June 6, 1939. R. K. DE CARACENA 2,161,506

LEATHER JEWELRY

Filed March 24, 1939 2 Sheets-Sheet 1

Fig. 1,

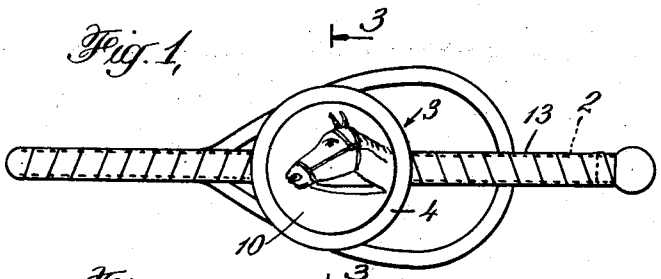


Fig. 2,

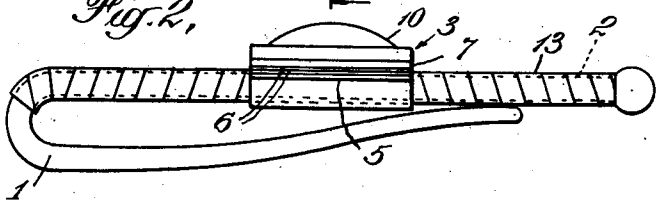


Fig. 3,

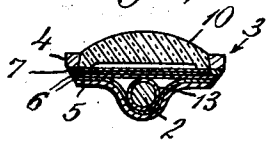


Fig. 4,

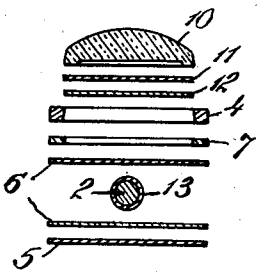


Fig. 5,

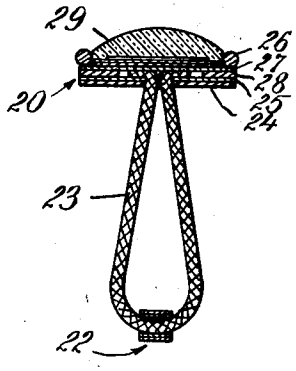


Fig. 6,

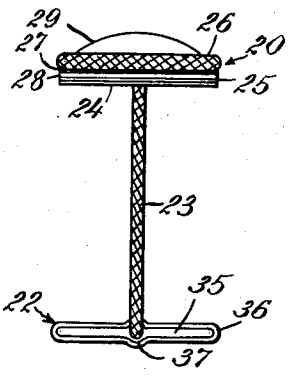


Fig. 7,



Fig. 8.

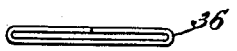


Fig. 9,

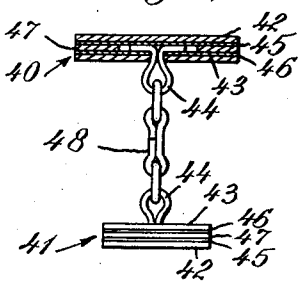
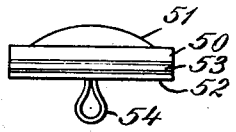


