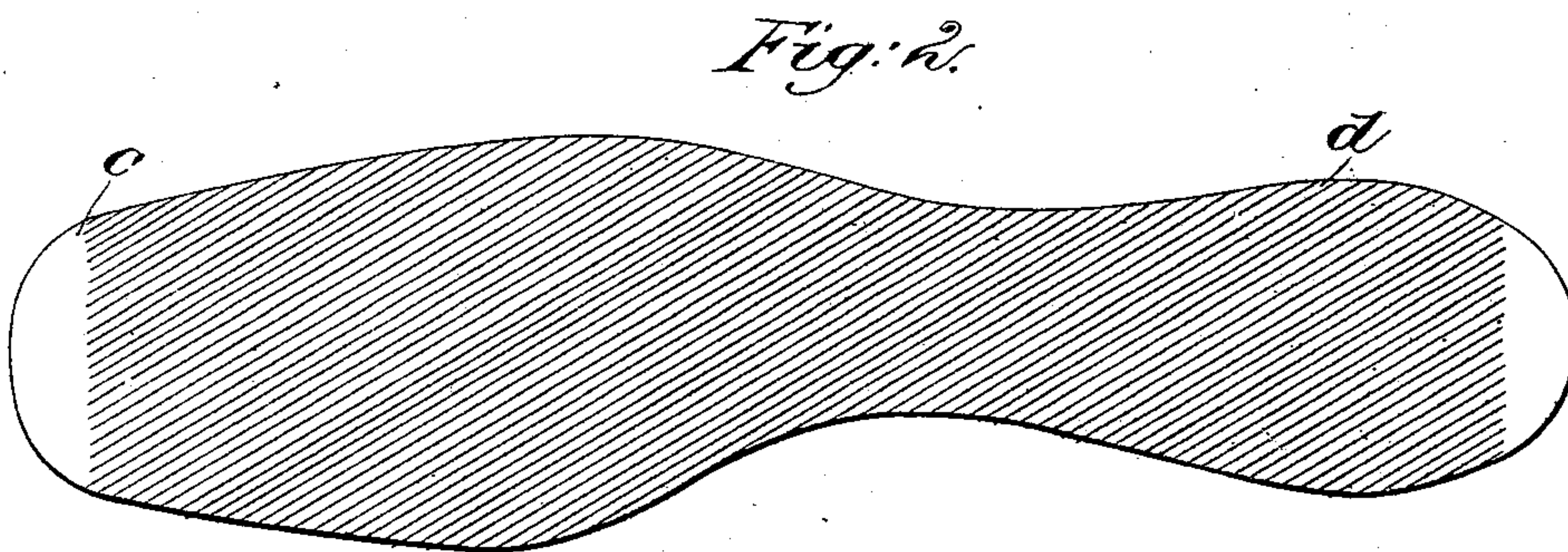
