

(No Model.)

2 Sheets—Sheet 1.

J. C. HILLMAN.
WOVEN FELTED BOOT.

No. 388,042.

Patented Aug. 21, 1888.

FIG 1

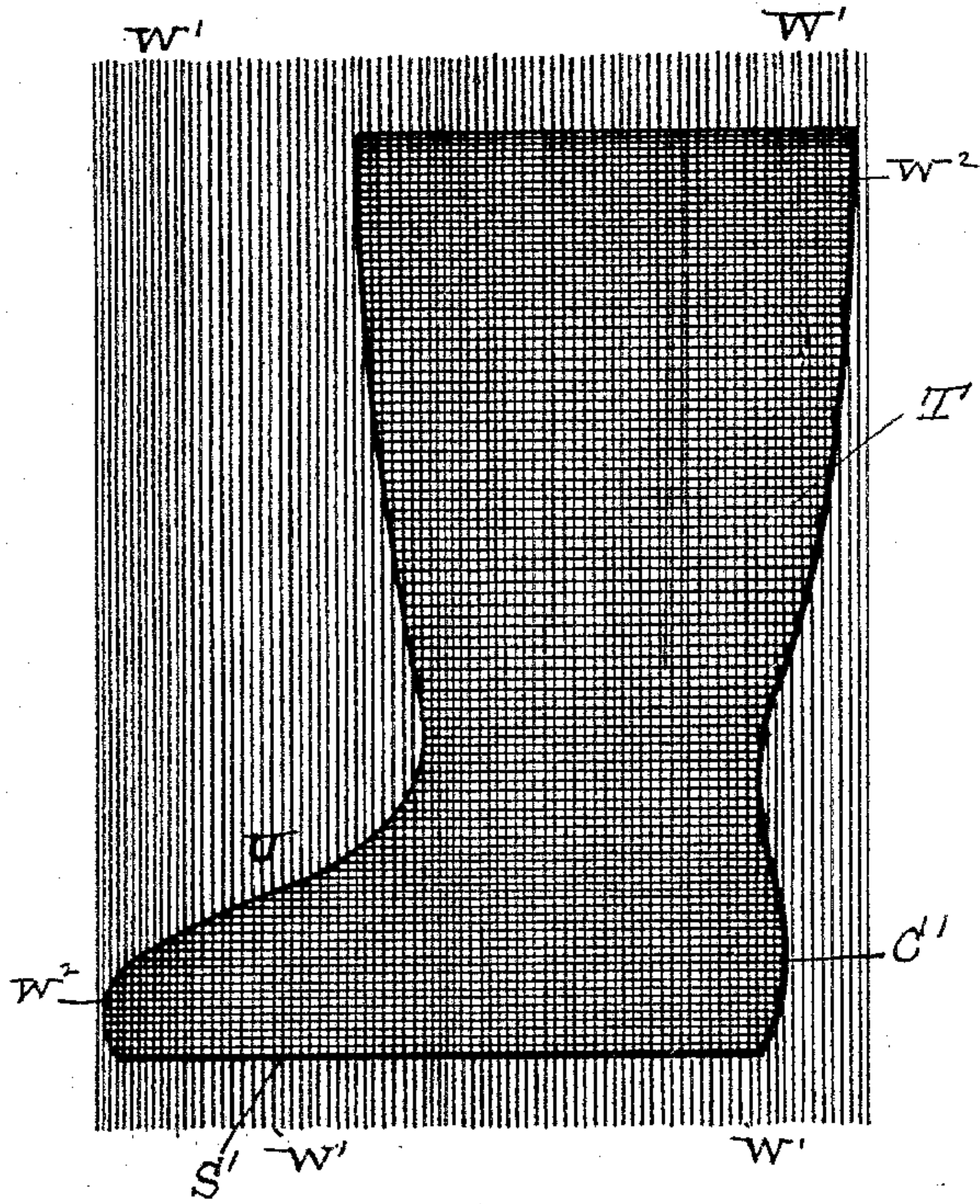


FIG 4

