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R. H. WANN

2,138,588

GARMENT

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FIG. 1.

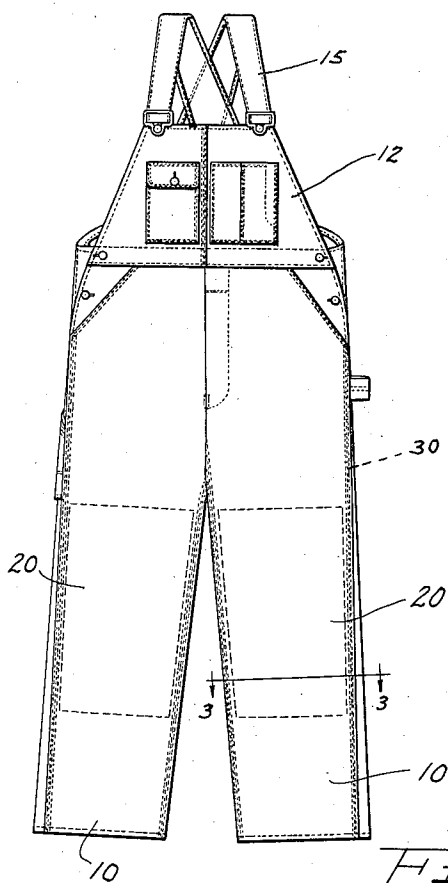


FIG. 2.

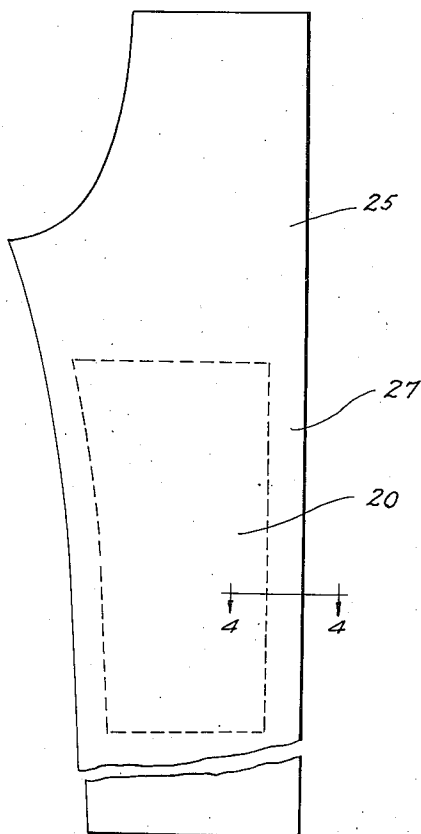


FIG. 3.

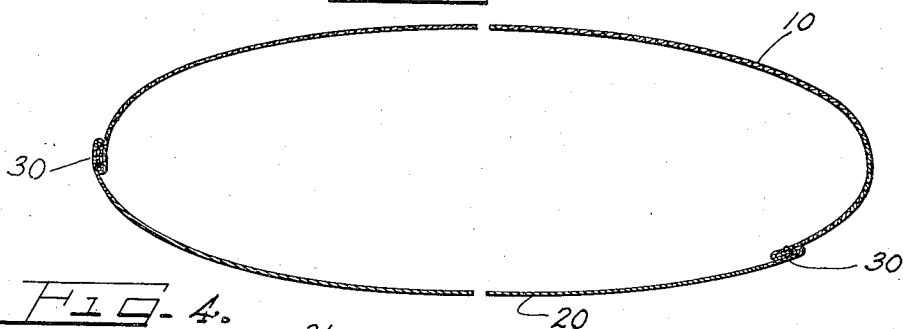
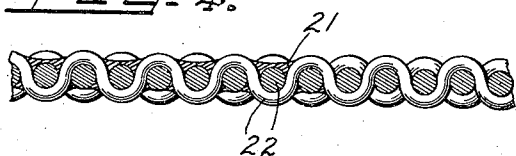


FIG. 4.



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GARMENT

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3 Claims. (Cl. 2—227)

My invention relates to garments and has to do more particularly with a garment which is reinforced in certain restricted areas for the purpose of enhancing the wear resistance of the garment and also for rendering it waterproof. Such areas may be, for example, the knees, seats, elbows, etc., where such special qualities are highly desirable.

My invention is especially applicable to work garments such as overalls, jumpers, etc., as well as play garments for children, and may have numerous other applications.

In the drawing which illustrates a practical application of my invention to a pair of overalls,

Figure 1 is a front plan view of a pair of overalls embodying my invention.

Figure 2 is a plan view of a leg section of a pair of overalls embodying my invention prior to its assembly by sewing with a companion section to form one side of said overalls.

Figure 3 is a sectional view taken substantially on line 3—3 of Figure 1; and

Figure 4 is a sectional view on a greatly enlarged scale, taken substantially on the line 4—4 of Figure 2.