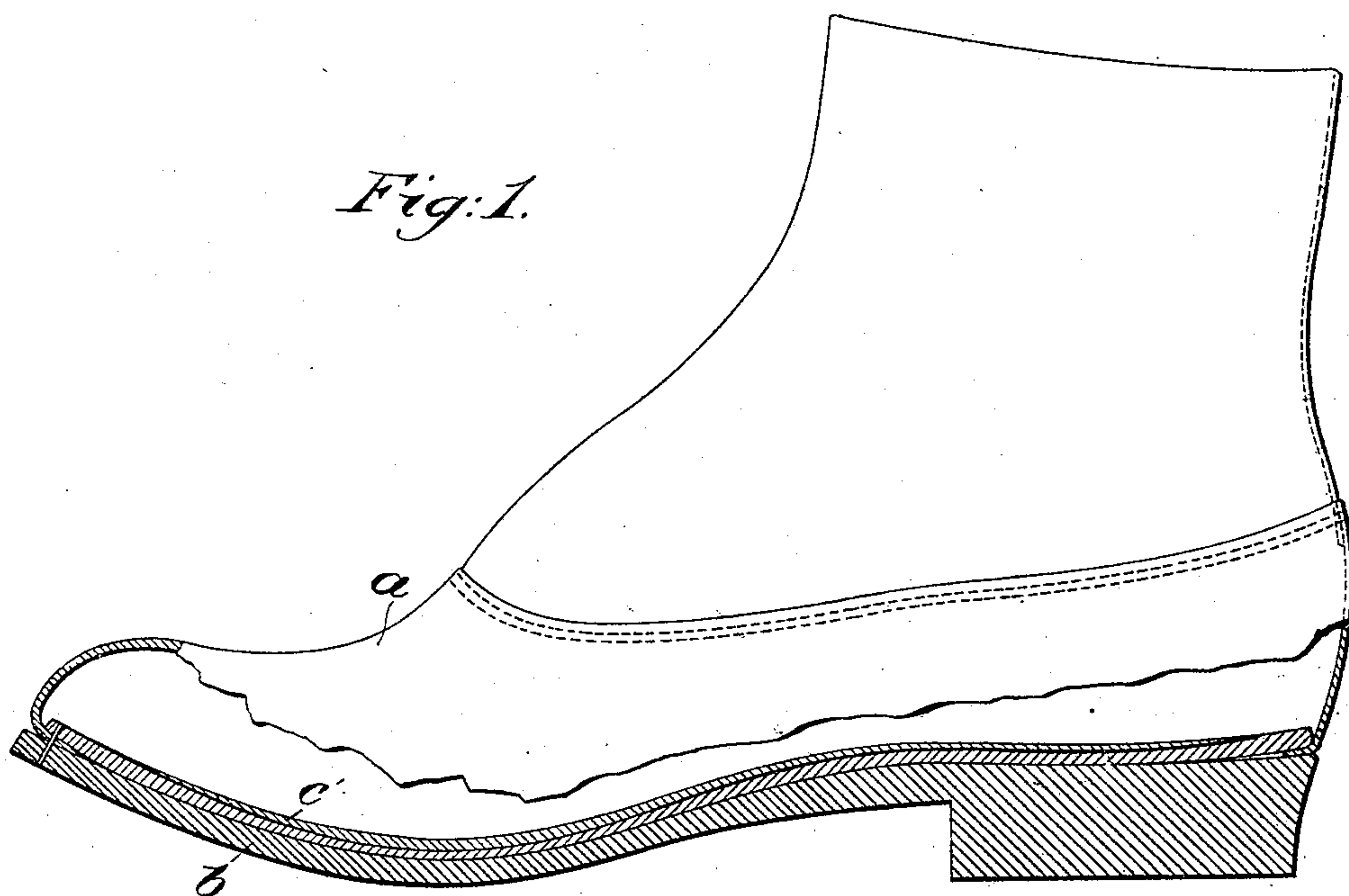