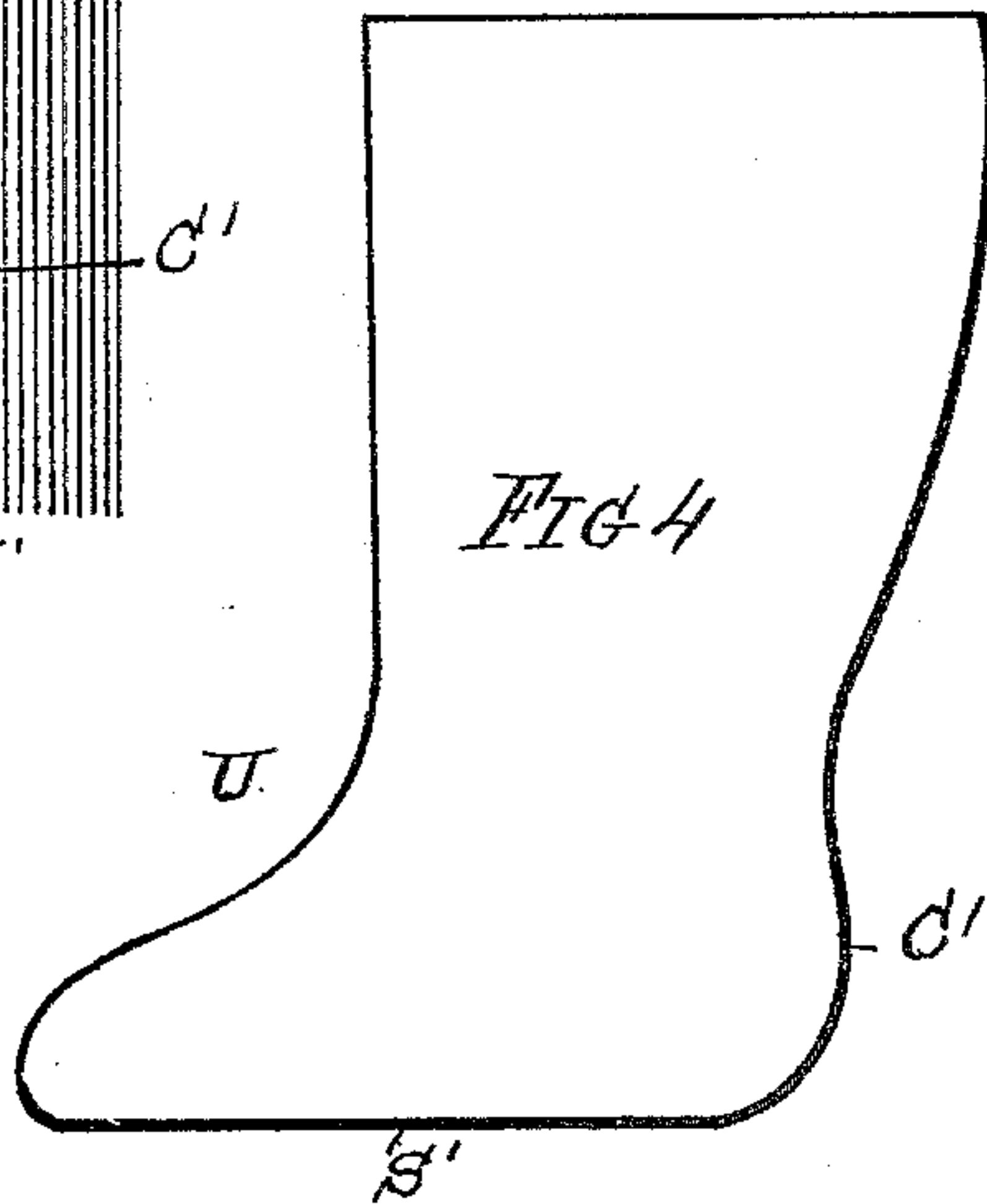
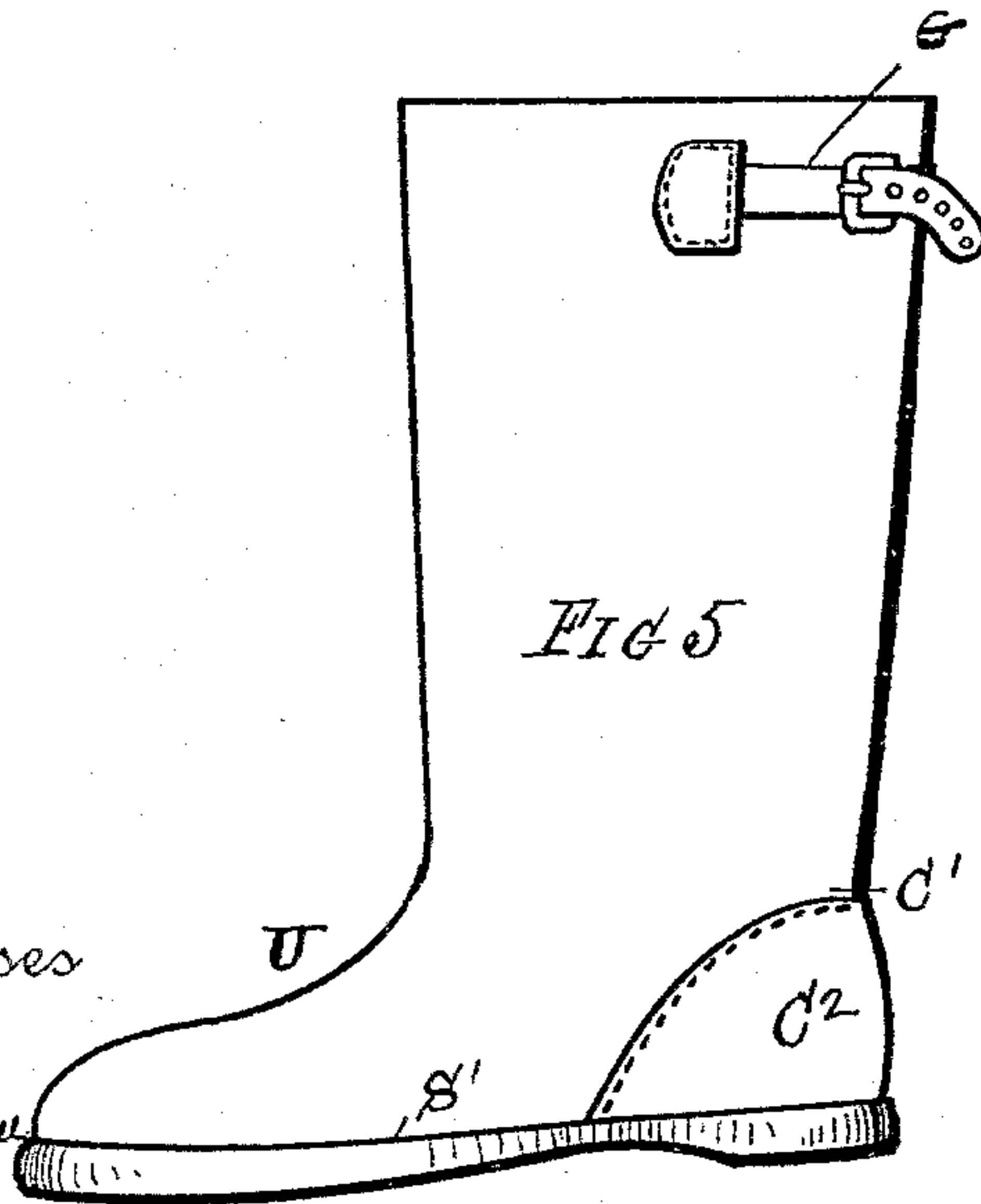


