

No. 871,303.

PATENTED NOV. 19, 1907.

D. B. SHANTZ.
BUTTON TUFT.

APPLICATION FILED JAN. 6, 1906.

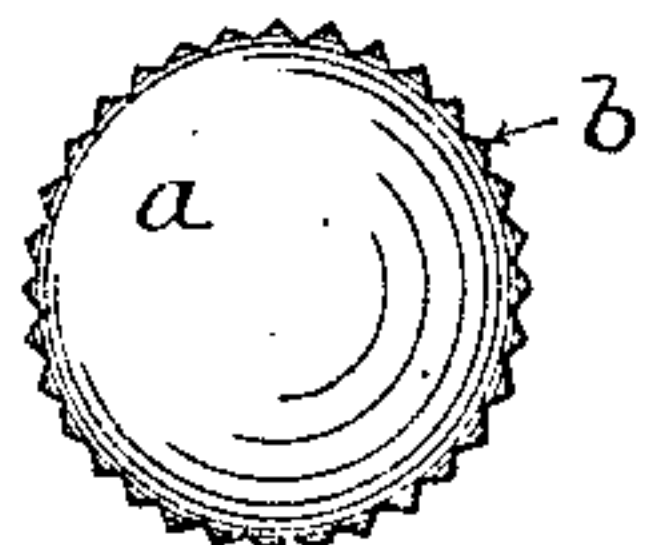


Fig. 1

