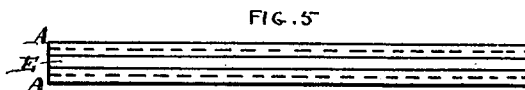
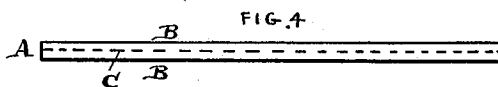
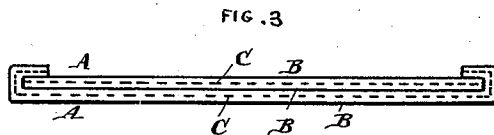
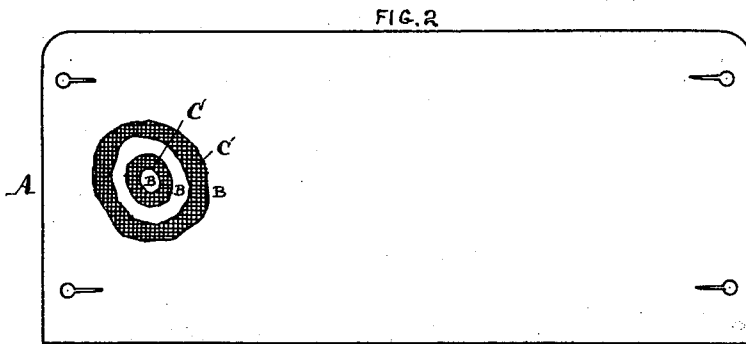
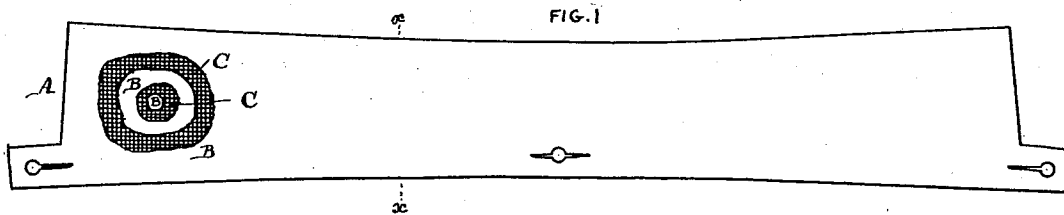


(No Model.)

R. M. HUNTER.
COLLAR OR CUFF.

No. 520,825.

Patented June 5, 1894.



Attest
S. T. Yerkes

Inventor
R. M. Hunter

UNITED STATES PATENT OFFICE.

RUDOLPH M. HUNTER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
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COLLAR OR CUFF.

SPECIFICATION forming part of Letters Patent No. 520,825, dated June 5, 1894.

Application filed April 2, 1890. Serial No. 346,343. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH M. HUNTER, a citizen of the United States, residing in Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Collars or Cuffs employing Pyroxyline Compounds and Textile Material; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

Heretofore collars and cuffs have been made from two sheets of celluloid or zylonite pressed together and united by heat, a solvent, or cement; or they have been made by placing a thin sheet of previously prepared celluloid upon each of the faces of a piece of fabric and uniting the sheets of celluloid to the fabric. In these constructions the celluloid or zylonite has been used in the hard condition in the form of thin sheets which have been cut by machinery from previously formed blocks of these materials. It has also been proposed to make a collar or cuff from two or more sheets of vegetable parchment the adjacent surfaces of which have been converted into pyroxyline.

In carrying out my invention I may dispense entirely with all the preliminary processes of the manufacture of sheets of celluloid, zylonite or equivalent compounds of pyroxyline and employ a soft fluid or plastic substance composed of a suitable compound of pyroxyline, and with this I saturate a textile fabric or its equivalent and after the same is dry, cut or stamp the article out of the coated and saturated material and place two or more of such pieces together and subject them to heat and pressure. In practice I have usually used two such layers for a single collar or cuff, which layers when placed upon each other and subjected to heat and pressure adhere and form a two ply fabric having a thin outer coating of pyroxyline compound. It is evident that any desired number of layers of fabric treated in this way may be employed if desired to make the collar or cuff two or more ply. In this manner I am enabled to use a body material in the form of cheap linen or cotton and thus save greatly

in the reduction of the quantity of expensive pyroxyline compound or celluloid heretofore found necessary.

