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(19) **United States**(12) **Patent Application Publication**
Talmor(10) **Pub. No.: US 2007/0295028 A1**(43) **Pub. Date: Dec. 27, 2007**(54) **JEWELRY DESIGN FOR LOCKET AND
METHOD FOR MAKING SAME****Publication Classification**(76) Inventor: **Michael Talmor, Or Yehuda (IL)**(51) **Int. Cl.****A44C 15/00** (2006.01)(52) **U.S. Cl.** **63/19**

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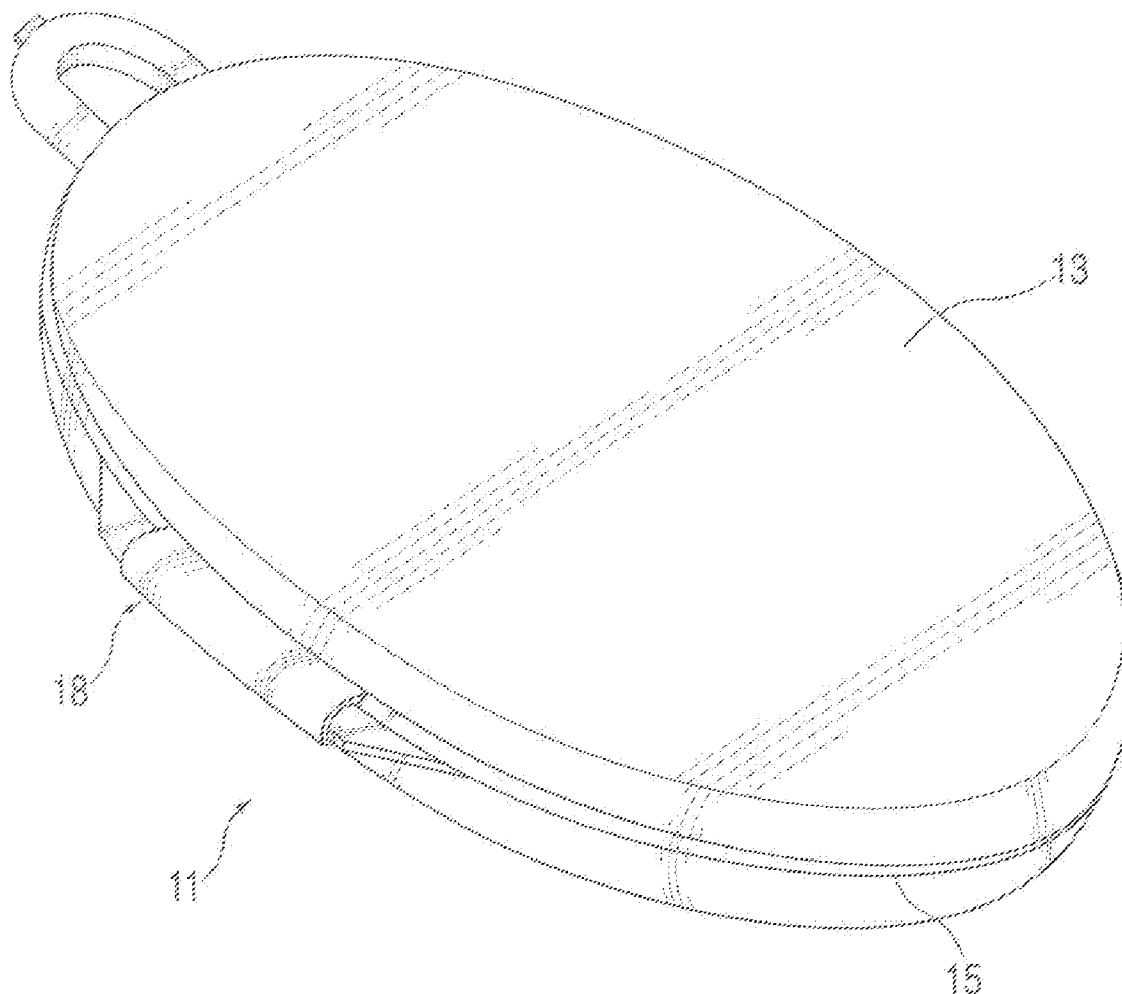
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ABSTRACT

A method for producing a pivotal frame assembly for a jewelry locket is provided. The method comprises the steps of stamping out a first frame element from a sheet of metal, including forming the first frame element with an extending lip, and then also stamping out a second frame element from a sheet of metal. Then, a pin is positioned along the lip, and the lip is wrapped about the pin in order to form a tubular element that is rotatable about the pin. Finally, the pin itself is attached to the second frame element, so that the first frame element is pivotally connected to the second frame element.

