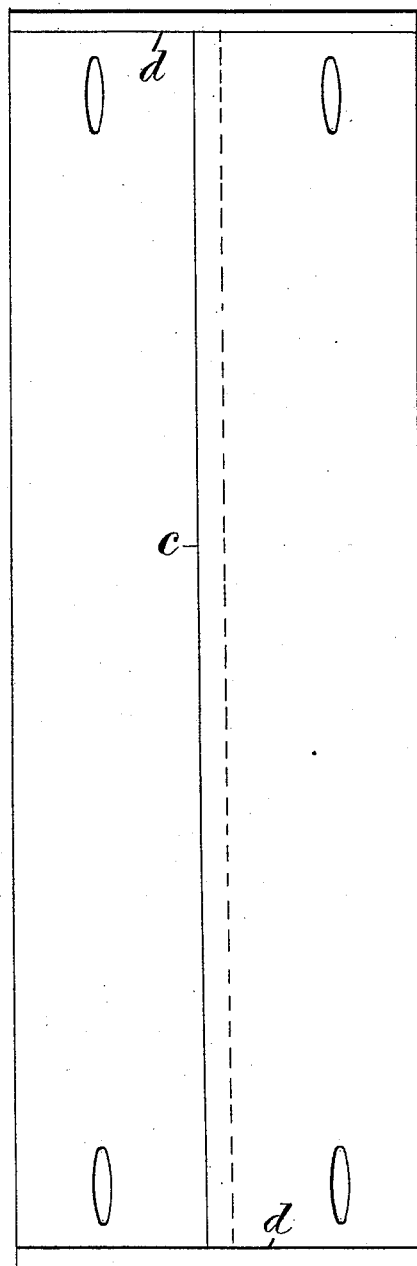


(No Model.)

J. W. HYATT.  
COLLAR OR CUFF.

No. 422,303.

Patented Feb. 25, 1890.



*Attest:*  
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# UNITED STATES PATENT OFFICE.

JOHN W. HYATT, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE CELLULOID MANUFACTURING COMPANY OF NEW YORK.

## COLLAR OR CUFF.

SPECIFICATION forming part of Letters Patent No. 422,303, dated February 25, 1890.

Application filed August 6, 1889. Serial No. 319,879. (No model.)

### *To all whom it may concern:*

Be it known that I, JOHN W. HYATT, a citizen of the United States, residing at Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Cuffs with Parchmentized Surfaces, 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 furnish an article of wearing-apparel of water-proof character with a parchmentized surface that is readily cleansed by the application of soap and water with a sponge. If such an article as a collar or cuff be made wholly of vegetable parchment, it is insoluble in water, but is so readily penetrated by moisture that when washed it loses its form and dries with a very rough and wrinkled surface. In my construction the article is formed of an inner body and an outer layer of woven vegetable fabric, which is secured to the inner body by a water-proof cement, and then superficially converted into vegetable parchment. I thus secure the cleanliness of the vegetable parchment in combination with the fine grain derived from the woven vegetable fabric, and avoid the softening of the entire article by the water, as the latter is prevented by the water-proof substance beneath the outer layer from penetrating the body of the article. The surface of the outer layer of vegetable fabric is readily converted into vegetable parchment by treatment with a solvent of cellulose, which solvent is only enabled to penetrate to the layer of water-proof substance beneath, and is thus exceedingly superficial in character.

The body of the article may be made of any suitable material to give elasticity to the article and to present an adhesive surface to the water-proof cement. As the superficial layer is, when parchmentized, quite translucent, it is desirable to give to the body of the article the color that is desired upon the surface and to secure the white or slightly-bluish color which is required to imitate starched linen. I have used for the body fibrous material, as cotton cloth saturated with water-proof composition of oil and white earth, with a little blue pigment intermixed to give

a desirable color to the product. Such a body is not, however, very elastic, and, as vegetable parchment possesses great stiffness and elasticity, I prefer to utilize the same for the central core of the article, which construction is shown in the annexed drawings, in which—

Figure 1 is an inside view of a cuff constructed with my improvements, and Fig. 2 is a transverse section of the same with the thickness of the layers exaggerated to show the construction clearly.

