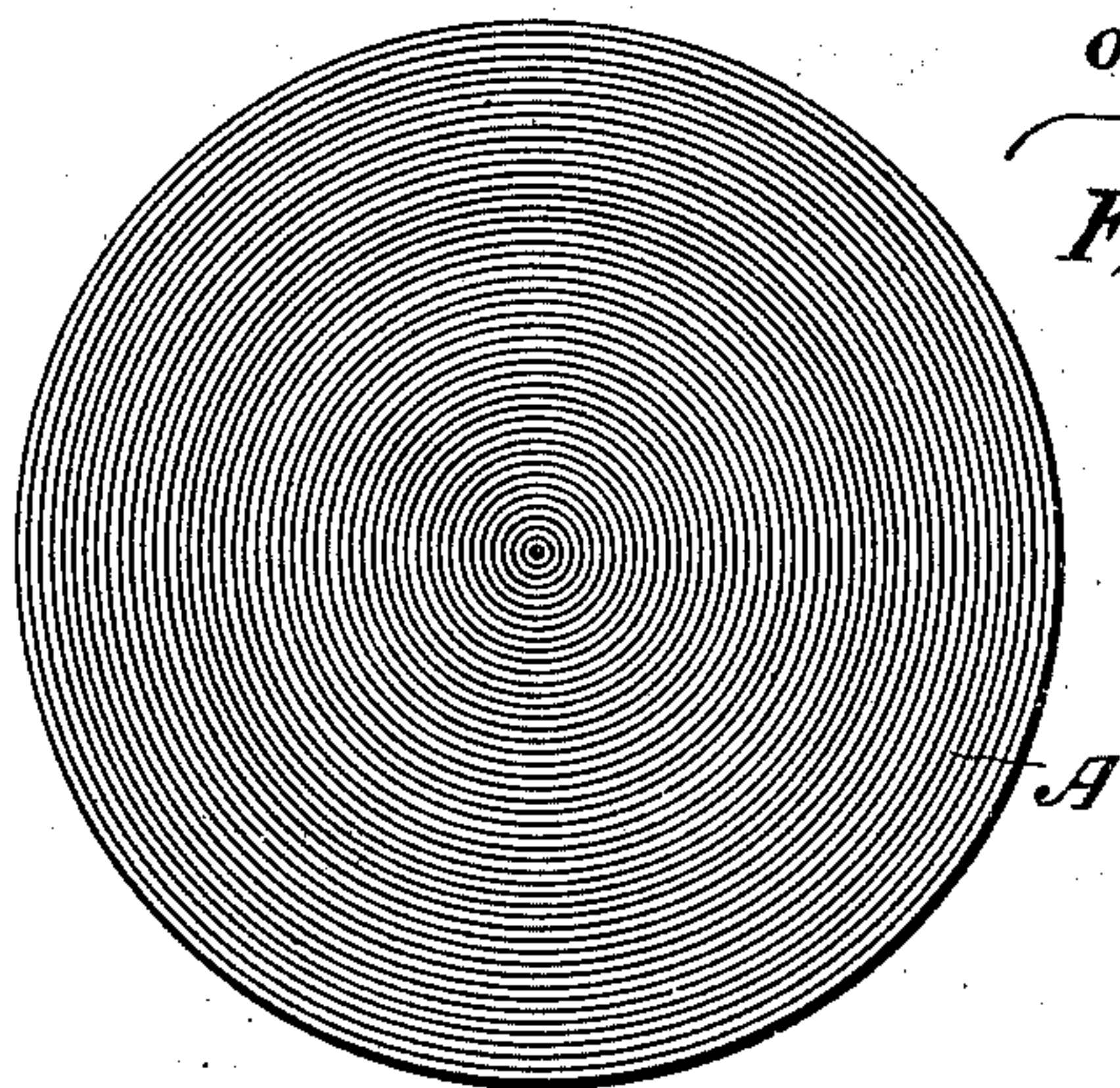


No. 741,327.

PATENTED OCT. 13, 1903.

R. L. GORDON.  
PROCESS OF UNITING BATS TO HAT BODIES.  
APPLICATION FILED MAY 29, 1902.

NO MODEL.



old Form.

Fig. 1.

Fig. 2.