FIG 5



Witnesses
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Charles S. Brinton

Inventor
Judson C. Hillman
By W. E. Nagam atty

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FIG 2

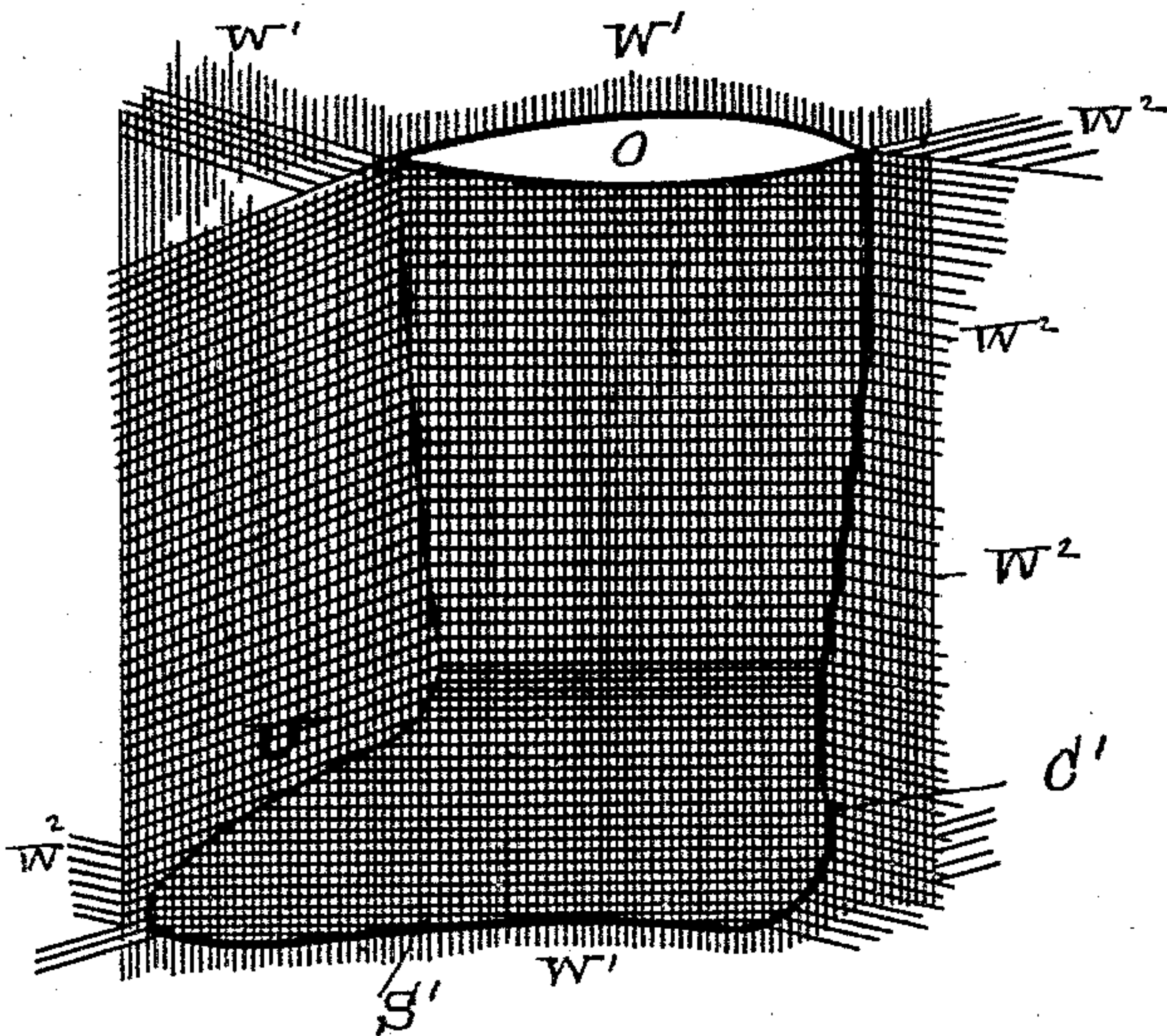
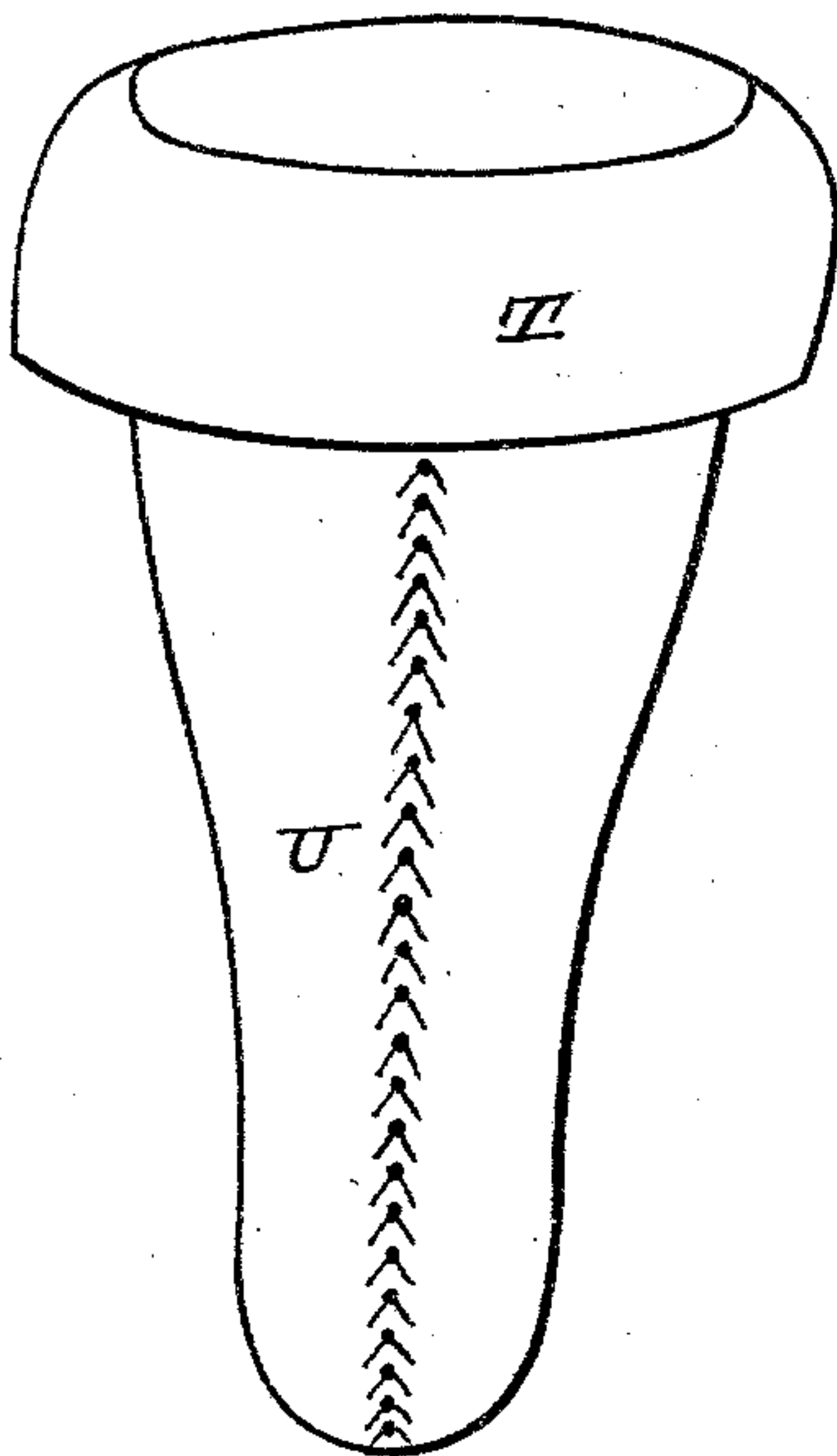


