

No. 712,442.

A. T. E. SMITH.

Patented Oct. 28, 1902.

SHOE.

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(No Model.)

Fig. 1.

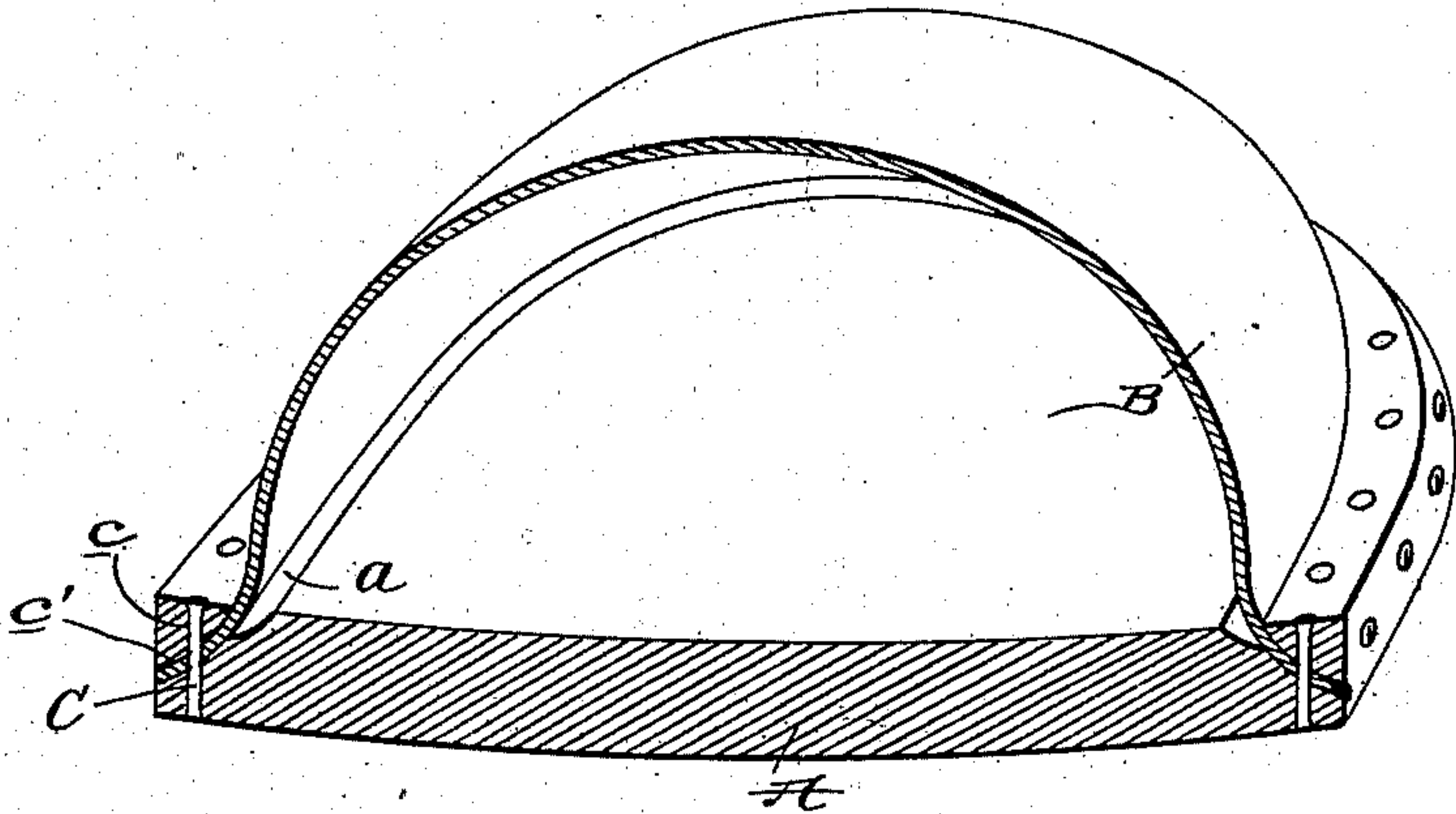


Fig. 2.

