

(No Model.)

H. A. WEBSTER.  
BUFFING OR POLISHING APPLIANCE.

No. 551,019.

Patented Dec. 10, 1895.

FIG. 1.

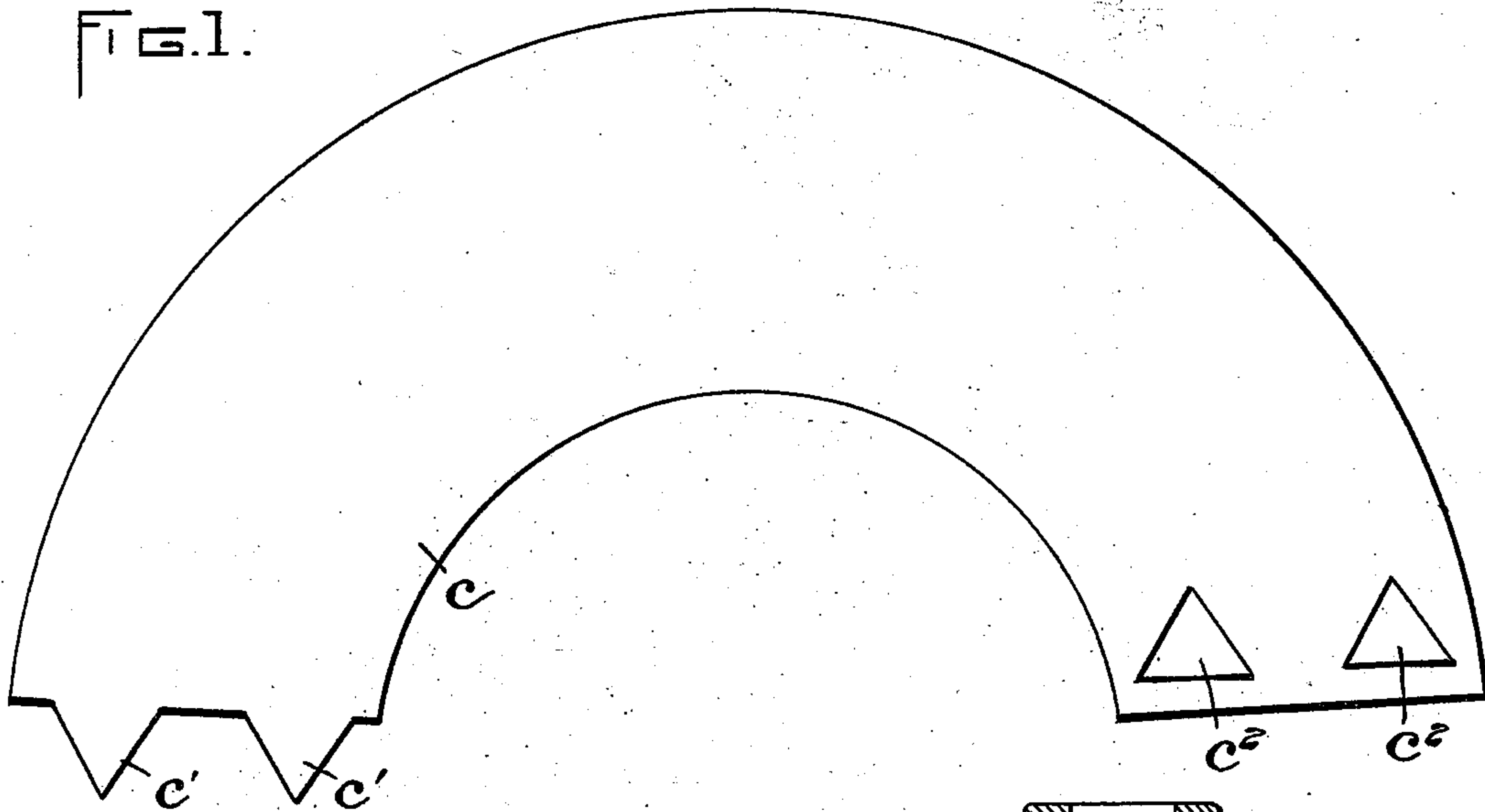


FIG. 2.