Fig. 10



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LEATHER JEWELRY

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Fig. 11,

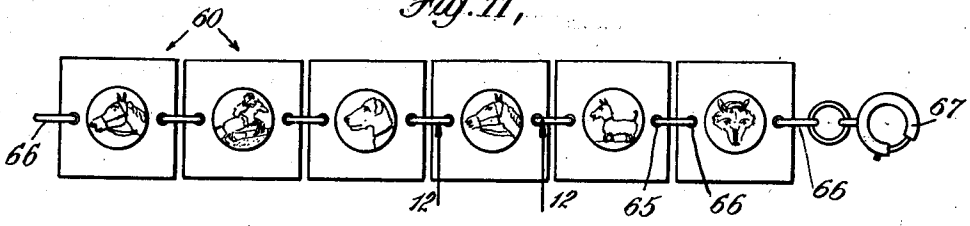


Fig. 12,

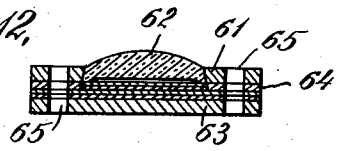


Fig. 13

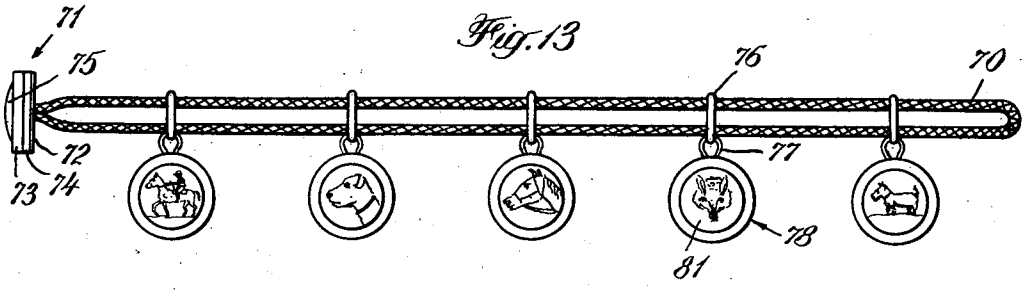


Fig. 15,

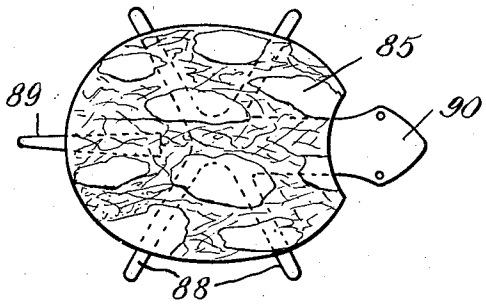
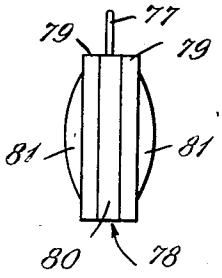


Fig. 14,



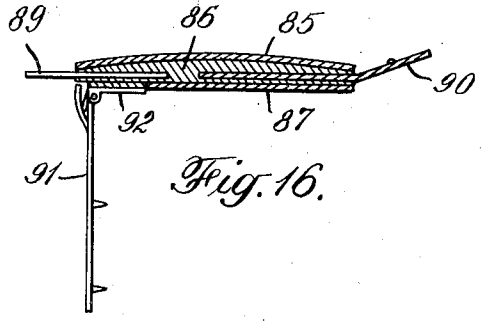


Fig. 16.

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UNITED STATES PATENT OFFICE

2,161,506

LEATHER JEWELRY

Ray K. de Caracena, Bronx, N. Y.

Application March 24, 1939, Serial No. 263,844

10 Claims. (Cl. 63—26)

This invention relates to articles formed of leather and has for its object the provision of improved leather articles and a method of making the same. The leather articles of the invention comprise a rigid composite structure having one or more pieces of leather bonded or cemended to a supporting body and formed into such ornamental or decorative things as buttons, cuff-links, tie-clasps, bracelets, dress ornaments, and the like, herein referred to as jewelry, or sport jewelry.

The jewelry of the invention comprises a structure of leather and associated bonding and supporting means preferably comprising a layer of cellulosic material bonded to the leather preferably interposed between two pieces of leather, and suitable mounting or connecting members or links (hereinafter called a mounting member) attached thereto, preferably anchored in the structure at or near the union of the leather with the cellulosic material. Any cellulosic material readily soluble in an easily volatilizable solvent may be used, such as pyroxylin, Celluloid, or cellulose acetate. In forming the jewelry of the invention, the most porous portion of the leather (from the flesh side inwardly) is impregnated or saturated with a solution of a cellulosic material, preferably similar in composition to the layer of cellulosic material, the layer of cellulosic material is rendered soft and sticky at the surface by means of the solvent and the saturated surface of the leather is pressed into contact with the softened surface of the layer of cellulosic material. This causes a fusion of the cellulosic material in the leather with the layer of cellulosic material and, upon solidification, the resulting structure becomes hard and rigid and the leather inseparably united to the cellulose layer.

Although there are special advantages in forming a piece of jewelry in which both exterior faces (the front and back faces) are of leather, I may use with similar effect a single piece of leather on the front face and any suitable layer or body of material for the back face that may be bonded to the layer of cellulosic material, such as artificial leather, wood, metal, or a resinous material, for example, a layer of colored plastic material molded to a particular shape, or a layer of colored cellulosic material, and the like. Any suitable mounting member, such as a link, loop, stud, bar, pin clasp, or the like, is attached to the structure, for example, to the back face, or anchored in or near the zone of fusion between the front and back faces with the layer of cellulosic material.

