

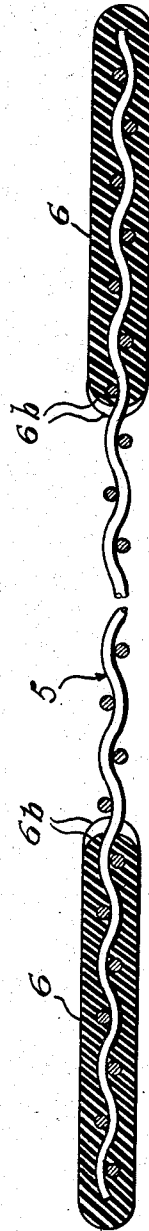
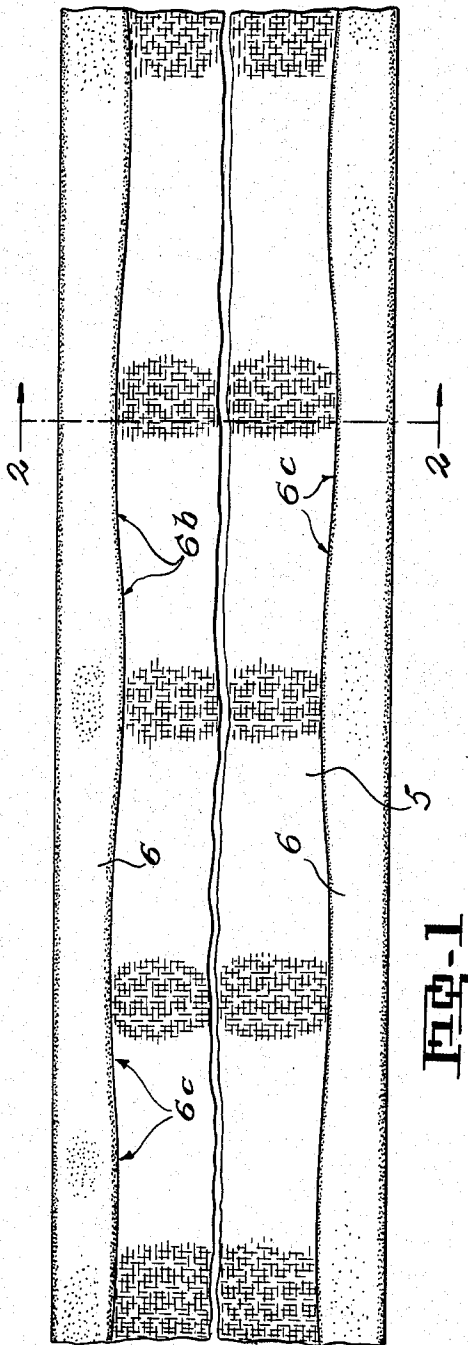
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FOURDRINIER WIRE HAVING REINFORCED COATED MARGINAL PORTIONS

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FOURDRINIER WIRE HAVING REINFORCED
COATED MARGINAL PORTIONS

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2 Claims. (Cl. 28—80)

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This invention relates to improvements in Fourdrinier wires used in Fourdrinier paper making machines and the object is to strengthen the marginal portions of the wire to prevent the breaking and checking to which these portions of the wire are subjected under service conditions, especially in the case of Fourdrinier machines operating at the higher speeds now employed.

According to this invention, the side marginal portions of the Fourdrinier wire are reinforced by the application of a plastic reinforcing material which completely covers the warp and weft strands and fills the intervening meshes.

Reinforcing materials suitable for the purpose of this invention may be produced by compounding various synthetic resins or other plastic materials having behaviour and property characteristics of resins such, for example, as rubber compounds and cellulose acetate which can be applied in various ways to a Fourdrinier wire to provide a film of the required thickness for covering the warp and weft strands of the wire and filling the intervening meshes. The type of film formed by the selected coating material should be one which is inert, water resistant, flexible and possesses high tensile strength.

A preferred embodiment of the invention is shown in the accompanying drawing in which—

Fig. 1 is a plan view of a portion of the length of the Fourdrinier wire having its side edges reinforced in accordance with the invention and,

Fig. 2 is a transverse sectional view taken substantially along section line 2—2 of Fig. 1.

Referring more particularly to the drawing, 5 designates a Fourdrinier wire having its side edges reinforced by plastic reinforcing material 6 which may be applied in any suitable way to completely cover the warp and weft strands of the wire and to fill the intervening meshes as shown to advantage in Fig. 2.

Each edge of the Fourdrinier wire may be reinforced by applying a single preformed covering strip of plastic material and subjecting the wire and the covering strip of plastic material to heat and pressure whereby the plastic strip is pressed around the warp and weft strands to completely cover these strands and to fill the inter-

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vening meshes. Alternately, each edge of the Fourdrinier wire may be reinforced by sandwiching it between two strips of plastic material and subjecting the resulting sandwich assembly to heat and pressure whereby the material of the strips is pressed into the meshes of the wire and united near the centre of the thickness of the wire.

In some instances it has been found that, when the plastic reinforcing material is applied so that it presents straight inner edges, there is a tendency for the wire 5 to develop cracks adjacent to and extending in the longitudinal direction of the inner edges of the reinforcing material. I have found that this difficulty can be overcome by using plastic reinforcing strips having a scalloped edge 6b and applying the strips so that the scalloped edges face toward the inner longitudinal centre of the wire as shown in Fig. 1. It is preferred that the scalloped edges 6b of the reinforcing material 6 be contoured so as to present long sweeping reverse curves 6c, but it will be understood that the exact contour of these edges is subject to suitable variations, the main consideration being the avoidance of straight edges which, as previously stated, have been found to promote cracking of the wire along and adjacent to such straight edges.

In the present drawings the edge-reinforcing material is shown applied to a Fourdrinier wire of plain weave but it will be understood that the invention is equally applicable to Fourdrinier wires made with a twill weave or any other type of weave.

What I claim is:

1. A Fourdrinier wire having its side marginal edges reinforced by covering strips of plastic material presenting scalloped inner edges.

2. A Fourdrinier wire having its side marginal edges reinforced by plastic material covering the warp and weft strands of the wire and filling the intervening meshes, the inwardly facing edges of the plastic material at each side of the wire being contoured to present a series of long sweeping reverse curves.

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No references cited.