

No. 675,451.

Patented June 4, 1901.

E. STOEFLER.

CELLULOID COVERED ARTICLE AND PROCESS OF COVERING SAME.

(Application filed Feb. 20, 1899.)

(No Model.)

Fig. 1.

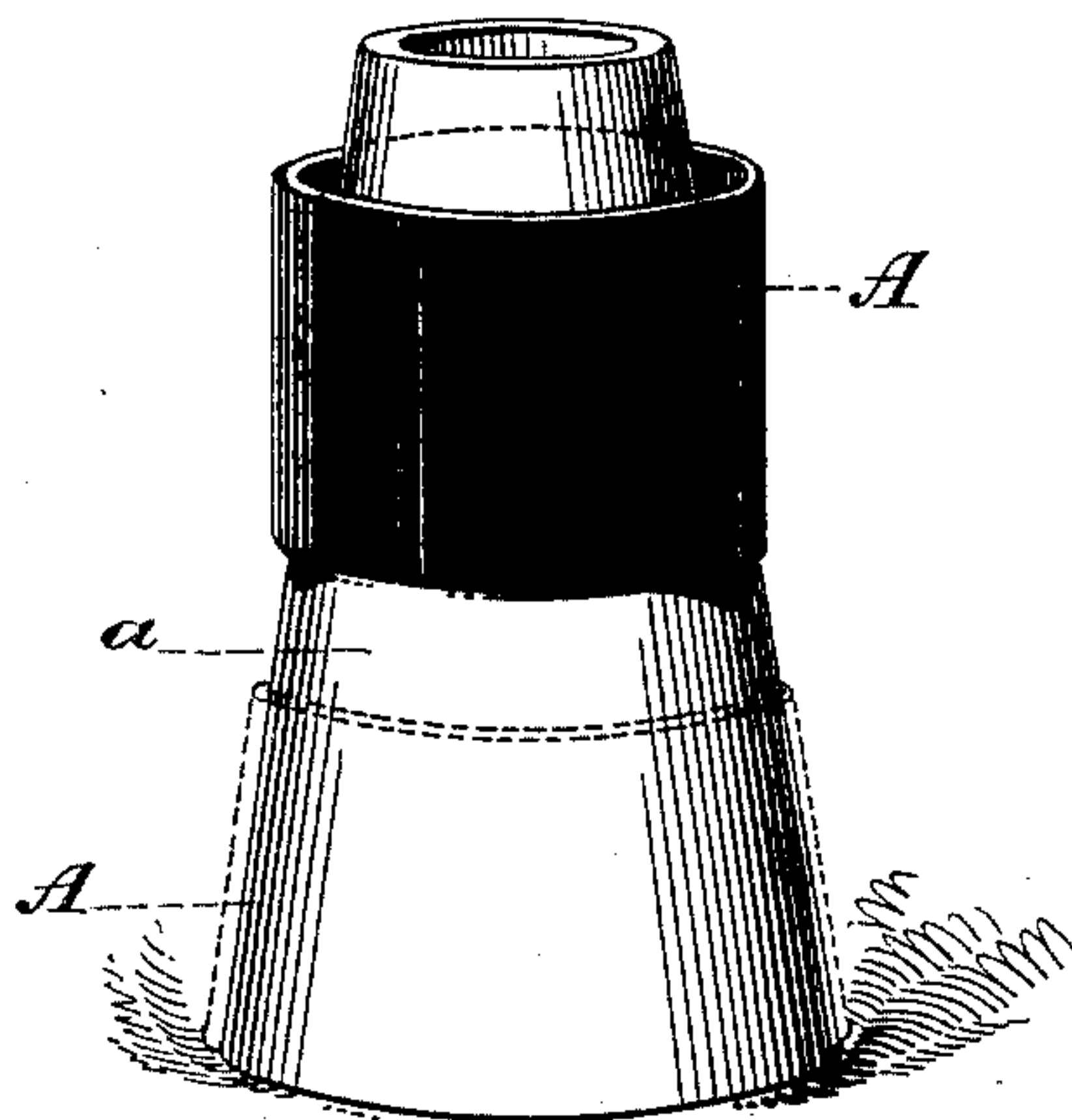


Fig. 2.

