

Oct. 1, 1946.

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2,408,368

WIRE REINFORCED FABRIC

Original Filed Jan. 8, 1943

2 Sheets-Sheet 1

FIG. 1.

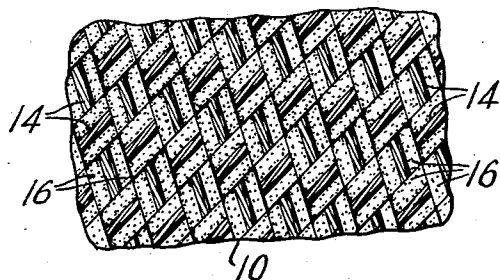
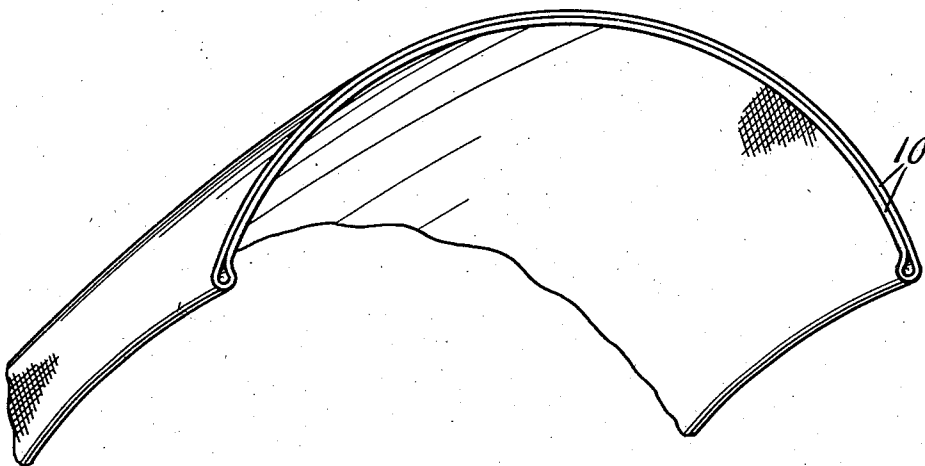


FIG. 2.



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FIG. 3.

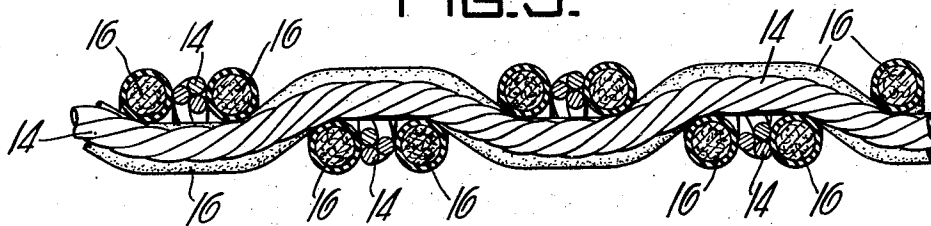
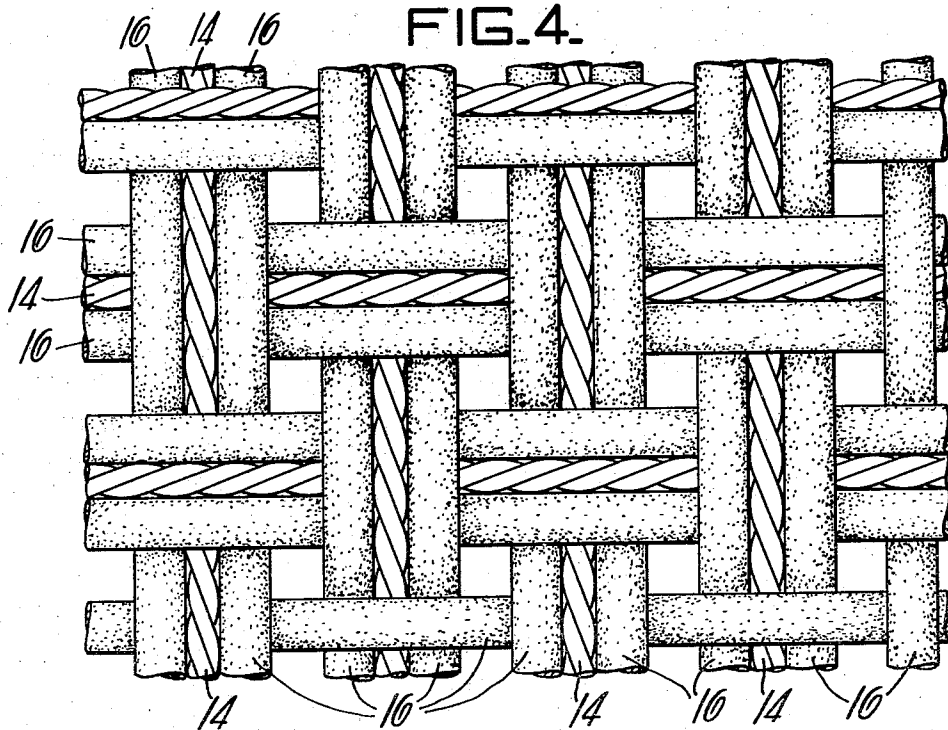


