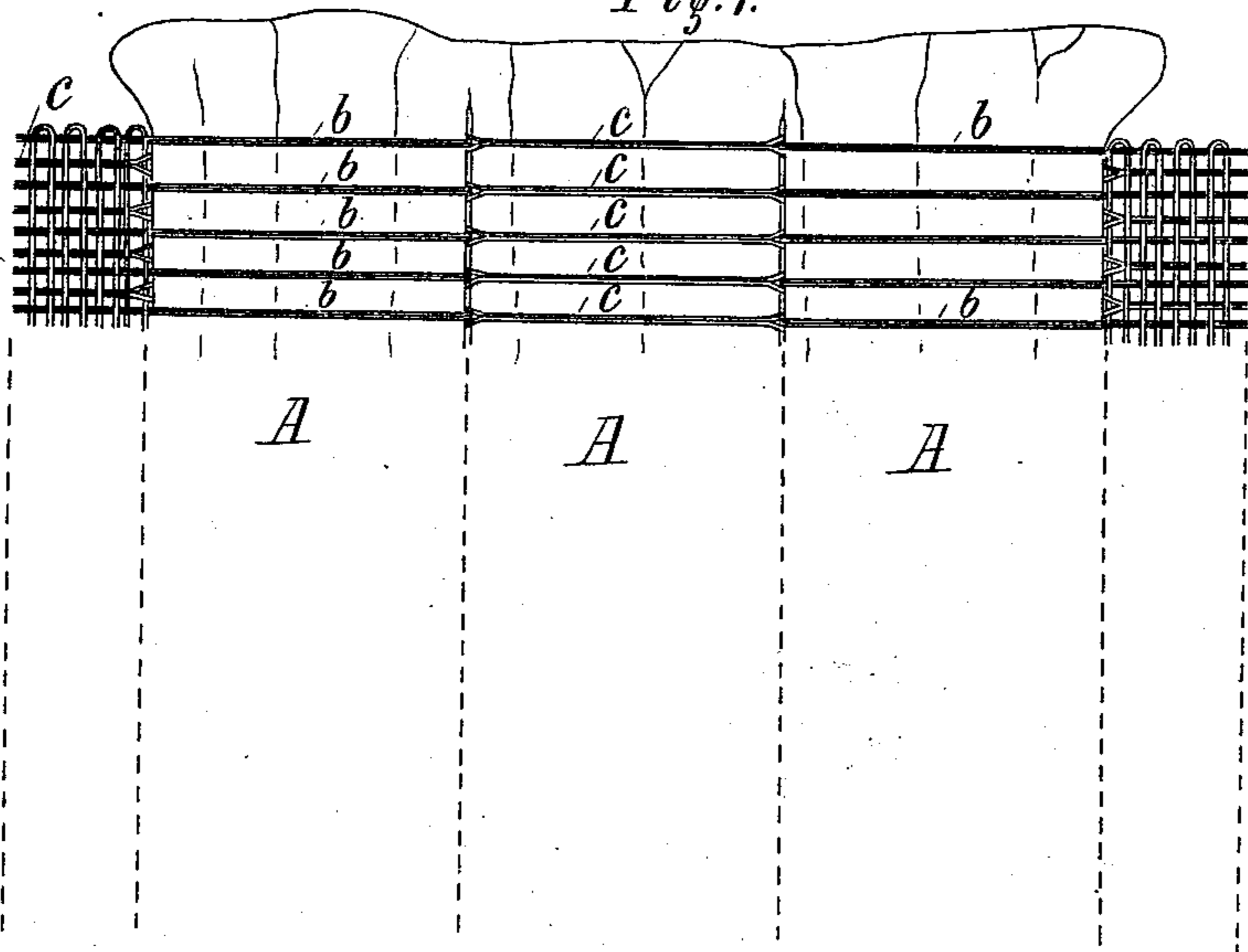


Fig. 2.