(21) Appl. No.: **11/689,262**(22) Filed: **Mar. 21, 2007****Related U.S. Application Data**

(60) Provisional application No. 60/790,435, filed on Apr. 6, 2006.



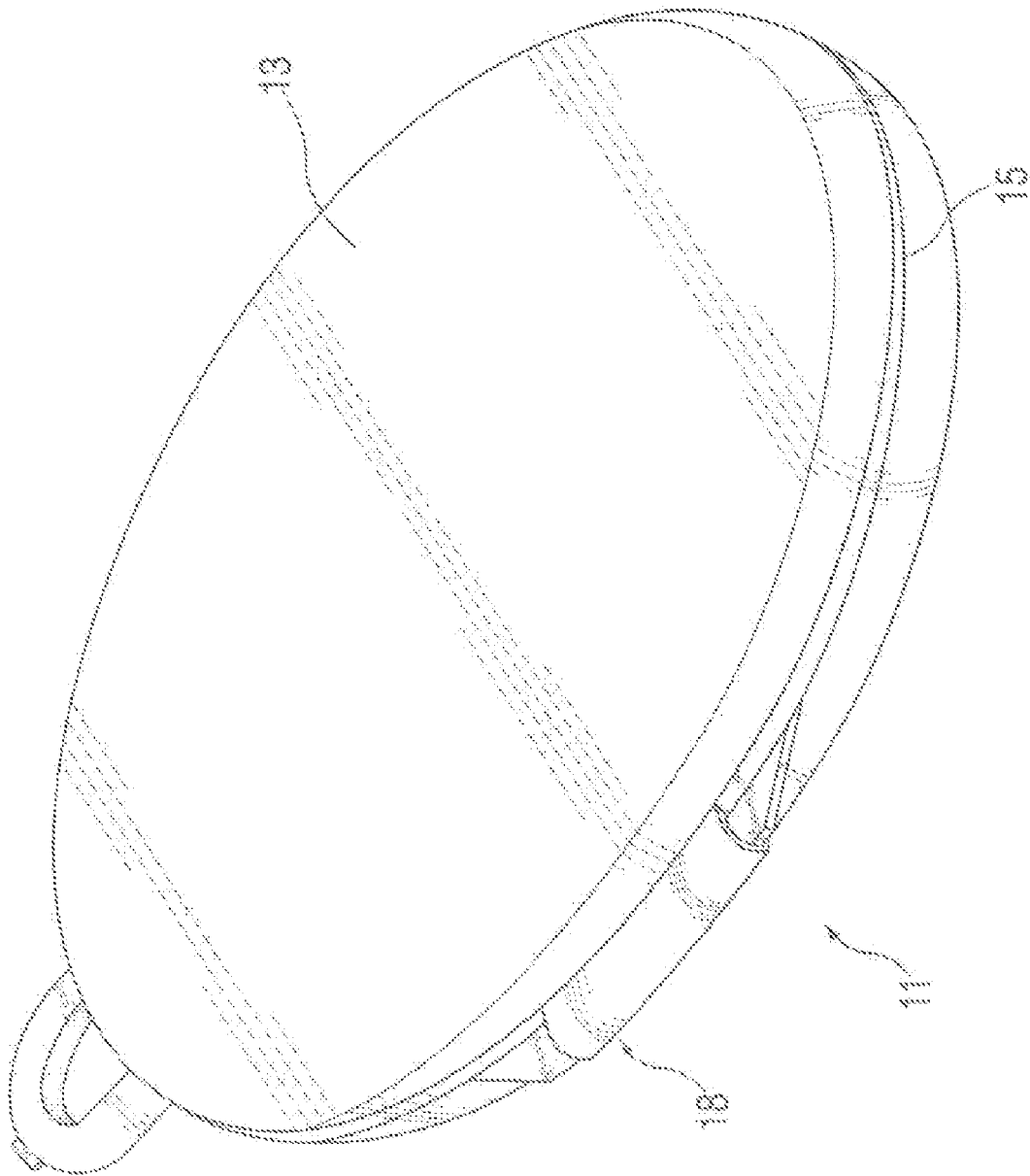
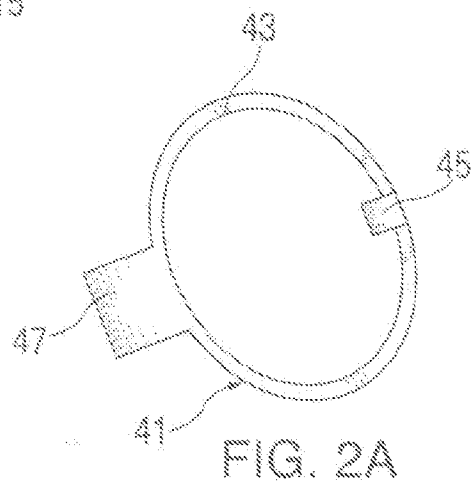
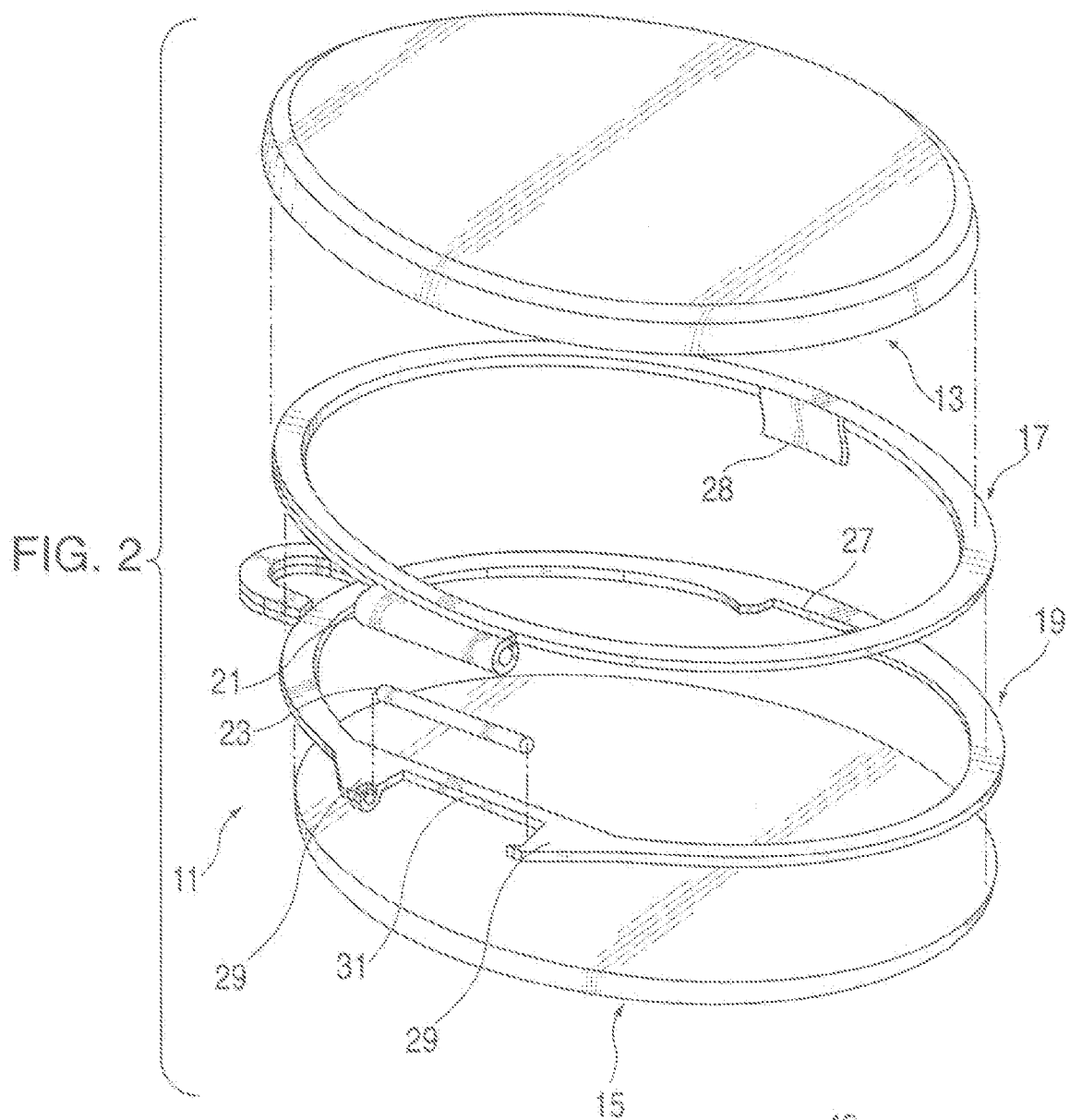
