(No Model.)

J. R. FRANCE.

APPAREL COLLAR, CUFF, &c.

No. 418,787. Patented Jan. 7, 1890.

Fig. 1.

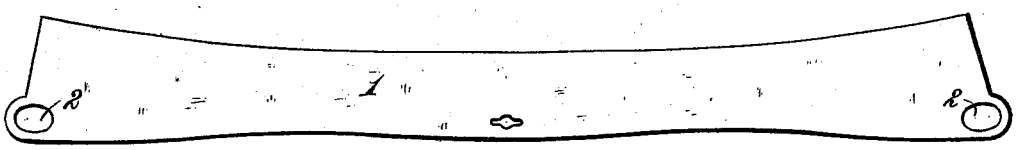

Fig. 2.

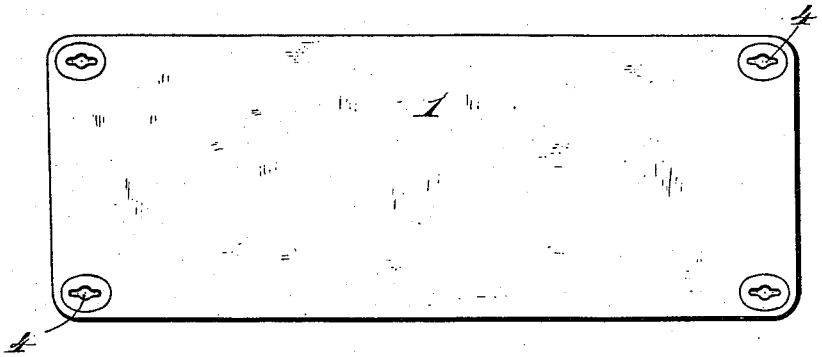

Fig. 3.

Witnesses.
Robt Everett.
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UNITED STATES PATENT OFFICE.

JOSEPH R. FRANCE, OF NEW YORK, N. Y.

APPAREL COLLAR, CUFF, &c.

SPECIFICATION forming part of Letters Patent No. 418,787, dated January 7, 1890.

Application filed March 27, 1889. Serial No. 304,955. (No specimens.)

To all whom it may concern:

Be it known that I, JOSEPH R. FRANCE, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Water-Proof Collars, Cuffs, and Shirt-Fronts, of which the following is a specification.

My invention relates to water-proof collars, cuffs, and shirt-fronts composed of zylonite, celluloid, or other pyroxyline compounds; and the purpose thereof is to provide articles of this character with suitable button-holes, which shall be pliable or flexible and possessed of sufficient elasticity to retain their shape, while at the same time they shall be strong and durable, not liable to fray or break up on their edges, and capable of being cleansed without being discolored. It is my purpose to provide this class of articles with button-holes formed in a material distinct from that composing the body of the article, and which will readily admit of the insertion and removal of the button, which will resist ordinary wear and tear, and which will not become discolored by perspiration.

Various attempts have heretofore been made to accomplish the several results named and obviate the well-known defects in those goods wherein the button-holes are punched directly in the rigid and comparatively unyielding body of the celluloid. Among others, a lining of muslin or linen has been interposed between two thicknesses of celluloid, while in another instance a thin plate of metal has been substituted for the muslin, the metal being placed around and near to the button-hole. Still another method has been to use bladder or similar membranous tissue confined between surfacings of celluloid; but experience has shown that all these methods are subject to objections, and that they not only fail to effect the desired results, but that in nearly every instance they add seriously to the labor and expense of manufacture.

In an application filed by me the 3d day of January, 1889, Serial No. 295,304, I have set forth a novel process for the manufacture of collars, cuffs, and shirt-fronts provided with button-holes which will retain their proper flexibility at all times and be to some extent elastic, while the material in which such openings are formed can readily be cleansed.