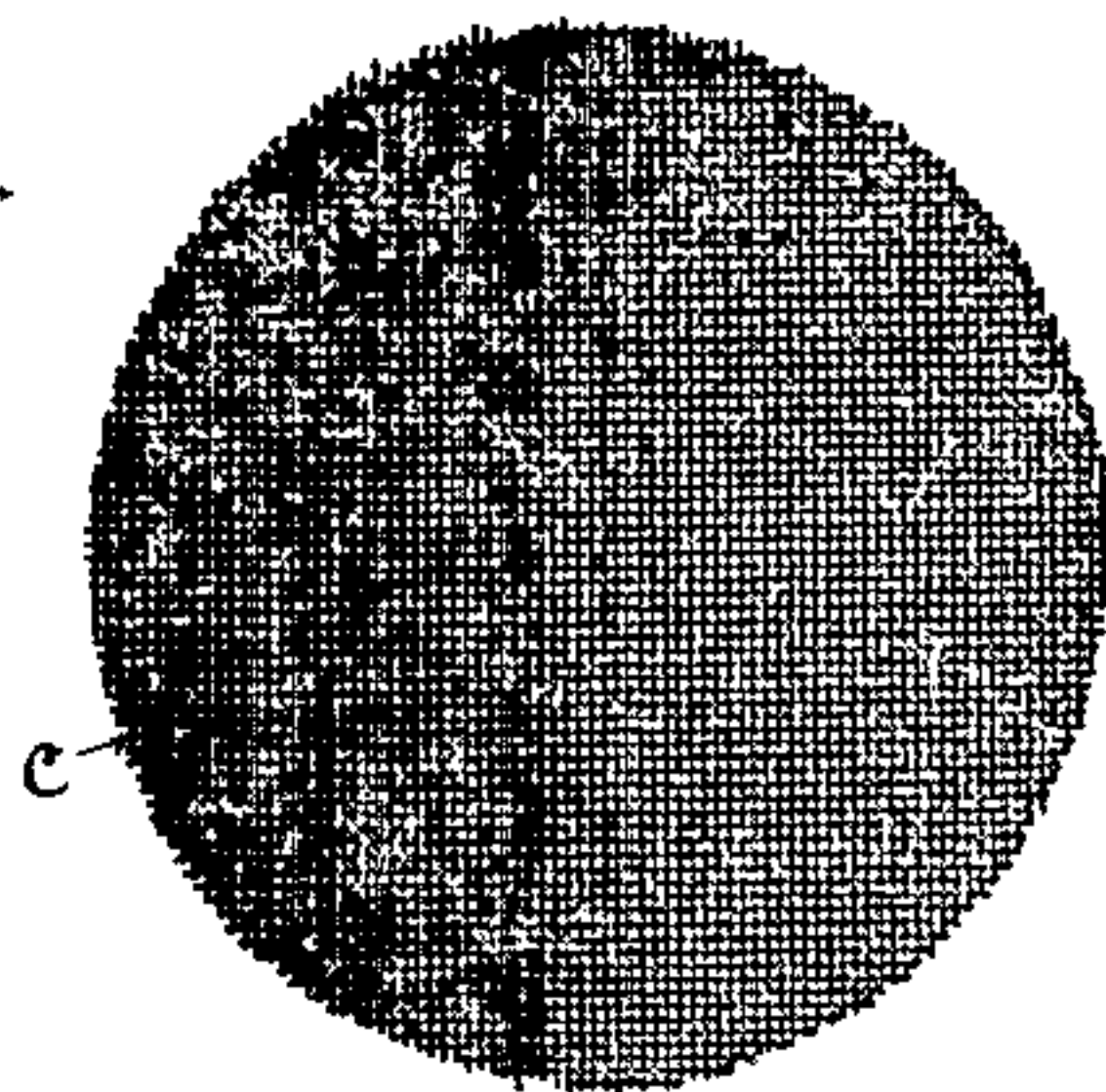


Fig. 2

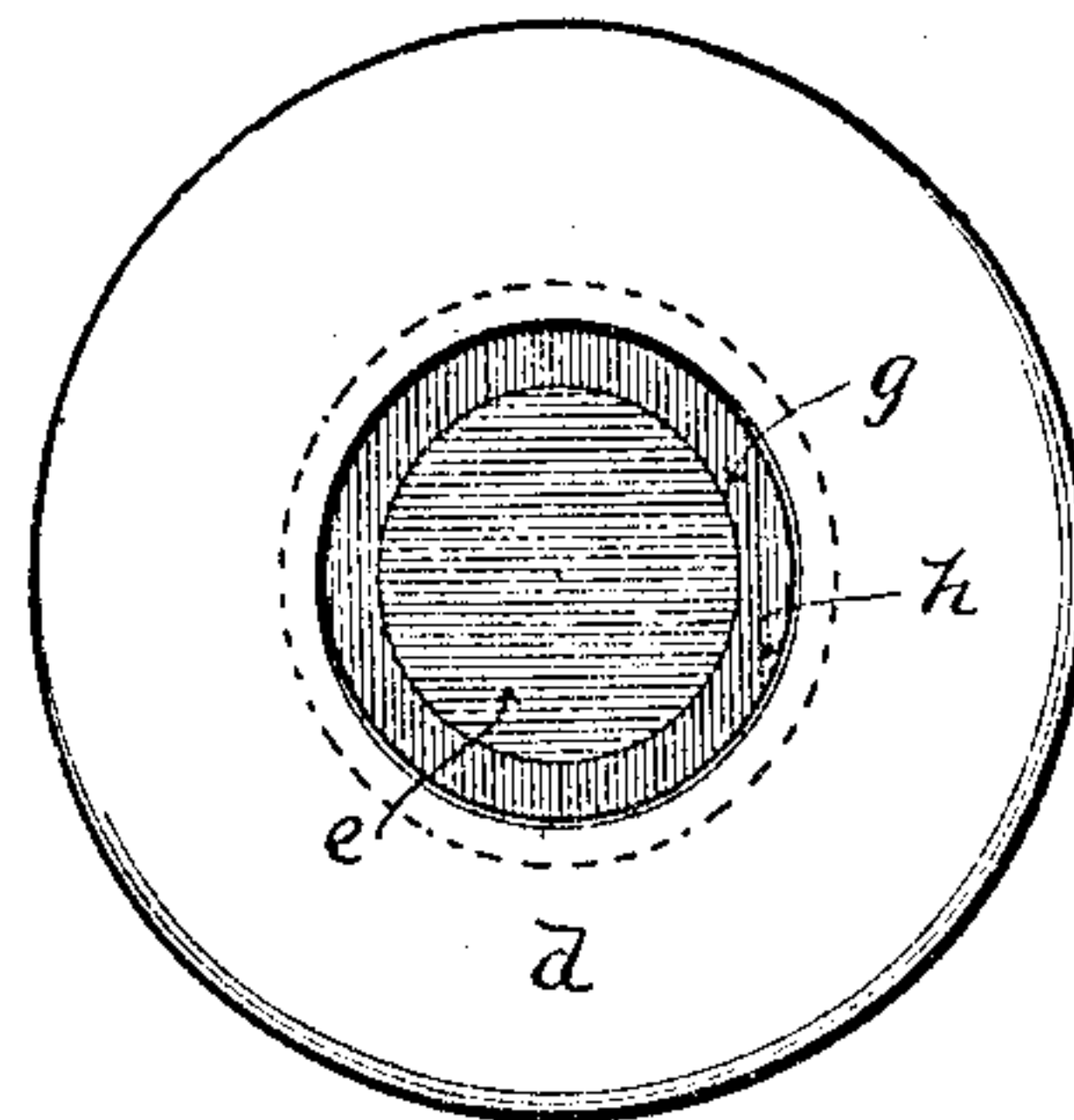


Fig. 5

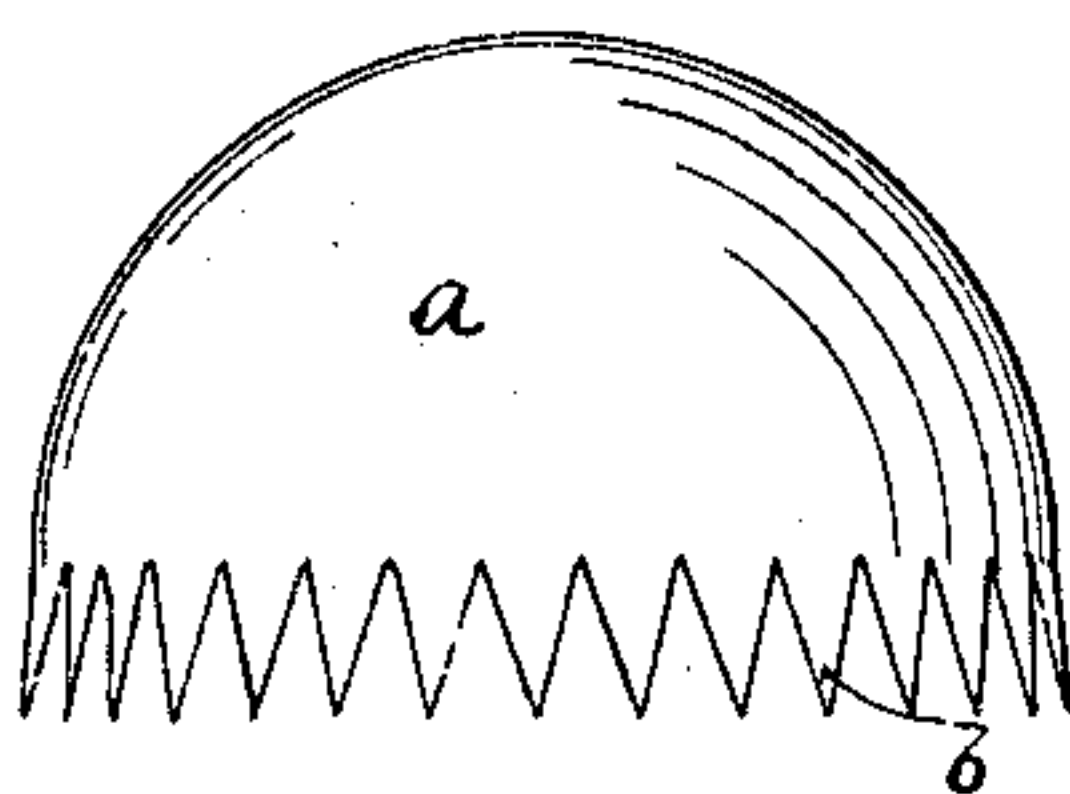


Fig. 3