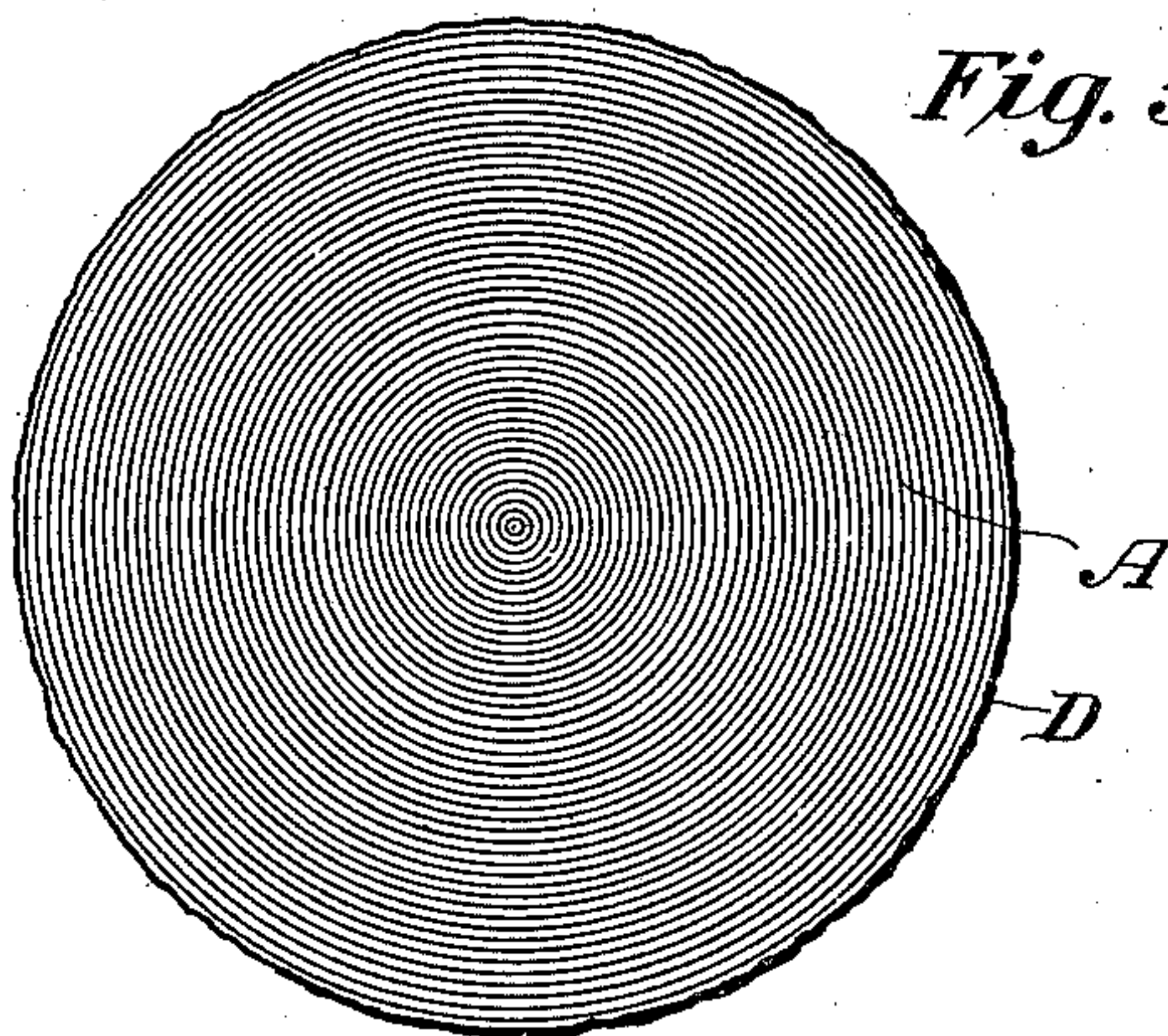
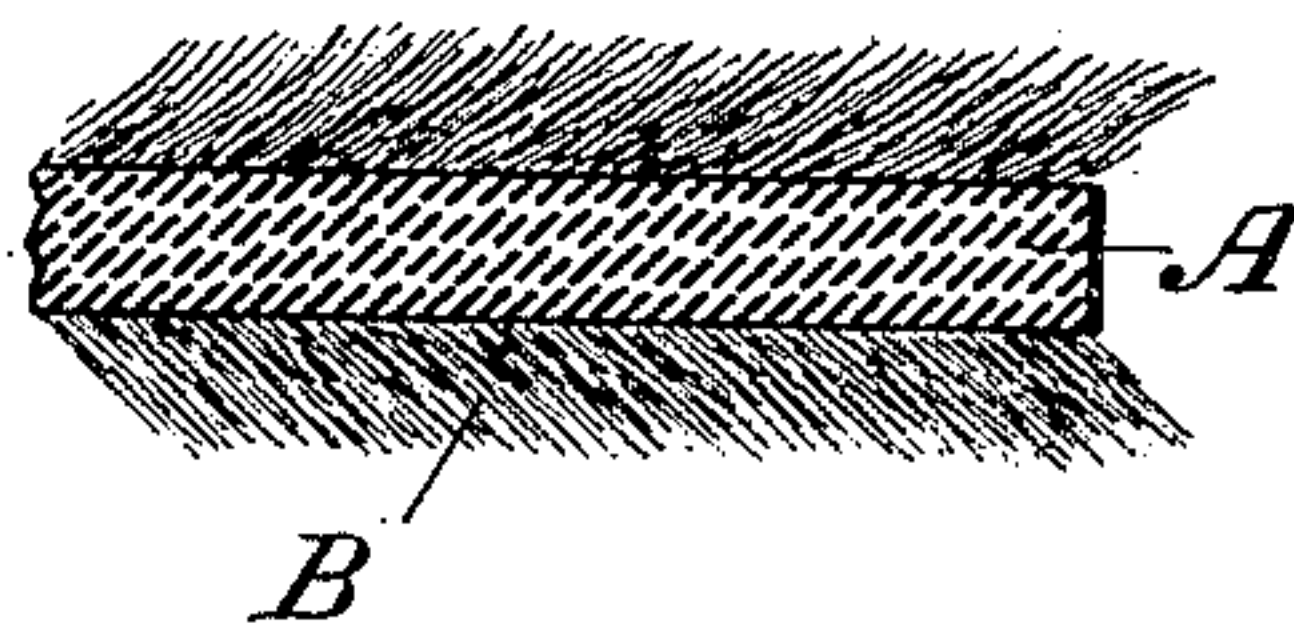