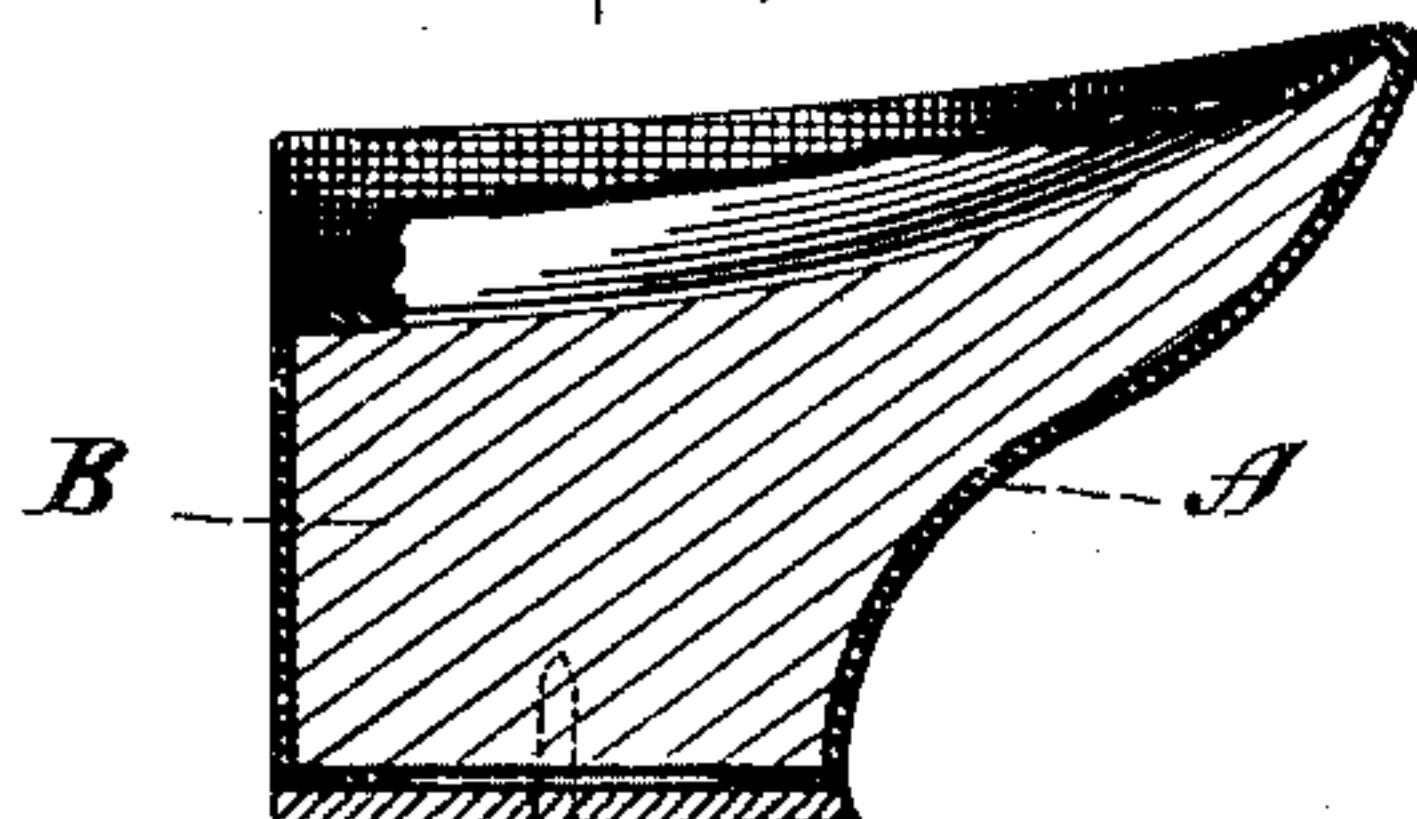


Fig. 3.