These and other novel features of the invention will be better understood from a consideration of the following discussion taken in conjunction with the accompanying drawings, in which:

Fig. 1 is a top view of a tie-clasp embodying the features of the invention;

Fig. 2 is a side view of the tie-clasp of Fig. 1;

Fig. 3 is a sectional view along the line 3—3 of Fig. 1;

Fig. 4 is a group of the separate parts comprising the tie-clasp of Fig. 1;

Fig. 5 is a side view, with parts shown in section, of a cuff-link embodying the invention;

Fig. 6 is a front view of the cuff-link of Fig. 5;

Figs. 7 and 8 illustrate separate parts used in the cuff-link of Fig. 5;

Fig. 9 is a side view, with parts shown in section, of another cuff-link embodying the invention;

Fig. 10 is a side view of a leather article embodying the invention;

Fig. 11 is a top view of a bracelet embodying the invention;

Fig. 12 is a sectional view along line 12—12 of Fig. 11;

Fig. 13 shows a different bracelet embodying the invention;

Fig. 14 is a side view of one of the ornaments of Fig. 13;

Fig. 15 is a top view of a dress ornament embodying the invention; and

Fig. 16 is a sectional view of the ornament of Fig. 14.

As a medium for impregnating the leather I may use a cellulosic solution, for example, a solution of Celluloid dissolved in acetone, pyroxylin dissolved in a mixture of alcohol and ether, or cellulose acetate dissolved in methyl formate. As a bonding or supporting medium I prefer to use a sheet or layer of cellulosic material preferably corresponding to the cellulosic material used in the solution, and the sheet or layer is softened by the same kind of solvent used in the solution. Celluloid and a solution of Celluloid in acetone are especially advantageous for these purposes, and while other materials which are hard and tough when solid and readily soluble in highly volatile solvents are their substantial equivalents, and may be used with similar results, for the sake of brevity only, Celluloid and a solution of Celluloid in acetone will be mentioned in the following description.

In Figs. 1 to 4 of the accompanying drawings, a tie-clasp is illustrated comprising a metal mounting or connecting member 1 in the form

of a loop having a straight bar 2 upon which is mounted a leather ornament 3 comprising an upper layer (front face) of leather 4 in the form of an annulus or bezel, a lower circular piece (back face) of leather 5, two circular sheets of thin Celluloid 6, a thicker sheet of Celluloid 7 in the form of an annulus, the central opening being the same diameter as that of the leather annulus 4, and a setting or novelty stone 10, for example, a decorated piece of glass adapted to fit closely into the openings of pieces 4 and 7. The glass setting may contain a painted figure such as a horse head or the like, and with such settings I prefer to place a layer of mother-of-pearl 11 under the glass to provide a background effect and a sheet of paper 12 between the mother-of-pearl and the Celluloid. The straight bar 2 of the tie-clasp is preferably covered with a helical wrapping of leather 13 cemented thereto by any suitable cement, such as "Collins" cement. In the tie-clasp illustrated, the ornament 3 is preferably mounted over the leather wrapping and bonded thereto. I may use the clasp without the ornament 2.

The separate parts of the tie-clasp of Figs. 1 to 4 are constructed and arranged as best shown in Fig. 4. In making the tie-clasp, the pieces of leather 4 and 5 are dipped in, and saturated with, a suitably concentrated solution of Celluloid in acetone and the exterior surfaces of the Celluloid sheets are rendered soft and sticky by dipping them in acetone. In assembling the parts of the ornament 3 over the leather covered bar 2, the two sheets of sticky Celluloid 6 are placed over the bar, one above and one below. The lower piece of leather 5 is placed over the lower sheet of Celluloid and pressed into conformation with the shape of the bar. The annular sheet of Celluloid 7 is placed over the top sheet 6 and the annular piece of leather 4 is then placed over the upper surface of the annular sheet of Celluloid 7. This entire mass or assembly is pressed together tightly. In preparation for mounting the setting 10 the sheet of paper 12 is placed over the upper layer of Celluloid 6, the piece of mother-of-pearl 11 is placed over the sheet of paper, and the setting is then forced into the opening in the Celluloid annulus 7 and the leather annulus 4 over the piece of mother-of-pearl. A dummy may be placed in the central opening and the pieces of leather worked to the desired shape. The dummy is then removed and the setting 10 inserted as described and the soft Celluloid and leather worked to conform to the shape of the setting. This entire assembly of parts is pressed together firmly and held momentarily until the initial set takes place. Any exuded Celluloid may be removed from the outside by washing it in acetone. By reason of the high volatility of the acetone, the pieces of leather become bonded together in a rigid and strong structure in a relatively short time. The Celluloid which permeates the leather solidifies in the leather and imparts rigidity thereto.

