

No. 667,699.

Patented Feb. 12, 1901.

R. HEATON.
FABRIC FOR FELT BOOTS.
(Application filed Sept. 3, 1896.)

(No Model.)

Fig. 1.

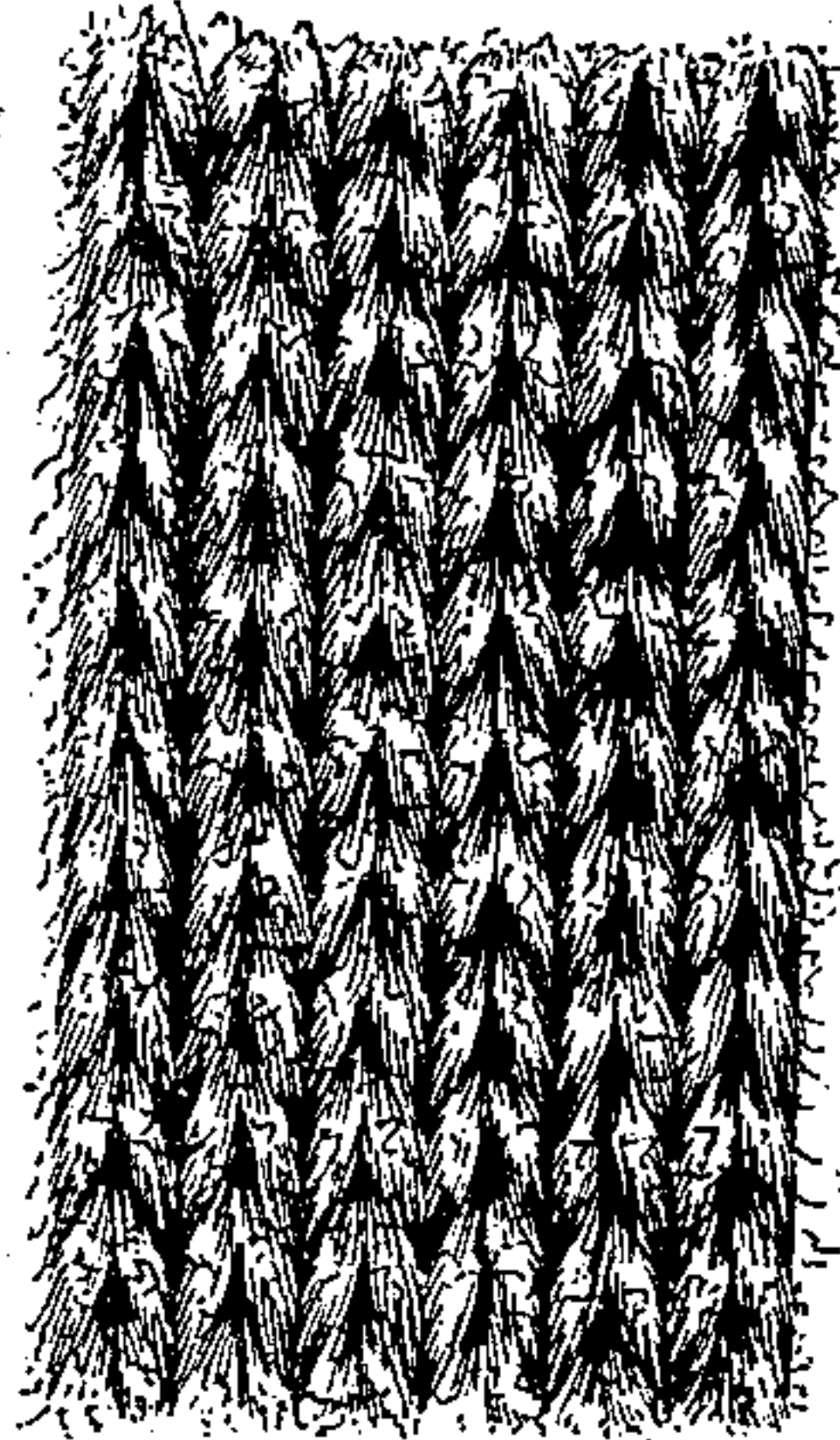
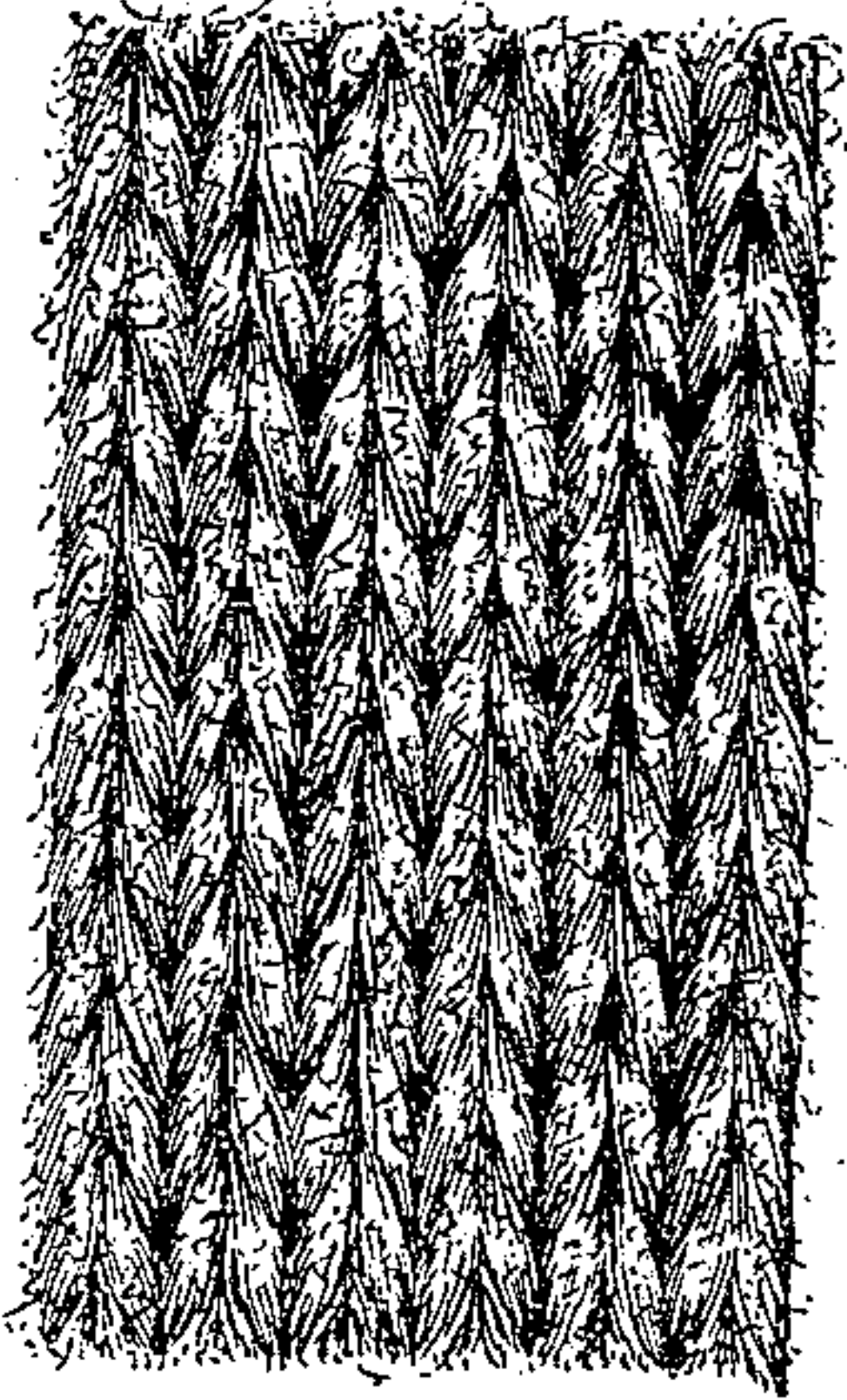