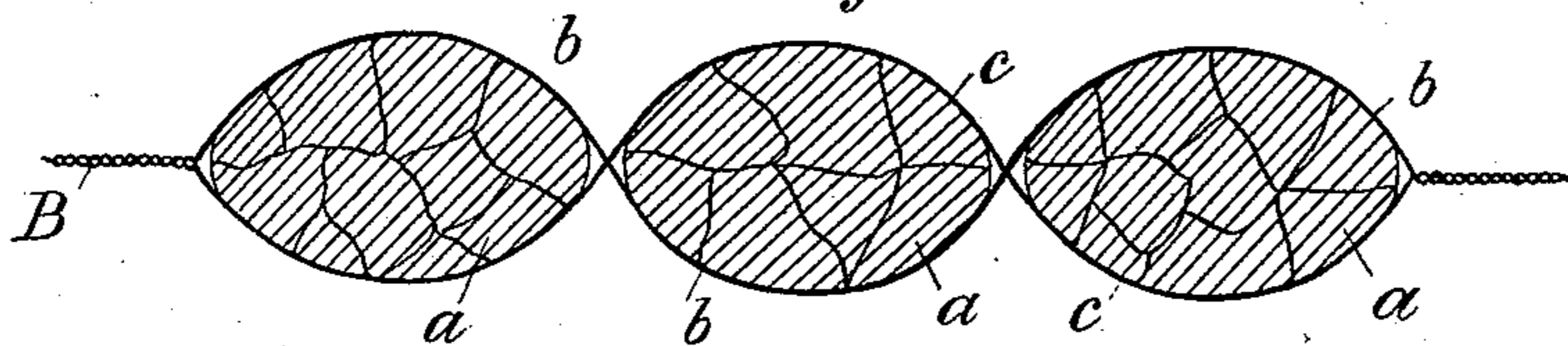
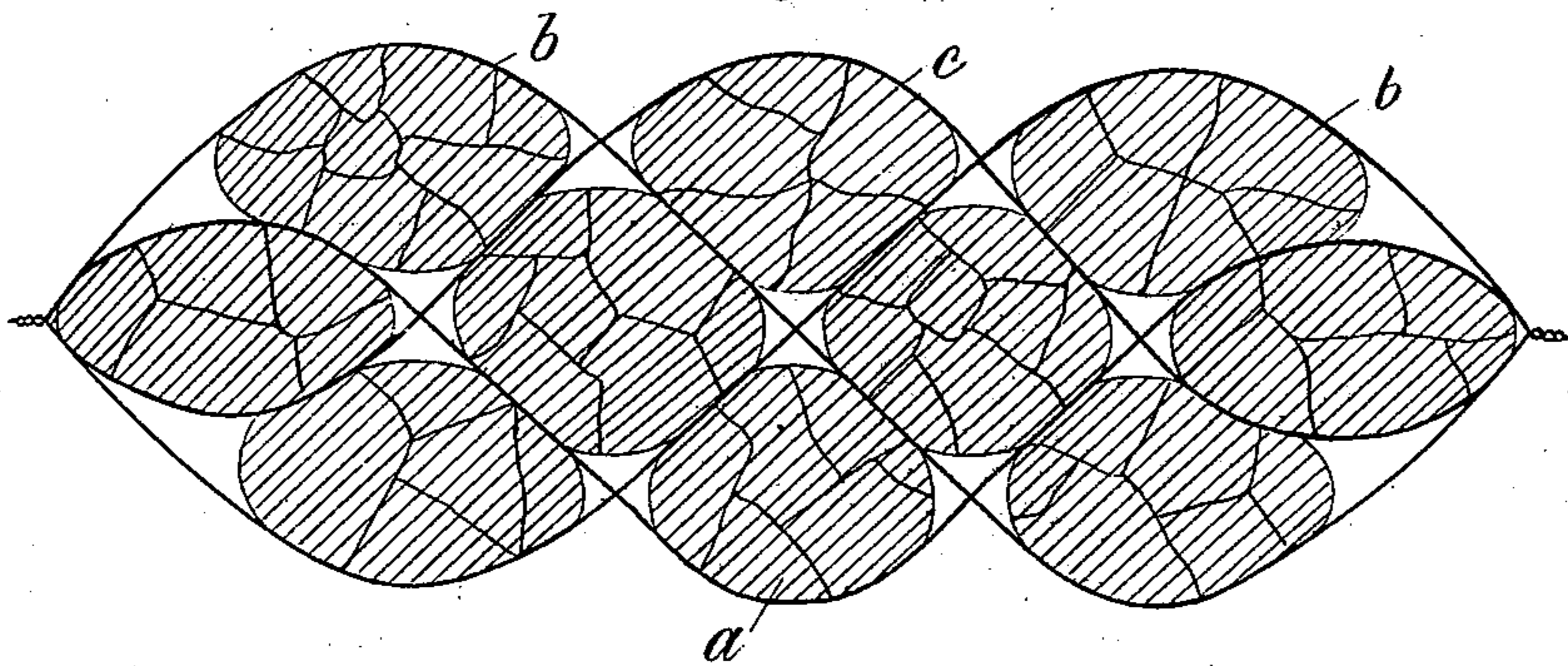


