

(No Model.)

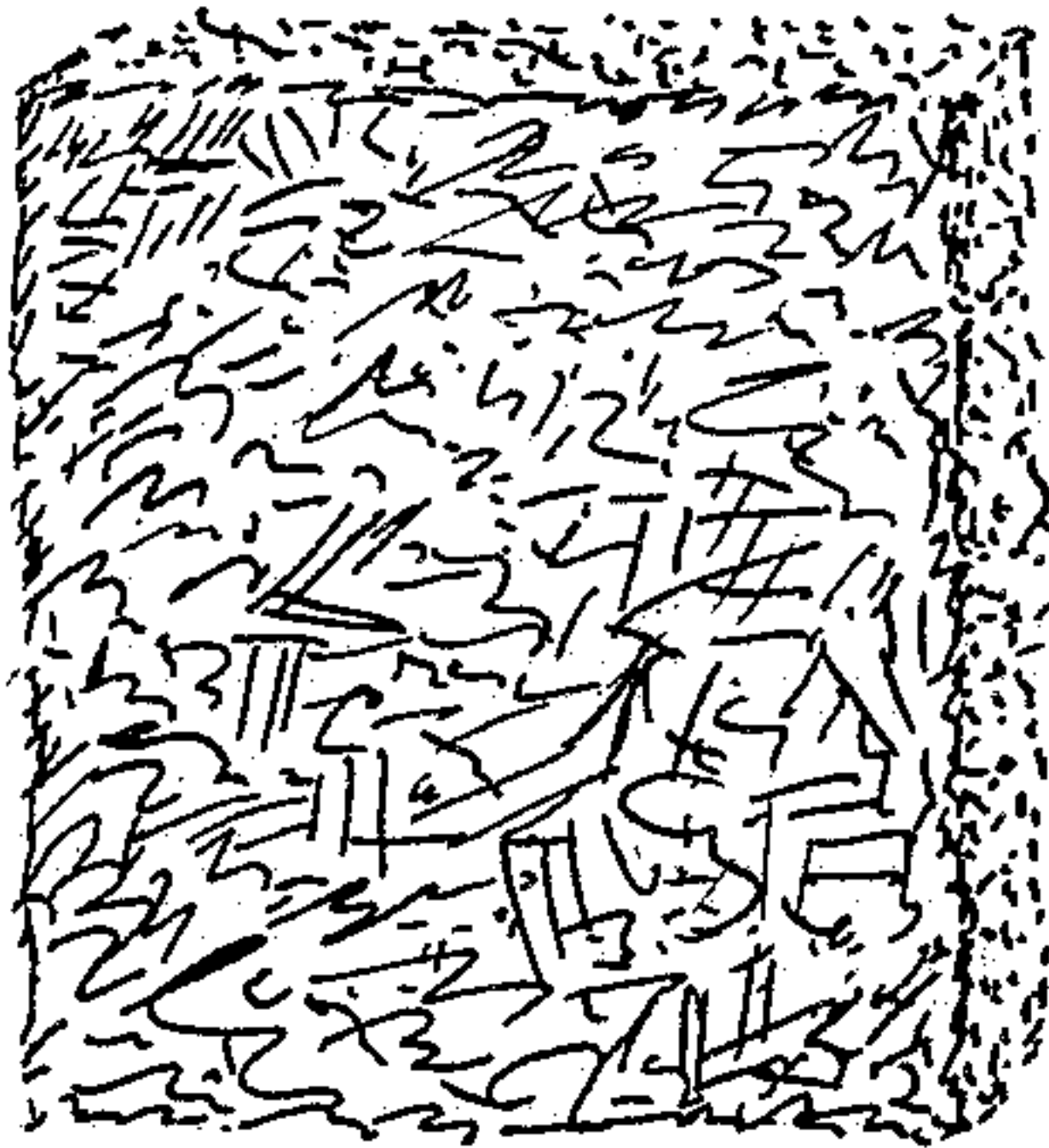
S. G. ALEXANDER.

FELT BOOT.