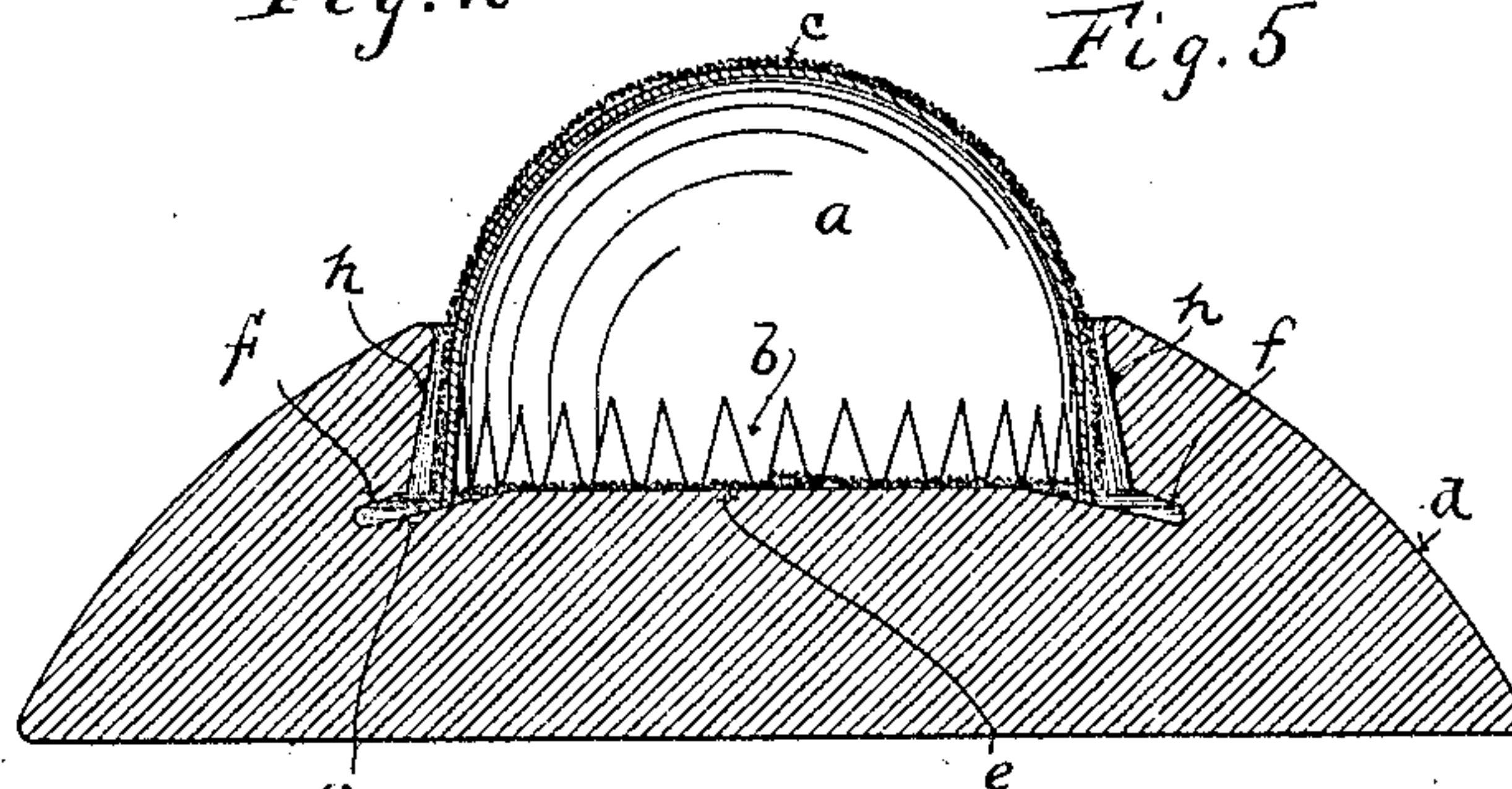


Fig. 6

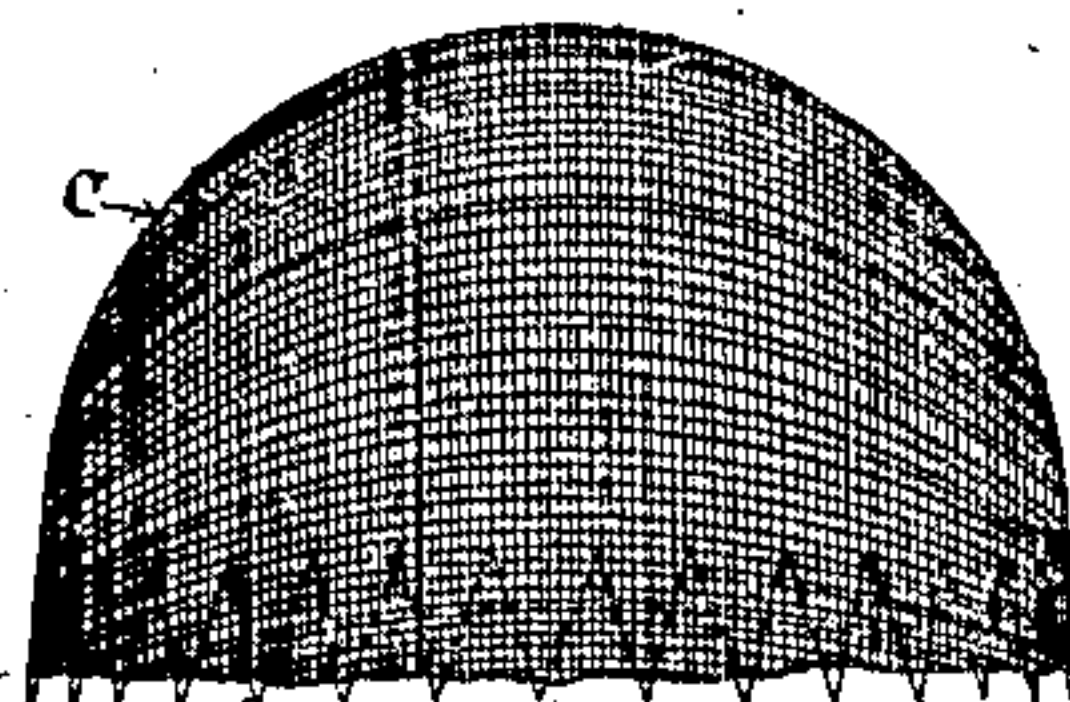


Fig. 4

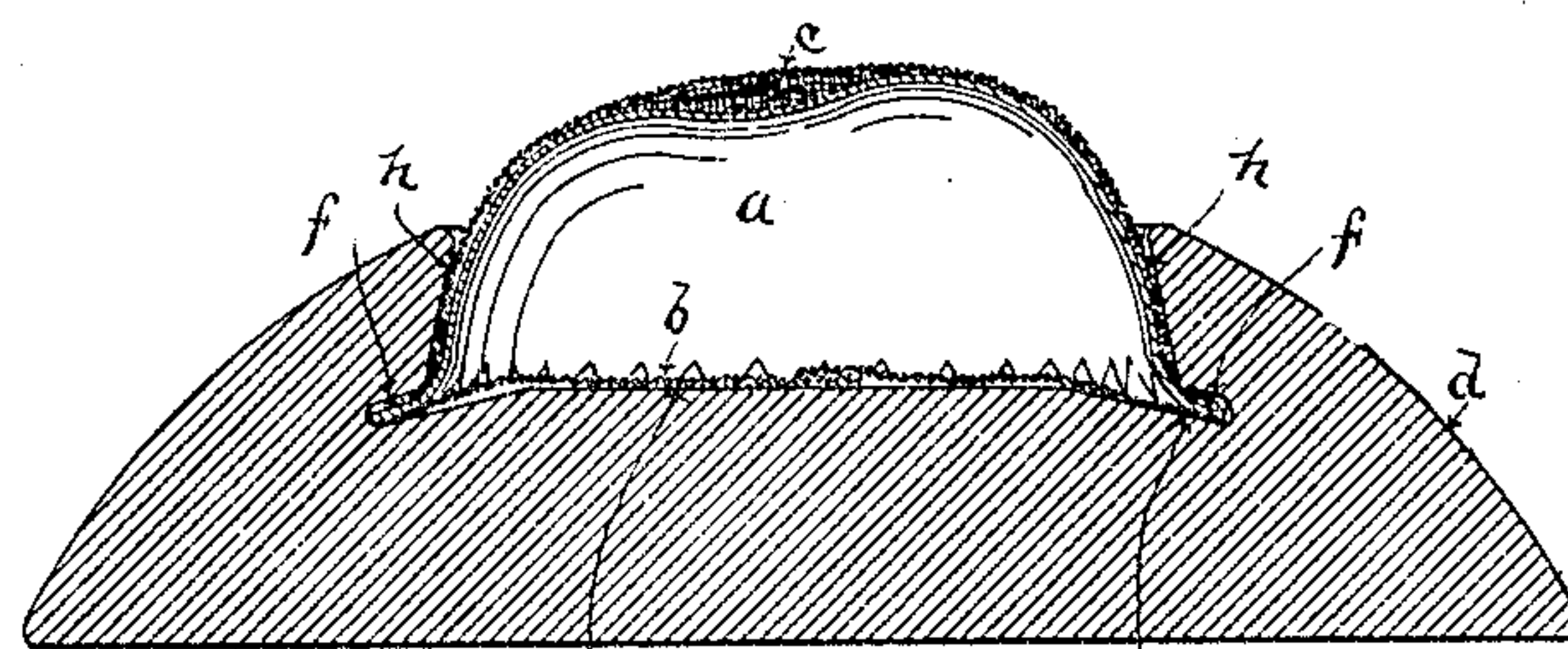


Fig. 7

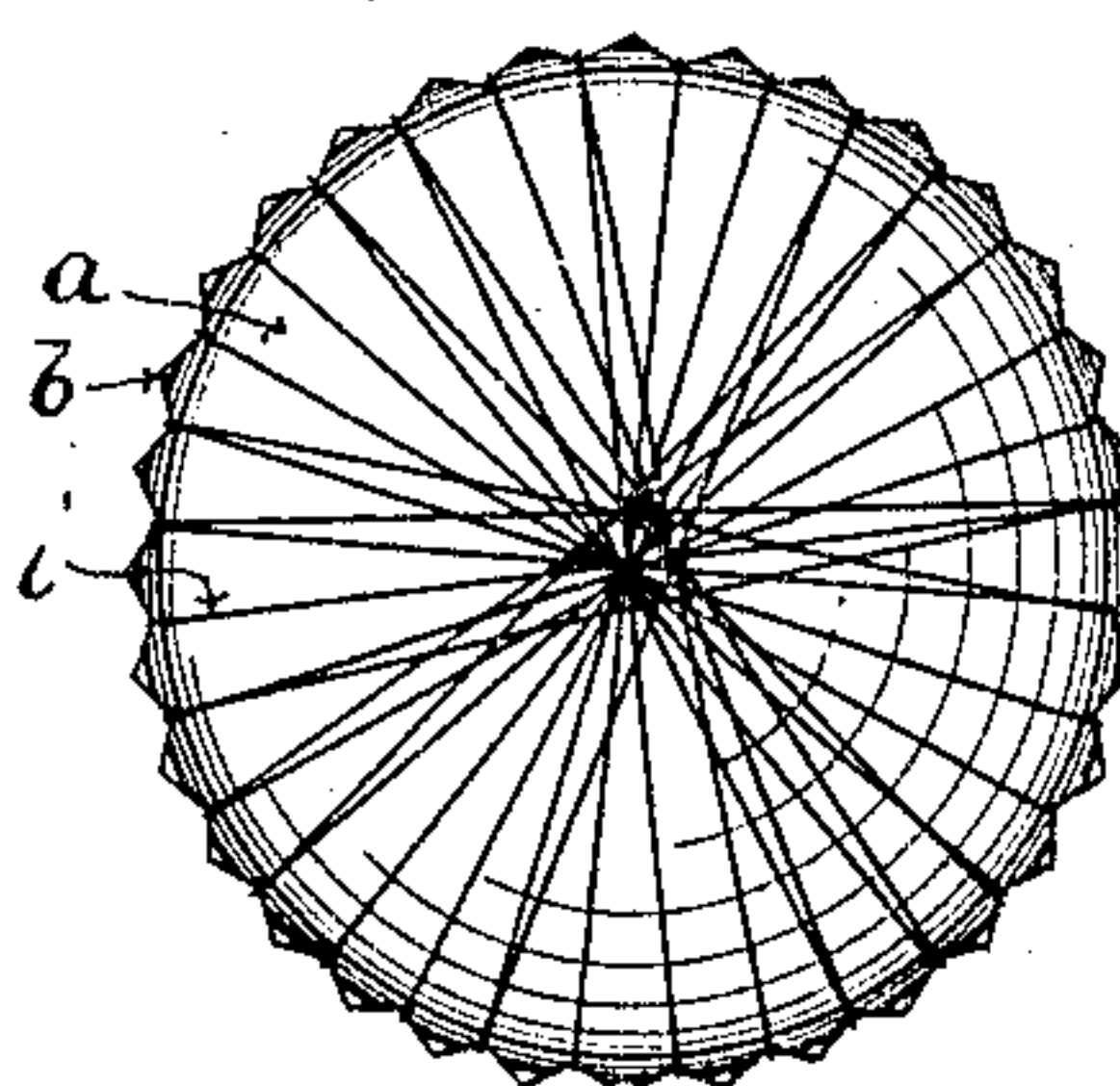