Fig. 2<sup>a</sup>



WITNESSES.

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(No Model.)

U. S. S. DAHLERUP.  
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Fig. 3.

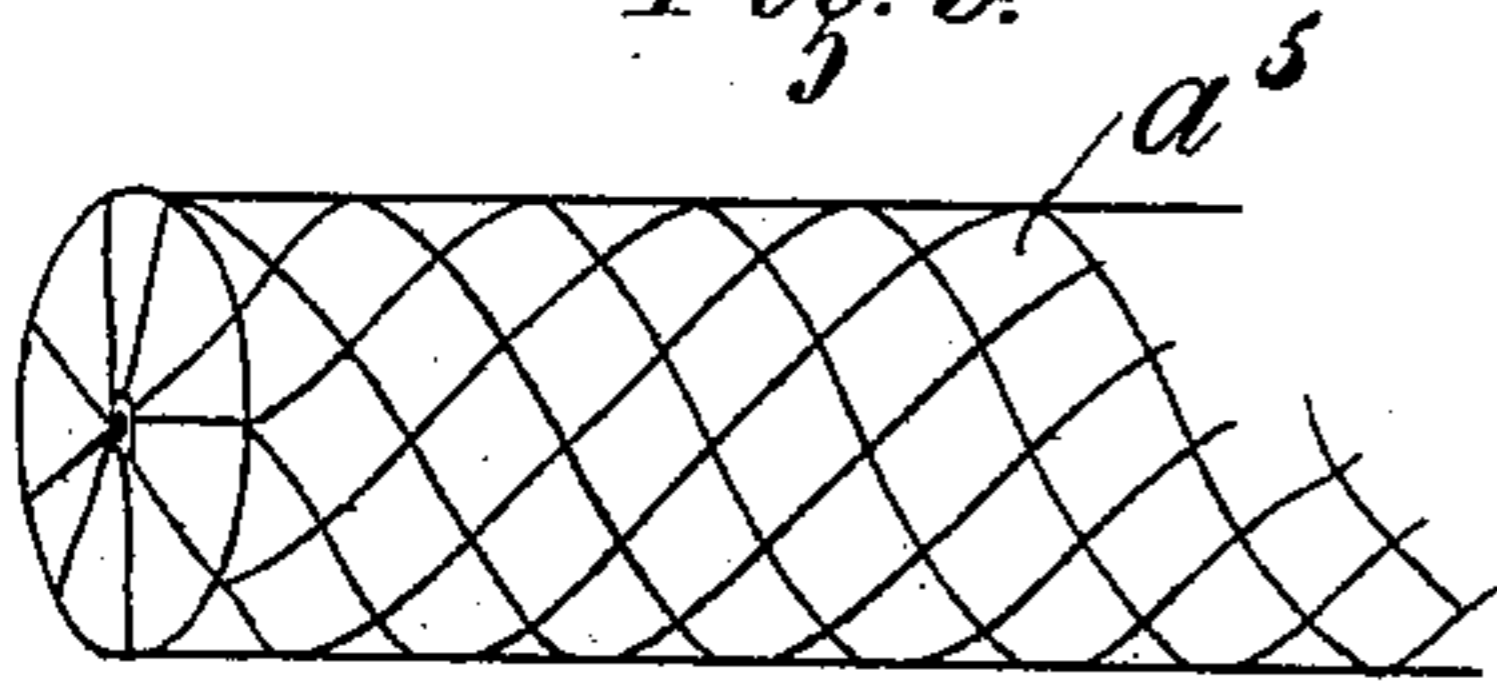


Fig. 4.

