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HOSE

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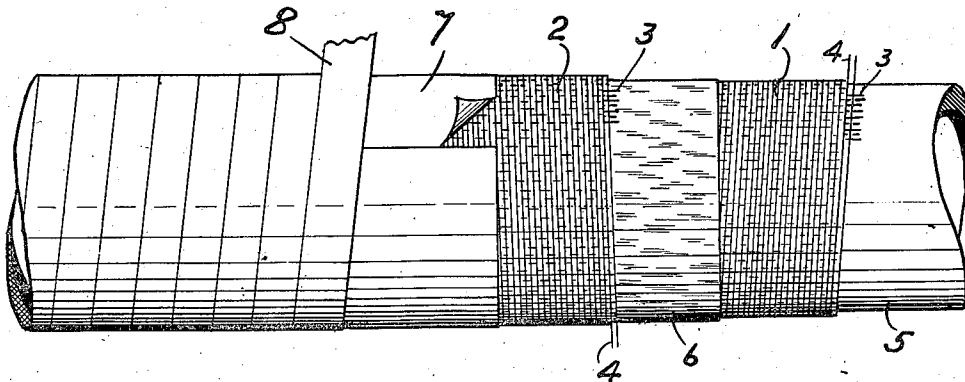


FIG. 1.

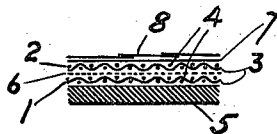


FIG. 2.

WITNESS:

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HOSE

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The principal objects of the present invention are to provide hose, sometimes designated rubber or duck and rubber hose which will not substantially deform or flatten in cross section upon bending and which therefore is well adapted for use for conveying liquids carrying sand or grit, and which will oppose or resist twisting, radial compression and expansion, and elongation, stresses and strain and which therefore is well adapted for use with excessive pressures as of water, steam or other like fluids.

To these and other ends hereinafter set forth the invention, generally stated, may be said to consist in a hose provided with a covering which includes one or more seamless tubular woven plies having a fibrous or textile warp and a metal weft or filler which, in addition to imparting its own tensile and mechanical strength to the hose, permits the fibrous or textile warp to be drawn up very tightly and in consequence to impart strength.

The invention also comprises the improvements to be presently described and finally claimed.

In the following description reference will be made to the accompanying drawing forming part hereof and in which

Figure 1 is a side view of hose embodying features of the invention and with the coverings or wrappings progressively removed toward the inner tube shown at the right, and

Fig. 2 is a longitudinal section.

In the drawing 1 and 2 are seamless tubular woven plies and they are duplicates except in the matter of spiral direction. Therefore a description of one will suffice and in fact the number may be increased. Each seamless tubular woven ply has a fibrous or textile warp 3 and a metal weft or filler 4 which may consist of one or two and perhaps more wires as of steel. The metal weft or filler in addition to imparting its own tensile strength and rigidity to the hose permits the fibrous warp to be drawn up very tightly and in consequence to impart strength to the woven ply and to the hose.

In the manner and by the means described the objects recited are attained.

In connection with the embodiment of the invention chosen for illustration in the drawing it may be said that 5 is the inner tube as of rubber material. 6 is a wrapping of adhesive material or fabric which, if desired, may be placed between the seamless tubular woven plies 1 and 2. 7 is an additional wrapping and 8 is a spirally wound outside cover. In Fig. 1 the ends of the wires constituting the metallic weft or filler are shown as bent outward. Of course the intention is not to limit the application of the invention to the general hose construction illustrated in the drawing or otherwise than as the prior art and the appended claim may require because modifications in matters of detail and form may be made without departing from the spirit of the invention.

I claim:

Hose having an inner tube of rubber material provided with a covering which includes two seamless tubular woven plies each having a textile warp and a metal weft, the metal weft in the plies being oppositely arranged, a wrapping of adhesive material applied to the woven plies, and an external spiral cover.

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