Fig. 8

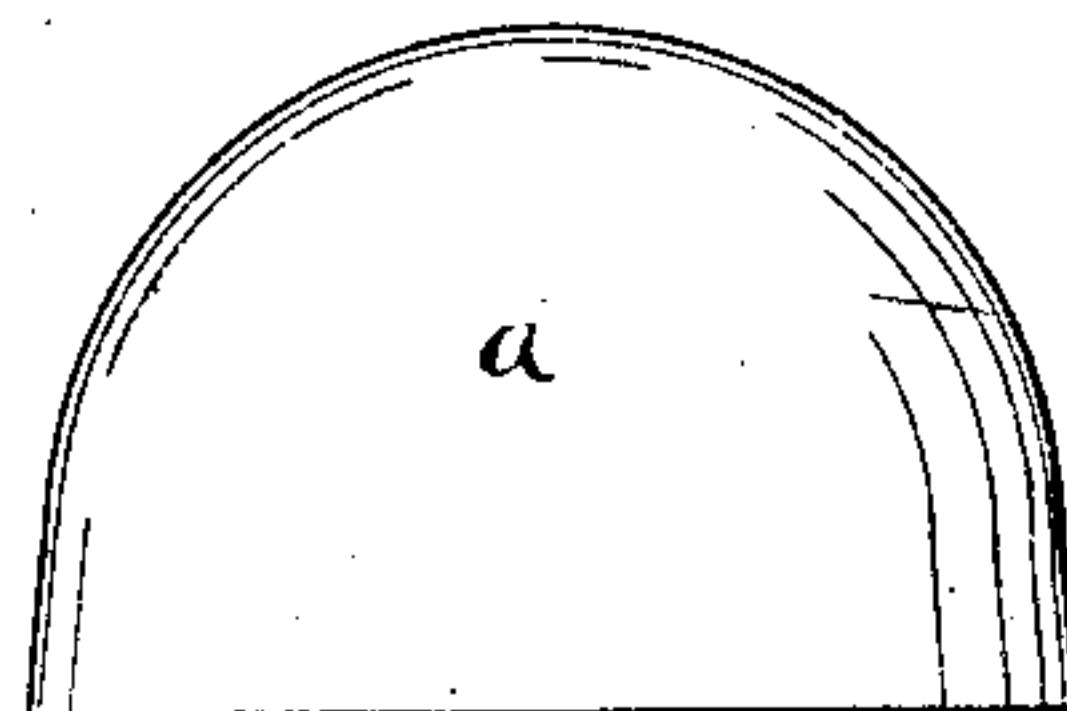


Fig. 9

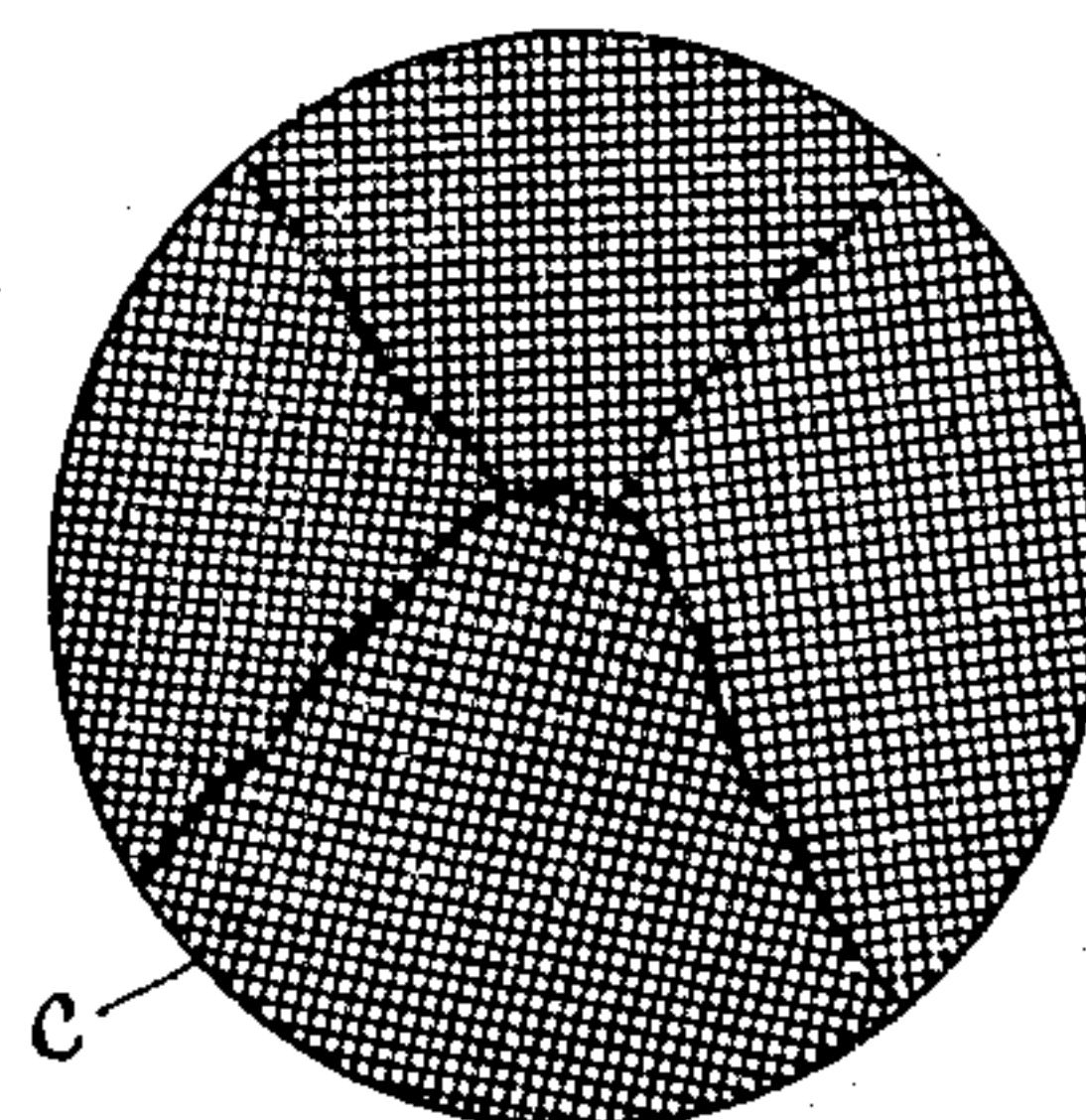


Fig. 10

Witnesses:

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UNITED STATES PATENT OFFICE.

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BUTTON-TUFT.

No. 871,303.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed January 6, 1906. Serial No. 294,950.

To all whom it may concern:

Be it known that I, DILMAN B. SHANTZ, a citizen of the Dominion of Canada, residing at Berlin, in the county of Waterloo and Dominion of Canada, have invented a new and useful Button-Tuft, of which the following is a specification.

