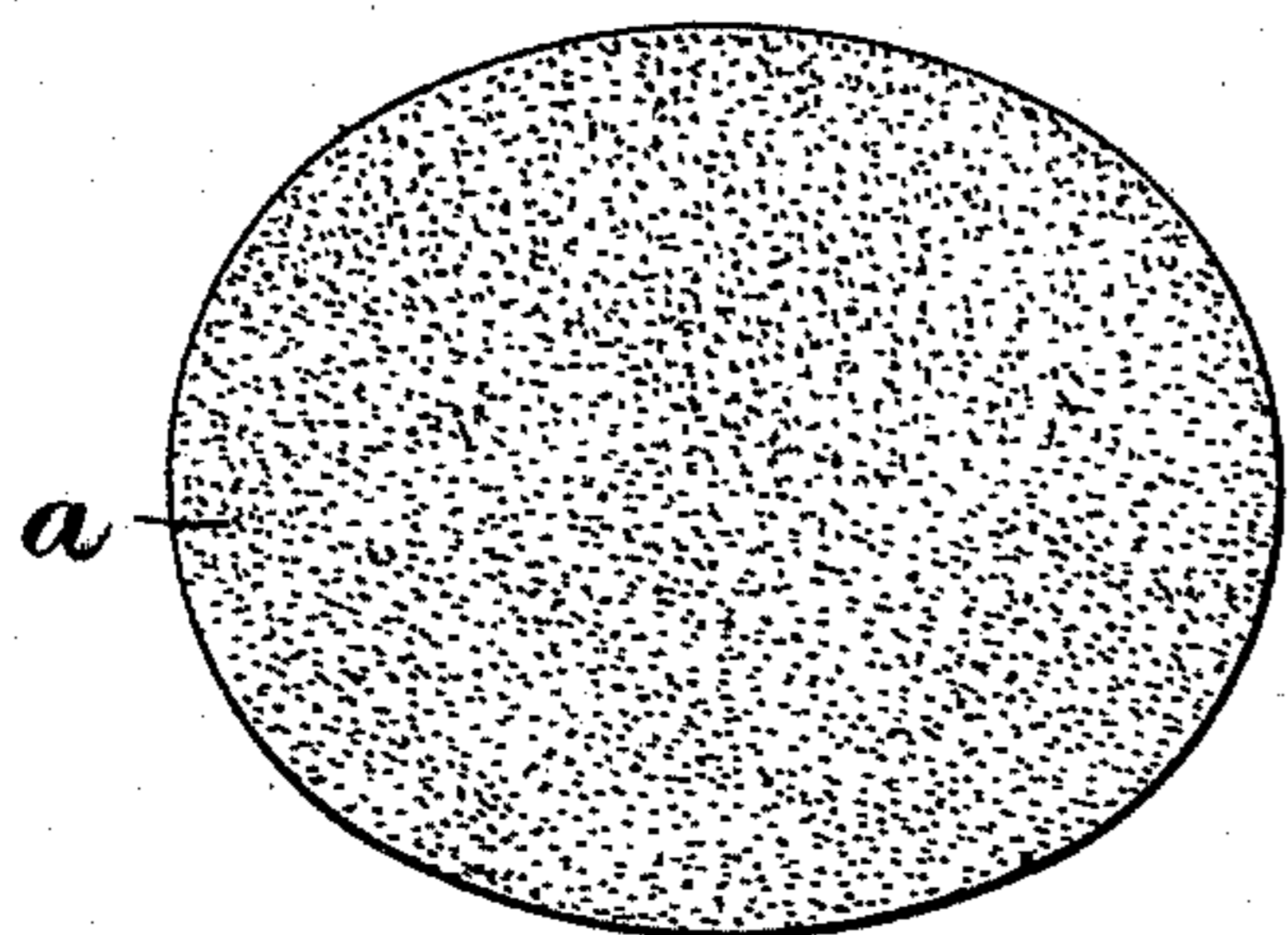


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