The pair of overalls illustrated in Figure 1 may be of usual or other suitable design and formed of textile material comprising a pair of legs 10—10, a front or bib portion 12, with suspender-like straps 15, for supporting the garment on the wearer's shoulders. The leg sections 10—10, have restricted areas 20—20, embodying my invention, said areas being treated as shown in detail in Figure 4 by the application of thermoplastic material 21, in such a manner as to impregnate and partially coat the fibers 22, of the textile material of which the garment is formed. The impregnating and coating material 21, may be any suitable thermoplastic substance, such as rubber, a natural or synthetic resin, a cellulose ester, or the like, suitably plasticized in manner known in the art. In my preferred embodiment I use as the preferred impregnating and coating material, rubber latex which has been treated in such a way as to stabilize the same. I consider it unnecessary to describe the precise formula for the coating and impregnating material, inasmuch as stable forms of latex are readily available on the market.

In the practice of my invention, garment sections 25, are cut in the usual manner, by machine or by hand, and I apply either to one or both sides of sections 25 as desired, by any suitable means, as by spraying rollers, brushes, etc.,

the thermoplastic material in the restricted areas 20, in such a manner as to leave free or untreated marginal portions 27, where the sections are to be sewn together. This is considered of great importance, inasmuch as it has been found in quantity production of garments of this general type that the sewing of plastic-impregnated textile material is greatly slowed down when the needle of the sewing machine is required to penetrate impregnated material. Furthermore, the needle heats up very quickly, resulting in damage, and the net effect is decreased production and a general loss of efficiency. By leaving free or untreated the portions through which the stitching will extend, these disadvantages are entirely obviated and sewing may proceed at maximum speed.

The thermoplastic material is applied in such quantity that the fabric is rendered substantially waterproof, but, as shown in Figure 4, care is taken to avoid applying an excess such as would impart a glazed, unnatural appearance to the fabric. Thus, a garment embodying my invention is substantially uniform in appearance as to the treated and untreated areas. The quantity of material to be applied can be readily determined by cut and try experimentation. The impregnated sections are passed through a drying oven to eliminate the moisture from the latex and prevent tackiness.

After the garment sections have been treated as above described, said sections are secured as by stitching 30, in a manner well known in the art.

It will be readily apparent that garments embodying my invention will possess many advantages over those previously known. Thus, such garments will have their wearing quality as well as their resistance to water penetration greatly enhanced at the points where such qualities are especially needed, as, for example, adjacent to the knees, seat, etc. This is of great value to workmen, especially those who are required to kneel in damp places, as, for example, cement workers, tile setters, etc. It is also advantageous for children's play suits, for obvious reasons.

I am well aware that reinforced and moisture-proofed garments have been known in the past. However, goods embodying my invention have special advantages over such previously known articles. For one thing, by restricting the treated portions to the areas where such treatment is especially required, the weight of the garment is decreased and the comfort of the wearer is enhanced not only by this fact, but also because the

air is permitted to circulate through all portions of the garment except the treated areas, thus enabling the wearer's body to breathe.

A further advantage is that garments embody-
 5 ing my invention have substantially a uniform appearance, since the thermoplastic material is applied in a limited quantity so as merely to fill in the spaces between the threads and provide only a slight coating therefor, but being insuffi-
 10 cient to produce a glazed surface. If desired, the plastic material may include a dye similar to the garment being treated. Thus, the garment has substantially the same appearance in the treated areas as in the untreated areas, and the wearer is
 15 not embarrassed by a patchwork appearance.

Numerous other advantages will be apparent to those skilled in the art. Various changes and modifications coming within the spirit of my invention will also probably suggest themselves to
 20 those skilled in the art and hence, I do not wish to be limited to the specific embodiment shown and described, or uses mentioned, except to the extent indicated in the appended claims, which are to be interpreted as broadly as the state of the
 25 art will permit.

I claim:

1. A garment formed of textile material and having portions thereof subject to excessive wear, said portions being impregnated with a thermo-
 30 plastic material so as to improve the wearing quality of said portions and render them sub-

stantially waterproof where such quality is re-
 quired, said thermoplastic material filling the spaces between the threads and having portions of the textile material on the coated surface ex-
 posed so as to preserve the textile appearance of
 5 said portions and thereby avoid a glazed appearance.

2. A garment formed of textile material and having portions thereof subject to excessive wear, said portions being impregnated with uncured
 10 latex so as to improve the wearing quality of said portions and render them substantially water-
 proof where such quality is required, said uncured latex filling the spaces between the threads and having portions of the textile material on the
 15 coated surface exposed so as to preserve the tex-
 tile appearance of said portions and thereby avoid a glazed appearance.

3. A bifurcated garment of textile material and having knee portions thereof subject to excessive
 20 wear, said portions being impregnated with a thermoplastic material so as to improve the wear-
 ing quality of said portions and render them sub-
 stantially waterproof where such quality is re-
 quired, said thermoplastic material filling the
 25 spaces between the threads and having portions of the textile material on the coated surface exposed so as to preserve the textile appearance of said portions and thereby avoid a glazed appearance.

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