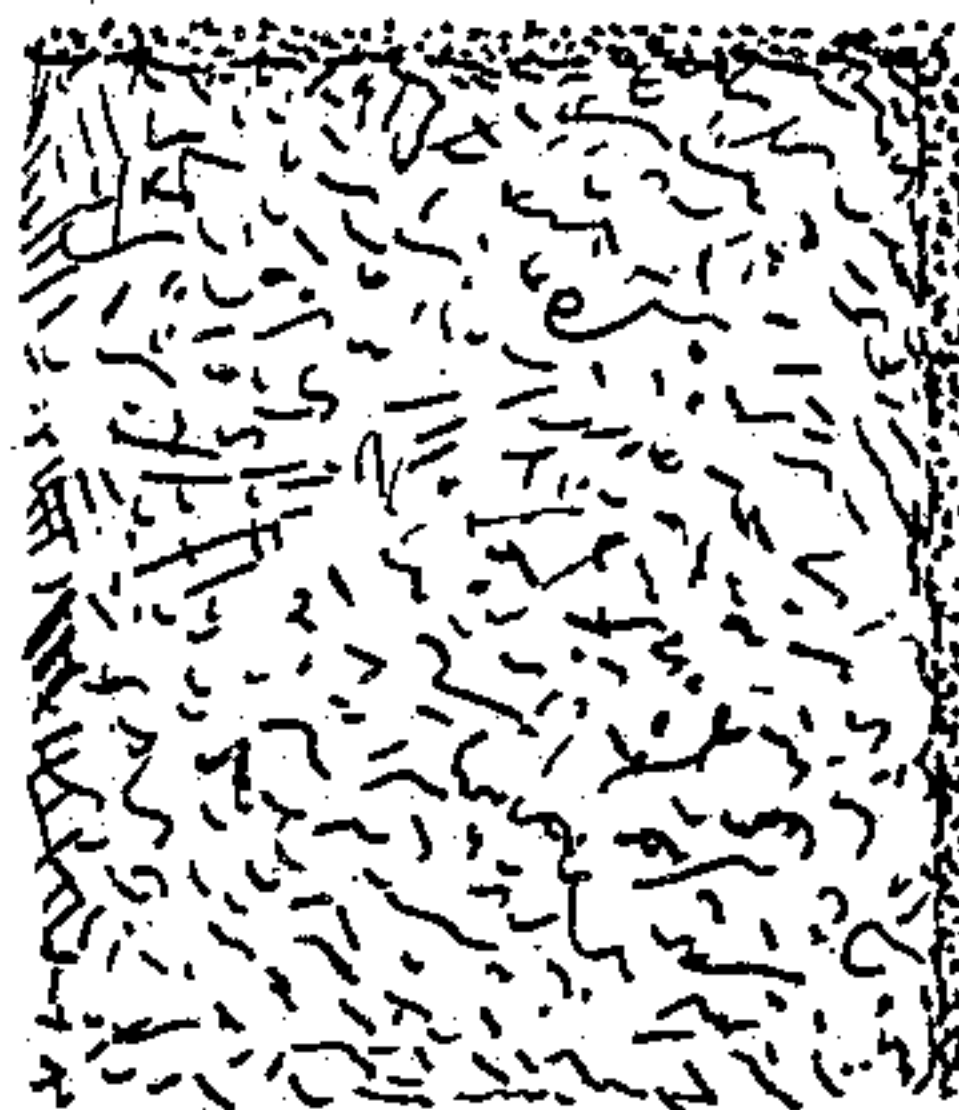
No. 345,471.

Patented July 13, 1886.

