

W. A. YOUNG.
METHOD OF MANUFACTURING GROMETS.
APPLICATION FILED MAY 29, 1919.

1,348,615.

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Fig. 1.

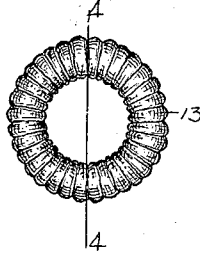


Fig. 2.

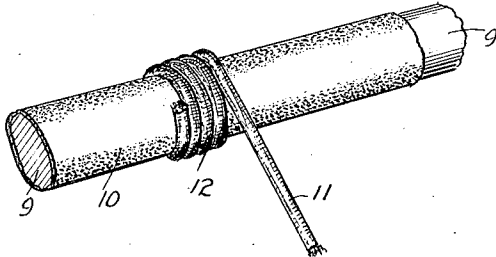


Fig. 4.

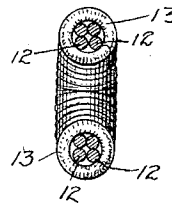
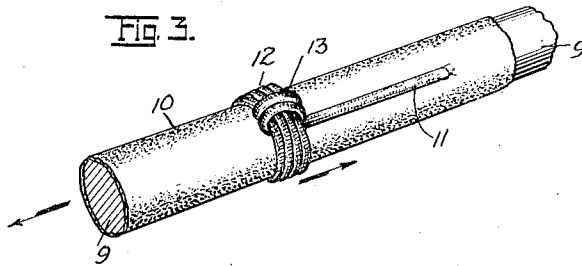


Fig. 3.



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METHOD OF MANUFACTURING GROMETS.

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To all whom it may concern:

Be it known that I, WILLIAM A. YOUNG, a citizen of the United States, and a resident of the city of New York, Astoria, borough of Queens, in the county of Queens and State of New York, have invented certain new and useful Improvements in Methods of Manufacturing Gromets, of which the following is a full, clear, and exact description.

Among the principal objects which the present invention has in view are: to simplify and cheapen the construction of articles of the character mentioned; to improve the sealing qualities of gromets; and to shorten the time required for manufacture of gromets.

Drawings.

Figure 1 is a side view of a gromet, constructed and arranged in accordance with the present invention.

Fig. 2 is a view showing in perspective a gromet forming mandrel and a strand of cord disposed as at the end of the initial step of the method herein described.

Fig. 3 is a perspective view showing the same after the initiation of the second step of the model.

Fig. 4 is a cross section taken as on the line 4—4 in Fig. 1.

Description.

As seen in the drawings gromets when constructed in accordance with the present disclosed method are shaped on mandrels of various diameters. The mandrels consist preferably of a core 9 and an abrasive covering 10. At present the covering 10 is emery cloth and the mandrel 9 is a rod of any suitable length.

As seen best in Fig. 2 of the drawings, the gromet is started by wrapping the pliable strand 11 around the mandrel outside the covering 10 to form the convolutions 12. As many convolutions are used as may be found necessary to give the gromet the desired body or thickness in cross section.

When the number of convolutions 12, required to form the body of the gromet, have been turned on the mandrel, the convolutions are rolled in the mandrel 9 and covering 10 thereof preferably, or the mandrel may be forced in the direction shown by the arrow at the left of Fig. 3 of the drawings. The result of this is that the convolutions are massed and rolled over the stretched sec-

tion of the pliable strand 11, which as shown in Fig. 3 of the drawings, is held substantially parallel to the mandrel. As the convolutions 12 are rolled, care is exercised to guide the pliable strand 11 so that a second series of convolutions indicated by the numeral 13 is wrapped around the first convolutions 12.

When the convolutions 13 encompass the complete body of the gromet formed by the convolutions 12, or in other words, when the convolutions 13 meet and form a solid covering for the convolutions 12, the pliable strand 11 is severed from the source of supply and is folded down or caught between the side of the convolution 13 initially formed and the convolution last formed. The expansion of the convolution 13 is sufficient to retain the free end of the pliable strand 11 until the completed gromet is dipped in the waterproofing material with which it is saturated ready for service.

The gromets of this character are used as waterproofing gaskets and usually in submarine work where they are placed around the threaded extension of the bolt to rest between the body, the metal of the structure and a metal washer which is placed under the nut which is to be turned down on the body of the structure. When the nut is driven home, it will be found the washer with which the said nut is in contact has compressed the gromet to a thin disk, but one which has accommodated itself to all of the irregularities of the metal surface of the structure against which it rests.

Claims.

1. A method of constructing gromets consisting in winding a strand upon a mandrel in parallel convolutions; then rolling said convolutions lengthwise of said mandrel for winding a continuation of said strand around said convolutions and transverse the same until said convolutions are covered.

2. A method of constructing gromets consisting in forming a body ring by winding a strand about a mandrel to form a plurality of convolutions of said strand; then rolling said body ring lengthwise of said mandrel for winding a continuation of said strand in coils about said convolutions until the same are covered.

3. A method of constructing gromets consisting in forming a body ring by winding a strand about a mandrel to form a plurality

of convolutions of said strand; then rolling
said body ring lengthwise of said mandrel
for winding a continuation of said strand
in coils about said convolutions until the
5 same are covered; then inserting the free
end of said strand between two of the last
mentioned convolutions.

4. A method of constructing gromets con-

sisting in winding a strand upon a form in
parallel convolutions, to form a ring; then 10
rolling said ring about its annular axis for
wrapping a continuation of said strand
about said convolutions and transverse the
same to completely cover said convolutions
and form the outer surface of said ring.

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