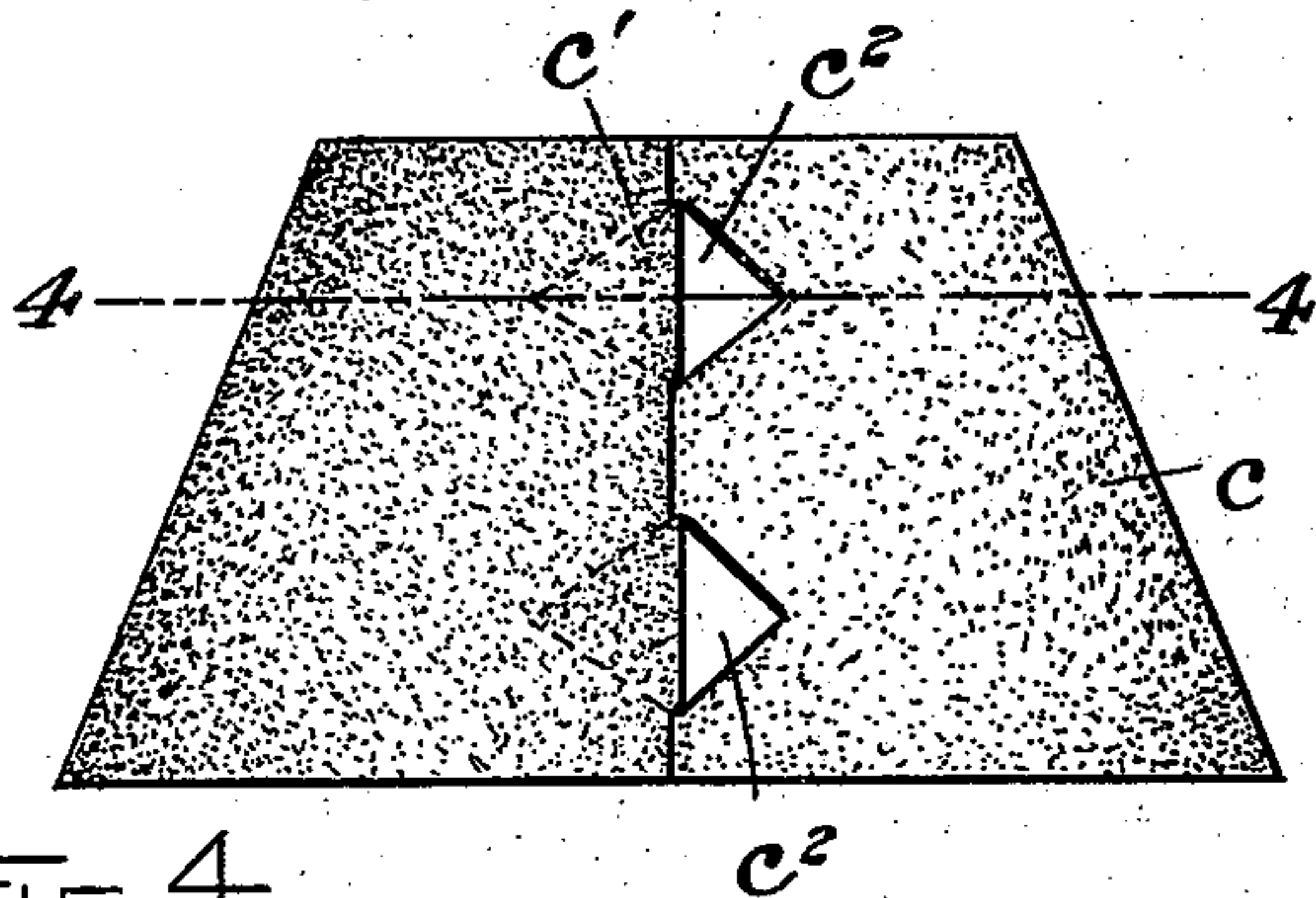


FIG. 3.