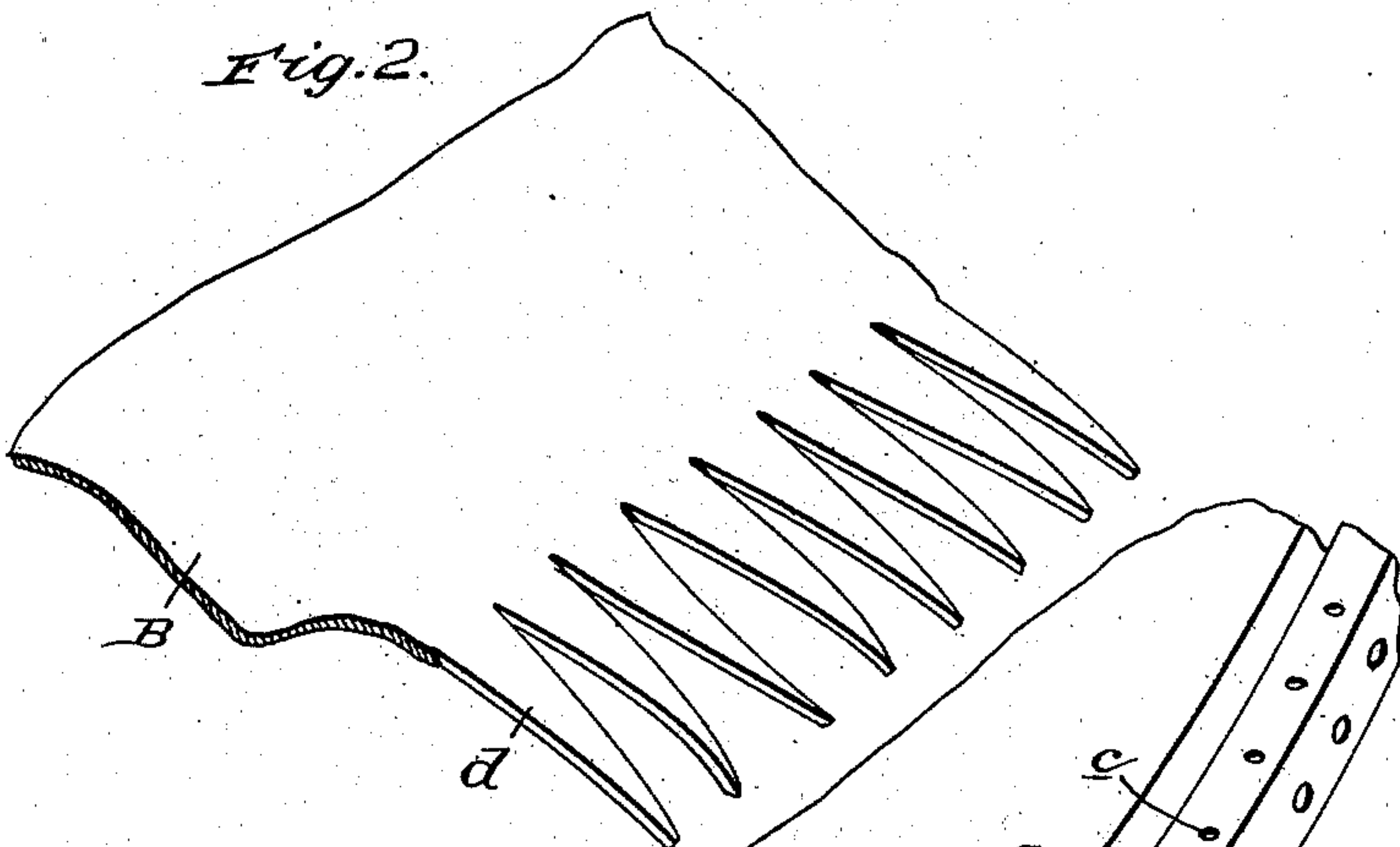


Fig. 3.