Fig. 3.

Fig. 4.

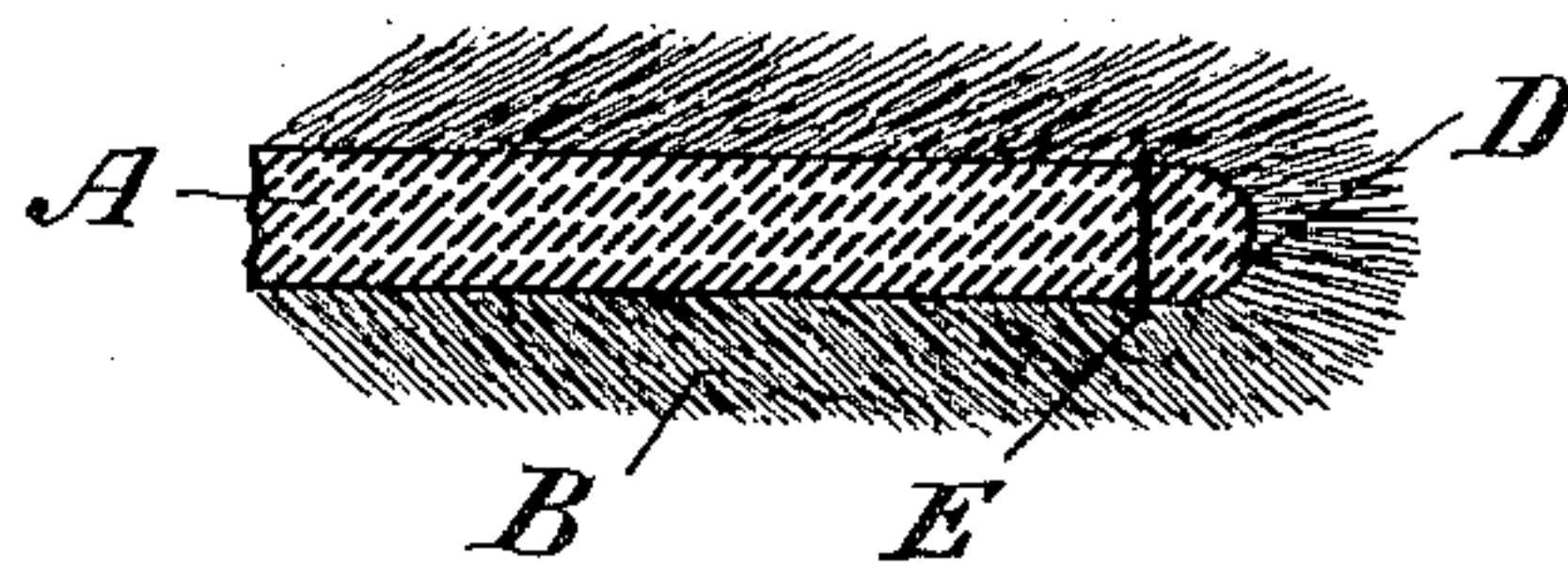


Fig. 6.

