Aug. 10, 1937. W. C. JOHNSON 2,089,379

ELASTIC CORD COVERING

Filed May 15, 1936

Fig. 1

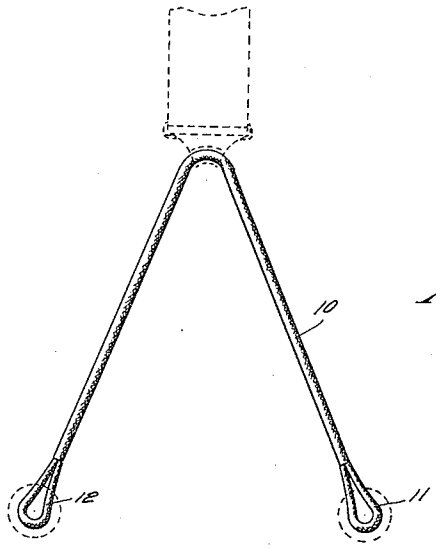


Fig. 2

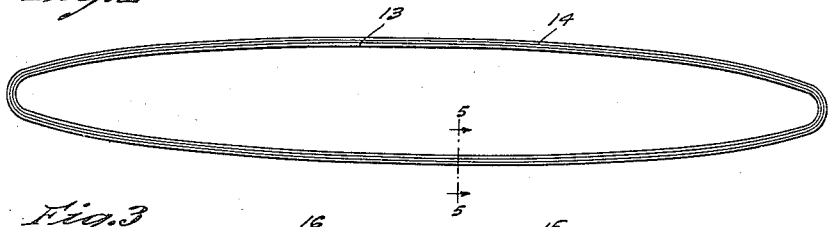


Fig. 3

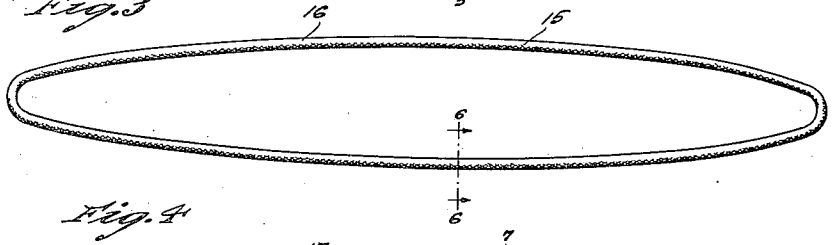


Fig. 4

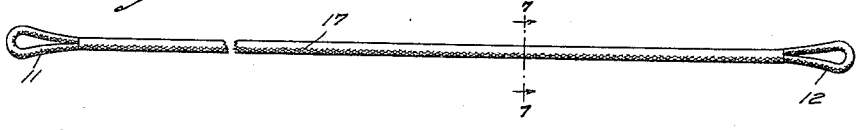


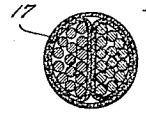
Fig. 5



Fig. 6



Fig. 7



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ELASTIC CORD COVERING

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Application May 15, 1936, Serial No. 79,896

14 Claims. (Cl. 96—26)

My present invention relates to the textile art, and has particular reference to the manufacture of textile covered rubber articles, and particularly the manufacture of suspender ends.

Suspender ends at present are either formed of textile material, which are secured in any desired manner to the suspender bands, or of elastic cords which are slidably mounted at the ends of the suspender webbing, the ends having button engaging loops.

It is the principal object of my invention to devise a novel construction for suspender ends of the latter type, whereby the life and the elasticity of the end is increased, and the tendency to wear or to break is lessened.

It is a further object of my invention to provide an ornamental construction which facilitates the attaching of the end loops to trouser buttons whereby the attachment and removal of the suspenders from the trousers are facilitated.

With the above and other objects and advantageous features in view, my invention relates to a novel method of manufacture and a novel article more fully described in the detailed description following, and more specifically defined in the claims appended thereto.

I have found it advantageous to manufacture a novel type of suspender end, using a cord made of a plurality of resilient bands, and having end loops which do not require sewing or attaching such as heretofore have been found necessary, the construction devised by me providing an integral end loop arrangement which cannot tear or break with ordinary use. Moreover, I have devised an improved textile covering arrangement which increases the life of the suspender end and presents a more attractive and more neatly finished product. A preferred constructional embodiment of my invention is disclosed in the drawing, as described hereinafter.

In the drawing,

Fig. 1 is a view showing the suspender end as in use;

Fig. 2 is a view of the elastic core;

Fig. 3 is a view of the blank formed by braiding the elastic core;

Fig. 4 is a view of the novel suspender end,

Fig. 5 is a section on the line 5—5 of Fig. 2;

Fig. 6 is a section on the line 6—6 of Fig. 3; and

Fig. 7 is a section on the line 7—7 of Fig. 4.