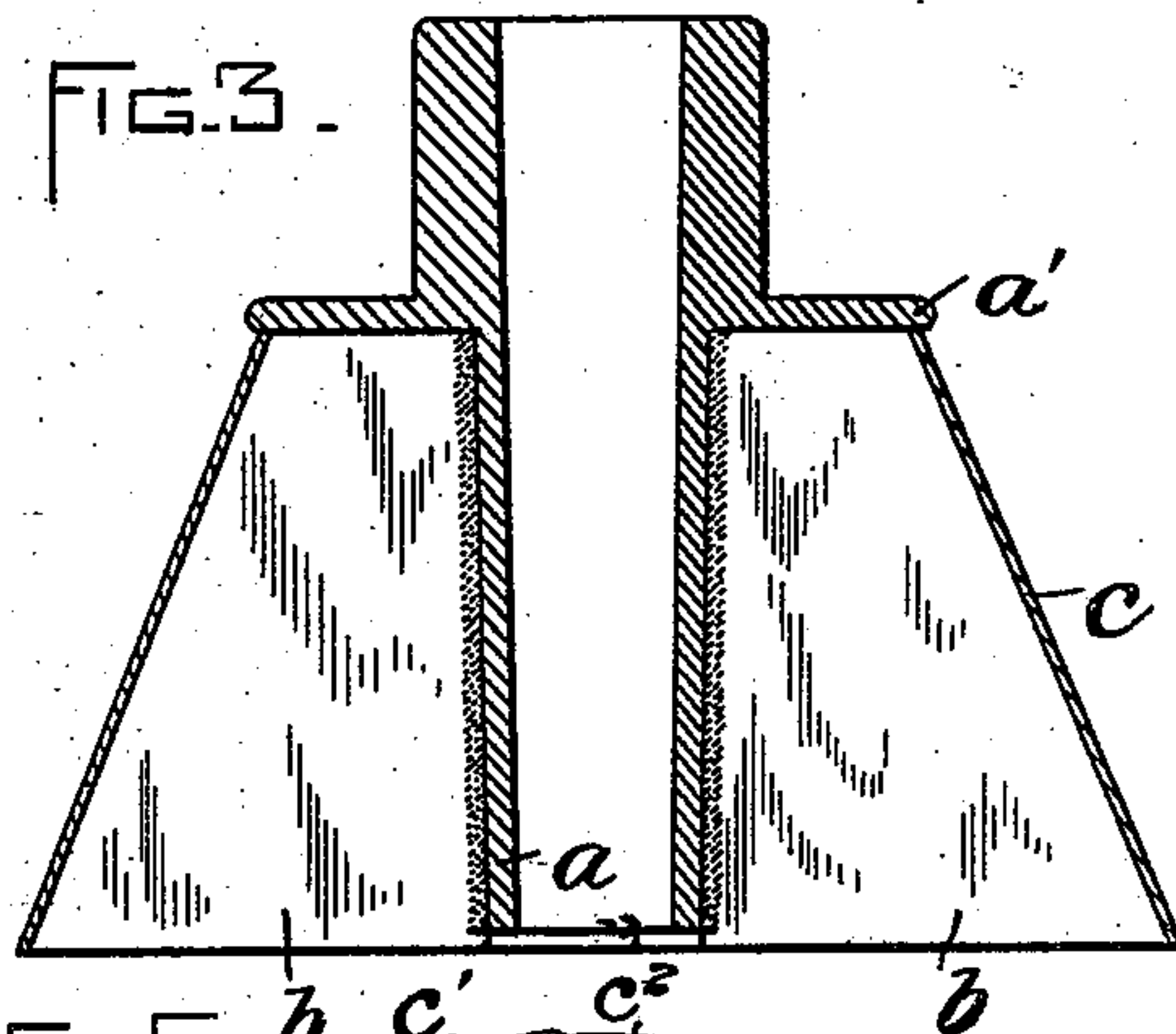


FIG. 4.