While I do not find it at all necessary to employ sheets of celluloid or zylonite yet if desired a sheet of either of these substances may be interposed between two such saturated sheets as above specified and the whole subjected to heat and pressure, or such sheet may be applied to one side only of a saturated sheet. The celluloid or pyroxyline compound so arranged may be first softened by a solvent such as ether, alcohol, or spirits of camphor, and then by heat and pressure forced into the fabric which has been previously coated with the pyroxyline compound.

In the drawings:—Figure 1 is a plan view of a collar embodying my invention. Fig. 2 is a plan view of a cuff also embodying my invention. Fig. 3 is a cross section on line *x* of Fig. 1, and Figs. 4 and 5 are similar views in which the former has but a single layer of fabric, and the latter two layers with an increased amount of pyroxyline between them.

A A represent two layers of a fabric prepared in the manner employed by me, and each is composed of an inner body piece of fabric C and an outer layer of pyroxyline compound B which also permeates or saturates the fabric in the process of manufacture. In preparing the fabric I pass a long strip or sheet of textile or other permeable substance through a vat holding a fluid or pasty mass of pyroxyline compound composed of pyroxyline, camphor, wood-alcohol, and oxide of zinc, to which may be added a little castor oil and a small amount of bluing. The amounts of these substances may be varied as desired. As the fabric is drawn through this substance it becomes thoroughly coated and impregnated with the compound and its outer faces pass over scrapers or surfaces to insure the material being uniformly distributed over the fabric. If desired the fabric may be run through the vat several times. The fabric so saturated and prepared is then allowed to dry. It is preferable when dry to calender its surface by pressure to make the pyroxyline smooth and uniform. Such a fabric is indicated in Fig. 4. It is then

cut into the desired shape and the pieces cut therefrom superimposed and subjected to heat and pressure. It is preferable however to place two pieces of such fabric together and subject them to heat and pressure to make a two ply fabric, and to give the desired finish and insure the pyroxyline compound flowing over the cut edges to prevent the fraying which might otherwise take place. When two such fabrics A A are placed together and subjected to heat and pressure, the adjacent faces become united into one layer, and this may be facilitated by employing a little solvent such as hereinbefore specified which may be rubbed over the adjacent faces. In place of employing heat and pressure the two layers may be united by cement. A section of my preferred form is shown in Fig. 3. If desired one of the sheets may be a little larger in area than the other, and when the latter is placed upon the former the free projecting edges are bent over as shown in Fig. 3, and then the whole subjected to heat and pressure. If desired a thin sheet E of celluloid or other pyroxyline compound may be interposed between the fabrics A A as shown in Fig. 5 and the whole subjected to heat and pressure to unite them. It is also evident that, if so heavy a fabric is not wanted, one of the layers A may be left off.

I do not limit myself to minor details of construction as they may be modified without departing from the spirit of my invention.

Having now described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture a collar or cuff formed of two or more plies of textile fabric each previously saturated throughout and coated on both faces with a pyroxyline compound and said plies united together so that the adjacent surfaces of pyroxyline compound are intimately connected to form an integral piece of fabric impervious to moisture.

2. As a new article of manufacture a collar or cuff formed of two or more plies of a textile fabric each saturated throughout with a pyroxyline compound and having interposed between its plies a thin sheet of celluloid and the whole united into an integral fabric.

3. A collar or cuff formed of two sheets of textile fabric of different sizes saturated by a pyroxyline compound, and in which the edges of the larger sheet are turned over the smaller sheets and subjected to heat and pressure whereby the two sheets are united giving a finish to the edges, and the edges are strengthened by having the edge of the fabric of one sheet inclosed in a fold of the fabric of the other sheet.

In testimony of which invention I have hereunto set my hand.

RUDOLPH M. HUNTER.

Witnesses:

ERNEST HOWARD HUNTER,
S. T. YERKES.