Fig. 2.

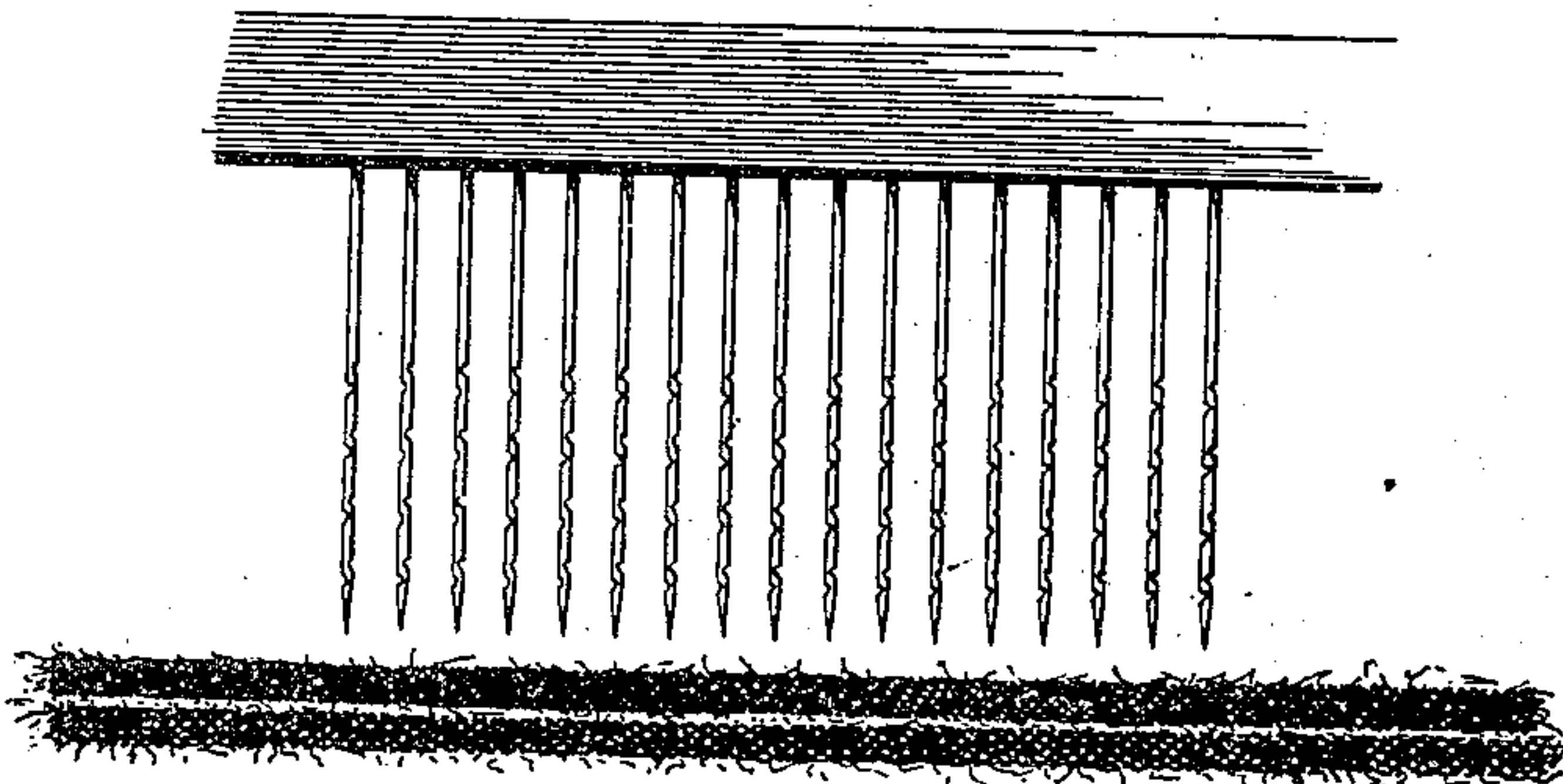


Fig. 3.