To make a core of vegetable parchment and secure a porous surface to absorb the water-proof cement for attaching the facing-layer, I form the body of two layers of coarse muslin *a*, joined together by converting their adjacent surfaces into vegetable parchment. To effect this result I apply to one side of each a solvent of cellulose, as sulphuric acid, which penetrates one surface of such layer sufficiently to partially dissolve it. By pressing such dissolved surfaces together the two are united into a single layer with a parchmentized interior and a fibrous substance. I then wash the solvent from the united sheet, dry it, and saturate its outer fibrous surfaces with suitable waterproofing material, as copal, dammar, pyroxyline, or pyroxyline varnish or mixture of the same, and mix with such varnish any suitable ingredient to render the sheet white and opaque. A fine woven cloth *b* is then cemented upon the outer sides of such body with any suitable water-proof cement adapted to unite firmly with the water-proof surface of the body.

To bind and cover the edges of the article, the layer of outer cloth *b* would be preferably formed in a single piece wrapped around the body and having one of its edges *c* overlapped and cemented to the other edge along the middle line of the cuff, the ends of the body being also covered by folding the cloth over thereupon, as indicated by the lines *d* in Fig. 1. The button-holes *e* would then be formed in the article and the whole outer surface treated with sulphuric acid or other solvent of cellulose to parchmentize the whole exterior of the article, by which means the edges and the interiors of the button-holes, as well as the flat surfaces of the article, are

converted into vegetable parchment, and the entire exterior is thus protected from wear and from the absorption of dirt in the most effective manner.

- 5 The water-proof cement with which the facing is attached to the body fills the inner pores of the facing and prevents the penetration of the solvent to any considerable degree, and thus restricts the formation of the vegetable parchment to the extreme outer surface of the article. Fine cloth is used for the outer layer or facing to imitate a starched and laundered article as closely as possible, and the vegetable parchment into which its surface is converted is so nearly transparent that the body beneath imparts its color to the entire article, and may be blued to any desired extent to imitate a laundered article. Assulphuric acid, used as I employ it, has very little, if any, effect upon many of the dye-stuffs employed in printing calicoes and other similar muslin goods, I find that such printed cloths may be used for the outer portions of the article and retain their ornamentation after the article is finished. The parchmientized surface resists dirt in a very effective manner, and may be readily cleansed by soap and water without the penetration of the cleansing-fluid below the surface.
- 30 I am aware that similar articles have been made wholly of parchmientized vegetable fabric, and therefore disclaim such a construction, as I have stated how such an article is softened and its surface spoiled by the application of water, whereas my article may be cleansed without producing any perceptible effect upon its appearance.
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It is not material to my invention whether

the external facing be wrapped over the edges of the body or not, as the final treatment with a solvent of cellulose to parchmientize the surface operates in any case to smooth the edges and to bind them together. It is also immaterial whether the body be formed of one, two, or more layers of vegetable fabric, as the essential part of the invention is the attachment of the fine woven facing to the body by water-proof material and the conversion of the superficial layer into vegetable parchment.

Having thus set forth my invention, what I claim herein is—

1. An article of wearing-apparel, as a collar or cuff, having a body protected by a covering of water-proof material, with a fine woven vegetable fabric cemented thereto and externally parchmientized, substantially as herein set forth.

2. An article of wearing-apparel, as a collar or cuff, having a body formed of two or more layers of vegetable fabric, with their adjacent surfaces converted into vegetable parchment and cemented together, their outer surface protected by a covering of water-proof material, fine woven vegetable fabric cemented thereto by water-proof cement, and the exterior of the whole superficially parchmientized, as and for the purpose set forth.

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

JOHN W. HYATT.

Witnesses:

F. C. FISCHER,  
THOS. S. CRANE.