Figs. 5 to 8 illustrate a cuff-link comprising an ornamental button 20, a bar 22, and a connecting member 23 which is preferably a piece of braided leather in the form of a loop suitably attached or fixed to the button. The button 20 comprises a lower piece (back face) of leather 24, and a lower thin piece of Celluloid 25, each in the form of an annulus, an upper piece (front face) of leather in the form of a braided bezel 26 and an upper thin piece of Celluloid 27. The bar 22 is preferably rotatably mounted upon the connecting member 23 and comprises a rigid mass or core of Celluloid 35 formed of several separate pieces of Celluloid and a surrounding piece of leather 36 bonded thereto. In forming this bar, the parts of which are best shown in Figs. 7 and 8, the leather is suitably saturated with a solution of Celluloid in acetone and the pieces of Celluloid are softened in acetone and formed over a piece of metal to provide the opening 37 for the connecting member 33. The leather is then applied and after the bar has solidified, the connecting member 23 is drawn through the hole and the free ends are mounted in the button. The ends of the connecting member 23 are brought together and passed through the central openings in the piece of leather 24 and the sheet of Celluloid 25, and are bent outwardly and spread over the piece of Celluloid 25. In order to accommodate these ends within the Celluloid mass bonding the pieces of leather together, a relatively thick sheet of Celluloid 28 in the form of an annulus is inserted between the sheets of Celluloid 25 and 27. The upper piece of leather 26 is preferably a braided ring and in the central opening thereof is mounted any suitable gem or setting, such as a novelty stone 29. The leather and pieces of Celluloid are treated with a Celluloid solution in acetone and acetone respectively and assembled together in the order shown.

Fig. 9 illustrates a modified form of cuff-link in which the two buttons 40 and 41 are each formed of two sheets of leather, the leather itself providing the only decorative effect. The buttons may be circular, square, or of any suitable form. They are hard, rigid and very strong, and the leather exterior gives a very pleasing effect. Each button is formed of an outer layer (front face) of leather 42, and an inner layer (back face) of leather 43. The layer of leather 43 has a central opening in which the connecting or mounting member, preferably a metal loop, is inserted and the ends flared outwardly as shown. The interposed supporting cellulosic layer or body preferably consists of a thin sheet of Celluloid 45 adjacent the layer of leather 42, a thin sheet of Celluloid 46, preferably having an opening in the center adjacent the piece of leather 43, and an annular relatively thick sheet of Celluloid 47 inserted between sheets 45 and 46. These buttons are formed by saturating the pieces of leather in a solution of Celluloid, rendering the sheets of Celluloid soft and sticky and pressing the pieces together in the position shown. The loops 44 anchored in the buttons are connected together by any suitable linkage 48.

Fig. 10 shows a button or ornament comprising an upper piece (front face) of leather 50 to which is attached, as by cement, rivets, or the like, a gem or setting 51, a lower piece (back face) of leather 52, and a Celluloid bonding and supporting layer 53 interposed between the two pieces of leather. The Celluloid may consist of a single relatively thick sheet or of any suitable number of separate sheets of any desired thickness, sufficient in the aggregate to impart stiffness and rigidity to the leather structure. The pieces of leather are saturated with a solution of Celluloid and the Celluloid layer is softened and the pieces bonded together as just described. The ornament has a mounting member 54 attached thereto in any suitable manner, preferably anchored in or adjacent the Celluloid layer 53. It is, of course, understood that this member 54 may be in the form of any mechanical device, such as a loop, pin, or clasp, suitable for attaching the

ornament to a garment or other place where it is intended to be used for decorative or utilitarian purposes.

