R. Dunlap.

Hats & Caps.

No. 48384 Patented Jun. 27, 1865.

Fig. 1.

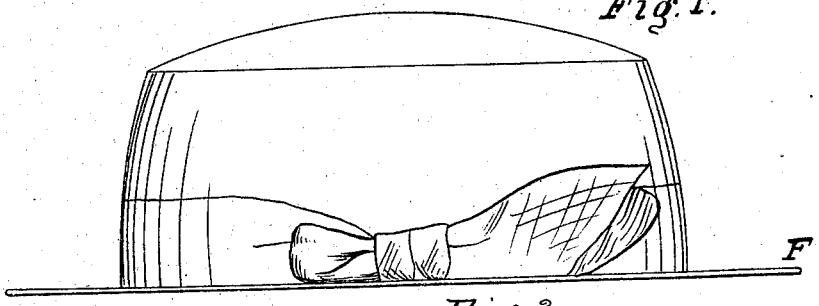


Fig. 2.

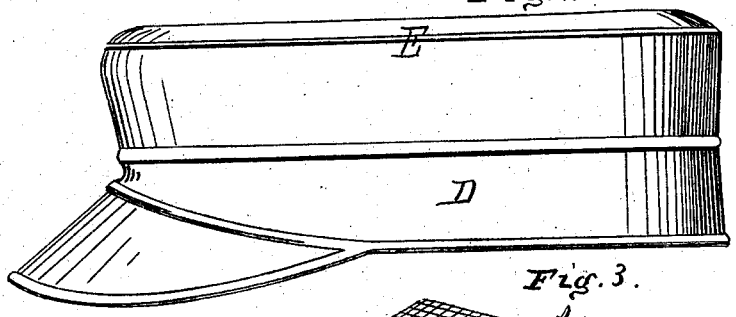
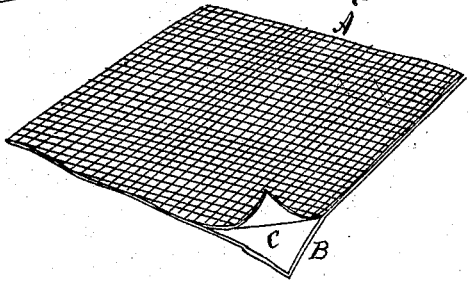


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

ROBERT DUNLAP, OF NEW YORK, N. Y.

IMPROVEMENT IN HATS.

Specification forming part of Letters Patent No. **48,384**, dated June 27, 1865.

To all whom it may concern:

Be it known that I, ROBERT DUNLAP, of the city, county, and State of New York, have invented a new and useful Improvement in Hats and Caps; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a hat, and Fig. 2 represents a cap, each made according to my invention. Fig. 3 represents a portion of a hat or cap after the materials which compose its outer and inner surfaces have been united, showing the adhesive material which I place between them.

Similar letters of reference indicate like parts.

This invention consists in a novel construction of hats and caps, wherein the crown of a hat and the body of a cap are severally made of an outer cloth and an inner cloth united together, after they are formed into shape, by means of gutta-percha or its equivalent.

My object is the production of an article—that is to say, a hat or cap—whose crown or sides will be flexible, so that the article can be packed or rolled up, and also elastic, so that when relieved from constraint it will resume its proper shape.

In applying my invention to the making of caps, I have sought to give this character to its sides D as well as its crown E, and in applying it to the making of hats I have, in this example, sought to give it to all parts of the hat except the brim F, which is here shown stiff or without flexibility.

My method of proceeding is as follows: First, I cut the material of which the outside of the cap is to be formed in the usual way, according to patterns or shapes to suit the style of the hat or cap to be made. The parts which form the body or crown and sides of the article are then sewed together in the common way, the seams occurring along the edges of the several pieces or parts of the crown and sides thereof, as seen in the drawings. I then cut the material of which the inside of the cap is to be made, and make up the several parts or divisions thereof in the same way as above explained for making the outside.

Any kind of textile fabrics, or, in other words, woven goods and knitted goods, can be used in carrying out my invention.

Having prepared the outer and inner surfaces of the body of the article in the way described, it is found, if they are now united to each other by tacking or stitching, and then united to the brim, when a hat is being made, or to the front piece if a cap is being made, that they are flexible and will yield to any pressure, and can be rolled up into a small compass, but that they have not an elastic character, so as to resume the shape and outline of a hat or cap when released from constraint.

A common mode of giving such an elastic character to hats and caps made of cloth and of other flexible inelastic material has been to interpose a mass of wadding or of paper or of some other material which is light and slightly elastic. Another mode is to unite the outer and inner surfaces by means of a varnish or glue, and in some cases use has been made of gum-shellac. The first mode makes the article heavy and accumulates an undue thickness of covering, so that it is injurious to the health of the wearers, and, moreover, the interposed wadding or filling soon becomes crushed, and the whole construction of the article is such as to prevent it from being folded or rolled up without injuring its shape. The second mode is defective because the varnish or glue cracks when it is dry, and the shape at first given to the article soon becomes lost.

In order to realize the conditions which are desired in articles of this kind—that is to say, flexibility and elasticity—I proceed in my method as follows: I place the inner surface of the article upon a block whose shape conforms to the shape which the inner and outer surfaces have been cut and sewed to, and then lay over it a sheet of very thin gutta-percha or its equivalent, which should be large enough to enable me to bring it easily around it so as to cover the same. I then lay over that the cloth or other stuff which is to form the outer surface of the hat or cap. The stuff is to be so laid as that the gutta-percha will not be in contact with the face sides thereof. The stuff is then secured to the block in any proper manner, and the whole put into a steam-box or otherwise subjected to heat of about the tem-

perature of free steam for about ten minutes, until the gutta-percha is made to adhere to and cement the surfaces with which it is in contact. The sheets of gutta-percha may be of about the thickness of tissue-paper. After the cementation of the opposing surfaces has been effected, the body of the hat or cap may be sewed or otherwise secured to the rim or to the front piece, as the case may be. The trimmings of the article may be arranged so as to present a finished appearance on both its surfaces if it is a cap, and also if it is a hat when the seam along the rim is made to allow the body to be turned.

The body of a hat or cap made according to my invention possesses flexibility, so that it can be flattened or disposed in any form which the brim or front piece admits of, and also elasticity, so that it will resume the shape of the pattern according to which it was cut when released from constraint, and this result will follow the said mode of construction when light goods are used to make said articles, as well as when heavy goods are used, and also when a surface of silk, worsted, or other delicate texture is joined in the way described to stuff of heavier quality and of a different character.

The gutta-percha may be applied in a liquid form instead of in sheets, and india-rubber may be used, in the manner above set forth, as a cement between the surfaces composing the article to be made.

I disclaim the invention claimed by John W. Whittal and William W. Pendleton in their Letters Patent granted August 1, 1854; but

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

As a new article of manufacture, a head-covering with its sides made of two thicknesses of woven or knitted material, formed upon a block, and cemented together with gutta-percha or india-rubber by the aid of wet heat, all as herein specified.

ROBERT DUNLAP.

Witnesses:
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