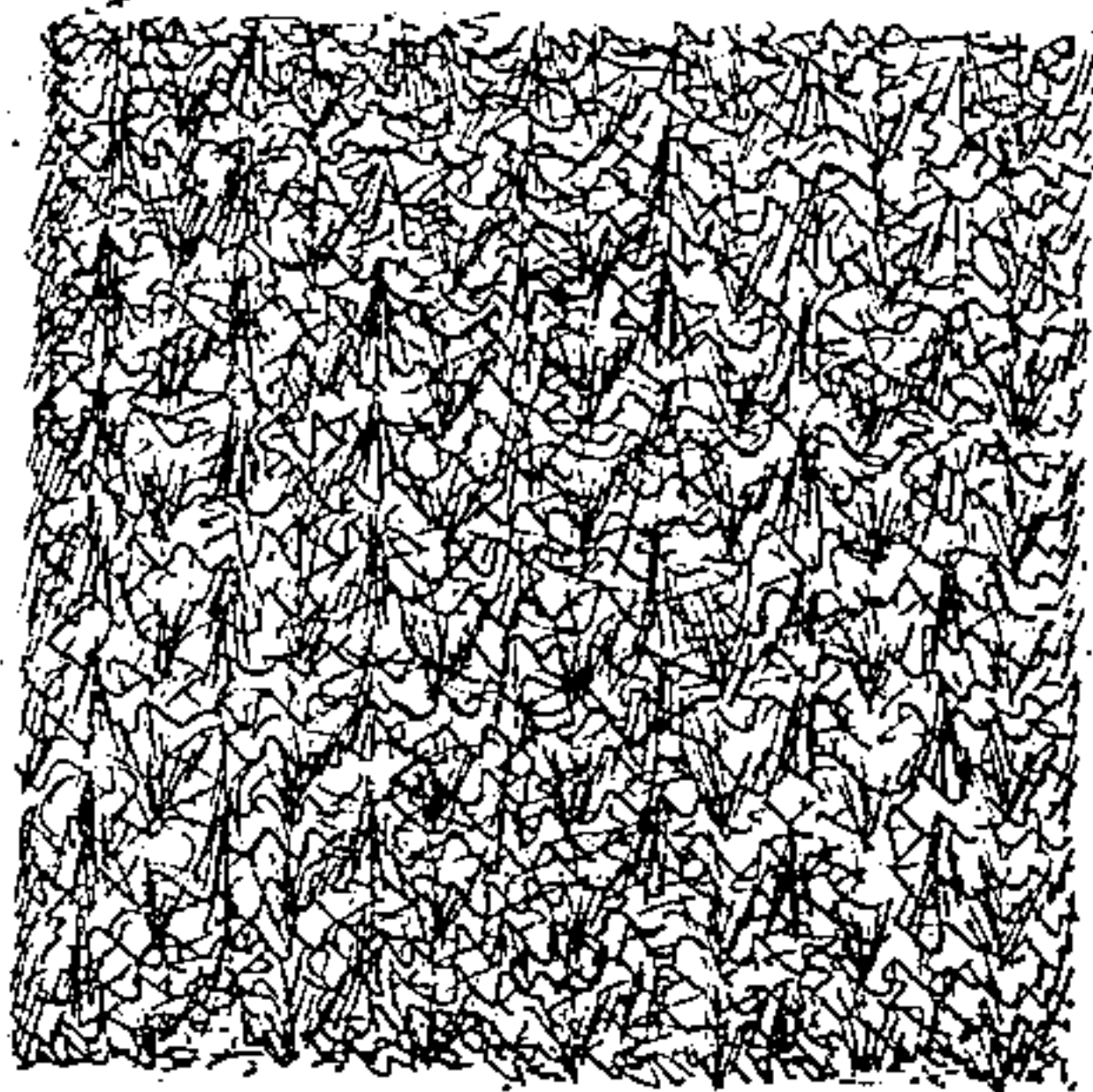
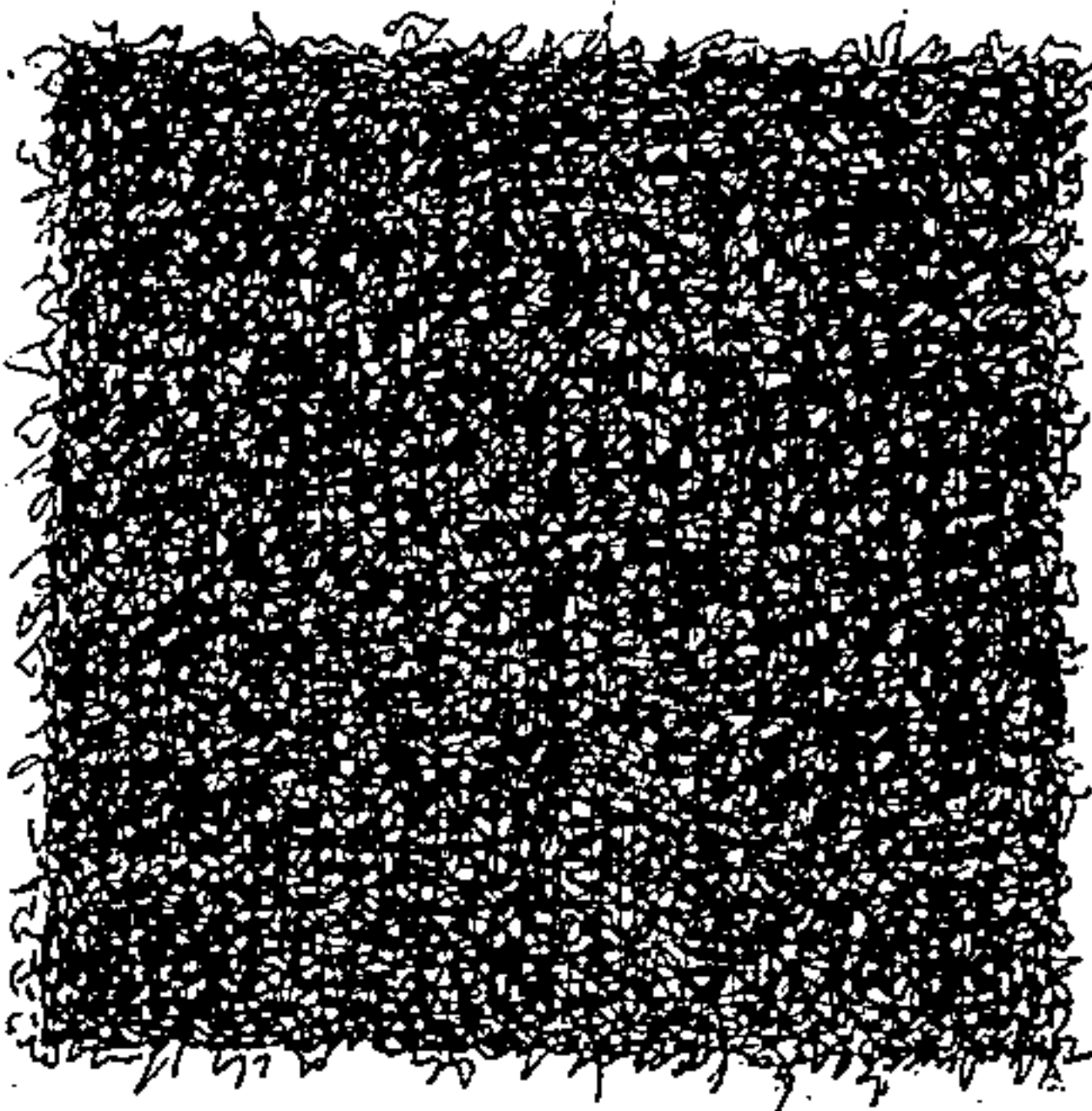