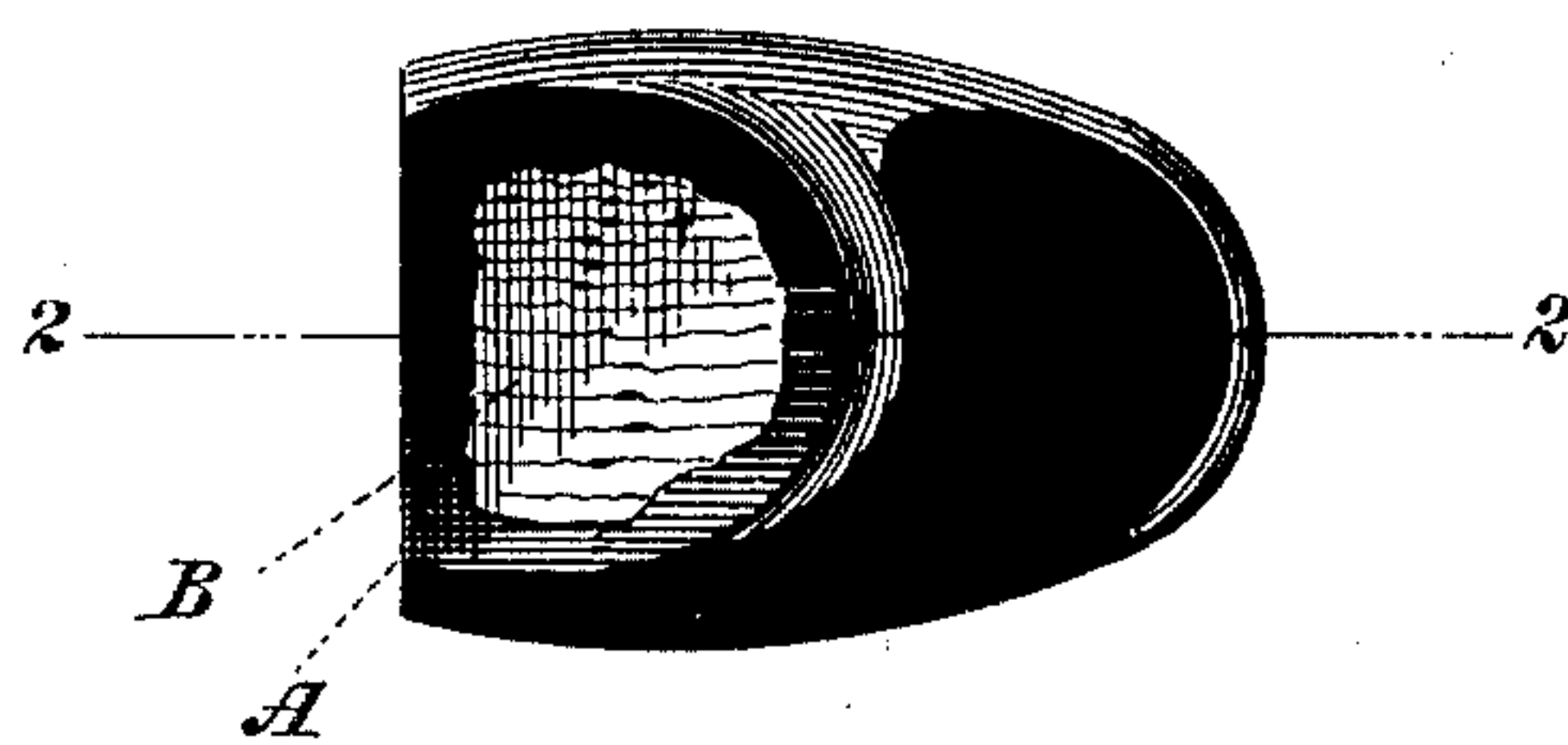
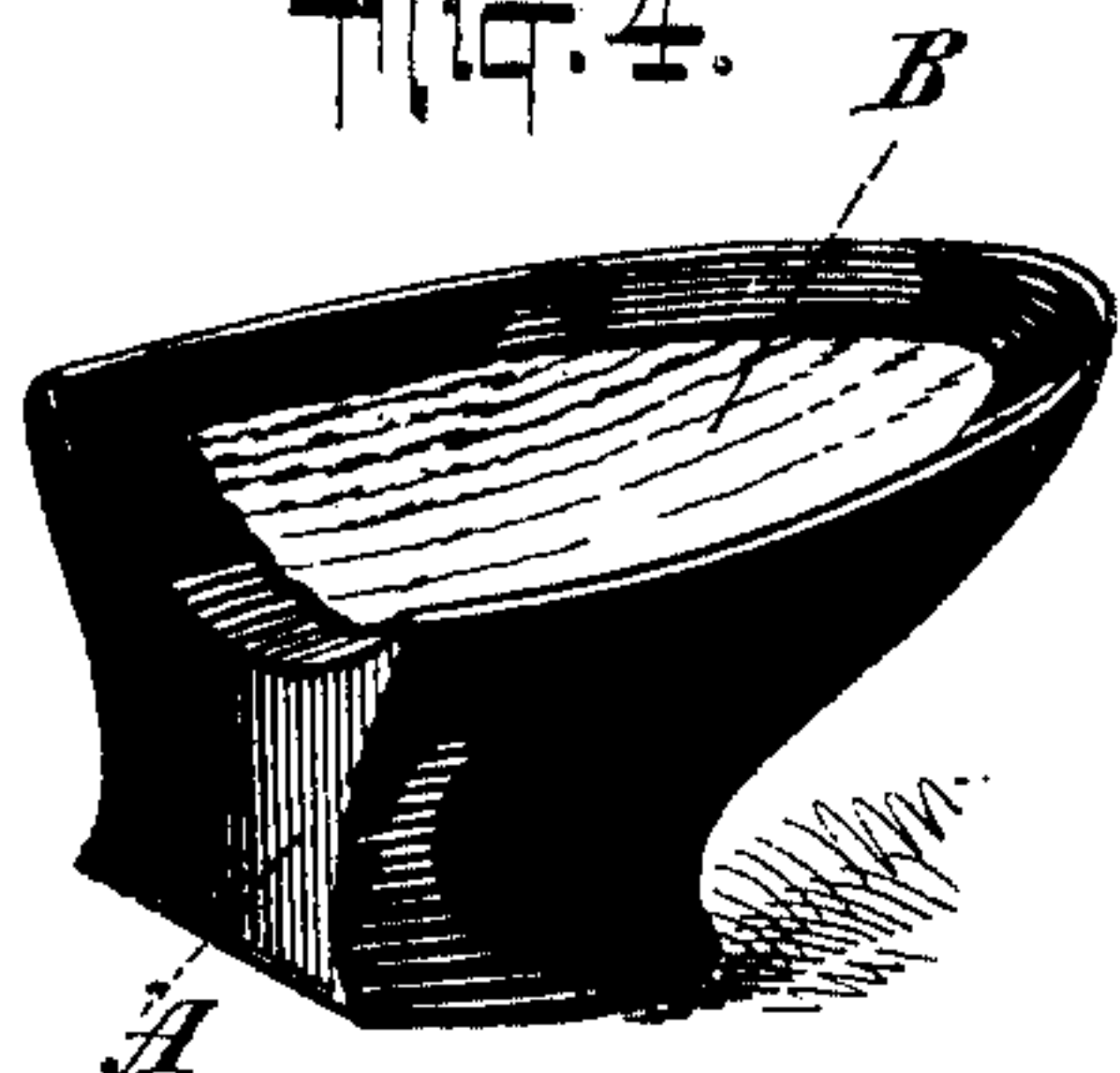