(No Model.)

G. H. CLARK.
BOOT OR SHOE.

No. 455,305.

Patented July 7, 1891.



Witnesses.

And S. Grinberg

Wm. L. Emery

Inventor.

George H. Clark,

by Lemby Gregory

Attys.

UNITED STATES PATENT OFFICE.

GEORGE H. CLARK, OF BOSTON, MASSACHUSETTS.

BOOT OR SHOE.

SPECIFICATION forming part of Letters Patent No. 455,305, dated July 7, 1891.

Application filed October 27, 1890. Serial No. 369,391. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. CLARK, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Boots or Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In the manufacture of boots or shoes flexibility of the sole at the ball is a very desirable feature, and a sock-sole which will protect the foot from coming in contact with the sole-tacks is also deemed very essential. Many ways have been devised for obtaining the desired flexibility, and among them the inner sole has been thinned transversely for a short distance at a point between its ends—as at the ball, for instance. To thin the inner sole in this way, it has been skived, and thereafter the skived inner sole has been put in a shoe in the regular course of manufacture, and finally a sock-sole of canvas or equivalent material has been pasted or otherwise secured to the inner face of the inner sole.

This invention consists, essentially, in a boot or shoe composed of an upper and an outer sole, combined with an inner sole thinned at its ball portion and a sock-sole having its ball portion thickened opposite the thinned part of the inner sole, the said inner sole being thereby left flexible and the sock-sole being strengthened or stiffened at the ball, so as to retain its place with relation to the inner sole.

In carrying out my invention I skive the inner sole, preferably from a point near the toe, rearwardly toward the heel, thereby thinning the same transversely from edge to edge. The line of cut is such that the insole is made thinnest at the ball portion. The inner sole is then put into the shoe in its usual course of manufacture, and thereafter the piece of leather which was removed from the inner sole by skiving to thin it is replaced and employed as a sock-sole. Owing to the variation in the line of cut, the sock-sole is thickest at the ball portion. The toe and heel ends of the inner sole are thereby left of full thickness to furnish a strong support or body on which to last the upper, and the ball portion is thinned to provide flexibility, and by employing the piece which was removed

by skiving as a sock-sole the expense of the sock-sole ordinarily employed is entirely done away with, and the sock-sole, being thickest at the ball portion, protects the foot from the contact with the sole-tacks which are ordinarily used in the construction of the boot or shoe, and also prevents the sock-sole from readily curling up at the ball by reason of shrinkage of the stock due to repeatedly subjecting the sock-sole to the action of the perspiration of the foot and thereafter permitting it to dry.

Figure 1 shows in side elevation and longitudinal section a shoe constructed in accordance with this invention; and Fig. 2, a plan view of the inner sole, showing the portion removed to thin it transversely from edge to edge.

The upper *a* and outer sole *b* may be of any usual or suitable construction. The inner sole is shown as skived from a point near the toe portion, as at *c*, toward the heel portion, as at *d*, (see Fig. 2,) the material removed varying somewhat in thickness from end to end, it being thickest at a point coincident with the ball portion of the sole. The inner sole *c*, remaining after removing the skiving or sock-sole *c'*, presents a thin very flexible ball and thick toe and heel.

The irregularly or unevenly skived inner sole, as represented in Fig. 2, is united to the upper and outer sole in the manufacture of the boot or shoe in any usual or suitable manner, and thereafter the piece *c'* is applied to serve as a sock-sole, its thick ball coming directly above the thin ball of the inner sole. This construction provides an inner sole with end portions which are strong and durable, on which to last the upper, and with a flexible ball portion, and the sock-sole, which exactly fits on the inner sole and which is thickest at the ball portion, affords ample protection against the sole tacks, and the thick ball of the sock-sole prevents the latter curling up at that point away from the inner sole, and yet there is sufficient stock left in the inner sole to enable the boot or shoe to be repaired.

It is obvious that the thinner the inner sole at the ball through which the stitches pass which confine the upper and outer sole together the more flexible will be the shoe at the ball; also, by making the inner sole thin

at the ball the strain on the stitches is very much reduced when the shoe is bent at the ball, and the sock-sole, being made thickest at the ball where the inner sole is thinnest, 5 equalizes the thickness of the leather under the foot and stiffens the sock-sole at this point, so that it has less tendency to curl or rough up or fold than would a uniformly thin sock-sole.

10 I claim—

A boot or shoe composed of an upper and outersole, combined with an inner sole thinned at its ball portion and attached to the shoe, as described, and a sock-sole having its ball

portion thickened opposite the thinned part 15 of the inner sole, the said inner sole being thereby left flexible and the sock-sole being strengthened or stiffened at the ball, so as to retain its place with relation to the inner sole, substantially as described. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE H. CLARK.

Witnesses:

BERNICE J. NOYES,
EMMA J. BENNETT.