Fig. 4.



WITNESSES

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RYAN HEATON, OF SANDY HOOK, CONNECTICUT, ASSIGNOR TO THE UNITED STATES RUBBER COMPANY, OF NEW JERSEY.

FABRIC FOR FELT BOOTS.

SPECIFICATION forming part of Letters Patent No. 667,699, dated February 12, 1901.

Application filed September 3, 1896. Serial No. 604,762. (No specimens.)

To all whom it may concern:

Be it known that I, RYAN HEATON, a citizen of the United States of America, residing at Sandy Hook, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Fabrics for Felt Boots; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to an improved fabric for the manufacture of felt boots and analogous articles; and it consists in a fabric made up of two separate pieces of knit goods the fibers of which are united or intermixed by means of barbed needles, after which the goods are fulled, thus making a fabric which is much stronger than a felt fabric of the same material and when made up into felt boots or analogous articles is much stronger than the material used in the manufacture of felt boots as known to the trade.

In the accompanying drawings, forming part of this specification, Figure 1 represents two pieces of woven or knitted fabric. Fig. 2 shows the barbed needles which are used in uniting the fibers of the two fabrics. Fig. 3 shows the fabric after being united by the needles. Fig. 4 is a view showing the general appearance of the complete fabric after being fulled.

In the manufacture of the product I take two or more pieces of woven fabric, Fig. 1, and place them one upon the other, Fig. 2, and the fibers of these pieces are united by passing barbed needles through them. After the pieces have been thus united the fabric will lose to a great extent the appearance of a woven fabric, Fig. 3, and the fabric so constructed will be stronger than the ordinary felted goods. After the two or more pieces of fabric have been connected or their fibers united by the barbed needles they are then

fulled in the usual manner, Fig. 4, when the product is ready to be made up into the desired article. No flock or bat is used in making the fabric, as the barbed-needle process acts to thoroughly intermingle the fibers to present a strong and durable article and the fulling process hardens the fabric by condensing the fibers.

When this fabric is made into boots and analogous articles such products are known as "woven" or "all-knit" bats and are much stronger than felt articles made after the ordinary manner.

I am aware that prior to my invention it has been proposed to make a double fabric and felt the same, and I do not claim such a fabric broadly. An example of the fabric which I hereby disclaim may be found described in the British patent issued to Nickels, No. 13,364 of 1850.

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

1. A fabric for wool boots and similar articles composed of two separate woven or knitted woolen fabrics superimposed, the fibers of one of said fabrics being in part introduced into and through the other fabric, and held in place by shrinking or fulling.

2. The process of making a fabric for wool boots and similar articles, consisting in forming by weaving or knitting a plurality of suitable woolen fabrics of larger dimensions than the finished boot; of assembling said fabrics side by side; of then uniting said assembled fabrics by punching fibers of one of said fabrics into the other; and subsequently fulling the combined fabric and lasting it to form the finished product.

In testimony whereof I affix my signature in presence of two witnesses.

RYAN HEATON.

Witnesses:

HENRY W. HEATON,
JAMES H. WARNER.