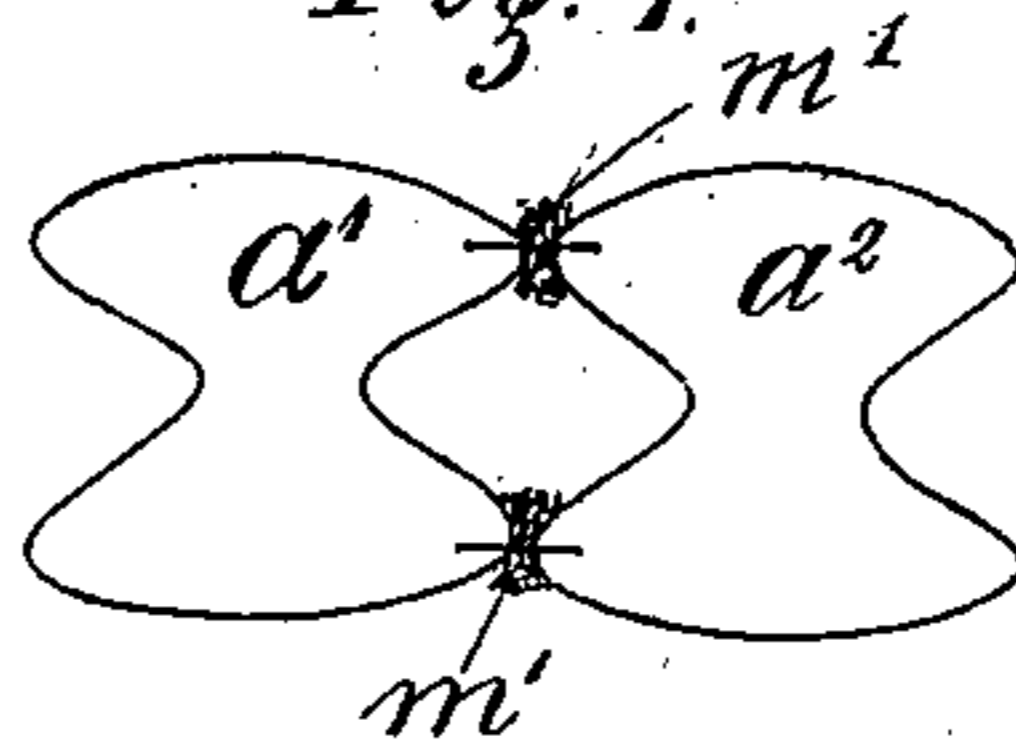


Fig. 5.