Figs. 11 and 12 illustrate a sport bracelet having a plurality of leather structures **60** linked together comprising an upper piece (front face) of leather **61** having a central opening in which is mounted an ornamental setting **62**, a lower piece (back face) of leather **63**, and an interposed layer or body of Celluloid **64** bonded to the pieces of leather in the manner herein described. Each leather structure has two holes **65** punched therethrough and the adjacent structures are connected together by a ring **66** looped through the holes. The holes of the end structures may be provided with any suitable connecting clasp or linkage **67**. The cellulosic layer or body **64** may consist of one or more sheets of Celluloid sufficient in the aggregate to produce the requisite rigidity.

Figs. 13 and 14 illustrate a different form of bracelet comprising a braided leather cord or band **70** in the form of a loop in which the ends are brought together and attached to an ornamental leather member **71** in the form of a button. The button comprises a front face, or bezel of leather **73**, preferably a punched annulus, a back face of leather **72** having a central opening in which the ends of the cord **70** are inserted and a layer of Celluloid **74** interposed between the faces of leather. The central opening of the leather face **73** has inserted therein an ornamental setting **75** similar to those previously described. The loop of the cord **70** extending from the button **71** is brought together and at spaced intervals a plurality of links **76** are clamped thereover. To each link is attached by means of a loop **77** an ornamental member **78**. Each ornamental member comprises two outer faces of leather **79**, each of which is in the form of a punched annulus, an interposed layer or body of Celluloid **80** bonded to the pieces of leather, and a separate gem or setting **81** mounted in the central opening of each piece of leather. The cellulosic layer or body is preferably formed of a central, relatively thin sheet of Celluloid and two outer layers of relatively thick Celluloid which have central openings of the same diameter or shape as the settings **81** and of the two pieces of leather. Each of these ornamental members is assembled by placing the two annular pieces of Celluloid on the opposite surfaces of the central piece of Celluloid, and a piece of leather over each annular piece of Celluloid. In the openings thus provided and over the central layer of Celluloid is placed in order, a piece of paper, a disc of mother-of-pearl, and the setting **81**. The settings **81** are forced into the central opening in the leather and Celluloid annulus and in contact with the mother-of-pearl. The leather and Celluloid are, of course, treated with the solution and solvent herein described.

Figs. 15 and 16 illustrate a dress ornament in the form of a turtle comprising an outer face of leather **85**, preferably alligator leather, to simulate the shell of a turtle, a cellulosic layer or body **86**, a back face **87** formed of any suitable plastic or resinous material, such as a synthetic resin, with or without coloring matter, and pressed or formed to any desirable shape, bonded to the cellulosic layer **86**, and legs **88**, a tail **89**, and a head **90** are anchored in the layer of Celluloid **86**. The legs, head, and tail may be formed of leather stiffened with a cellulosic solution or of colored pieces of Celluloid. Any suitable clasp, such as the spring clasp **91**, may be attached to the ornament. The base or connecting part of the ornament **92** may be anchored in the cellulosic layer **86**, or riveted, cemented, or bonded thereto, or to the back face **87**.

In forming the various articles of jewelry according to the invention, I prefer to use both front and back faces of leather, but I may use any other suitable kind of material in place of leather for the back face, such, for example, as artificial leather, molded, colored, and figured pieces of plastic material or resins, or layers of cellulosic material. The material for the back may have inherent properties of forming a suitable bond, as by means of solution, adhesion, or cohesion, to the layer of cellulosic material to which the front face of leather is bonded, or it may be formed or provided with physical connecting means that may be embedded in the Celluloid layer.

In producing the jewelry of the invention, any suitable leather may be used, such as pig, calf, alligator or the like, and the most effective bonding is accomplished by bringing the flesh side of the leather into contact with the Celluloid. The flesh side of the leather is relatively quite porous and fibrous and this permits the fibers to be embedded in, and tenaciously adhere to, the solidified Celluloid mass. The layer of Celluloid bonding the pieces of leather together may be formed of a single sheet, for example, a sheet 0.020 of an inch thick or it may be formed of several separate thinner pieces, for example, each 0.0075 of an inch thick. The Celluloid layer is provided in any desired thickness which is sufficient to bond the leather thereto and impart stiffness and rigidity to the leather structure. The rigidity is caused, in part, by the Celluloid solidfied in the leather and the bonding of the solidified pieces together. In forming the various articles of jewelry illustrated in the drawings, the relatively thin pieces of Celluloid are cut from sheets 0.0075 of an inch thick, and the relatively thick pieces are cut from sheets 0.020 of an inch thick.