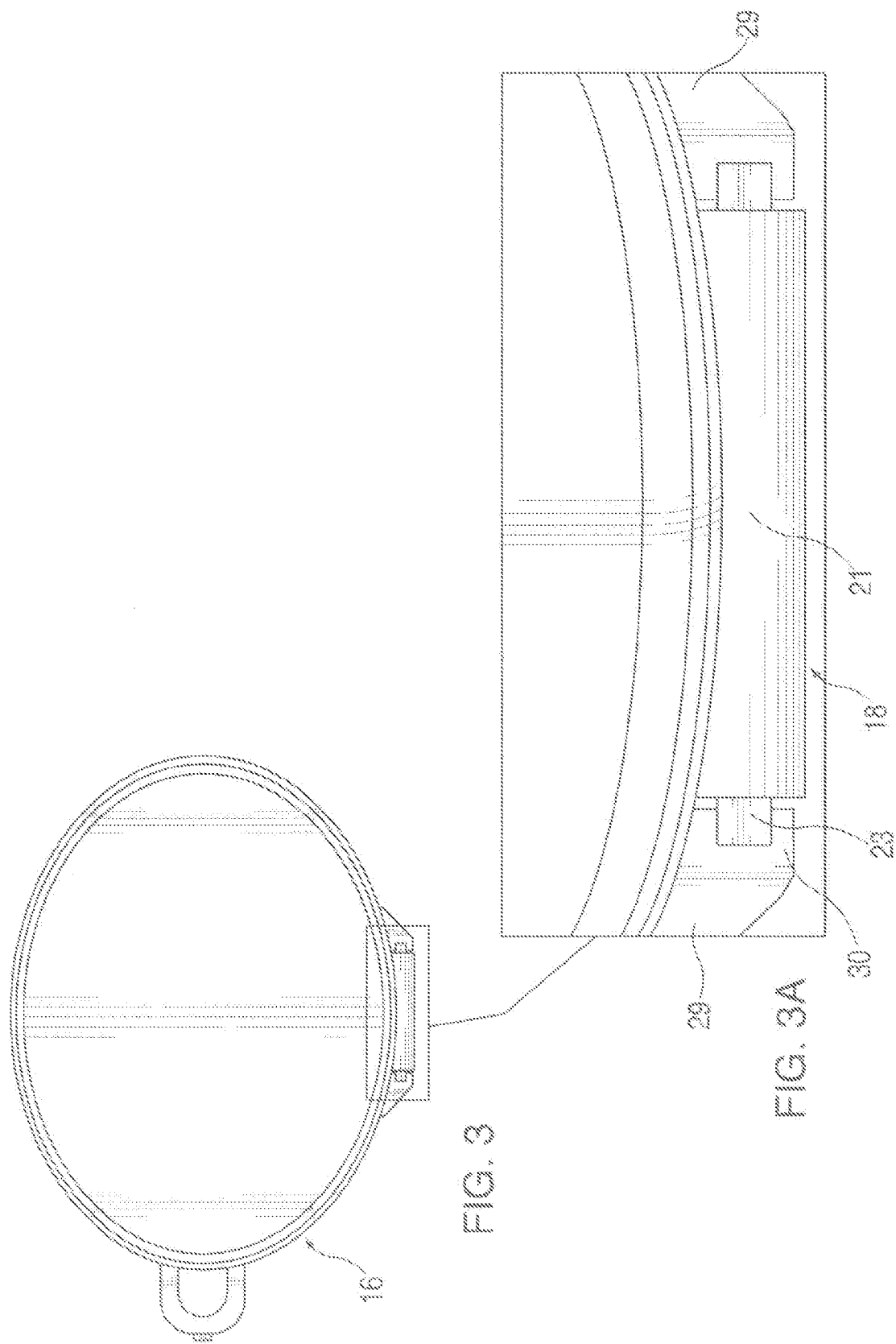
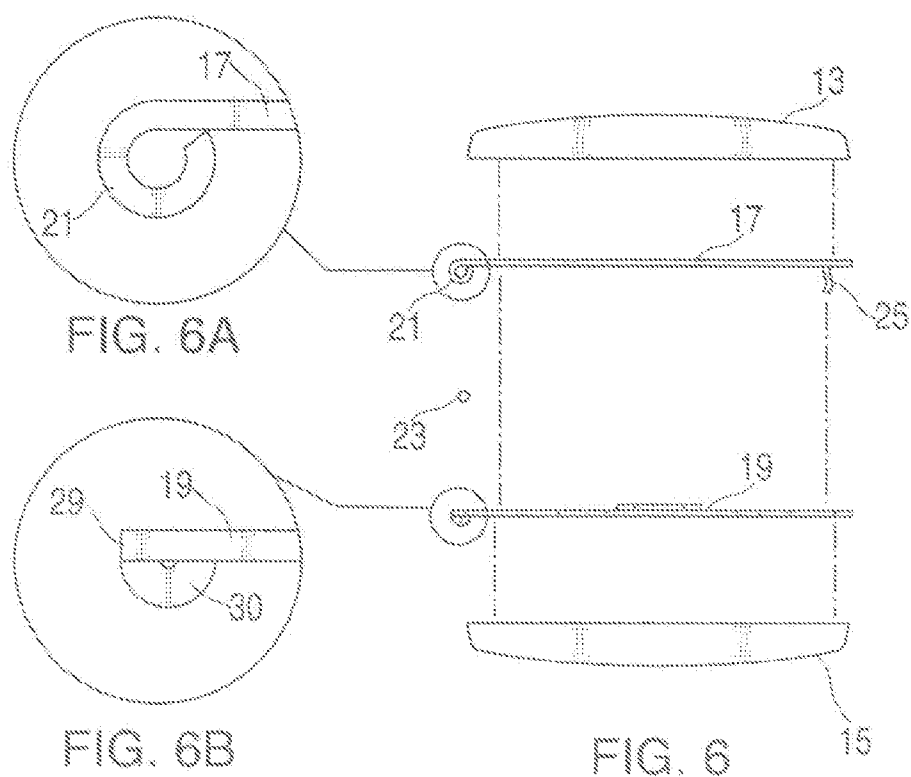
