

(No Model.)

J. W. HYATT.
COLLAR OR CUFF.

No. 419,258.

Patented Jan. 14, 1890.



Fig. 1.

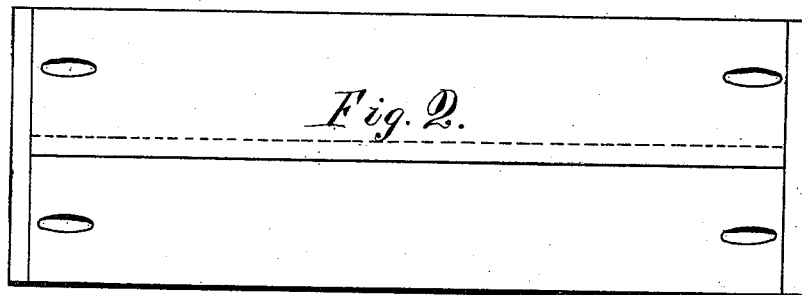


Fig. 2.

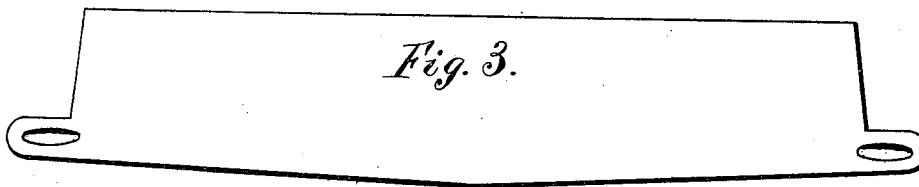


Fig. 3.

Attest:
L. Loe.
H. C. Fischer.

Inventor.
John W. Hyatt,
per Crane & Miller, attys.

UNITED STATES PATENT OFFICE.

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

COLLAR OR CUFF.

SPECIFICATION forming part of Letters Patent No. 419,258, dated January 14, 1890.

Application filed November 13, 1888. Serial No. 290,674. (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 Collars or Cuffs with Water-Proof Coverings, fully described and represented in the following specification, and the accompanying drawings, forming a part of the same.

10 The object of this invention is to furnish an imitation of a starched linen collar or cuff, and to furnish an article with a water-proof surface that may be cleansed by the application of soap and water with a sponge.

15 The invention is designed to be cheaper than the celluloid collars and cuffs now in use and to answer substantially the same purpose.

My invention consists, primarily, in a body of fibrous material having its outer side saturated with water-proof composition, and a covering of fine woven fabric cemented thereto upon the whole exterior surface by water-proof cement, the outer surface of such woven fabric being finished in imitation of starched linen by a coating of water-proof varnish.

Figure 1 is a diagram, in an exaggerated form, of a section through a collar or cuff. Fig. 2 is a diagram of a cuff, and Fig. 3 of a collar.

20 The body of the cuff may be made of thick-sized fabric or any other suitable substance having the desired degree of flexibility, and may be saturated with water-proof material or be internally converted into vegetable parchment. If the whole cuff were made of parchmentized cloth, it would absorb water in such degree that when cleansed it would be greatly softened and would dry in a wrinkled condition; but as vegetable parchment possesses great stiffness and elasticity I prefer, in the best construction for my invention, to utilize the same for the central core of the article, which I effect in the following manner:
45 I take two layers of coarse muslin *a*, as that intended for sheeting, and brush or otherwise spread upon those sides which will be contiguous when joined together sulphuric acid, chloride of zinc, or other solvent of cellulose
50 of such strength that the solvent will penetrate and operate only upon the surfaces of

the sheets, and I then press such dissolved surfaces together, uniting the two into a single layer of firmly-united substance with a parchmentized interior and a fibrous exterior.