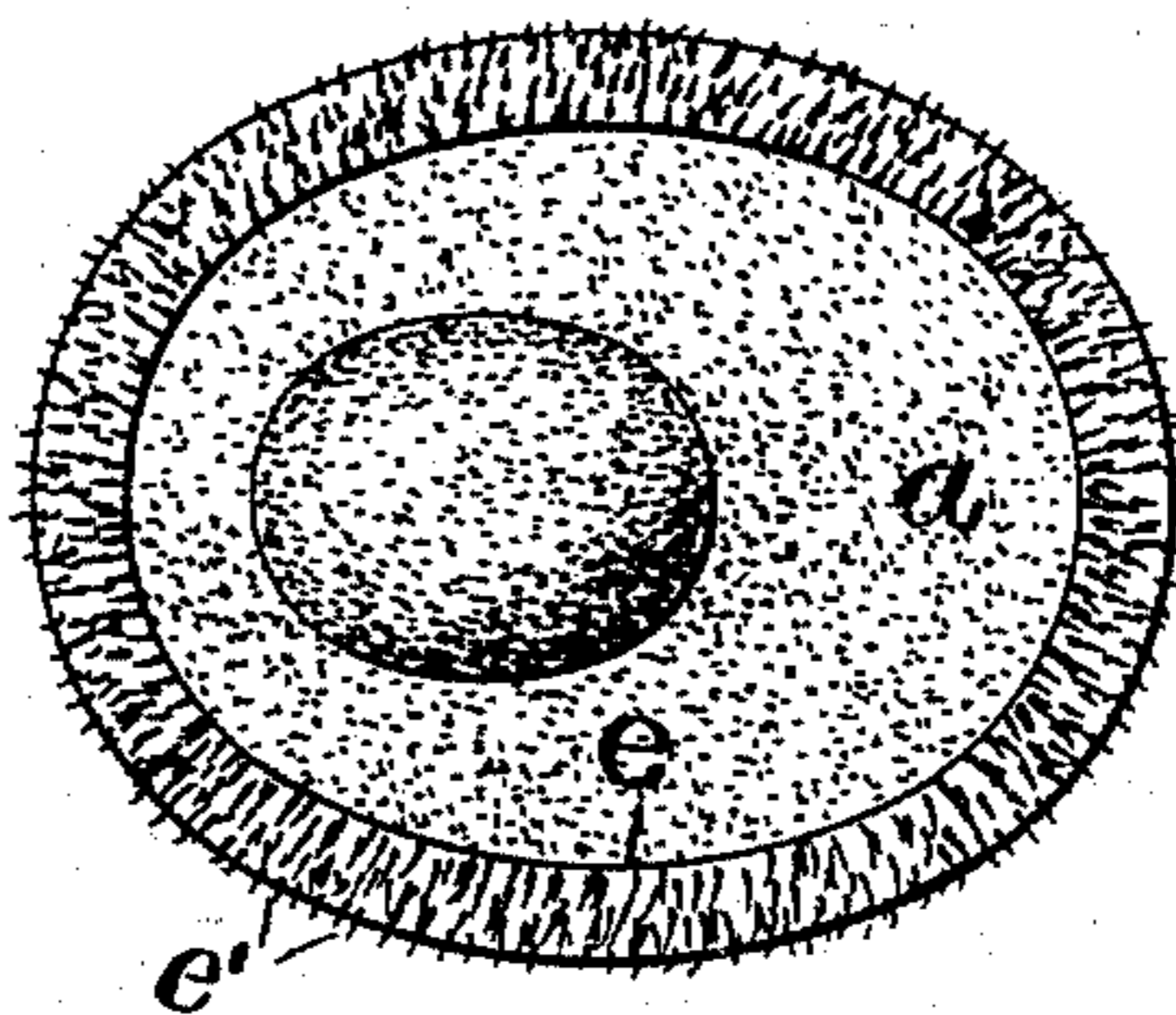
G. YULE & W. A. BAGLIN.  
HAT BODY.

No. 497,084.