The nature of this process consists in the formation of an eye or opening in the article at the point where a button-hole is to be located and of considerably greater size than the finished button-hole. The section containing the button-hole is composed of a piece of tanned calf or sheep skin, to one or both sides of which is cemented by any usual means a thin piece or film of celluloid of larger dimensions than the inclosed piece, which is preferably of a size to fit the opening in the article. A button-hole is then punched out of the composite sheet, which is finally cemented to the article directly over the oval opening into which the inclosed calf or sheep skin projects. In said process I provide for the substitution of rubber tissue in place of the tanned calf or sheep skin or for the employment of a composition of rubber and pyroxyline ground together between calender-rolls and then vulcanized.

My present invention has for its purpose to provide certain novel materials for the formation of the button-hole sections; and the invention consists in the parts and combinations of parts hereinafter fully set forth, and then definitely pointed out in the claims following this specification.

Referring to the accompanying drawings, Figure 1 is a view of a collar, showing the form of opening. Fig. 2 is a view of a cuff, showing the button-hole section applied. Fig. 3 is a sectional view showing the construction of the button-hole section.

In the drawings, the numeral 1 denotes a collar, cuff, or other article of pyroxyline compound, and having at the points where button-holes are to be located openings 2, of oval form, punched or cut from the body of the celluloid and of a size considerably greater than that of the slit constituting the button-hole proper.

The numeral 3 designates a piece of tanned calf or sheep skin of a size and shape similar to that of the opening 2, and having upon one or both sides a film or thin sheet of celluloid cemented thereon, such film or films being of such size that their edges project beyond the edge of the inclosed material. This constitutes what may be termed the "button-hole

section," in which a slit 4 is punched, constituting the button-hole proper. The button-hole section is then cemented upon the collar, cuff, or other article directly over the opening 2. The intermediate film of calf or sheep skin may be saturated with collodion-varnish to render it water-proof.

In place of the calf or sheep skin I may employ chamois-leather or undressed kid, to one or both sides whereof a thin sheet of celluloid may be cemented, or in place thereof a coating of collodion or collodion-varnish may be employed, or it may be saturated in collodion to render it water-proof. I may also use a sheet of rubber tissue in place of the calf or sheep skin, a thin film of celluloid or coating of collodion-varnish being applied thereto. Out of the chamois-leather, undressed kid, or rubber tissue thus prepared are cut the films 3, similar in shape to the openings 2. I may also use a strong filamentous paper—such as "linen" or "parchment paper," so called—in place of the several materials named, said paper being made water-proof by saturation in collodion or in paraffine. The films 3 being cut from any one of the materials prepared, they are surfaced upon one or both sides by thin sheets of celluloid, having such size as to more than cover the opening 2, over which they are cemented by heat and pressure, bringing the film 3, in which the button-hole has previously been punched, into the opening, within which it may be projected by the process of cementing. It should be noted, however, that by inserting the film 3 in said opening and cementing the films of celluloid on each side thereof subsequently the application of the button-hole section adds but little to the thickness of the article. The edges of the button-hole 4 are wholly removed from the margin of the opening 2, and the composite sheet or section provides a pliable, durable, and somewhat elastic material for the button-holes, not liable to fray out or break, not discoloring when wet or cleaned, and having sufficient strength to resist the strain of the buttons.

I am aware of the Letters Patent No. 343,903 issued June 15, 1886, to J. G. Jarvis, and do not wish to be understood as claiming a button-hole section of textile material coated or impregnated with collodion, as such does not constitute my invention.

Having thus described my invention, what I claim is—

1. A water-proof pyroxyline collar, cuff, or other like article having an opening containing a piece of flexible skin provided on each side with an attached film of pyroxyline compound projecting beyond the edges of the skin, and such projecting edges cemented to the body of the collar or cuff about the edges of the opening, substantially as described.

2. A water-proof pyroxyline collar, cuff, or like article having an opening provided with a button-hole section composed of an intermediate film of a size to fit in the opening between the edges thereof and having each of its sides provided with an attached film of pyroxyline material projecting beyond the edges of the intermediate film, and such projecting portions cemented, respectively, to the opposite surfaces of the body of the pyroxyline collar or cuff, substantially as shown and described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOSEPH R. FRANCE.

Witnesses:
H. P. STAMFORD,
I. E. GILLIES.