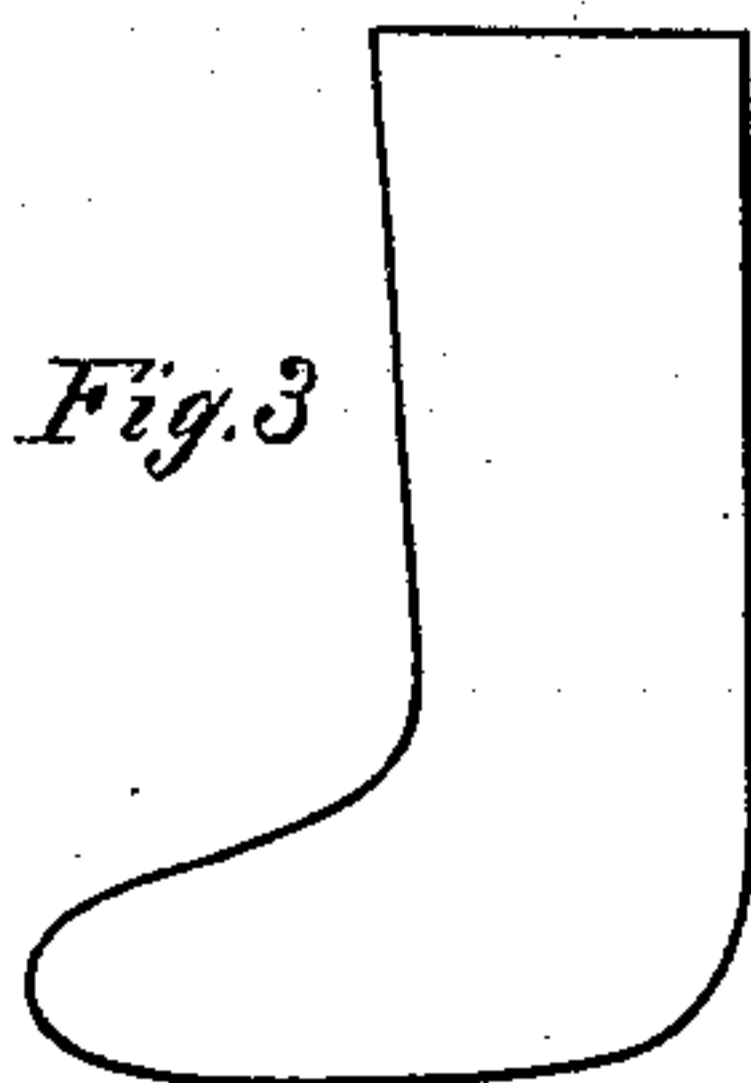
*Fig. 1*



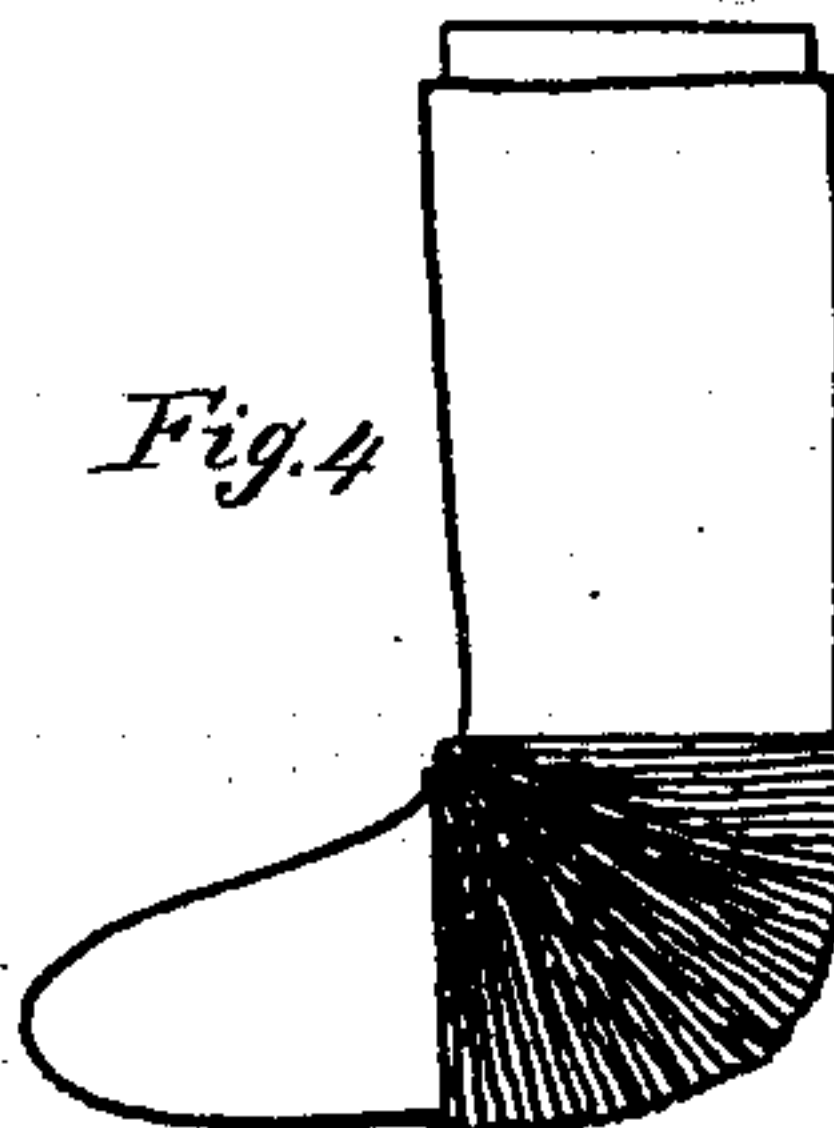
*Fig. 2*



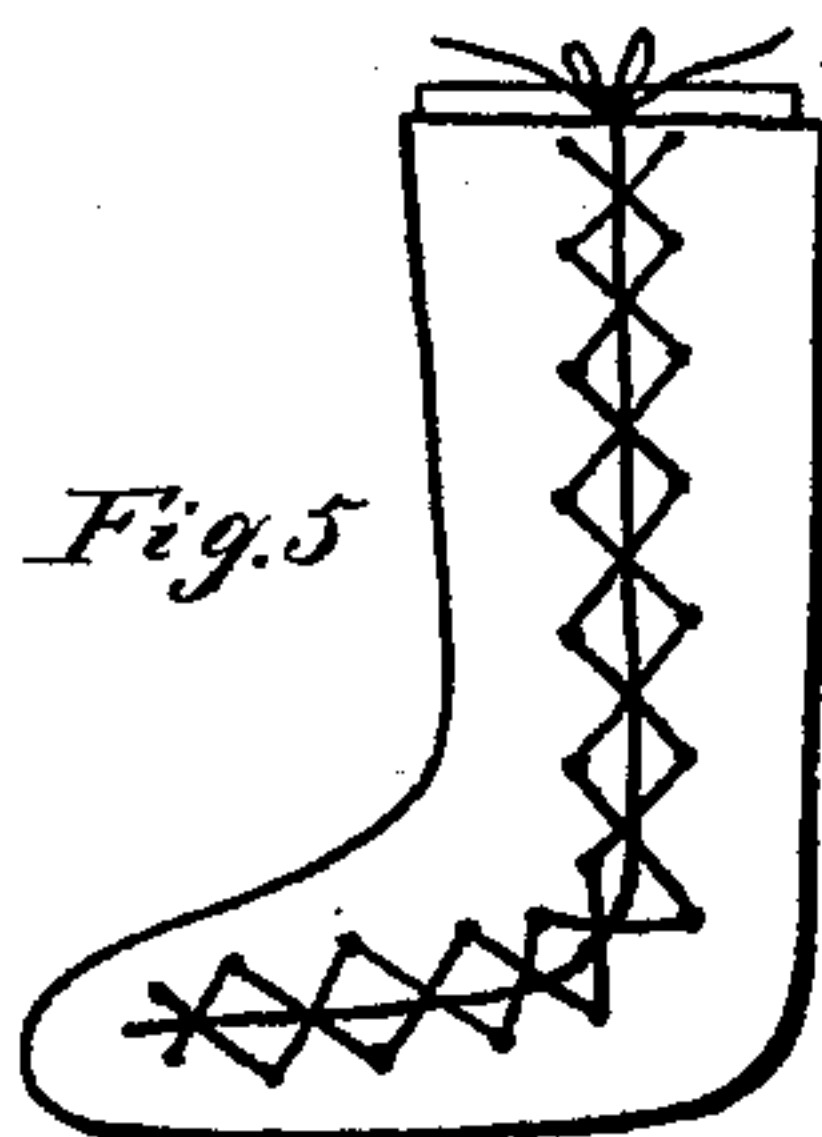
*Fig. 3*



*Fig. 4*



*Fig. 5*



Attest:  
John Schuman.  
*[Signature]*

Inventor:  
Samuel G. Alexander.  
by his Atty  
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# UNITED STATES PATENT OFFICE.