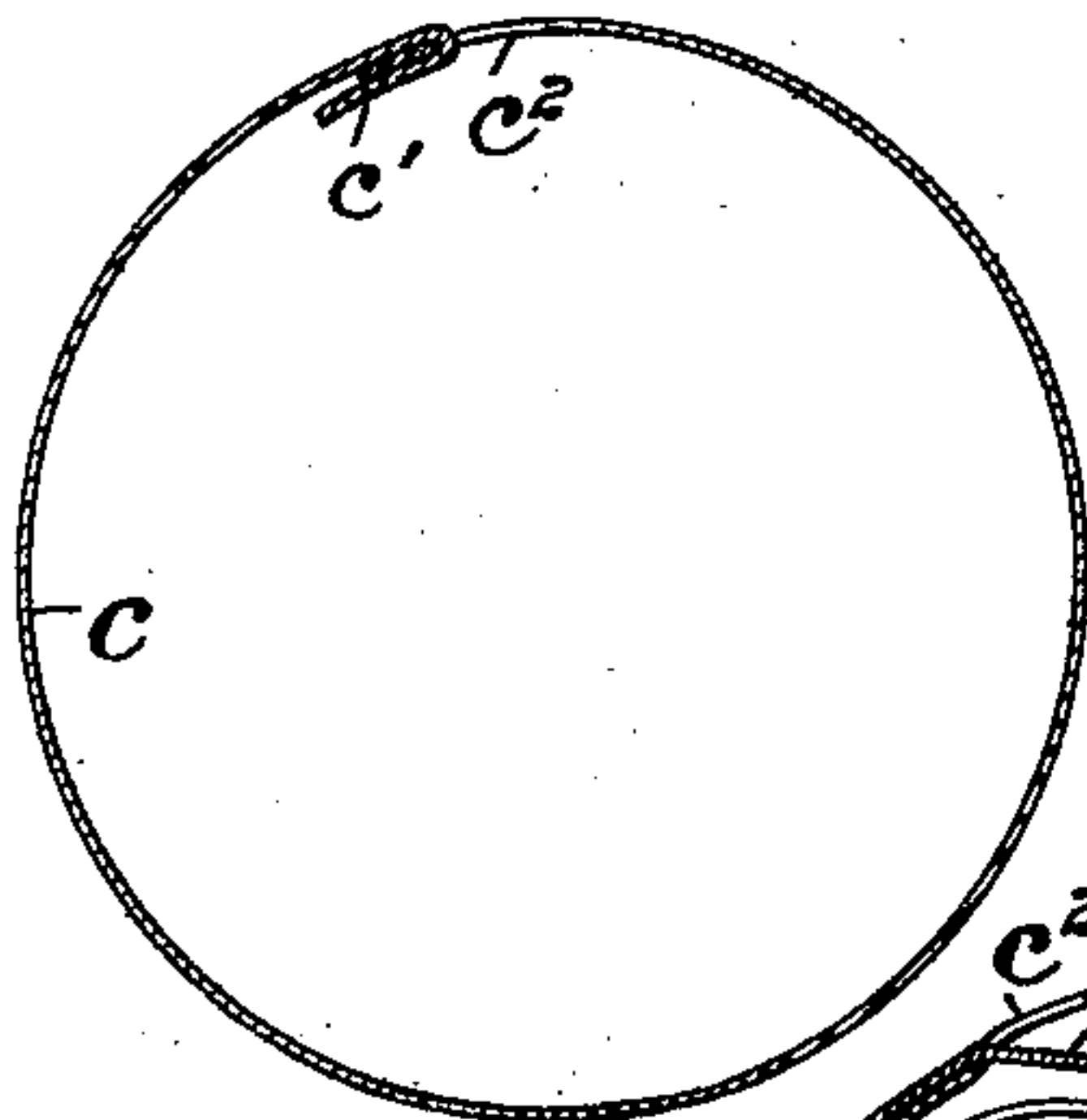


FIG. 5.

