

No. 699,254.

Patented May 6, 1902.

J. W. SMITH.  
SEAM FOR SEWED ARTICLES.

(Application filed June 7, 1901.)

(No Model.)

Fig. 1.

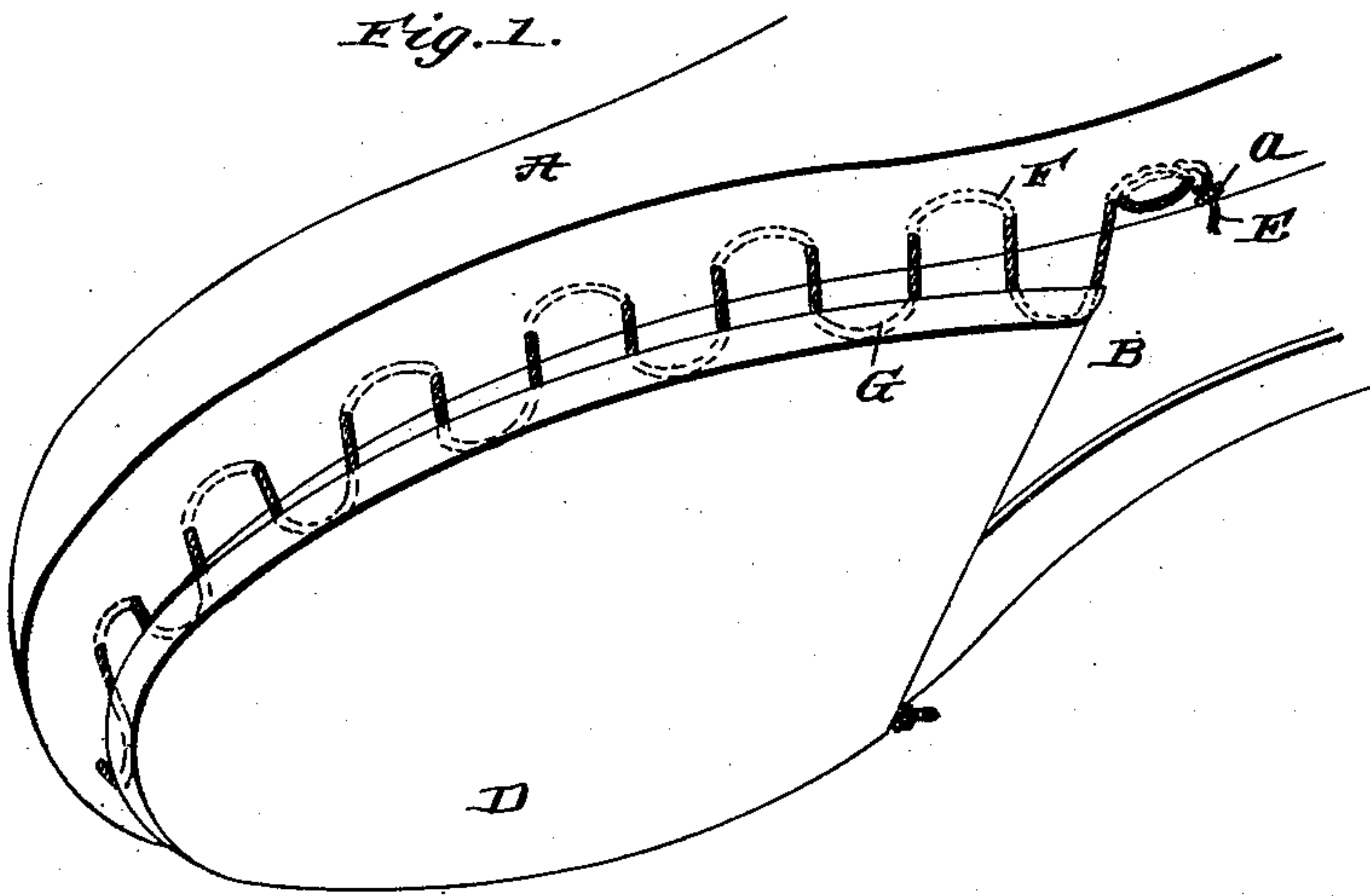


Fig. 2.