55 Sulphuric acid may be readily applied in this process by thickening it into a species of paste by a suitable proportion of paper-pulp dissolved therein. I then dissolve the solvent from the united sheet, dry it, and thoroughly saturate its outer fibrous surfaces with a suitable water-proof material, as copal, dammar, pyroxyline, or gutta-percha varnish or mixture of the same, and mix with such varnish any white earth or suitable ingredient to render the sheet white and opaque. The body of the article is then completed, and a fine woven cloth *b* is then cemented upon its outer sides with any suitable water-proof cement adapted to unite firmly with the water-proof surface beneath. The exterior surface of the cloth facing is then finished with any suitable dirt-resisting medium, as dammar or bleached shellac varnish, which would be applied after the article was finished.

75 The product of my invention when formed with vegetable parchment in the center of the body, as in the construction shown in Fig. 1, possesses in the highest degree a permanent elasticity conjoined with the desired opacity and color, and a surface which is formed of the actual grain of the woven fabric and adapted for cleansing by the mere application of soap and water with a brush or sponge.

To effectually bind and cover the opposite edges of the cuff, the layer of outer cloth *b* is shown in Figs. 1 and 2 formed in a single piece wrapped around the body *a* and having one of its edges *c* overlapped upon and cemented to the other edge along the middle line of the cuff.

85 When in use, that side of the cuff upon which the overlapped edge is cemented may be turned inward, and the joint may be thus wholly concealed. The cloth facing upon the inner side of the cuff would not with this construction extend beyond the ends, but the cloth upon the outer side would be formed long enough to fold over the ends of the cuff and lap upon the inner side, as shown in the line *d* in Fig. 2.

The edges of the body may be readily thick-

ened by folding a narrow strip of fabric over them before the muslin facing is applied, as shown at *e* in Fig. 1, the cuff then exhibiting a thickened edge, like a hem, as shown by the dotted line *e'* in Fig. 2.

5 It will be understood from the above description that my invention does not consist in the mere use of a water-proof fabric for the manufacture of collars and cuffs, but that it
10 requires a fibrous body saturated externally with a water-proof composition, and a fine woven fabric cemented upon the whole exterior of the body by water-proof cement adapted to affect the inner substance of such outer
15 layer only. The outer substance of the fine woven fabric therefore remains porous, and is thus adapted for still further treatment by a water-proof varnish.

20 It is obvious that a portion of the water-proof material applied to the surface of the body may operate as the water-proof cement for attaching the covering of fine woven fabric, in which case I saturate the exterior of the body with water-proof composition, and when
25 such composition has partially dried (until its outer surface has become sticky and adhesive) I press the covering of fine woven fabric firmly thereon, and thus cement it securely to the body in the desired manner.

30 I am aware that an inherently water-proof body is not new, as United States Patent No. 38,122, dated April 7, 1865, describes "a shirt-collar made of rubber," and as a modification suggests, "covering the rubber collar with
35 enameled cloth or leather, or other material made impervious to water." Such a body as india-rubber is not adapted to absorb cement, like the porous substances which I use for my water-proof body, and it is not, therefore,
40 adapted to retain securely a covering of other material, as is required in my invention;

neither is a covering of enameled cloth or leather any equivalent for the fine muslin which I employ, as such materials do not possess a fine woven grain resembling linen, 45 which I desire to provide upon my article, that it may closely resemble when finished a laundered linen collar.

In the finishing of my muslin covering I am particularly careful not to obliterate the 50 woven grain, but treat the surface in such manner as to make it resist dirt, while retaining its attractive appearance.

I hereby disclaim the said Patent No. 38,122.

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

1. An article of wearing-apparel consisting in a body of fibrous material having its outer side saturated with water-proof composition, 60 and a covering of fine woven fabric cemented thereto upon its whole exterior surface by water-proof cement and provided with a superficial coating of water-proof varnish, substantially as herein set forth. 65

2. An article of wearing-apparel consisting in a body of fibrous material internally parch- mentized with its outer sides saturated with water-proof composition, and a covering of fine woven fabric cemented thereto upon its 70 whole exterior surface by water-proof cement and provided with a superficial coating of water-proof varnish, substantially as herein set forth.

In testimony whereof I have hereunto set 75 my hand in the presence of two subscribing witnesses.

JOHN W. HYATT.

Witnesses:

THOS. S. CRANE,
L. LEE.