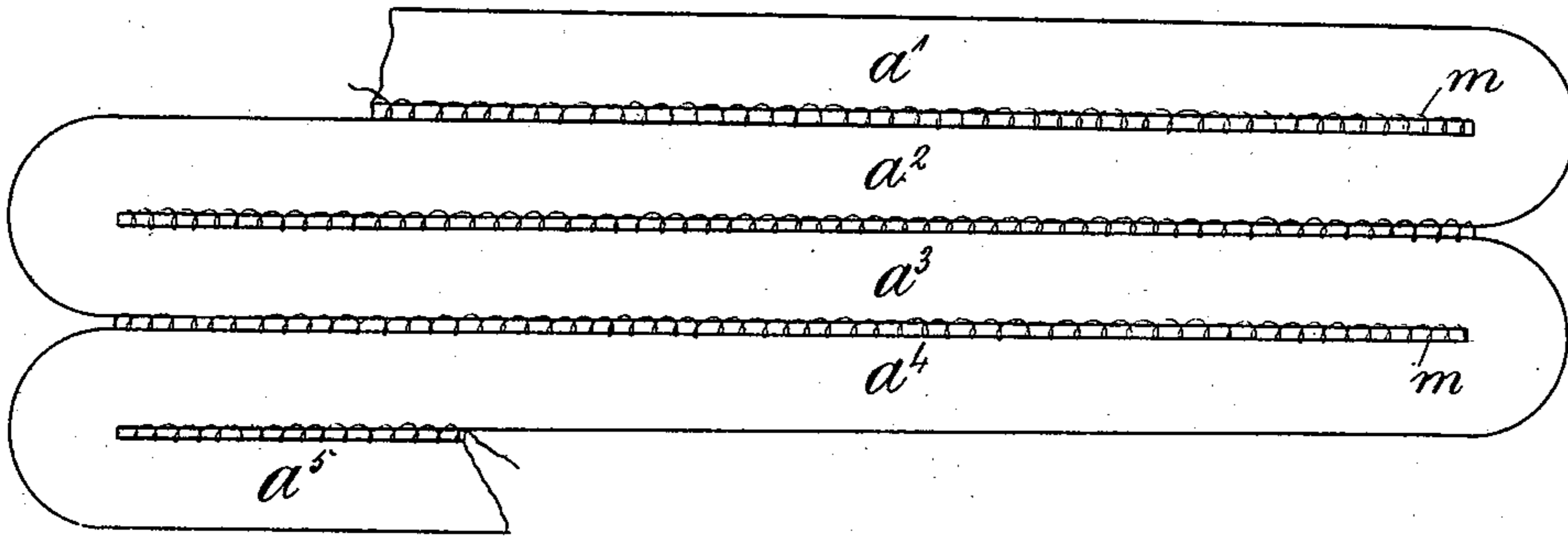


Fig. 6.