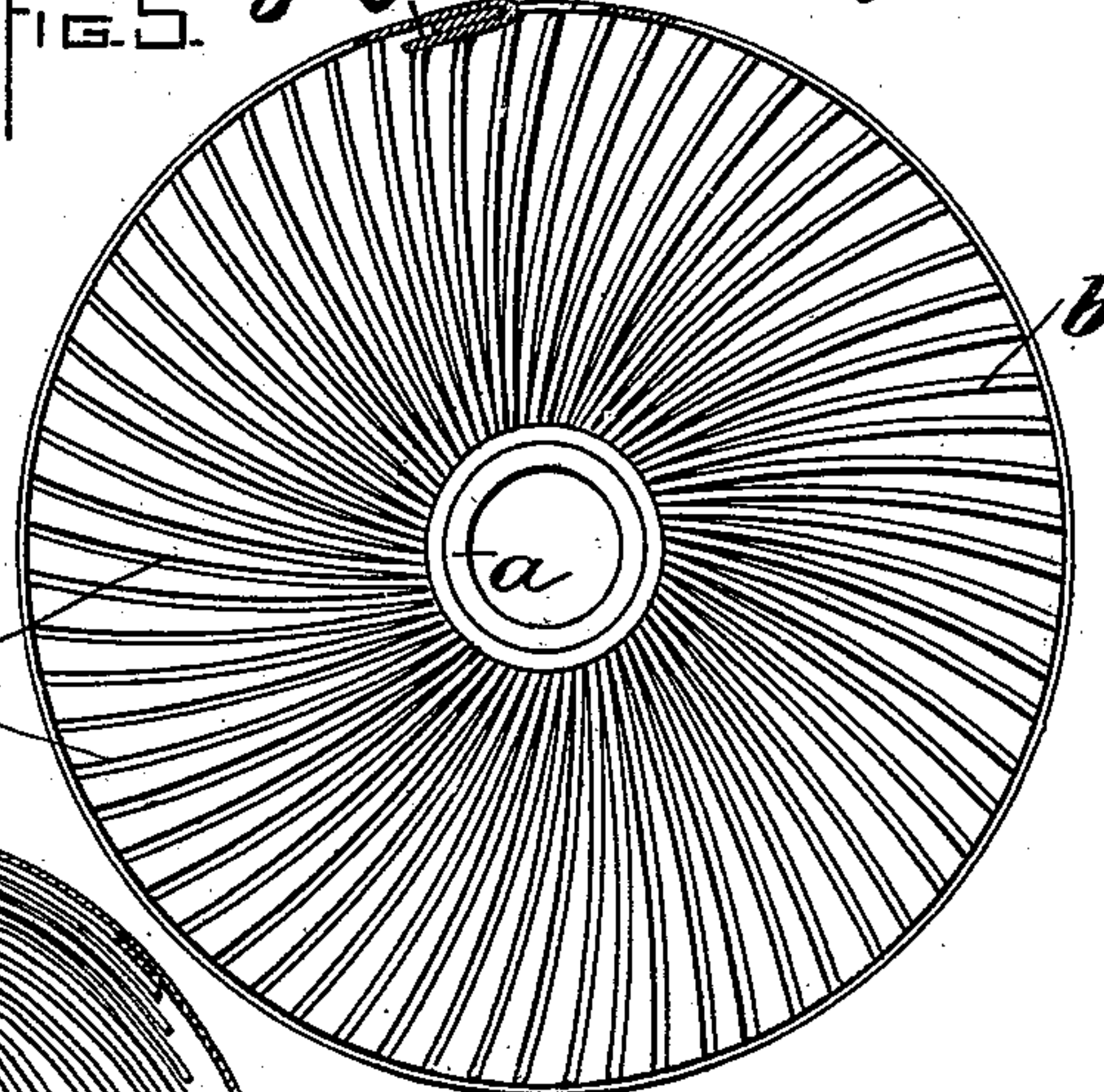
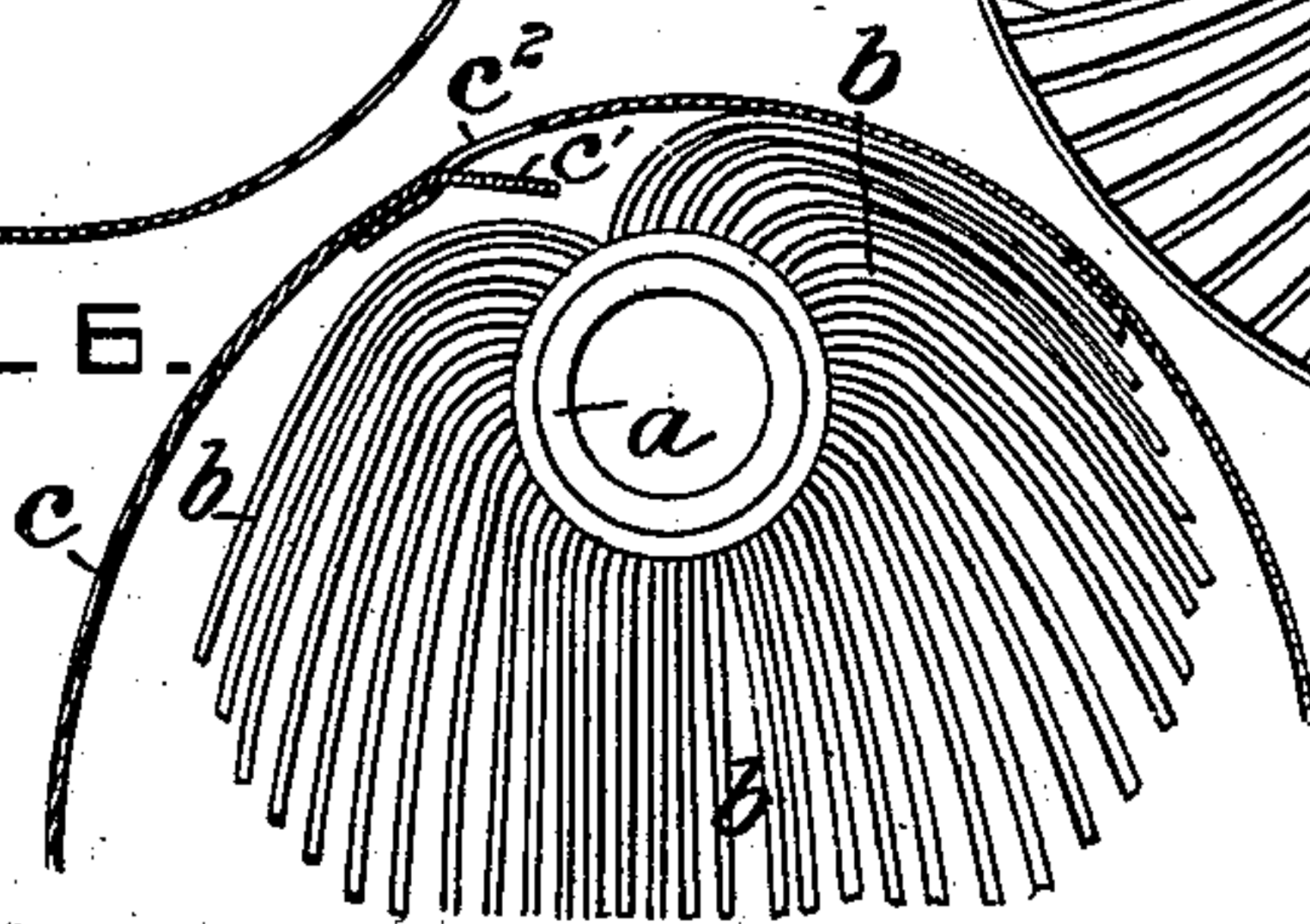