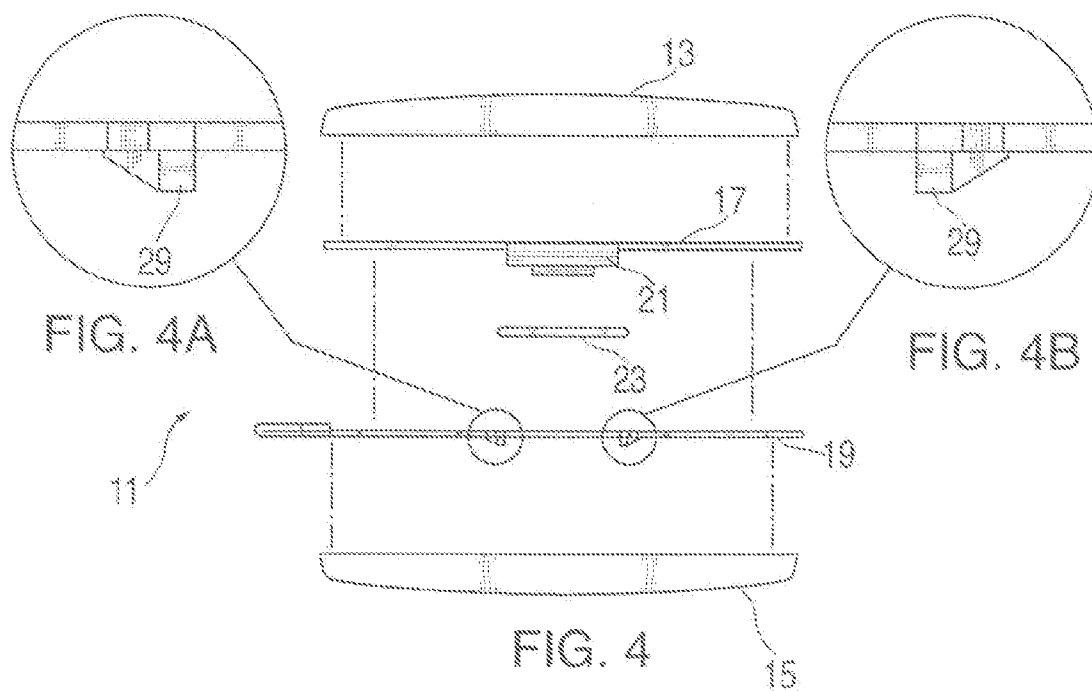
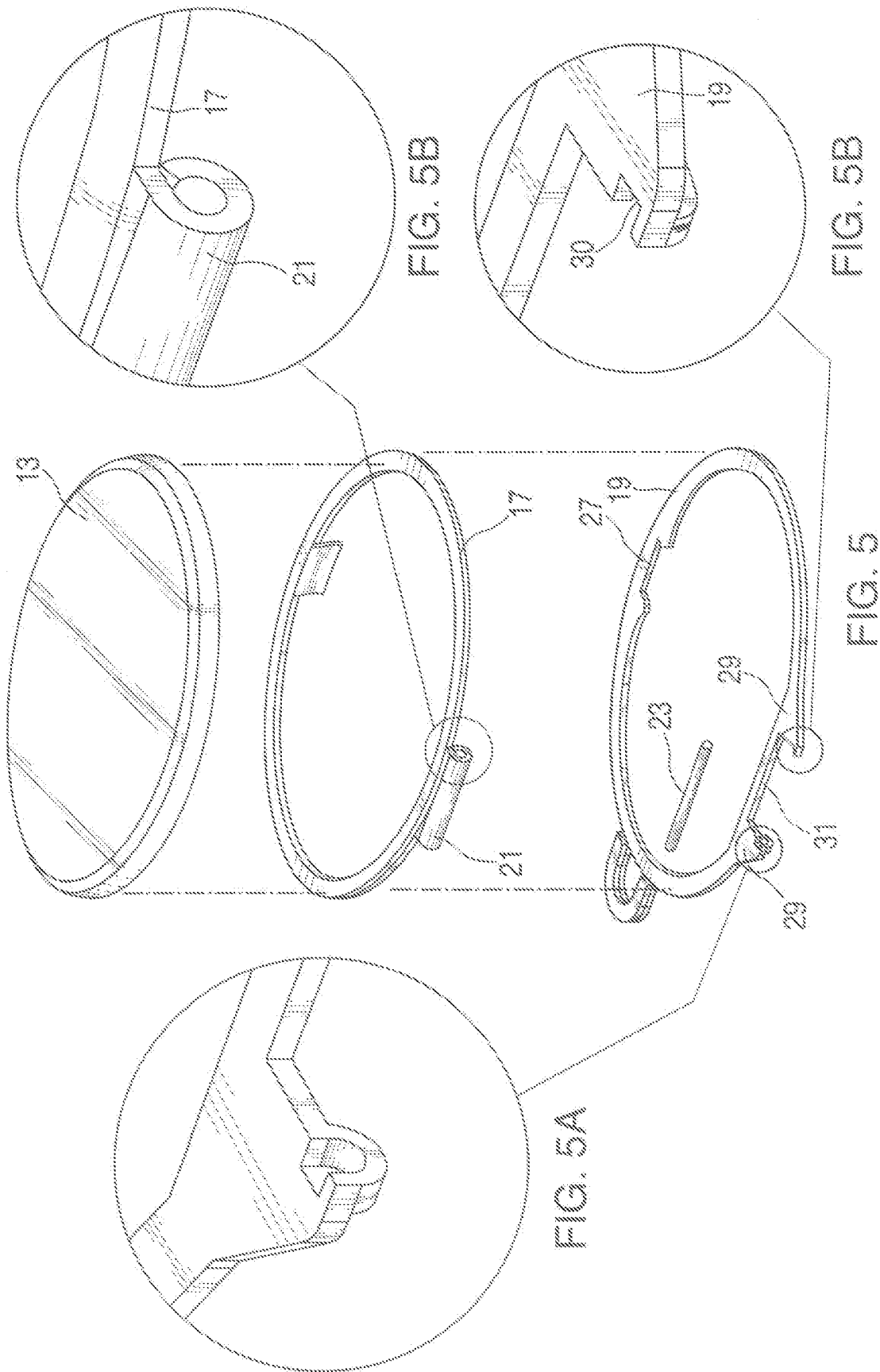