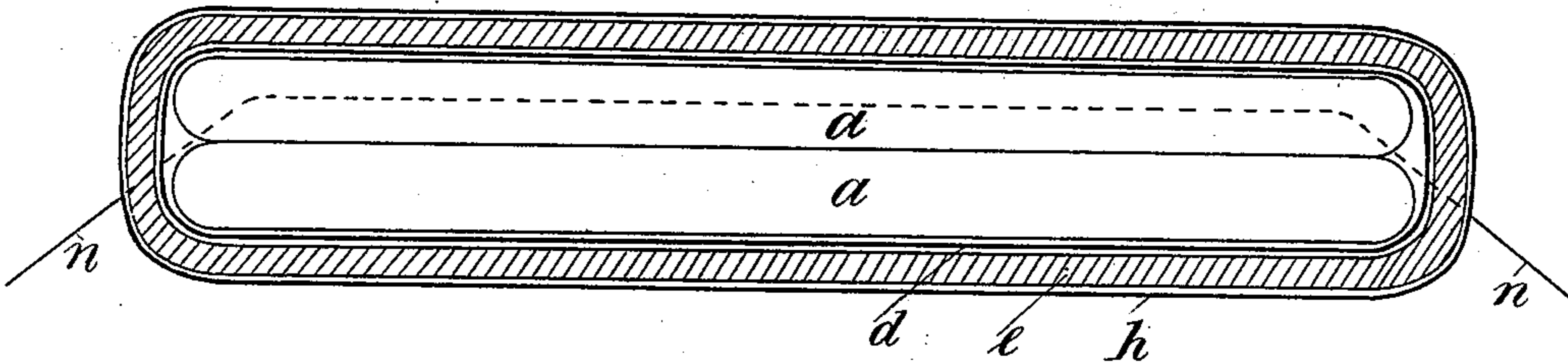
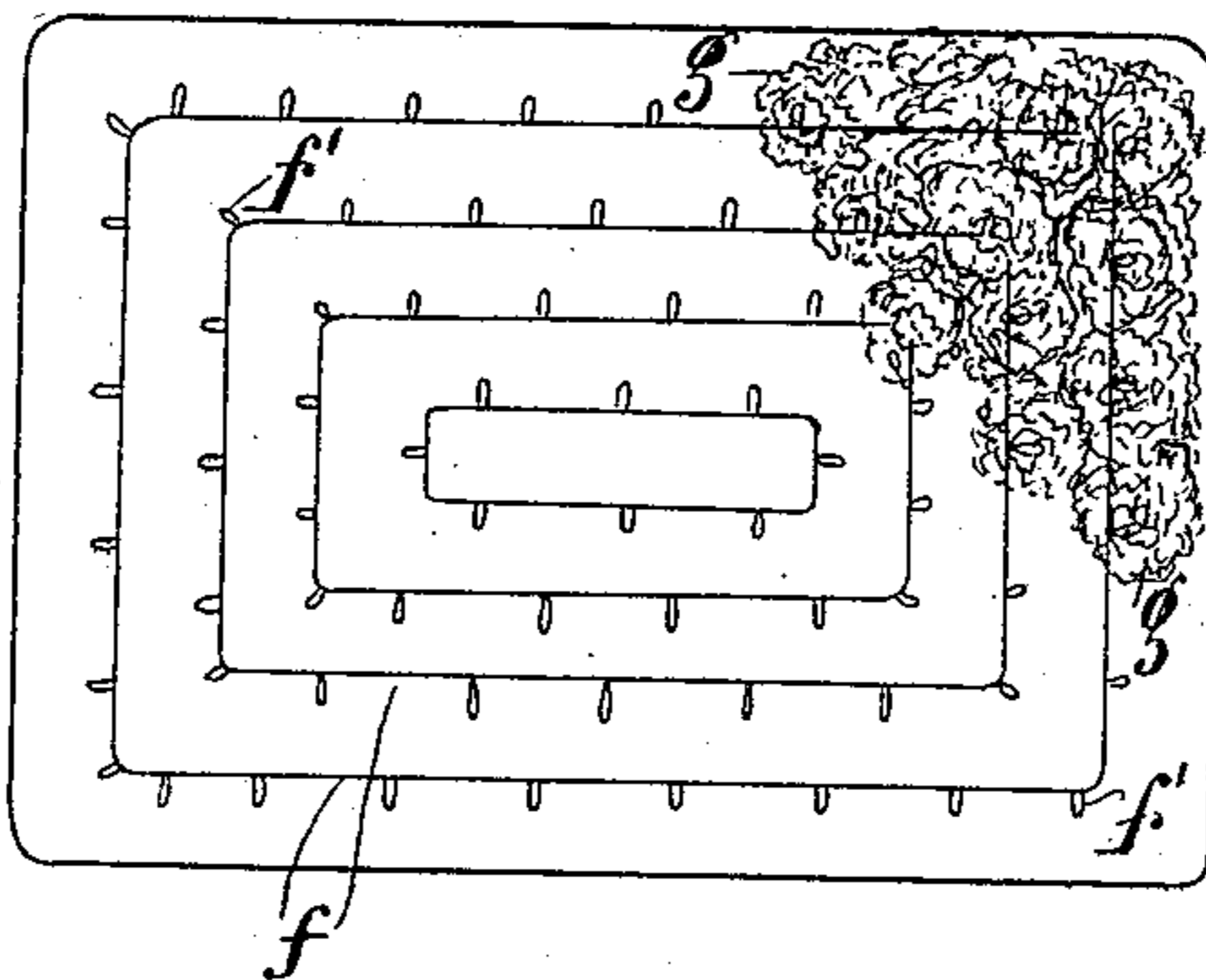


Fig. 7.



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# UNITED STATES PATENT OFFICE.

URSULA SIGNE SOFIE DAHLERUP, OF COPENHAGEN, DENMARK, ASSIGNOR  
OF ONE-HALF TO CHARLES CHRISTENSEN, OF SAME PLACE.

## COTTON-WOOL MATTRESS.

SPECIFICATION forming part of Letters Patent No. 568,240, dated September 22, 1896.

Application filed March 6, 1896. Serial No. 582,067. (No model.) Patented in Sweden June 20, 1895, No. 6,134, and in Norway August 30, 1895, No. 3,967.

*To all whom it may concern:*

Be it known that I, URSULA SIGNE SOFIE DAHLERUP, of Charlottenlund, near Copenhagen, Denmark, have invented certain new and useful Improvements in Cotton-Wool Mattresses and Pillows, (for which I have obtained Letters Patent in Sweden, No. 6,134, dated June 20, 1895, and in Norway, No. 3,967, dated August 30, 1895,) of which the following is a specification.

The object of the invention is to provide an improved mattress, pillow, or the like, of cotton-wool or equivalent material, so constructed that increased elasticity is obtained, hygiene will be promoted, and a covering for the mattress will be unnecessary, and a saving be thereby effected in the cost of manufacture.