FIG. 6.



WITNESSES:

*T. H. Conner*  
*J. H. Davis*

INVENTOR:

*H. A. Webster*  
*by Wright & Brown*  
*Attys.*



# UNITED STATES PATENT OFFICE.

HAROLD A. WEBSTER, OF HAVERHILL, ASSIGNOR TO GEORGE H. P. FLAGG,  
OF BOSTON, MASSACHUSETTS.

## BUFFING OR POLISHING APPLIANCE.

SPECIFICATION forming part of Letters Patent No. 551,019, dated December 10, 1895.

Application filed February 16, 1895. Serial No. 538,629. (No model.)

*To all whom it may concern:*

Be it known that I, HAROLD A. WEBSTER, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Buffing or Polishing Appliances, of which the following is a specification.

This invention relates to buffing or polishing appliances comprising a rotary hub, a series of limp arms radiating therefrom, and collectively constituting a pad or cushion, which is normally limp or flabby and is adapted to be distended by centrifugal force, and a cover or band of flexible material formed to loosely encircle said cushion when the latter is in its normal condition and to closely fit the distended cushion, the cover being operatively supported by the cushion when the latter is distended by centrifugal force caused by the rapid rotation of the cushion.

An appliance organized as above indicated is described and claimed in another application filed by me February 5, 1895, Serial No. 537,409.