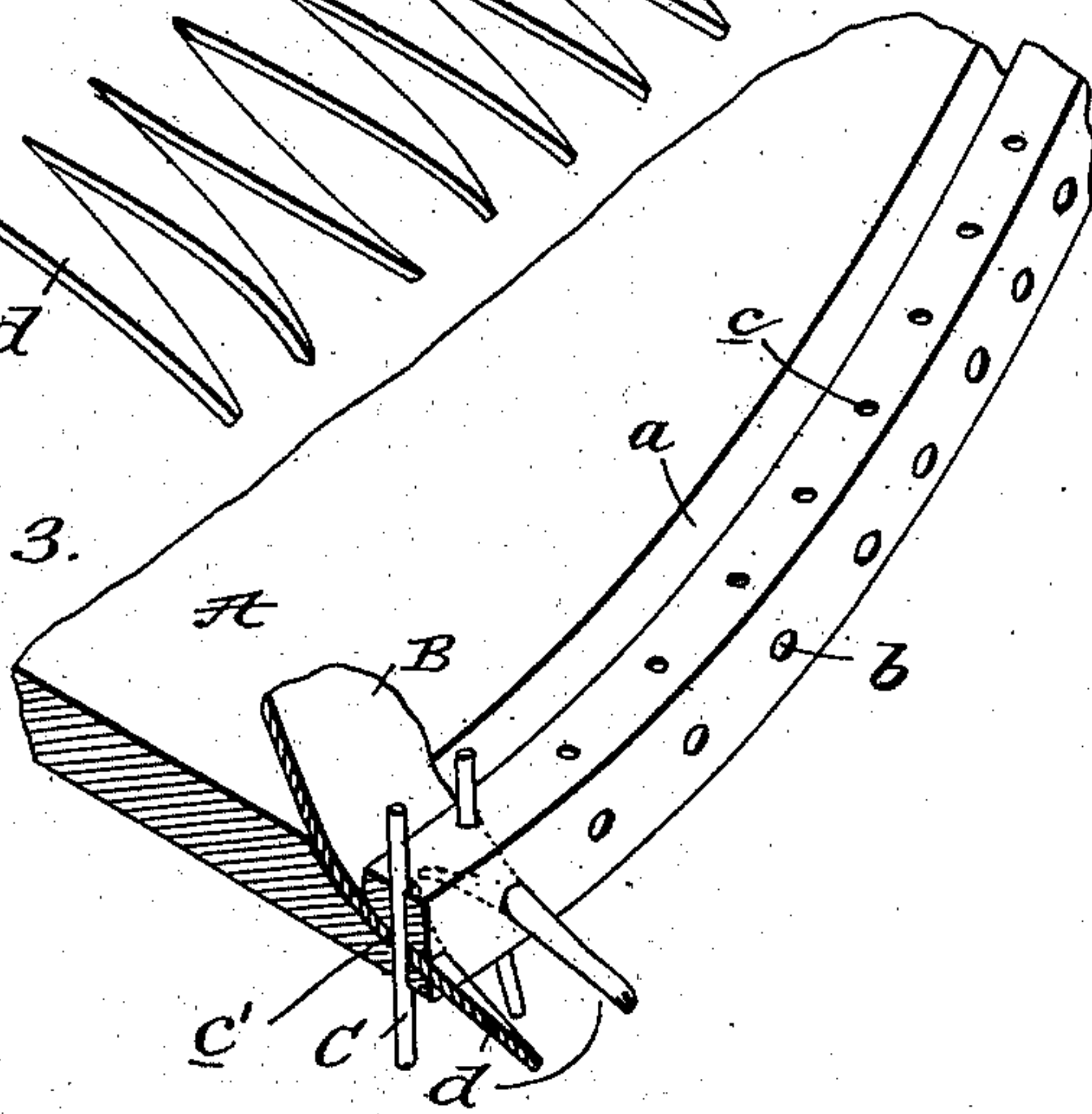


Fig. 4.



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ALBERT T. E. SMITH, OF WOONSOCKET, RHODE ISLAND.

SHOE.

SPECIFICATION forming part of Letters Patent No. 712,442, dated October 28, 1902.

Application filed May 27, 1902. Serial No. 109,216. (No model.)

To all whom it may concern:

Be it known that I, ALBERT T. E. SMITH, a citizen of the United States, residing at Woonsocket, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in Shoes, of which the following is a specification.

My invention relates to shoes, and more particularly to connections between the uppers and soles thereof; and it contemplates the provision of a shoe in which the upper and sole are strongly and durably connected in such manner that there is no seam to be covered, and consequently no necessity of employing an inner sole.

With the foregoing in mind the invention will be fully understood from the following description and claims when taken in conjunction with the annexed drawings, in which—

Figure 1 is a sectional perspective view of a portion of a shoe, the upper and sole of which are connected in accordance with my invention; Fig. 2, a perspective view of a portion of the upper; Fig. 3, a sectional perspective view illustrative of the manner in which the upper and sole are connected, and Fig. 4 a detail view of one of the fastenings through the medium of which the upper and sole are secured together.

Similar letters of reference designate corresponding parts in all of the several views of the drawings, referring to which—

A is the sole of my improved shoe, which is preferably a single thickness of leather or other suitable material, although it might be composed of a plurality of superposed layers of material without departing from the scope of my invention.

B is the shoe-upper, which may be composed of a single thickness of leather or other material, or of said thickness and a lining, as desired, and C C are fastenings the purpose of which is to secure the upper to the sole.

