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L. SPRARAGEN

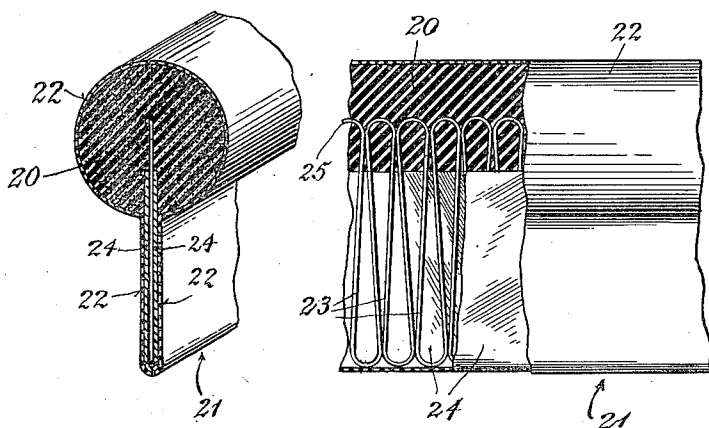
2,347,159

BEADING STRIP

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Fig. 1

Fig. 2



INVENTOR
Louis Spraragen,
BY *Johnson + Kline*
ATTORNEYS

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BEADING STRIP

Louis Spraragen, Bridgeport, Conn., assignor to
Bridgeport Fabrics, Inc., Bridgeport, Conn., a
corporation of Connecticut

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270,582. Divided and this application Novem-
ber 22, 1943, Serial No. 511,361

2 Claims. (Cl. 20—69)

This invention relates to a flexible beading strip, and, more particularly, to a strip having a resilient flexible cover intimately formed thereon.

This application is a division of my copending application Serial No. 270,582, filed April 28, 1939.

Beading strips have long been used for applying finishing edges to upholstered articles, as sealing strips for closing the joint between two relatively movable members, and for weather-proofing openings or other like purposes.

When strips have been used in conjunction with upholstered devices, efforts have been made to cover the strips with a material which will blend with the material with which they are to be used.

In prior constructions, these covers have taken the form of fabric, leather, or artificial leather coverings disposed about the bead and secured in place thereon. If it was desired in these prior constructions to fit the beading about a curve having a short radius of curvature, it was practically impossible to get a smooth finished appearance, due to the fact that the material on the inside of the curve would bunch and the material on the outside of the curve would approach its limit of stretching and prevent the bead from being properly curved.

Further, when the bead is to be used as a weather stripping, or a seal, and subject to adverse conditions, the cover must, of course, be of such material as will protect the bead from deterioration.

An object of the present invention is to provide a beading strip which has an attractive appearance and is satisfactory for the purpose of sealing or ornamenting upholstered articles, and at the same time the beading strip, with its desired covering thereon, may be readily bent to the desired curvature. A further object of the present invention is the use of a cover of such material as to protect and prevent deterioration of the bead when used in locations where the bead is subjected to adverse conditions.

These objects are accomplished, according to the present invention, by providing the core or bead portion of the beading strip of flexible material and securing thereto a laminated anchoring strip comprising loops of resilient wire positioned between layers of paper and then covering the bead and anchoring strip with a flexible resilient coating intimately secured thereto so as to become integral therewith to bend and flex with the bead, which covering material not only protects the bead but also provides it with a suitable outward appearance that blends with the material with which it is to be used.

When the beads and attaching strips have been secured together, they are covered with the elastic coating which firmly adheres to the surface of the bead and attaching strip so as to

completely cover the same. This covering material will enable the bead and attaching strip to be fitted to a curve having a relatively short radius of curvature as it will yield, when the bead is applied to the curve, by stretching on the outside of the curve and compressing on the inside of the curve, thus presenting a smooth outward appearance.

In the preferred form of the invention, the flexible resilient material forming the cover can be deposited from a latex dispersion, synthetic latex, synthetic rubber, or any material of this nature and can be self-curing, air-cured, or heat-cured.

Further, the covering material can be provided with any suitable pigment, coloring material or filler so as to produce a surface which will blend with the upholstery or like material with which it is to be used. Also, the covering material can be provided with suitable materials which will resist deterioration of the seal in case the bead is to be used under adverse conditions, since it completely encloses the bead and attaching strip and seals it against contact with injurious elements.

The covering material may be applied to the assembled bead or attaching strips in many ways, as, for example, by dipping, spraying or otherwise applying the coating so as to completely cover the surface.

As pointed out in the above-noted application, with a covering of this nature, various materials can be used for the bead and attaching strip. Rubber, sponge rubber, cotton bats, paper or fibrous cord, or the like material can be used for the bead. As herein illustrated, a laminated strip of wire loops positioned between paper can be used for the attaching strip. These elements can be used since they will be adequately protected by the cover and will not present an objectionable appearance in use.

The bead, according to the present invention, can be of various sizes and shapes and can be located in various positions with respect to the attaching strip.

Other features and advantages will be apparent from the specification and claims when considered in connection with the drawing, in which:

Figure 1 is a perspective view of the invention.

Fig. 2 is a side elevational view, partly in section of Fig. 1.