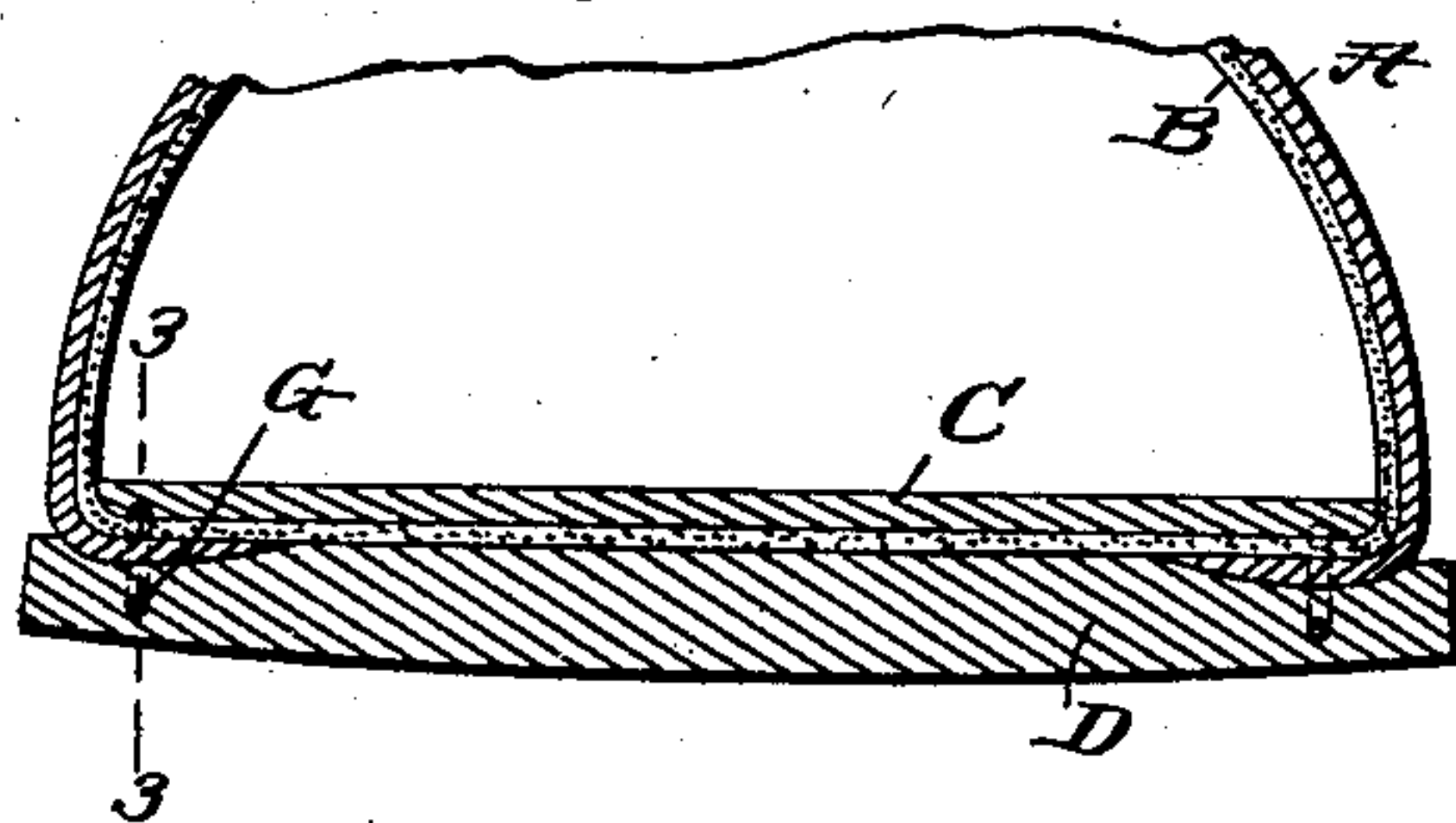


Fig. 3.