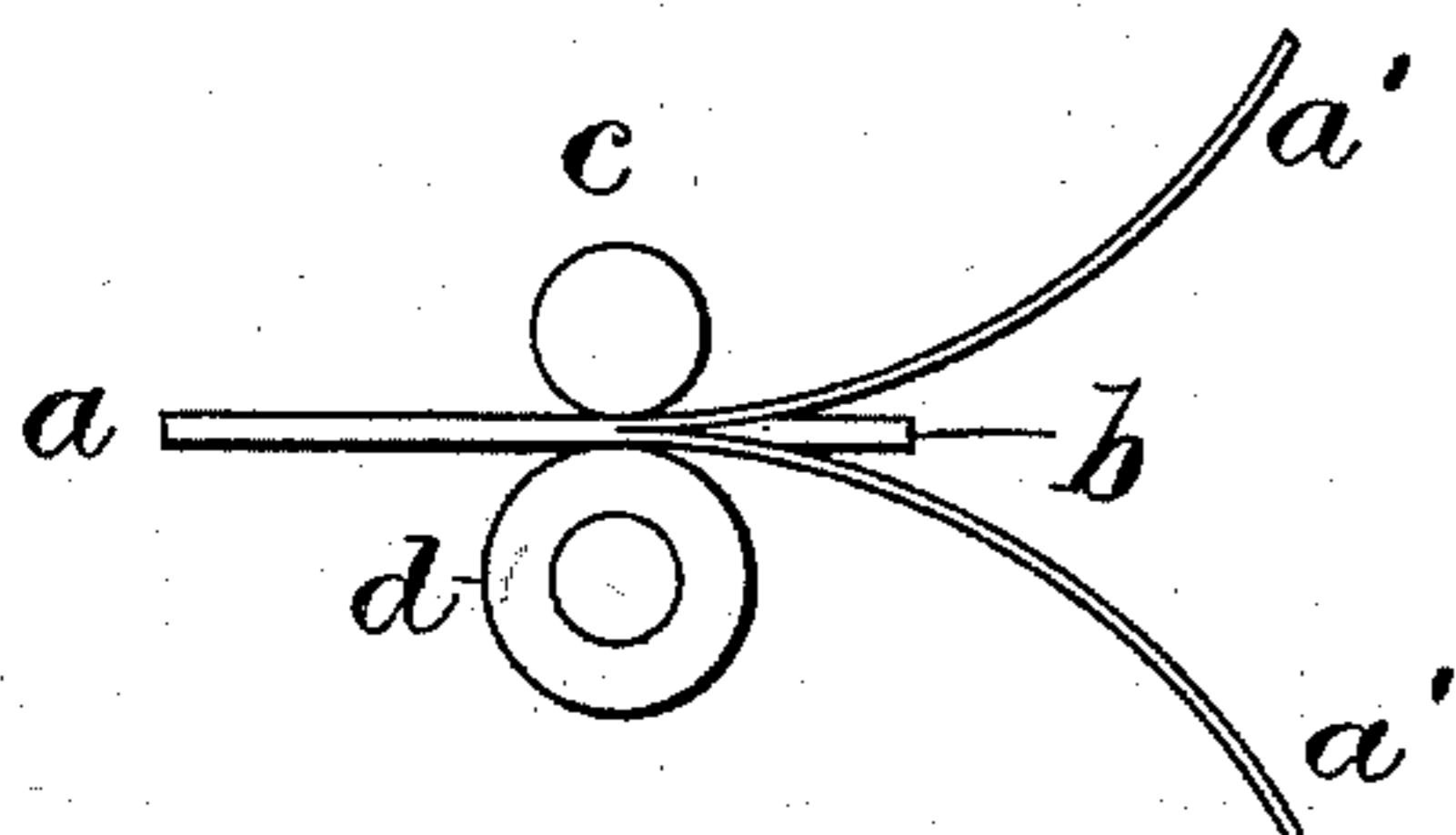
Patented May 9, 1893.