Fig. 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

EMILE STOEFLER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO  
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CELLULOID-COVERED ARTICLE AND PROCESS OF COVERING SAME.

SPECIFICATION forming part of Letters Patent No. 675,451, dated June 4, 1901.

Application filed February 20, 1899. Serial No. 706,122. (No model.)

*To all whom it may concern:*

Be it known that I, EMILE STOEFLER, residing in the borough of Manhattan, city, county, and State of New York, have invented certain  
5 new and useful Improvements in Celluloid-Covered Articles and Processes of Covering the Same, of which the following is a full, clear, and exact description.

My invention relates primarily to the manufacture of celluloid-covered heels.

Heretofore it has been found impossible to provide an endless or seamless covering of celluloid for certain articles—such, for instance, as heels for shoes—and for this reason it has been found difficult to provide an efficient covering of celluloid for such articles, though the desirability for the use of celluloid for this purpose has been appreciated.

The object of my invention is to overcome the difficulties heretofore encountered in celluloid-covered articles of this character and in the process of covering the same; and to these ends my invention consists in an article of the character hereinafter described and  
25 claimed and in the process hereinafter set forth of producing said articles.

In the accompanying drawings, Figure 1 represents an implement which I have found desirable to use in carrying out my process and to which reference is made herein to explain said process. Fig. 2 is a central longitudinal section of a shoe-heel covered with celluloid in accordance with my process, the section being taken on the line 2 2 of Fig. 3. Fig. 3  
35 is a bottom view of the same, and Fig. 4 is a perspective view of the article illustrated in the two preceding figures.