FIG. 4.



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UNITED STATES PATENT OFFICE

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WIRE REINFORCED FABRIC

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Original application January 8, 1943, Serial No.
471,755. Divided and this application July 14,
1945, Serial No. 605,053

8 Claims. (Cl. 139—420)

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This invention relates to a wire reinforced fabric and is a division of my copending application, Serial No. 471,755, filed January 8, 1943.

These fabrics have various uses such as in the tread portion of a tire. In the making of such fabrics it is desirable that the reinforcing wires should be closely spaced, but not be in frictional contact with each other.

It is therefore, an object of my invention to provide a wire reinforced fabric in which the wire strands have minimum contact with each other.

These and other objects will be more apparent after referring to the following specification and attached drawings, in which:

Figure 1 is an isometric view of the reinforced fabric arranged in a basket weave;

Figure 2 is an isometric view showing the reinforced fabric arranged to form a two-ply construction;

Figure 3 is a cross sectional view of the basket weave fabric greatly enlarged; and

Figure 4 is a plan view of Figure 3.

Referring more particularly to the drawings, the fabric 10 is shown as having a basket weave in which each thread of the weave has a stranded wire structure 14 between two latex covered cotton cords 16. It will be understood that the term "latex" is used in its broad sense which will include synthetic as well as natural rubber-like materials. The stranded structures are coated with "Vulcaloc" which is a rubber cement having a benzol solvent or with other suitable materials which favors adhesion with the gum of the cotton cords.

Referring to Figures 3 and 4 it will be seen that the stranded wires 14 running in one direction will bridge the stranded wires 14 running in the other direction. The latex coated cords 16 on either side of the stranded wires 14 are of larger diameter than the stranded wires, and, under heat and pressure, as in vulcanizing, they will flow and deform so as to fill in the area between the bridged strands, thus insulating the bridged strands from direct contact with one another.

In Figure 2 the reinforced fabric is shown to be of tubular form with the inner half of the tubular fabric collapsed inwardly and nested into the outer half. By applying heat to the fabric in this nested position, the latex on the cotton cords is fused to form a unit two-ply construction and will fill the interstices and cover the outside surfaces of the stranded structures 14 to

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insulate them from frictional contact with each other.

While one embodiment of the invention has been shown and described, it will be understood that other modifications and adaptations may be made without departing from the scope of the following claims.

I claim:

1. A wire reinforced fabric comprising a plurality of threads arranged in a plain weave, each of said threads having a stranded wire structure between latex coated cords.

2. A wire reinforced fabric comprising a plurality of threads arranged in a plain weave, each of said threads having a stranded wire structure between latex coated cotton cords.

3. A wire reinforced fabric comprising a plurality of threads arranged in a plain weave, each of said threads having a stranded wire structure between latex coated cotton cords, the diameter of said cords being greater than that of the stranded wire structure.

4. A wire reinforced fabric comprising a plurality of threads woven together, each of said threads having a stranded wire structure between latex coated cords.

5. A wire reinforced fabric comprising a plurality of threads woven together, each of said threads having a stranded wire structure between latex coated cotton cords.

6. A wire reinforced fabric comprising a plurality of threads woven together, each of said threads having a stranded wire structure between latex coated cotton cords, the diameter of said cords being greater than that of the stranded wire structure.

7. A wire reinforced fabric comprising two plies, the fabric in each ply having a plurality of threads woven together, each of said threads having a stranded wire structure between latex coated cords, the latex on the cords filling the interstices and covering the outside surface of the stranded structures when heat is applied thereto.

8. A wire reinforced fabric comprising two plies, the fabric in each ply having a plurality of threads woven together, each of said threads having a stranded wire structure between latex coated cotton cords, the diameter of said cords being greater than that of the stranded wire structure, the latex on the cords filling the interstices and covering the outside surface of the stranded structures when heat is applied thereto.

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