*Fig. 1.*



*Fig. 4.*



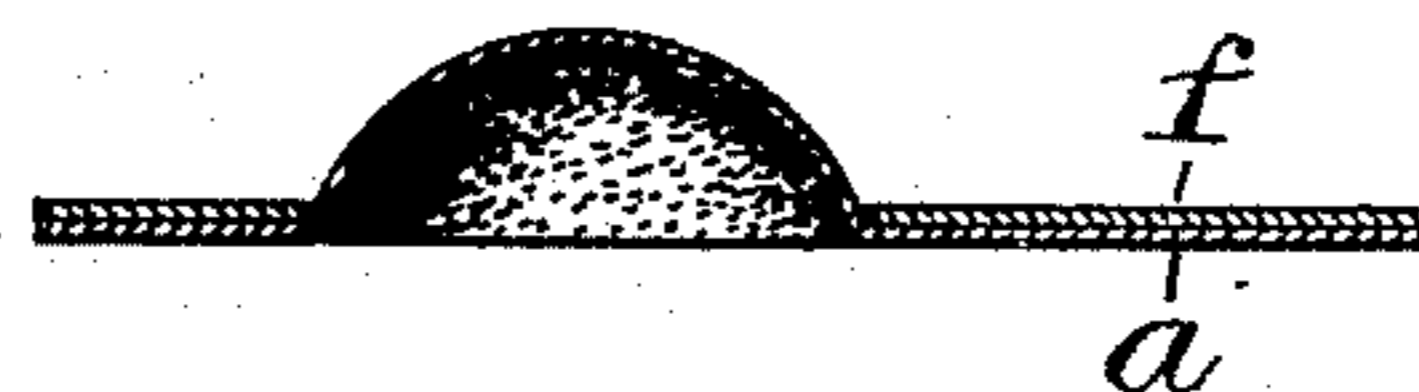
*Fig. 2.*



*Fig. 5.*



*Fig. 3.*



*Fig. 6.*

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# UNITED STATES PATENT OFFICE.

GEORGE YULE, OF NEWARK, NEW JERSEY, AND WILLIAM A. BAGLIN, OF  
NEW YORK, N. Y.

## HAT-BODY.

SPECIFICATION forming part of Letters Patent No. 497,084, dated May 9, 1893.

Application filed October 16, 1891. Serial No. 408,909. (No specimens.)

*To all whom it may concern:*

Be it known that we, GEORGE YULE, residing at Newark, Essex county, New Jersey, and WILLIAM A. BAGLIN, residing in the city, county, and State of New York, citizens of the United States, have invented certain new and useful Improvements in Hat-Bodies, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of this invention is to cheapen the construction of a hat body, and also to furnish the means of making various combinations of felt in the same body.

The present invention consists in a hat body comprising a layer of split felt united to a foundation.

It has been common heretofore to cement two hat bodies together to make the upper and under sides of the hat of different qualities or colors, but such construction involves the complete manufacture of two hat bodies separately, by performing all the operations of forming, hardening, shaving, dyeing, and pouncing, upon each body. By splitting the hat bodies we are enabled to make any desired combinations of material or color with the same expenditure of labor, for two pieces of felt, as have been heretofore required for a single body. We have discovered that the separate layers possess the strength and durability required for many uses, while the cutting of the fibers, which is apparent upon one side of each piece, serves to distinguish such layers from an ordinary felt. When a body is formed by cementing together two separate felts, the cost of the product is greatly increased by the necessity of making one or both of the felts very thin to avoid a great increase in the thickness and weight of the final product; and as such thin felts can only be made from expensive fur, of fine quality, and involve the utmost skill and care in "forming" and "felting" the same, it is obvious that the cost is correspondingly increased. The manufacture of such an article is enormously cheapened by making a felt of ordinary thickness, and then splitting the same into two or more layers, as such felt can be "formed" and "felted" with the least ex-

pense, and when split may make two or more layers of thin material, which can be used for the same purpose as the thin and costly felts referred to above. The splitting of the felt offers other advantages in the manufacture of hats, which will be more fully set forth hereinafter.

