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V. GUINZBURG

1,840,945

BELTING

Filed Dec. 7, 1928

Fig. 1.

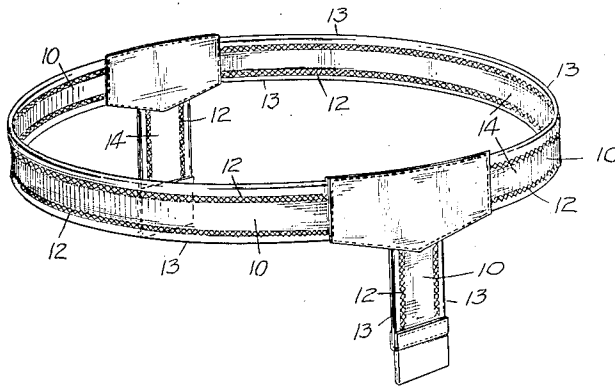


Fig. 2.

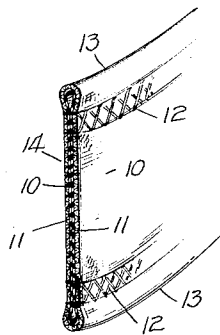


Fig. 3.

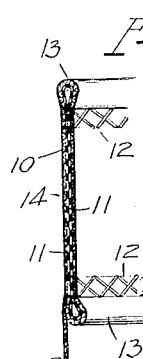


Fig. 5.



Fig. 4.

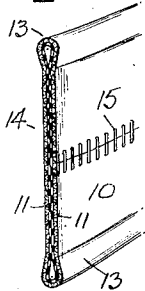


Fig. 5.

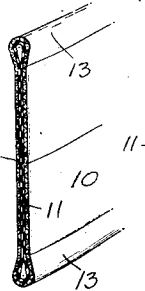


Fig. 6.

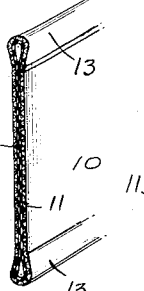


Fig. 7.

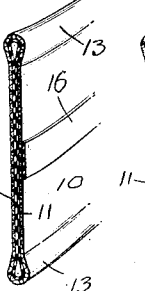


Fig. 8.



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BELTING

Application filed December 7, 1928. Serial No. 324,429.

This invention relates to an extensible belting used for supporters of various garments and particularly in the manufacture of sanitary belts.

Heretofore sanitary belts have been made up of sections of the ordinary elastic webbing, comprising parallel strands of rubber interwoven with threads of cotton or silk to produce the finished band, which is capable of stretching in a longitudinal direction only. It will be understood that when the parts of the body embraced by the elastic webbing are caused to bend, the latter must be flexible enough to yield also, and it has been found that due to the inherent nature of this webbing any creases formed therein, as a result of such bending, will leave the webbing in a crushed condition even after the body has again been moved to normal position. The conditions of the webbing naturally becomes much worse each time it is worn, until nothing but an uneven heavily creased rope remains. To continue wearing a belt after reaching such a condition is extremely uncomfortable and as a result few persons have found such appliances either efficient or economical and have resorted to other means.

Another distinct disadvantage in the use of the ordinary elastic webbing is its natural coarse texture and extremely rough edges which cut into the soft skin of the body whenever the webbing becomes the least bit creased or the folds of flesh of the body cause the edges to press therein. This condition is even increased to a much greater degree when the webbing is under tension.

With the foregoing in mind it is the purpose of the present invention to provide an extensible belting for the purpose described which will positively not remain crushed after wear and which is incapable of injuring the flesh of the wearer. I accomplish this purpose by means of a belting made from a rubber coated knitted fabric, known commercially as stockinette material, which is so folded upon itself, stitched and then treated so that the edges are rolled and perfectly smooth, the center portion is highly elastic, and the finished material itself stretches only in longitudinal direction.

One embodiment of my invention is illustratively exemplified in the accompanying drawings, in which Figure 1 is a perspective view of a sanitary belt constructed of my improved belting; Figure 2 is a transverse sectional view taken through any portion of the belting; and Figure 3 is also a sectional view showing my invention built directly into a piece of material which might be used to produce undergarments where it is desirable to embody an extensible waist line therein; Figure 4 is a view similar to Figure 2 showing the connection between the ends of the material made by stitching which does not project through to the outside of the belting; Figure 5 shows a view of the belt with the connection made without the use of any stitching; Figure 6 shows the connection adjacent one of the sides of the belt and effected without the use of stitching; Figure 7 is a view of a still further modified means of connecting the ends of the material, the means being in the form of a tape; Figure 8 is a view of a belt with only one side provided with the rolled or tubular edge; and Figure 9 shows a section of a belt in which no tubular edges are provided.