The invention consists in the novel features hereinafter particularly described, and defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a broken plan view showing a portion of a mattress constructed in accordance with my invention. Fig. 2 is a cross-sectional view thereof. Fig. 2<sup>a</sup> is a cross-sectional view illustrating a slight modification. Fig. 3 is broken perspective view of a stuffing especially adapted to my improved material, in the formation of stuffed pillows, for instance. Fig. 4 represents the cross-sectional form preferably given such stuffing in practice. Fig. 5 is a broken plan view of a continuous piece of such stuffing bent on itself a number of times to provide the desired breadth of surface. Fig. 6 is a vertical sectional view of a pillow or the like having two layers of said stuffing and a covering of my improved cotton-wool material; and Fig. 7 is a sectional plan view of a pillow having a further covering, as hereinafter pointed out.

In forming a mattress in accordance with my invention several strips *a* of cotton-wool are fastened together in a bunch or group *A*, each group comprising, say, from six to twelve strips. The groups *A* thus made are formed into a woven fabric, the groups or bunches

*A* forming the weft of the fabric and threads *b* and *c* forming the warp, as indicated in Figs. 1 and 2. The ends of the warp-threads are employed in forming a border *B* on the fabric, ordinary weft-threads being employed in such borders. By using more or less strips *a* to each bunch the fabric may be made thinner or thicker, as desired, varying from one-fourth of an inch to four inches in thickness; or, if desired, the strips may be employed with suitable warp-threads *b c* to form a multiple-ply fabric, as illustrated in Fig. 2<sup>a</sup>, whereby a thick and comfortable mattress will be formed without the employment of a special stuffing.

It will be evident such a mattress possesses many advantages, since it is very light and durable and no covering is necessary, which results in a saving in the cost of manufacture; also, air may circulate through the mattress, and the latter may be readily washed, and thereby hygiene is materially promoted, thus adapting the material to hospital as well as household use.

The material described may be used to form pillows and cushions by placing several layers thereof in a loose case. Where it is desired to give adventitious elasticity to the mattress or pillow, I provide a special stuffing, as illustrated in Figs. 3 to 7. Thus I form a woven or plaited cylindrical structure *a*<sup>5</sup> of fine hard-drawn steel wire, and the sides of such woven-wire material are pressed inward to form reëntrant recesses, as shown in Fig. 4. Preferably this material is given considerable length and is bent several times on itself, as shown in Fig. 5, to form the runs *a'* *a*<sup>3</sup> *a*<sup>3</sup> *a*<sup>4</sup>, &c., and the adjacent edges of the several runs are united by spirally-twisted threads or wires *m*. If desired, strips *m'* of cotton-wool may be interposed at the joints to prevent creaking resulting from the rubbing together of the edges of the woven wire, as in Fig. 4.

In Fig. 6 a pillow is shown formed of two layers of the stuffing *a*, one above the other, inclosed in a covering of sacking *d*, and around this is a covering *e* of my improved fabric, (shown in Figs. 1 and 2,) which in this instance has a casing *h*. In this figure

the letters *n* indicate strings for drawing the layers of stuffing into closer relation.

5 The pillow constructed as above described may have within the outer casing *h* tufts *g* of cotton-wool, horsehair, jute, or the like, the tufts being held by loops *f'* in strings *f*.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

10 1. The herein-described material for mattresses or the like, consisting of warp and weft, the weft-threads in the body being composed of strips of cotton-wool and the side edges of the fabric having ordinary weft-  
15 threads, substantially as described.

2. A mattress, pillow or the like, formed of a woven fabric having a weft consisting of

strips of cotton-wool, and a filling composed of tubes of woven wire side by side, substantially as described. 20

3. A mattress, pillow or the like, having a covering of a woven fabric, the weft of which consists of strips of cotton-wool, and a filling of woven-wire tubes arranged side by side, the sides of the tubes having reëtrant for- 25 mation, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

URSULA SIGNE SOFIE DAHLERUP.

Witnesses:

ROBT. J. KIRK,

L. HOFMAN BANGS.