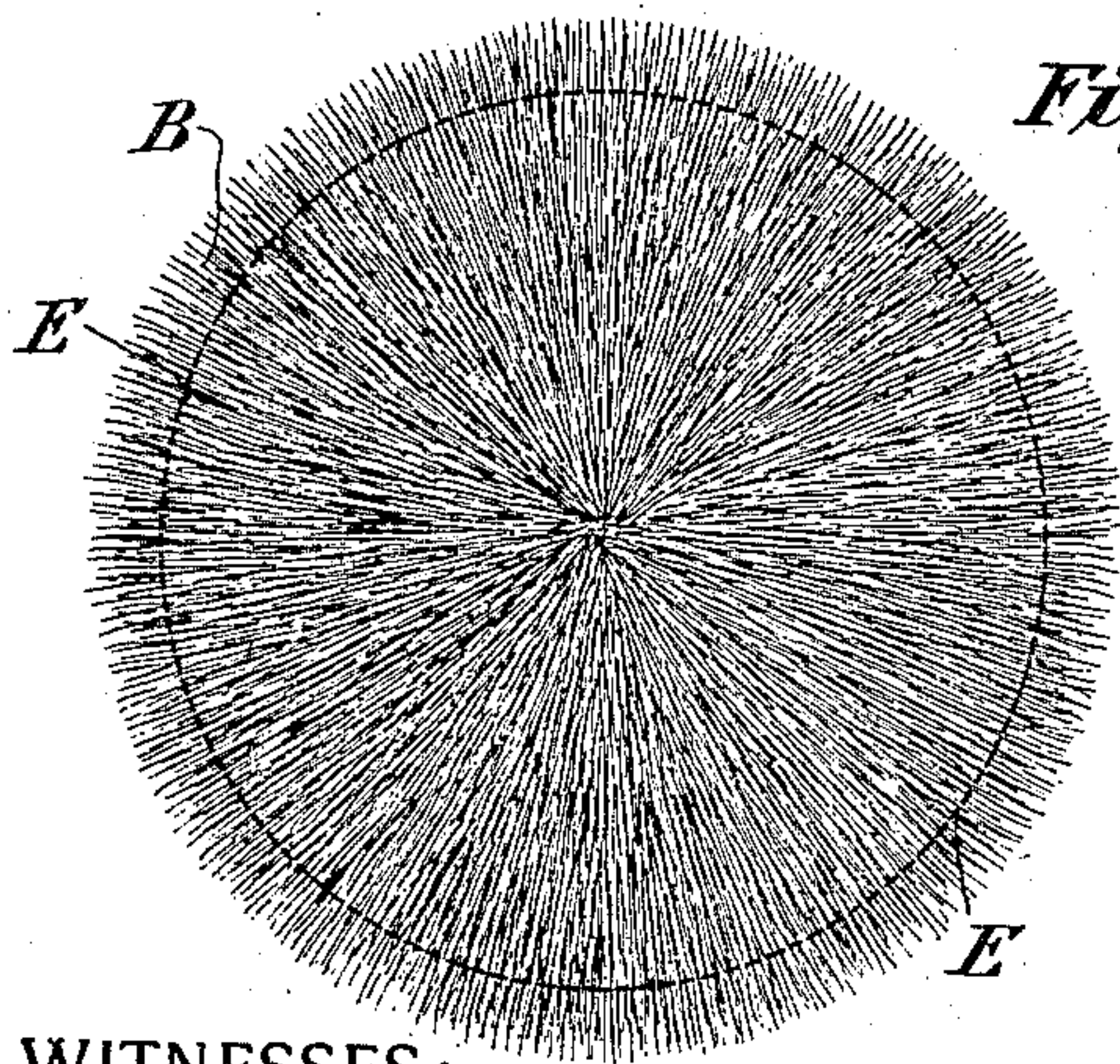
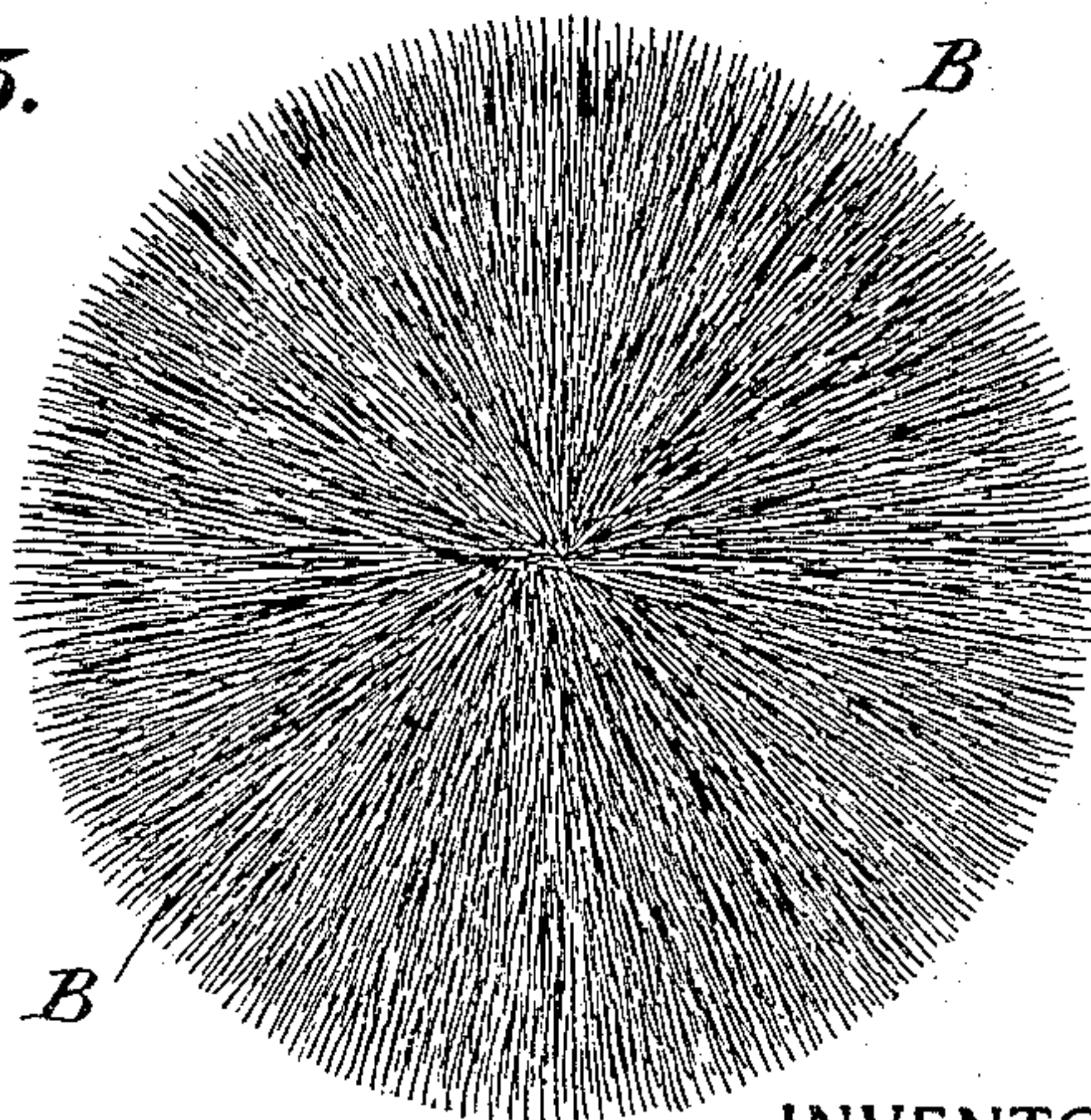


Fig. 5.



WITNESSES:

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## UNITED STATES PATENT OFFICE.