According to the present invention, a beading strip which can be readily bent to the desired curvature is provided with a flexible resilient cover which will bend with the beading strip so as to form a smooth surface when the beading strip is carried around a curve having a short radius of curvature.

The beading strip, in the preferred form of the invention, comprises a bead of flexible ma-

terial and an attaching strip 21 of relatively stiff bendable material secured thereto and the bead and attaching strip covered and completely enclosed by a relatively thin coating or film 22 of flexible material.

As set forth in the said copending application, the bead can be formed of various materials which are flexible and capable of bending and also are resilient enough to form a seal if used for that purpose and can be of any desired shape. Here it is illustrated as being circular in cross-section.

Preferably, the bead 20 can be molded directly on the attaching strip, can be formed in two halves and cemented together, or can be formed in a solid piece with a slit therein for receiving the attaching strip.

The beads are mounted and held in proper position by attaching strips. These strips are of stiff bendable material having sufficient resiliency to hold the bead in proper position, and, in the instance where the beading strip is used as a seal or weather stripping, will press the bead into proper sealing relation with a cooperating member.

While the attaching strip may take many forms, as noted in the parent application, it is here shown as comprising a reinforced laminated strip including a plurality of loops of wire 23 disposed between layers of paper 24 with the ends of the wires forming loops 25 projecting beyond one edge of the paper which is to be secured in the bead.

The laminated strip is secured in the bead by having the edge thereof disposed within the bead with the material of the bead extending through the loops to interlock therewith, and the paper firmly adhered to the material of the bead by cement or other adhesive material. The laminated strip may be positioned with respect to the bead so as to extend radially therefrom.

The paper of the laminated strip, which is used with the wire loops, can be suitably treated with a binder or rubber cement which will cause the rubber to adhere thereto so that the rubber of the bead or the cement used in securing the strip in place in the bead will firmly hold the laminated strip in the bead.

The beads, especially when made of rubber or artificial rubber, according to the present invention, are preferably treated or impregnated with a bonding material or other composition before they are covered with a thin coating or layer of resilient flexible material which becomes intimately secured thereto so as to bend with the bead. If desired, the beads and attaching strips can also be impregnated with the bonding material prior to the application of the cover so that it more readily adheres thereto.

In the preferred form of the invention, the covering material comprises a deposit from a dispersion of latex, and the thin coating or layer thereof can be formed by dipping, spraying or otherwise applying the latex to the treated bead and attaching strip so as to completely enclose and encase the same. The cover when so made will completely seal the bead and attaching strip against engagement by foreign materials and will enable the various types of bead and attaching strips, as noted above, to be used with satisfactory results. Other materials may be used for the cover, such as synthetic latex, rubber, synthetic rubber, or the like resilient flexible ma-

terials, and the cover materials can be self-curing, air-cured, or heat-cured.

Suitable pigments, coloring material or fillers can be added to the covering material to provide a desirable surface on the beading strip so that the strip will blend with the material with which it is used. Also, the covering material can be provided with suitable materials which will render it resistant to deterioration when the beading strip is used for sealing or weather stripping.

With this cover of flexible resilient material intimately secured to the bead and attaching strip, the beading can be used as a binding strip for upholstery, a sealing strip between movable members, and a weather stripping, for example, about openings. The attaching strip will enable the beading strip to be properly positioned and will resiliently hold it in such a position.

When the strip is to be carried around a curve having a short radius of curvature, the flexible covering will yield with the bead so as to stretch on the outside of the curve and compress on the inside of the curve, providing a smooth surface on the bead at the curve.

The beading strip can be attached in position by having its attaching strip provided with a dry adhesive or thermoplastic adhesive, which can be caused to adhere upon being rendered tacky or by heat and pressure or can be cemented in place. Also the beading strip can be attached by stitching, tacking or otherwise fastening it to the frame or element to which it is to be secured, and the resiliency of the attaching strip will hold the bead in proper position.

It is to be understood that in the broader aspects of the invention the various types of beads can be used with the herein disclosed attaching strip and be covered with any one of the above covering materials suitable for the use to which the strips are to be applied.

Variations and modifications may be made within the scope of this invention and portions of the improvements may be used without others.

I claim:

1. A beading strip comprising a bead of flexible material; a laminated attaching strip anchored in the bead to project therefrom and provide a means for mounting the beading strip, said laminated attaching strip comprising strips of paper having wire loops positioned between the strips; and a relatively thin, outwardly-nonadhesive, impervious coating of tough, flexible, wear-resisting material permanently secured to the surfaces of the bead and attaching strip to form an integral layer thereabout yielding to permit the bead to be bent into a curve of short radius without buckling and without more crumpling than that produced by bending of the bead of flexible material.

2. A beading strip comprising a bead of flexible material; a laminated strip anchored in and cemented to the bead to project therefrom and provide a means for mounting the beading strip, said laminated attaching strip comprising strips of paper having wire loops positioned between the strips, and said bead and attaching strip being impregnated with a binder; and an outwardly nonadhesive coating deposited from a dispersion of latex covering the impregnated bead and attaching strip and adhering securely thereto and forming a flexible cover for the bead which will bend with the bead without bunching.

LOUIS SPRARAGEN.