Referring now to the drawings, 10 denotes the outside material of the belting which comprises a knitted or woven fabric capable of stretching in one direction only, the latter being naturally longitudinally of the belting. One face of this material is coated with a thin layer of rubber 11. The process for carrying out this step is well known and it will suffice to say that although fabric materials have heretofore been coated with rubber, I am concerned primarily with a rubber coated material of knitted texture having considerable give or elasticity in one direction, such material being generally known as stockinette.

As illustrated clearly in Figure 2, the belting is made from a strip of the rubber coated stockinette, which strip is folded on itself longitudinally thereof to initially form a sort of tubing, as it were, the rubber coated faces being arranged on the inside and in contact with each other. A row of elastic stitching 12 is run through the over-lapped

material along a line parallel to and short of the actual line of the fold forming each longitudinal edge. As a result the loop 13 between the stitching 12 and the line of the fold becomes virtually a tubing or piping, which is re-enforced on its interior by the rubber coating and as a consequence it resists all effort to permanently crease or crush the material. The loops 13 form extremely efficient edges and at the same time are soft and pliable.

The mid portion 14 of the belting between the separated rows of elastic stitching 12 is formed into an integral strip by applying a knurled roller to the outer surfaces thereof before the vulcanizing step takes place. This treatment causes the two adjacent rubber surfaces 11 to knit and adhere together very closely, and to practically become integral after the same have been vulcanized.

In the manufacture of sanitary belts utilizing strips of the belting just described, it will be seen that the soft rolled edges 13 of the belting will hardly be felt as it is brought into contact with the tender flesh of the body and the treated mid portion 14 will offer the necessary elasticity required of a supporter of this or any other character where the ordinary elastic webbing is used.

In Figure 4, I have shown the two side edges of the material brought together adjacent the mid portion of the inside of the belt and attached by means of special stitching 15 which only penetrates the layer of material being attached by the stitches.

Figure 5 and 6 show the belt made up without the use of stitching of any kind. The material of the belt is held together merely by the knitting of the rubber surfaces after treatment by the knurled rollers.

Figure 7 shows a separate strip of rubber tape 16 adhered to the inside face of the material over the abutting edges thereof.

Figure 8 is a view showing only one side rolled to form the tubular edge and Figure 9 is a view illustrating a strip of belting constructed by merely placing the rubber coated surfaces of the material together and utilizing the knurled roller to knit the contacting surfaces together.

Having now described my invention what I desire to secure by Letters Patent is:

1. An extensible belting comprising a strip of material having one face at least provided with a rubber coating, said material being folded longitudinally upon itself to form a hollow tubing, and means for attaching the walls of the folded material together only along portions inside the lines of one of the folds.

2. An extensible band of material comprising a strip of stretchable textile fabric having one face rubber coated, said strip being folded longitudinally on itself to bring the rubber coating inside into integral contact

with itself to a line spaced from each fold, a row of elastic stitching spaced from the line of each fold to form tubular edges along opposite sides of the band.

3. A sanitary belt of the character described, comprising sections of extensible material formed from rubber coated textile fabric folded upon itself to form a tubing, the lines of the folds being in the body of the material and the sides overlapping, elastic stitching disposed parallel to and short of the line of each fold to form a soft rolled edge, and the mid portions of the overlying rubber surfaces being permanently adhered together between the separated rows of elastic stitching.

4. A sanitary belt made of belting comprising knitted material coated with rubber and folded to bring the coated surfaces together, said coated surfaces being adhered together in the mid portion of the belt and leaving hollow tubular edges on each side.

5. As an article of manufacture, extensible banding consisting of a strip of extensible fabric and an elastic rubber coating applied to one face of the strip, the coated strip being folded upon itself to bring the coating in to face to face relationship, the folded strip being secured together along the contiguous coated faces but leaving the coating at one folded edge unattached, the elastic coating providing a lining for such folded edge forming said fabric at said edge into a rounded, hollow, tubular, elastically collapsible edge for the belting.

6. As an article of manufacture, extensible belting consisting of a strip of extensible fabric and an elastic rubber coating applied to one face of the strip, the coated strip being folded upon itself to bring the coating in to face to face relationship, the folded strip being secured together along the contiguous coated faces but the coating at one folded edge being left unattached, the elastic coating of the strip at such folded edge forming said fabric at said edge into a hollow portion of larger cross-section than the body of the strip to provide an elastically collapsible edge for the belting.

7. As an article of manufacture, extensible belting consisting of a strip of extensible fabric and an elastic rubber coating applied to one face of the strip, the coated strip being folded upon itself to bring the coating in to face to face relationship, the folded strip being adhered along the contiguous coated faces but leaving the coating at one folded edge unadhered, the elastic coating of the fabric at such folded edge forming said fabric at said edge into a rounded, hollow, tubular, elastically collapsible edge for the belting.

In testimony whereof he has affixed his signature.

VICTOR GUINZBURG. 130