ROBERT L. GORDON, OF MATTAWAN, NEW YORK.

## PROCESS OF UNITING BATS TO HAT-BODIES.

SPECIFICATION forming part of Letters Patent No. 741,327, dated October 13, 1903.

Application filed May 29, 1902. Serial No. 109,440. (No specimens.)

*To all whom it may concern:*

Be it known that I, ROBERT L. GORDON, a citizen of the United States of America, and a resident of the village of Mattawan, county of Dutchess, and State of New York, have invented certain new and useful Improvements in Processes of Uniting Bats to Hat-Bodies, of which the following is a specification.

The object of this invention is to prevent the large percentage of defective goods which is produced by the ordinary process of napping a hat-body. This object is accomplished partly by stitching the nap-bat to the hat-body at an early stage in the napping operation and partly by tearing the edge of the hat-body to the desired size and shape instead of cutting the same with a sharp knife.

Nap-bats are produced by blowing the fur or other material upon a perforated or exhausted surface in a so-called "forming-machine" to form a layer or nap-bat of suitable size and shape for application to the hat-body.

Hat-bodies are at the present time made both of flat and conical shape, and the nap-bat is produced in a forming-machine of either shape that may be required for application to the hat-body. The layer of fur comprising the nap-bat is too soft to bear handling, and is commonly removed from the forming cone or plate by pressing the hat-body upon it until it adheres sufficiently to transfer the nap-bat to the body. The hat-body and nap-bat are then subjected to pressure under a so-called "vibrating jigger," which works the fur of the nap-bat (while in a dry condition) a little into the substance of the hat-body. It is then common to dampen the nap-bat to strengthen it and increase its adhesion to the body and to then roll the body and bat in a damp cloth and knead and work the same by hand to "stick" the nap-bat to the body sufficiently to bear the subsequent processes of scalding and a harder treatment which works the fibers of the bat into the body to produce a flowing nap.

As no means has been heretofore known for attaching the nap-bat positively and securely to the hat-body before working and kneading it in a cloth, it is a frequent occurrence for the nap-bat to slip upon the body during such treatment, and thus deprive one

edge of the hat-body of the proper furry coating. The nap-bat has also during such kneading and working been often torn by such slipping, so that when the napping was concluded a bald place would appear, which could only be cured by sticking a piece of a nap-bat upon the same and subjecting the hat anew to the sticking and napping operation. The difficulty in producing a perfect nap by such previous methods has led to the present invention, in which the nap-bat and the hat-body are secured together by stitching as soon as the bat has been pressed upon the hat-body with sufficient firmness to retain its place during the sewing operation. Such stitching or sewing of the bat to the body, especially at the margin, has been found by experience to retain the nap-bat in its required position upon the body during the entire subsequent treatment, and thereby avoid the slipping and tearing of the bat before the nap was completed.

As the slipping of the bat exposes the margin of the hat-body, it is obvious that some means of holding the nap-bat securely to the edge of the hat-body during the napping operation is of especial value, and it has been found that a row of stitches can be used for such purpose without preventing the working of the nap into the hat-body by the usual means and without in any manner disfiguring the brim of the hat when the nap is finished. The insertion of the roots of the napping fibers into the felt all around the stitches serves to completely conceal the stitches in the finished product.

It has been common in the manufacture of napped hats to reduce the edge of the body to the desired size by a sharp knife before applying a nap-bat thereto, as it could not be cut after napping without disfiguring the nap; but it has been found that the nap does not penetrate or adhere readily to such smooth cut edge, and the edge of such a body cannot therefore be napped as perfectly as the natural surface on the upper and under side of the brim.

I have discovered that the nap can be made to adhere to the edge of the brim by severing the same roughly in any suitable manner, as by tearing it off or cutting it with dull shears, which leave the fibers projecting upon the



edge instead of cutting them smoothly. Such shearing or tearing may be done either by hand or by any convenient mechanism; but the most rapid and effective means consists of a sewing-machine with a broken needle inserted in the needle-carrier and operated to punch a row of holes around the brim where it is to be severed, like the division in a sheet of postage-stamps. When thus punched upon the desired line, the edge of the body can be readily torn off, leaving the edge in such a rough and fibrous condition that the nap adheres to it as perfectly as to the other surfaces of the body.