FIG 3



Witnesses,

Charles S. Brintnell,
Geo. A. Darby.

Inventor,

Judson C. Hillman,
by W. C. Hagan atty

UNITED STATES PATENT OFFICE.

JUDSON C. HILLMAN, OF HAGAMAN'S MILLS, NEW YORK, ASSIGNOR OF TWO-THIRDS TO ISAAC L. W. REYNOLDS, OF SAME PLACE, AND CHARLES B. KNOX, OF JOHNSTOWN, NEW YORK.

WOVEN FELTED BOOT.

SPECIFICATION forming part of Letters Patent No. 388,042, dated August 21, 1888.

Application filed November 30, 1887. Serial No. 256,516. (No model.)

To all whom it may concern:

Be it known that I, JUDSON C. HILLMAN, of Hagaman's Mills, county of Montgomery, and State of New York, have invented a new and useful Continuously - Woven Fabric Boot, of which the following is a specification.

My invention relates to improvements in the method of making fabric boots, it being the object and purpose of my invention to make the boots more serviceable so far as their wearing qualities are concerned, and to simplify their production.

As heretofore made, boots of this class have been knit and then felted or fulled to thicken up the material and adapt it for such uses. Boots of this class have also been made from material that was woven in a tubular form, that was cut and sewed to give it the desired shape. By my improvement the boots are woven to have the required form, and so woven that no seams are used in the "leg," "counter," "upper," and "sole" parts of the boot, said parts being woven in continuity.

Where boots of this class are knit, a hole worn into an exposed part, from the nature of knit fabric, soon enlarges under use, and where boots are made from woven material and the parts are cut and sewed to give them form the stitches are liable to give out. My improvement upon these older methods consists, as will be more fully detailed hereinafter, in producing the leg, upper, counter, and sole parts of the boot of continuously-woven material and without seams.

Accompanying this specification, to form a part of it, there are two plates of drawings containing five figures, illustrating my invention, with the same designation of parts by letter-reference used in all of them. Of these illustrations, Figure 1 shows a plan view of my improved boot after having been woven with the warp-threads remaining intact. Fig. 2 shows a perspective of the same, illustrating the relative position of the double form of warp-threads. Fig. 3 shows the boot after having been woven with the warp-threads joined at one of the sides, and with the boot shown as in part turned. Fig. 4 shows the

boot after having been woven and felted or fulled; and Fig. 5 shows the boot after having been finished, with an added sole, counter-reinforce, and top-gathering strap and buckle.

The several parts of the boot thus illustrated are designated by letter reference, and the several process steps by which it is produced are described as follows:

The letters W' designate the warp-threads, and W^2 the woof-threads.

The letter T indicates the boot-top, U the upper, and C' the counter, and C^2 the reinforce counter.

The letter S' indicates the sole, and G the gathering-strap.

The boot illustrated is as woven on a Jacquard loom, having double lines of warp-threads, so operated that the shuttle shall ply the woof so as to give the material woven a tubular form, as indicated at O , Fig. 2. By letting off warp-threads where it desired to narrow, and taking in warp-threads where it is desired to widen, the fabric, the boot form indicated at Figs. 1 and 2 is produced. When this has been done, the warp-threads at the front and back of the boot form so produced are secured and cut off, as indicated at Fig. 3. The woven boot is then turned, as appearing in Fig. 4, and fulled or felted by any of the usual and well-known processes. While I have described the top, upper, counter, and sole woven in the continuous piece, if desired, the top, counter, upper, and sole may be so woven with the sole part left open at the bottom, and the edges of the latter closed by securing and cutting off the warp-threads thereat.

If desired, at the ankle the boot may have thereat interwoven a double woof-thread, to thicken up and strengthen the fabric, and a gathering-strap. The supplemental sole S' may be made of felt, leather, or any other known suitable material, and the counter-reinforce C^2 may be made of leather, felt, or any other well-known and suitable material.

I am aware that it is not new to weave tubular-form fabric upon a Jacquard loom or other loom constructed to weave tubular fabric, my improved use of such mechanism as applied to produce a boot being in the method

adapted by me for widening out and narrowing in the tubular form, by letting off in the one instance some of the warp-threads and taking them in in the other.

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

10 1. The method for producing a fabric-boot body, consisting in weaving the same in continuity, and then securing and cutting off the warp and woof threads where projecting beyond the sides and the sole part thereof, as and for the purposes specified.

15 2. The herein-described method for producing a fabric-boot body, consisting in weaving the same in continuity, then securing and cutting off the warp and woof threads, and then fulling or felting the same, as and for the purposes specified.

20 3. The method for producing a fabric boot, consisting of weaving the same in continuity,

then cutting off and securing the woof and warp threads and fulling or felting the body, and then attaching an exterior sole to the bottom part, as and for the purposes specified. 25

4. A fabric boot produced from woven material, with its top, upper, counter, and sole parts made in a single piece, having the warp-threads where projecting beyond the body secured and cut off, and its warp-threads 30 where subtending the bottom opening secured and cut off with the material felted or fulled, and provided with a supplemental sole, S², and re-enforce counter C², substantially in the manner as and for the purposes set forth. 35

Signed at Troy, New York, this 19th day of October, 1887, in the presence of the two witnesses whose names are hereto written.

JUDSON C. HILLMAN.

Witnesses:

CHARLES S. BRINTNALL,
W. E. HAGAN.