SAMUEL G. ALEXANDER, OF DETROIT, MICHIGAN.

## FELT BOOT.

SPECIFICATION forming part of Letters Patent No. 345,471, dated July 13, 1886.

Application filed April 22, 1886. Serial No. 199,830. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL G. ALEXANDER, of Detroit, in the county of Wayne and State of Michigan, have invented new and  
5 useful Improvements in Cabled Felt Boots; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

10 This invention relates to certain new and useful improvements in felt boots or stockings.

My invention relates more particularly to strengthening the boot or stocking at the ankle  
15 and instep, where such devices so frequently break and fail while being worn, by the incorporation with the felt of which the boot or stocking is made of cables or cords, preferably made of wool and thoroughly incorporated with the felt during the process of manufacture.  
20

Figure 1 represents a thick bat of soft wool as it comes from the card. Fig. 2 represents the same after it has been partially felted down  
25 or hardened. Fig. 3 represents a flat form of zinc or other equivalent substance. Fig. 4 represents such flat form having a felt stocking or boot thereon, and also showing the position and means employed by me for strengthening the boot at the ankle and instep. Fig. 5 is a  
30 perspective view illustrating the same with a jacket fastened over the whole.

I desire it to be understood that the felted boot or stocking herein referred to is made  
35 from bats of wool in the manner well known to those skilled in the art and felting into the same the cable strengthening at the heel and ankle, so as to thoroughly incorporate them with the felt, and then fulling them to reduce  
40 the article to the proper size for a boot or shoe, after which the same is finished or shaped over a last or form.

My invention may be applied upon the outside of a boot of a single thickness of felt, or  
45 it may be applied to a boot of double thickness of felt by incorporating the re-enforcements between the two layers of felt in a manner well known to those accustomed to the manufacture of this class of goods.

The bat having been first worked into felt 50 and formed upon the flat zinc form, I take a cable made of several strands of wool yarn, and, commencing at the point where the leg of the article turns into the foot, wind such cable or wool yarn diagonally from that point to a point 55 underneath what might be properly termed the "hollow" of the boot, or that portion of the same which is designed to come under the hollow of the foot of the wearer, so that from that point to the heel the strands of the cable run 60 in converging lines to the point at the instep or bend. From the latter point I also wind the cable in diverging lines over the heel far enough up the rear side of the leg to thoroughly re-enforce the ankle part. Then, if a 65 single thickness of felt is only required in the boot, I felt, by the well-known process, the wool cable and the felt or body of the boot until the two are thoroughly amalgamated and incorporated, after which the boot is removed 70 from the enlarged zinc form and reduced by the well-known process of fulling to the size required. If a double-thickness boot is required, after winding the cable, as above described, I wrap another piece of felt around 75 the form and thoroughly felt the two thicknesses with the interposed woollen cables and finish as already described. In this manner I am able to produce a boot wherein those parts that are apt to break down or give out—such 80 as at the ankle and instep—are strengthened by re-enforcing the same as above described, while at the same time I avoid the necessity of using a knit fabric such as has been heretofore employed. 85

What I claim as my invention is—

As an improved article of manufacture, a felt boot or stocking re-enforced at the ankle and instep by wool yarn or cords wrapped around the same in the process of manufacture in lines diverging each way from the instep, said re-enforcement being thoroughly felted to the body of the boot or stocking, substantially as described. 90

SAMUEL G. ALEXANDER.

Witnesses:

DANIEL PENDERGAST,  
THOMAS R. GOODWIN.