The nature of my improvements will be understood by reference to the annexed drawings, in which—

Figure 1 is a plan view of the old form of hat-body before the bat has been attached. Fig. 2 is an enlarged cross-section of such hat-body, showing the bat attached thereto. Fig. 3 is a plan view of a new form of hat-body before the bat has been attached with rough edge prepared by the method described. Fig. 4 is an enlarged cross-section of the same after the bat has been attached. Fig. 5 is a plan view of the hat-body after the nap has been attached in the manner hereinafter described, and Fig. 6 is a plan view of the hat-body completely finished with the nap raised thereon.

Similar letters relate to similar parts throughout the several views.

A designates the felt hat-body, and B the nap-bat. Fig. 1 shows the body with a smooth edge, such as is produced by cutting into the desired shape with a sharp knife, and Fig. 2 shows such a body with the nap-bat applied in readiness for the treatment which is required to insert the napping fibers into the body. When such a body and nap-bat are subjected to the napping operation, the fibers do not readily penetrate the smooth edge of the body, and such edge is therefore imperfectly napped. Furthermore, the bat when not adherent to the edge of the hat-body is liable to slip away from the edge and produce the imperfections above described. Such slipping prevents the fur fibers from becoming rooted in the body and produces an imperfect nap on the body. Such defects in the nap are obviated by producing a rough edge on the body, as shown in Figs. 3 and 4, and by connecting the nap-bat and the hat-body securely together by a series of stitches E, which are very readily inserted through the felt and nap-bat adjacent to the edge, as shown in Fig. 5.

A single row of stitches has been found in practice adequate to hold the nap-bat securely in place upon the hat-body during the scalding operation and the entire subsequent treatment required to root the napping fibers in the body. The attachment of the nap to the edge of the body prevents the edge of the nap from injury and holds all parts of the

nap equally in place. It has also been found that the stitches being applied before the nap is raised are buried between the roots of the fibers which form the finished nap and are wholly concealed from view within the base of the nap in the finished product, as shown in Fig. 6. The nap may be stitched to the body by hand or by a sewing-machine, and the stitching may be extended in any desired direction upon the surface of the nap-bat as may be required to secure it adequately to the body.

Any desired means may be used to sever the felt in reducing the size of the body to produce a rough and fibrous edge, to which the nap will adhere; but I have found the method of first perforating a row of holes upon the desired line and then tearing off the margin to be the most convenient and effective in practice.

The invention may be applied to hat-bodies and nap-bats of any desired shape, and the body after it is napped by the present invention may be shaped and finished in any desired manner or may be sold in an unfinished shape.

Having thus set forth the nature of the invention, what is claimed herein is—

1. The method of uniting a nap-bat to a previously-felted hat-body, which consists in applying the nap-bat in a loose condition to the hat-body, securing the nap-bat and hat-body together by stitching, and finally working the nap into the body to unite the nap-bat and body permanently in the usual manner.

2. The method of uniting a nap-bat to a previously-felted hat-body, which consists in applying the nap-bat in a loose condition to the hat-body, securing the nap-bat and hat-body together by a row of stitches adjacent to the edge of the hat-body and then working the nap into the body to unite the nap-bat and body permanently in the usual manner.

3. The method of uniting a nap-bat to a previously-felted hat-body, consisting in trimming or reducing the body to the desired size with a rough or torn edge, applying the nap-bat in a loose condition to the hat-body including its rough edge and finally working the nap into the body to unite the nap-bat and body permanently in the usual manner.

4. The method of uniting a nap-bat to a previously-felted hat-body, consisting in trimming or reducing the body to the desired size with a rough or torn edge, applying the nap-bat in a loose condition to the hat-body, securing the nap-bat and hat-body together by a row of stitches adjacent to the edge of the hat-body to hold the same in proper relative position, and finally working the nap into the body to permanently unite the two in the usual manner.

5. A napped hat-body having a brim devoid of binding and a row of stitches adjacent to the edge of the brim within and concealed by the base of the nap.

6. A napped hat-body having a brim with  
rough edge and devoid of binding, a nap in-  
serted in the rough edge of the brim, and a  
row of stitches adjacent to the edge of the  
5 brim within and concealed by the base of the  
nap.

In testimony that I claim the foregoing as

my invention I have signed my name, in pres-  
ence of two witnesses, this 16th day of May,  
1902.

ROBERT L. GORDON.

Witnesses:

JAMES G. MEYER,  
JOHN T. KELLY, Jr.