In carrying out my process I take an endless piece of celluloid, which is preferably in the form of a tube or band, as indicated at A in Fig. 1. This band of celluloid is placed in a bath of liquid, such as water, which is maintained at about 212° Fahrenheit for a few moments to allow the celluloid to become thoroughly heated through, when it may be taken  
45 from the bath and placed upon a suitable former, which in the present instance is illustrated as a frustum *a*. The celluloid is forced upon this frustum to the position indicated  
50 in dotted lines, thereby stretching it at all points to the required degree and to give it

the general conformation of the article to which it is to be applied. The celluloid may then be dipped in a cooling-bath of liquid, such as water, to set or fix it in the shape  
55 which it has been given by the former *a*. After the celluloid has been set or fixed in the stretched condition the heel body or core B, which is of substantially the same size and shape as the heel or other article to be produced and is preferably made of a single  
60 piece, is placed within the celluloid band, with the openings of the band at the top and bottom of the core, the ends of the band projecting beyond the same. The celluloid is  
65 then subjected to a bath of liquid, such as water, which is maintained at about 212° Fahrenheit. The result of submitting the stretched celluloid to this last heating-bath of liquid is to contract or shrink the celluloid  
70 upon the core to which it is to be applied. After the celluloid has remained in the shrinking-bath for a few moments it may be withdrawn and the covering will be found to have contracted so as to follow the contour of the  
75 core to which it is applied and so as to cause the ends of the tube to overlap the core, as indicated in Figs. 2, 3, and 4 of the drawings.

It will be observed from Fig. 3 of the drawings that an open end of the band is brought  
80 to the bottom of the heel body or core. This is preferably covered by a strip of leather or other suitable material, as indicated in Fig. 2 of the drawings, it being desirable that leather or some such material be placed upon  
85 the heel-body at this point to give it a natural and finished appearance.

It will be seen by reference to Figs. 2, 3, and 4 of the drawings that the celluloid surrounds the heel-body and extends around the  
90 ends thereof and that there are no seams formed in the celluloid covering. It will likewise be observed that by the shrinkage or contraction of the celluloid upon the core a perfect union between the core and the  
95 covering is formed and that it is impossible for the covering to be removed from the core without breaking it (the covering) throughout a considerable extent thereof. It will likewise be observed that the celluloid covering surrounds all of the corners and angles  
100 of the finished article without the formation



of joints, which is very desirable in articles of this character because of the liability of the celluloid covering stripping from the article when joints are formed at these points.

5 While I have referred throughout to maintaining the liquid baths at about 212 Fahrenheit and to other specific details of the process, it will be understood that various circumstances, such as the condition and thickness of the celluloid employed and the character of articles to be covered, might require that these details be departed from, it being understood that I have described one means and what I consider to be the best one of carrying out my invention.

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

1. The process of producing celluloid-covered heels, which consists in producing a solid heel body or core of substantially the size and shape of the finished heel, heating in a liquid bath an endless band of celluloid of sufficient length to project beyond the top and bottom of the heel body or core to be covered to render said celluloid capable of being stretched without breaking, stretching said piece of celluloid at all points and placing the stretched piece of celluloid upon a solid heel body or core so that ends of the celluloid band will project beyond the ends of the heel-body and finally submitting the celluloid band or covering on said body to a liquid bath maintained at a sufficient degree of heat to shrink or contract the celluloid covering on the heel-body and so that the ends of the celluloid band are contracted at the top and bottom of the heel-body to prevent the body from being withdrawn from the covering, whereby said heel-body and covering will be securely and

permanently united and the celluloid covering will constitute a jointless covering for the heel.

2. The process of producing celluloid-covered articles which consists in producing a core of substantially the size and shape of the finished article, heating an endless band of celluloid of sufficient size to project beyond the ends of the core in a liquid bath maintained at about 212° Fahrenheit to render said celluloid capable of being stretched without breaking, stretching said band of celluloid, thereupon submitting the celluloid to a cooling-bath of liquid to fix the celluloid in a stretched condition, thereupon placing the stretched band of celluloid upon the core to be covered and which constitutes a permanent core so that the ends of the celluloid band will project beyond the ends of the core and finally in submitting the stretched band to a liquid bath maintained at about 212° Fahrenheit to shrink or contract the celluloid band or covering on the core and around the ends thereof, whereby the ends of the band will be contracted to prevent the core from being withdrawn from its covering and said core and covering will be securely united.

3. As a new article of manufacture, a celluloid-faced heel consisting of a solid heel body or core B of substantially the size and shape of the heel and a seamless band of celluloid tightly surrounding the said heel-body upon all sides thereof and having its top and bottom openings smaller in extent than the corresponding portions of the heel-body.

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Witnesses:

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