My invention relates to improvements in button tufts and means for attaching the same.

The threefold object of my invention includes the prevention of the pulling-out of the tuft-material; the prevention of the button and tuft coming apart and the securing of a larger and thicker tuft; the reinforcing of the tuft by windings of thread.

Referring to the drawing herewith, in which like characters of reference indicate corresponding parts, Figure 1 is a top plan view of my cup-shaped disk. Fig. 2 is a plan view of a piece of tuft-material cut ready for use. Fig. 3 is a side elevation of Fig. 1. Fig. 4 is a similar view of the tuft material over it in place. Fig. 5 is a back face view of a button blank. Fig. 6 is a central cross section of said blank with the said disk and tuft-material in place ready to be secured. Fig. 7 is a view similar to Fig. 6 with the disk expanded and the tuft-material secured. Fig. 8 is a plan view of said disk and my reinforcing windings in place. Fig. 9 is a side elevation of a modified form of a cup-shaped disk, and Fig. 10 is a bottom view of a disk with the covering material over it in place and cemented or glued down, as hereafter described.

The disk *a* is cup-shaped. In the drawings, which are on a larger scale than most button sizes, I have, for the purpose of clearness in description, somewhat exaggerated certain features, such, for example, as the depth of serration and similar features. This cup-shaped disk, which I shall hereafter refer to as the "disk" has upon its periphery serrations or teeth *b*. The disk is metal and should be of a temper and quality which may be expanded by pressure. The tuft-material *c* is the ordinary woven cloth made for such purposes, except that my form of construction permits of the use of a heavier and stronger grade than is ordinarily used, especially in the smaller size buttons when the area of the seat or recess is necessarily small. The button blank *d* is made in the usual manner with a tuft seat or recess *e* and an annular recess *f* in the usual manner,

and the side walls *h* are slightly expanded inwardly. In addition to these common features of the recess, I form an annular bevel or lead *g* in the floor or bottom of the recess *e* to assist in the proper spreading of the serrations *b*.

The method of constructing and attaching the tuft is as follows: The blank *d* being properly recessed, the disk *a* being stamped with the serrations *b*, and the tuft-material being cut as shown in Fig. 2, the tuft-material is placed over the disk as shown in Fig. 4 and the points of the serrations pricked through the cloth as shown in that figure. The edges of the tuft-material may be glued within the disk, but that is generally not necessary. The tuft thus formed is now placed in the recess *e*, as shown in Fig. 6. Pressure by means of a punch of the proper bearing face is brought to bear upon the convex surface of the tuft and the serrations *b*, following the lead of the surface *g*, expand into the annular recess *f*. In this manner the tuft is formed with the tuft-material firmly secured over the serrations of the disk before it is put in place, and the expansion of the disk and serrations not only holds the disk in place in the button, but further secures the tuft material. In order that the tuft may be sewed through more readily I usually indent the crown of the disk as shown in Fig. 7.

Referring now especially to Fig. 8, I will describe another important feature of my invention. In order to reinforce the tuft, I first wind the disk *a* with thread as shown at *i*, which passes over the crown and into the notches of the serrations *b*. These windings materially add to the strength of the tuft, since the threads *i* will be caught up by the needle in sewing the button to a garment and the pull on the tuft will be in part carried by the thread.

In Figs. 9 and 10 I have shown a disk having no serrations or teeth and the covering material folded and glued over the open end of the disk. By employing a disk of the form shown in Fig. 9 and cementing or gluing the folded-in edges or flaps of the covering material together, the serrations may be dispensed with without departing from the spirit of my invention.

In the drawings and foregoing description I have shown a turned button body. It will be understood that my tuft is equally adaptable to other forms of buttons and may be secured thereto by any well-known means,

such as cementing, waxing or holding with retaining wings or flanges.

Having thus described my invention and its method of attachment, what I claim is:

5 1. As an article of manufacture, a button comprising a solid one-piece button body provided with an undercut recess, a serrated disk adapted to be locked in said recess, a
10 tuft material adapted to be engaged by said disk, windings of thread engaged by the serrations of said disk.

2. In combination with a button body and
15 tuft-material, a disk peripherally serrated, windings of thread engaging in said serrations and passing over the crown of the disk, said tuft-material superposed on said disk and said windings and engaged by said ser-

rations, and means for securing said disk to said button body.

3. In combination with a button body and 20 tuft-material, a disk peripherally serrated, windings of thread engaging in said serrations and passing over the crown of the disk, said tuft-material superposed on said disk and said windings, a recess and an annular 25 seat in said button body and said corrugations expanded within said annular seat.

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

DILMAN B. SHANTZ.

Witnesses:

E. A. KELLY,

W. E. BABBITT.