The solution used to impregnate the leather at the bonding surface may contain varying quantities of Celluloid, for example, from a small amount up to, say, about 20 per cent of weight of the acetone. A thin solution, one not made appreciably viscous by the dissolved Celluloid, is very effective because of its rapid penetrating properties and solvent action on the Celluloid layer. While a certain bonding and hardening effect may be accomplished by impregnating the leather with solvent alone and bringing the softened Celluloid in contact therewith, I do not prefer this indirect method. Although the acetone in the leather dissolves the softened layer of Celluloid and carries it into the leather, the results are not uniform. Moreover, when the leather is impregnated with a thin solution of Celluloid or Celluloid dissolved from the layer, it is necessary to impregnate the edges of the leather with a solution containing enough Celluloid to give a hard edge.

When the Celluloid has solidified or dried, the leather may be coated with a liquid wax, for example, it may be dipped in a wax such as "Innis-Spaden" liquid wax and then polished.

I claim:

1. An article of jewelry comprising a sheet of leather, a layer of cellulosic material, an annular piece of leather having a central opening, said pieces of leather being permeated with the cellulosic material and bonded to the layer of cellulosic material, said pieces of leather and cellu-

losic material forming a rigid leather structure with the pieces of leather on the outside, a gem mounted in the central opening of the annular piece of leather, and a mounting member anchored in the leather structure.

2. An article of jewelry comprising at least two pieces of leather, a gem mounted upon one of the pieces of leather, each piece of leather being impregnated with a solid cellulosic material making the leather hard and rigid, an interposed body of solid cellulosic material between the pieces of leather unit with the solid cellulosic material in the leather bonding the two pieces of leather together in a rigid structure, and a mounting member attached to the structure.

3. A tie-clasp comprising a bas, a leather back face, a leather front face, a gem mounted in the leather front face, a layer of cellulosic material, said faces of leather being mounted on opposite sides of the bar with the cellulosic material interposed therebetween, said faces of leather being permeated with a cellulosic materal and bonded to the layer of cellulosic material.

4. A tie-clasp comprising a metal mounting member, a bar, a piece of leather helically wound over the bar, said leather being cemented to the bar, and an ornamental leather structure comprising at least two pieces of leather bonded together with a cellulosic material mounted on the bar.

5. A cuff-link comprising a leather back face having an opening adjacent its center, a cellulosic body bonded to the leather back face, a gem mounted over the cellulosic body, a leather front face surrounding the gem and bonded to the cellulosic material, a bar, and a connecting member, one part of which is inserted through the opening in the leather back face and anchored in the body of cellulosic material, the other part being attached to the bar.

6. A sport bracelet comprising a plurality of ornamental leather members each including two pieces of leather, the more porous part of each piece of leather being impregnated with a solid material, a layer of solid material interposed between the two pieces of leather, said layer of material merging into the material with which the pieces of leather are impregnated, forming a homogeneous mass of solid material bonding the two pieces of leather together, a novelty setting in each ornamental member, and means connecting the ornamental members together into a bracelet.

7. An article of jewelry comprising a leather front face, a gem set in the front face, said leather face being impregnated with a solid material, a layer of solid material homogeneously united to the solid material with which the leather is impregnated, a solid back face bonded to the layer of solid material, said pieces of leather being rendered hard and rigid by the impregnated material, and a mounting member attached to the solid back face.

8. A sport bracelet comprising a plurality of leather structures each including a leather front face, said leather front face being impregnated with a solid material, a layer of solid material homogeously united to the solid material with which the leather is impregnated, a solid back face bonded to the layer of solid material, said piece of leather being rendered hard and rigid by the impregnated material, a novelty setting in the front face in at least one of the leather structures, and means connecting the leather structures together into a bracelet.

9. An article of jewelry comprising a metal mounting member, a layer of leather bonded to the mounting member, said layer of leather being impregnated with a solid material giving the leather rigidity, and a novelty setting mounted over and secured to the layer of leather.

10. An article of jewelry comprising a supporting structure, a novelty setting mounted over the supporting structure, a leather bezel bonded to the supporting structure and in snug engagement with the novelty setting thereby securing the novelty setting in place.

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