Referring to the drawing, the suspender end 10 may be attached to the suspender webbing in any desired manner, the dotted lines showing a standard type of slidable connection, the suspender end having two end loops 11 and 12. In manufacturing the suspender end, a plurality of endless rubber bands 13, see Figs. 2 and 5, are grouped together to form a core 14, around which a textile cover 15 is formed, preferably by braiding, whereby an endless blank 15 is provided having a textile outer covering 16 and an inner core formed of a plurality of independent endless rubber bands. The covered blank 15 is then gathered together at the center and a separate textile binding cover 17, see Fig. 4, is formed thereon, as by braiding, and locked at the ends, preferably to the covering of the blank, whereby integral end loops 11 and 12 are formed. The winding of the braided covering 16 and of the cover 17 is preferably accomplished under considerable tension; the blank 16 is stretched to approximately three times its length, whereby the finished suspender end has a length about one and one half times the length of the blank when it contracts to its normal condition. Due to the tension exerted on the blank during the winding operation, and the central braiding of the cover 17, the section of the finished suspender end is as indicated in Fig. 7, whereby the suspender end has a very attractive appearance. The double textile cover along the major portion of its length, and particularly at the point of connection with the suspender webbing, increases the life of the suspender ends; the end loops are integral with the body portion and are not secured together by sewing or any equivalent means, whereby the tension exerted on the end loops is transmitted to the elastic bands forming the core, thus increasing the effective resilience. The novel construction may be used for other covered cords and similar articles, such as are for example used in exercising machines, and may be utilized for any articles which have end loops subject to severe strain.

Although I have described a core formed of a plurality of elastic bands, any other type of core may be used, both elastic and inelastic, and formed of one or more bands; the covering is preferably of textile material, but may be of any suitable material, such as for example rubber, either in the form of a tube of by impregnation, as by dipping; and the outer cover may similarly be of other suitable material..

While I have described a specific constructional embodiment of my invention, changes in the materials used, in the method and type of covering winding used, and in the arrangement of the parts, may be made to suit the requirement for different products, without departing from the

spirit and the scope of the invention as defined in the appended claims.

I claim:

1. The method of forming a cord having end loops, comprising the steps of covering an endless band core to form an endless blank, bringing the sides of the blank into adjacency, and covering the adjacent sides while leaving the ends uncovered.

2. The method of forming a cord having end loops, comprising the steps of covering an endless band core formed of a plurality of endless bands to form an endless blank, bringing the sides of the blank into adjacency, and covering the adjacent sides while leaving the ends uncovered.

3. The method of forming a cord having end loops, comprising the steps of covering an endless band core formed of a plurality of endless resilient bands to form an endless blank, bringing the sides of the blank into adjacency, and covering the adjacent sides while leaving the ends uncovered.

4. The method of forming a cord having end loops, comprising the steps of covering an endless band core to form an endless blank with textile material, bringing the sides of the blank into adjacency, and covering the adjacent sides with textile material while leaving the ends uncovered.

5. The method of forming a cord having end loops, comprising the steps of covering an endless band core formed of a plurality of endless bands to form an endless blank with textile material, bringing the sides of the blank into adjacency, and covering the adjacent sides with textile material while leaving the ends uncovered.

6. The method of forming a cord having end loops, comprising the steps of covering an endless band core formed of a plurality of endless resilient bands to form an endless blank with textile material, bringing the sides of the blank into adjacency, and covering the adjacent sides with textile material while leaving the ends uncovered.

7. A cord having end loops, comprising an endless core, a covering therefor, the sides of the covered core being in adjacency, and a cover over the central portion of said covered core, the ends being uncovered.

8. A cord having end loops, comprising an endless core formed of a plurality of endless bands, a covering therefor, the sides of the covered core being in adjacency, and a cover over the central portion of said covered core, the ends being uncovered.

9. A cord having end loops, comprising an endless core formed of a plurality of endless resilient bands, a covering therefor, the sides of the covered core being in adjacency, and a cover over the central portion of said covered core, the ends being uncovered.

10. A cord having end loops, comprising an endless core, a covering of textile material therefor, the sides of the covered core being in adjacency, and a cover of textile material over the central portion of said covered core, the ends being uncovered.

11. A cord having end loops, comprising an endless core formed of a plurality of endless bands, a covering of textile material therefor, the sides of the covered core being in adjacency, and a cover of textile material over the central portion of said covered core, the ends being uncovered.

12. A cord having end loops, comprising an endless core formed of a plurality of endless resilient bands, a covering of textile material therefor, the sides of the covered core being in adjacency, and a cover of textile material over the central portion of said covered core, the ends being uncovered.

13. A suspender end comprising an endless cord formed of a plurality of endless resilient bands, a continuous covering of textile material therefor, the sides of the covered cord being in adjacency over the major intermediate portion of its extent but spaced at each end portion to accommodate a button, and a cover of textile material over said intermediate portion and terminating at the spaced portions.

14. A suspender end comprising an endless cord formed of a plurality of endless resilient bands, a continuous covering of textile material therefor, the sides of the covered cord being in adjacency over the major intermediate portion of its extent but spaced at each end portion to accommodate a button, and a cover of textile material over said intermediate portion and terminating at the spaced portions as reinforcement against wear upon the suspender.

WILLIAM C. JOHNSON.