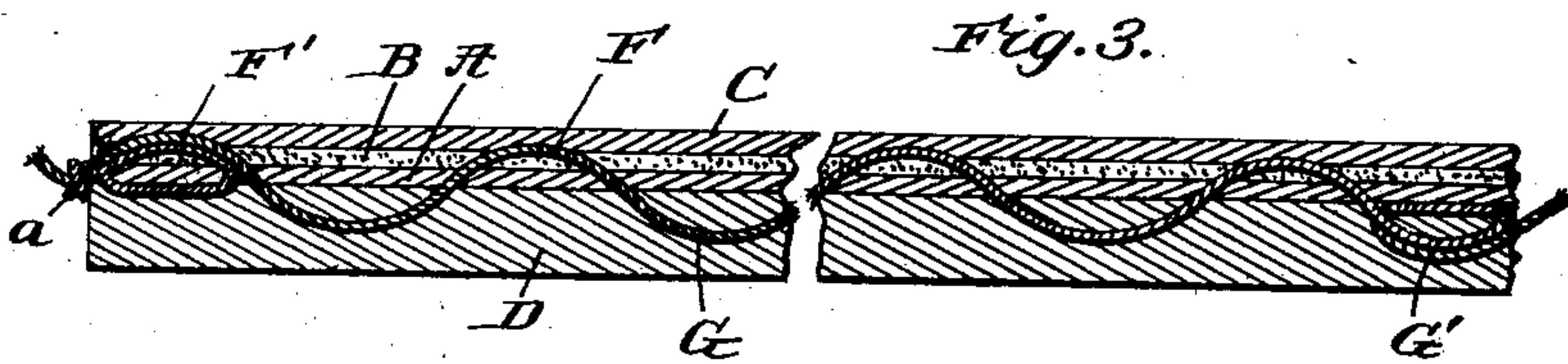
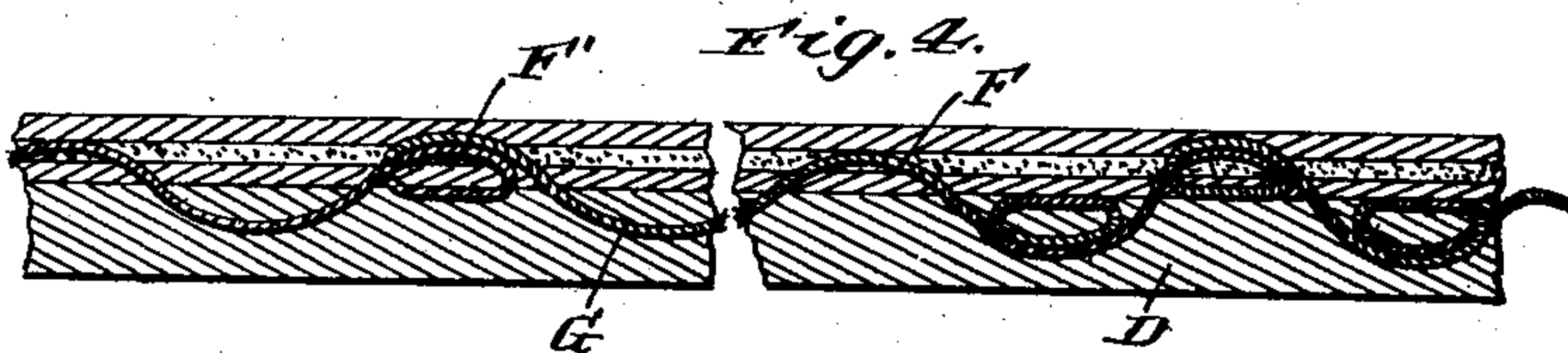


Fig. 4.



Witnesses  
C. H. Rader  
N. C. Healy

Inventor  
By James W. Smith.  
James J. Sheehy  
Attorney



# UNITED STATES PATENT OFFICE.

JAMES WILSON SMITH, OF WOONSOCKET, RHODE ISLAND.

## SEAM FOR SEWED ARTICLES.

SPECIFICATION forming part of Letters Patent No. 699,254, dated May 6, 1902.

Application filed June 7, 1901. Serial No. 63,608. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES WILSON 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 Seams for Sewed Articles, of which the following is a specification.

My invention relates to seams for sewed articles. It contemplates the provision of a seam in which a single thread is arranged to form running stitches alternately through a portion of a part, preferably the outer or tap sole of a boot or shoe, and the part or parts against which the inner face of the first-mentioned part or tap-sole is laid, and one or more lock or stay stitches in its course at the point or points subjected to the greatest strain or throughout the course of the thread, according to the work to be produced. When the seam is embraced in a boot or shoe, the connection of the tap-sole is such that the stitches are never subjected to strain incident to the bending of the boot or shoe, and consequently they do not detract from the flexibility of the sole.

My improvements are designed more especially for use in the resoling of boots and shoes of the single outside-sole type and will be so described; but they are also susceptible of use in connecting two soles together or a single sole to a welt, as will hereinafter be more fully and clearly pointed out.