The invention will be understood by reference to the annexed drawings, in which—

Figure 1 is a plan of a flat hat body; Fig. 2 a diagram illustrating the operation of splitting the same. Fig. 3 is a section of a hat body formed in two complete layers. Fig. 4 is a plan of a hat body with a band of felt attached to the upper side of the brim. Fig. 5 is a cross section through the middle of the same; and Fig. 6 a similar cross section showing the entire upper side of the brim covered with a separate layer.

The invention is illustrated herein in connection with a flat hat body *a*, the same being represented in Fig. 1 of oval shape like the brim of an ordinary hat. Fig. 2 shows such a body applied to a knife *b*, with a gage roll *c* upon one side of the knife edge, and an elastic presser roll *d* at the opposite side, a portion of the body being split into two layers *a'*. By adjusting the gage roll at a suitable distance from the side of the knife edge, the body may obviously be split in two in the middle of its thickness as shown in Fig. 2, or one layer of less thickness may thus be removed and the remainder split in the center. Two of such layers may be stuck together by applying a suitable cement or stiffening material to one side of each, and then pressing them together, with heat if required, to cause their permanent adhesion. The crown is then pressed or blocked into the felt, and the product forms a hat with two distinct layers throughout, as shown in the section in Fig. 3. The cement between the layers operates to stiffen the product in the required manner without altering the texture of the felt upon its outer side. The felt is thus much better adapted for pouncing and finishing than when the stiffening has been introduced in a solution through the entire body, as is commonly practiced. Such stiffening solution, if applied after the hat body is dyed, tends to injure the

color, so that it is sometimes preferable to stiffen the hat before dyeing. Such stiffening however prevents the felt from taking the color evenly, and the union of two split layers therefore obviates all the difficulties of dyeing and stiffening the body, as the raw felt may be first dyed and the stiffening introduced without affecting the surface, by first separating the felt into two layers. It is obvious that the layers may not only be combined with other and differently colored split layers, but may be secured upon either side of a separate body; or upon a foundation of wholly different material. Where it is desirable for any reason, the layers may be attached together in the brim only, leaving the layers detached in the crown of the hat; which facilitates the stretching of the crown, in the blocking operation, and also renders the crown more soft and flexible when finished. The layers may, when split, be cut into rings or bands of any suitable shape and width, and secured upon either or both sides of the hat brim. A napped band is shown upon the brim in Fig. 5 and in Fig. 4 the band *e* is shown applied to the upperside of a hat brim adjacent to the edge of the same. The band is shown in both figures with a flowing fur *e'* upon its outer side. In Fig. 6 the entire upper side of the brim is shown coated with a similar layer *f*. In thus applying a layer to one side of the hat brim, the hat would be preferably blocked before the layer was applied, and the latter would be cut into a band or ring of the size desired, and then secured upon such brim. Such a construction obviously admits of many combinations of color, which are secured at a very greatly reduced cost in comparison with similar products, as either a napped or plain felt may be split, and either of the parts used in the place of an or-

dinary piece. It is obvious that the expense of forming and felting a hat body, and scalding a nap upon one or both sides of the same, is only half as great for each layer as for the whole body. The hat body may be felted into any convenient shape to facilitate splitting into layers, and the means for producing a flat body or disk of the required felt for splitting is claimed in our application, Serial No. 408,905, filed October 16, 1891.

The separate portions of the body, when split, are termed "layers of split felt" herein, to distinguish them from layers of other felt in which the fibers are not severed.

It is immaterial how a layer of split felt be united to a foundation, as it is not necessary that the layers should be united throughout their entire contiguous surfaces.

We have limited our claims herein to a hat body having its whole surface covered with a continuous layer of split felt, and have filed a separate application, Serial No. 448,346, on October 10, 1892, to claim the use of the split felt upon portions only of the body, as shown in Figs. 4 and 5.

We claim—

1. A hat body comprising a layer of split felt united to a foundation, as set forth.
2. A hat body comprising a plurality of layers of split felt secured together, as set forth.
3. A hat body comprising a layer of napped and split felt united to a foundation, the nap of the split layer facing outward, as set forth.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

GEORGE YULE.  
WILLIAM A. BAGLIN.

Witnesses:

THOS. T. CRANE,  
JOSEPH PHELPS.