The sole, which in practice may be extended rearwardly to form the heel-seat or upper heel-lift of the shoe, is peculiar in that it is provided in its upper side adjacent to its edge with a groove *a*, preferably undercut, as shown, and also, in that it is provided at suitable intervals with apertures *b*, which extend from the base of the groove to the

sole edge, and apertures *c*, which are also arranged at intervals and are preferably, although not essentially, perpendicular. Awls are preferably employed to form the apertures *b c*, and in the preferred embodiment of the invention the apertures *b* are formed with a flattened awl, so that they will be of a greater width than height, while the apertures *c* are formed with an awl of circular form in cross-section.

As best shown in Fig. 2 of the drawings, the upper B is provided at its edge with integral tongues *d*. These tongues are preferably tapered to a point, as shown, and they are designed, precedent to the securing of the upper to the sole, to be inserted in and drawn through the sole-apertures *b* until the edge of the main portion of the upper—i. e., the edge of that portion from which the tongues project—is snugly seated in the groove *a*, as shown in Fig. 3.

The apertures *c*, before referred to, may be formed in the sole either before or after the tongues of the upper are placed in the apertures *b*, although I prefer to form them subsequent to the said placing of the tongues—this in order that the tongues may when the apertures *c* are formed be provided with apertures *c'*, coincident with said apertures *c*. The apertures *c c'* in the sole and upper-tongues, respectively, are designed to receive the fastenings C. These fastenings may be and preferably are separate strips of leather or other suitable material, as shown in Fig. 3, this in order to preclude squeaking of the shoe in use. I do not desire, however, to be understood as confining myself to the use of the separate strips as fastenings, as when desired the fastenings may form part of a continuous strip or waxed thread without departing from the scope of my invention.

In making a shoe in accordance with my invention the sole is provided with the groove *a* and the upper with the tongues *d*. An aperture *b* is then formed in the sole, and one of the upper-tongues is inserted in said aperture and firmly drawn to place, after which coincident apertures *c c'* are formed in the sole and tongue and a fastening C placed therein. This operation is repeated until all of the tongues of the upper are fastened to the sole, when the upper and sole will be

durably connected in such manner that there is no seam inside the shoe to be covered, and hence no necessity of employing an inner sole. Subsequent to the connection of the
 5 upper and sole in the manner described the tongues *d* and separate strip-fastenings *C* are trimmed flush with the edge and sides, respectively, of the sole, Fig. 1, when the shoe will be ready for use. When the several fastenings are formed by a continuous strip or
 10 thread, as described in the foregoing, the tongues *d* alone are trimmed flush with the sole.

The term "shoe" as herein employed is intended to comprehend a boot as well as a shoe.
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Having described my invention, what I claim, and desire to secure by Letters Patent, is—

20 1. In a shoe, the combination of a sole having a groove in its upper side adjacent to its edge, apertures extending from the groove to its edge, and apertures intersecting the first-mentioned apertures, an upper having
 25 tongues on its edge, disposed in the first-mentioned apertures of the sole and provided with apertures coincident with the second-mentioned apertures thereof, and fastenings disposed in the said coincident apertures of
 30 the sole and upper-tongues.

2. In a shoe, the combination of a sole having a groove in its upper side adjacent to its edge, and also having apertures extending from the groove to its edge, and apertures intersecting said first-mentioned apertures, an
 35 upper having tongues disposed in the first-mentioned apertures of the sole and provided

with apertures coincident with the second-mentioned apertures thereof, and separate fastenings disposed in the said coincident apertures of the soles and upper-tongues; the
 40 tongues of the upper and the fastenings being trimmed flush with the edge and sides, respectively of the sole.

3. The shoe described comprising a sole
 45 having the undercut groove in its upper side adjacent to its edge, apertures extending from the base of the undercut groove to its edge, and apertures intersecting the first-mentioned apertures, an upper having its
 50 edge disposed in the undercut groove, and tongues on said edge disposed in the first-mentioned apertures of the sole, and provided with apertures coincident with the second-mentioned apertures thereof, and fastenings
 55 disposed in the said coincident apertures of the sole and upper-tongues.

4. In a shoe, an upper having tongues on its edge; in combination with a sole having a groove in its upper side receiving the edge
 60 of the upper, and also having apertures extending laterally from said groove and receiving the tongues on the upper, and apertures intersecting the lateral apertures, and fastenings disposed in said intersecting apertures
 65 and the tongues and securing the upper and sole together.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ALBERT T. E. SMITH.

Witnesses:

GEO. W. SPAULDING,
 EDGAR L. SPAULDING.