With the foregoing in mind the invention will be fully understood from the following description and claim when taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a shoe of the single tap-sole type, illustrating the manner in which the tap-sole is connected to the upper and lining, said tap-sole, however, being shown as separated from the upper in order to better illustrate the course of the thread and the formation of the alternate stitches in the tap-sole and upper and lining. Fig. 2 is a transverse section of the completed shoe. Fig. 3 is a longitudinal section taken in the plane indicated by the line 3 3 of Fig. 2 with the thread in elevation and arranged adjacent to its ends to form lock or

stay stitches, and Fig. 4 is a similar view with the thread arranged to form lock or stay stitches at points intermediate of its ends.

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

A is the upper, B the lining, C the insole, and D the tap-sole, of a shoe of the ordinary single outside-sole type, all of which may be of the ordinary construction, and E is the thread, arranged to form alternate stitches F G through the upper and lining and sometimes through the insole C and through a portion of the outer or tap sole, respectively.

In carrying out my invention and connecting the outer or tap sole D to either a new or an old shoe the upper and lining of the shoe are properly lasted over the insole and the outer or tap sole is temporarily tacked or otherwise fixed with respect to the insole. With this done the operator takes a thread, preferably a waxed one with a knot at one end and a needle or other penetrating device on its other end, and after placing the boot or shoe in a sidewise position with the inside of the tap-sole toward him and turning the edge of the tap-sole slightly in a direction away from him he passes a turned or curved awl from the desired point of commencement and in a direction longitudinal of the shoe inwardly through the upper and lining and sometimes through the insole and thence outward through the lining and upper at a point on the line on which it is desired to attach the upper to the sole and in advance of the point of entry of the awl. He then draws the thread through the passage in the upper and lining and secures the end thereof by the knot *a* or by the stay or lock stitch F', the latter being formed by bringing the thread back to the original point of entry of the awl and passing it the second time through the upper and lining. Subsequent to the formation of the first stitch through the upper and lining the operator makes a longitudinal curvilinear passage through a portion of the tap-sole D, which passage is arranged in advance of the passage through the upper and lining, and then passes the thread through the said passage of the tap-sole to form the running-stitch G, and draws the thread taut to



bring the tap-sole against the upper. He then makes another passage through the upper and lining and sometimes through the insole similar to the first-named passage and in advance  
 5 of the passage in the tap-sole and passes the thread through the said passage in the upper and lining, and thus continues until the tap-sole is connected throughout to the upper and lining by running-stitches F G and one or more  
 10 lock or stay stitches F' G', formed in the upper and lining and tap-sole alternately. The end of the thread at the finishing-point may be secured by a knot *a* or by a stay-stitch F', or both, if desired. Stay-stitches F' G' may  
 15 also be formed in the upper and lining and tap-sole, respectively, at the points subjected to the greatest strain, and when desirable or necessary all of the stitches in the upper and lining and all of the stitches in the tap-sole  
 20 may be lock or stay stitches.

It will be readily observed that when the tap-sole is connected to the upper and lining by the alternate stitches formed of a single thread and each stitch is drawn taut subse-  
 25 quent to its formation the tap-sole will be drawn tight against and securely connected to the upper and lining, and it will also be observed that the stitches will not be subjected to strain incident to bending or flexing  
 30 of the sole, and consequently will not detract from the flexibility thereof.

Notwithstanding its advantages as pointed out in the foregoing, it will be appreciated that my improved connection is susceptible  
 35 of being expeditiously and easily effected, and therefore contributes materially to the cheapness of production of the shoe.

In connecting the outer or tap sole D to a welt-shoe the stitches F or F' will of course  
 40 be formed in the welt of the shoe, while in connecting the said tap-sole to another heavy

sole the running-stitches F or the stay-stitches F' will be formed in such other heavy sole.

I have entered into a detail description of the construction and relative arrangement of  
 45 the parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such  
 50 specific construction and relative arrangement of parts, as such changes or modifications may be made in practice as finally fall within the scope of my claim.

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

In a seam for sewed articles, the combination of a layer of stock having a line of curvilinear passages, the ends of which are dis-  
 60 posed at the inner side of the layer, a layer of stock laid with its face against that of the first-named layer and having curvilinear passages intermediate the curvilinear passages  
 65 in said first-named layer whereby a continuous passage is formed for a continuous thread, and the said continuous thread arranged to form a line of loop-stitches alternately through  
 70 the curvilinear passages of the first-named layer and the second-named layer, and also passed the second time through passages of the layers to form lock or stay stitches; the said thread being drawn taut and suitably secured at its ends.

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

JAMES WILSON SMITH.

Witnesses:

EDGAR L. SPAULDING,  
 GEO. W. SPAULDING.