The present invention consists in certain improvements in the form of the cover and pad, and has for its object to render the same more efficient and satisfactory for certain kinds of work.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a view of the pad-cover before it is curved to surround the pad. Fig. 2 represents a view of the pad-cover curved into the form of a pad-surrounding band. Fig. 3 represents a sectional view of the entire appliance in operative condition. Fig. 4 represents a section on line 4 4 of Fig. 2. Fig. 5 represents an end view of the appliance shown in Fig. 3. Fig. 6 represents an end view showing the condition of the appliance when at rest.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a rigid hub, which may be a part of a shaft or formed as a separate piece adapted to be attached to a shaft. To the hub are attached a plurality of limp arms, which may be of limp leather, cloth, or other suitable flexible material, the arms being incapable of supporting their own

weight, so that they hang down when at rest, as shown in Fig. 6, and are caused to radiate, as shown in Figs. 3 and 5, when rapidly rotated, the arms therefore constituting a normally limp or flabby pad or cushion, which is adapted to be distended by centrifugal force. The arms are formed to give the pad a frusto-conical form, as shown in Fig. 3, so that it will support a frusto-conical pad-cover *c*, and by reason of its conical form will prevent endwise displacement of the cover toward the larger end of the pad, this being an important feature of my improvement, since the conical cover presents the straight contour lengthwise of the device that is desirable for buffing or polishing comparatively large surfaces, such as the bottoms of boot and shoe soles, without the liability of endwise displacement, which would exist if the pad and cover were cylindrical, the larger end of the cover and pad being left free or unobstructed by any rigid flange or stop that would be required to prevent displacement in the direction indicated if the pad and cover were cylindrical. Hence the larger end of the cover can be used for buffing or polishing a surface, such as the shank portion of a sole, close to a wall or projection, such as the breast of a heel, rising from said surface. To prevent displacement of the cover in the opposite direction or toward the smaller end of the pad, a stop or flange *a'*, affixed to the hub *a*, is employed, the smaller end of the cover bearing against said stop.

I prefer to make the arms *b* in the form of strips extending continuously from end to end of the hub, the outer edges of said strips being inclined relatively to the axis of the hub, thus giving the pad its frusto-conical form.

The cover *c* is composed of a strip of flexible material of the segmental form shown in Fig. 1, this form causing the cover to assume the frusto-conical form shown in Figs. 2 and 3 when wrapped around the pad. The cover is provided with end-coupling members, whereby its ends may be interlocked to retain the conical form, said members being tongues *c'* *c'*, formed on one end of the cover, and slots or orifices *c<sup>2</sup>* *c<sup>2</sup>*, formed in the other end.

When the pad is at rest, the cover encir-



cles it loosely, so that there is room within the cover for the free insertion and inward projection of the tongues, as shown in Fig. 6.

5 When the tongues are thus inserted, the cushion is rotated and its resulting distention causes its arms to bend the tongues back against the inner surface of the cover, the ends being thus securely united, as shown in Figs. 4 and 5.

10 In another application, filed December 13, 1894, Serial No. 531,639, I show a buffing appliance comprising a rigid shank or spindle and a series of flexible strips attached at their inner ends to one end of the spindle and radi-  
15 ating therefrom, the lower edges of said strips projecting below the spindle and collectively forming a yielding face arranged at right angles with the spindle, said face supporting an abrasive disk extending across the end of  
20 the spindle. My present invention differs from that last referred to in that the abrasive cover is frusto-conical and is supported by the ends and not by the lower or outer edges of the arms.

25 I claim—

A buffing appliance comprising a rotary hub and a plurality of limp arms radiating therefrom and collectively constituting a frusto-conical pad or cushion which is limp or flabby when at rest and is adapted to be distended 30 by centrifugal force, a frusto-conical pad-cover formed to fit the distended cushion and having an abrasive outer surface, the form of the pad preventing endwise displacement of the cover toward the larger end of the pad 35 when the pad is distended, while the limp and flabby character of said cushion permits such displacement when the cushion is at rest, and means for preventing endwise displacement of the cover toward the smaller end of 40 the pad.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 11th day of February, A. D. 1895.

HAROLD A. WEBSTER.

Witnesses:

HENRY M. CHOATE,  
HENRY N. WHITNEY.