FIG. 1









JEWELRY DESIGN FOR LOCKET AND METHOD FOR MAKING SAME

[0001] This application claims priority benefit of Provisional Application No. 60/790,435, filed Apr. 6, 2006.

BACKGROUND OF THE INVENTION

[0002] This application is directed to a locket assembly produced by a stamping technique in which less metal, such as gold, may be used without compromising function, stability and strength.

SUMMARY OF THE INVENTION

[0003] A method for producing a pivotal frame assembly for a jewelry locket is provided. The method comprises the steps of stamping out a first frame element from a sheet of metal, including forming the first frame element with an extending portion, and also stamping out a second frame element from a sheet of metal. Then, a pin is positioned along the extending portion, and the extending portion is wrapped about the pin in order to form a tubular element that is rotatable about the pin. Finally, the pin itself is attached to the second frame element such that the first frame element is pivotally connected to the second frame element.

[0004] As a consequence of the inventive method, the frame elements of the locket can be made thinner, thus utilizing less metal and thereby reducing overall costs. Nonetheless, the pivoting pin is made with a thickness that is greater than the frame elements so that the hinge unit for the locket is of a sufficient size and thickness to provide both pivoting support as well as support of the two frame elements.

[0005] Accordingly, it is an object of the invention to provide a jewelry locket produced by a stamping technique in which less metal may be used.

[0006] Another object of the invention is to produce a jewelry locket in which the two pivoting frame elements have a reduced thickness.

[0007] Yet a further object of the invention is to provide a jewelry locket in which the hinge unit, including a pivoting pin, is greater in thickness than that of the frame elements.

[0008] Still other objects and advantages of the invention will, in part, be obvious and will, in part, be apparent from the following description.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a perspective view of the inventive locket assembly of the invention;

[0010] FIG. 2 is an exploded perspective view of the locket assembly shown in FIG. 1;

[0011] FIG. 2A is a top view of a stamped-out metal sheet that is used to form the first or upper frame element of the locket assembly of the invention;

[0012] FIG. 3 is a top plan view of the locket assembly of FIG. 1;

[0013] FIG. 3A is an enlarged plan view of the hinge unit of the inventive locket assembly;

[0014] FIG. 4 is an exploded elevational view of the locket assembly of FIG. 1;

[0015] FIGS. 4A and 4B are enlarged elevational views showing portions of the hinge units;

[0016] FIG. 4 is an exploded perspective view of some of the components of the lock assembly of FIG. 1;

[0017] FIGS. 5A and 5B are enlarged perspective views of the fingers of the hinge unit;

[0018] FIG. 5C is an enlarged perspective view of the tube element of the hinge unit;

[0019] FIG. 6 is an exploded side view of the locket assembly of FIG. 1;

[0020] FIG. 6A is a side elevational view of the tube element of the hinge unit; and

[0021] FIG. 6B is an enlarged side elevational view of the finger of the hinge unit.

DETAILED DESCRIPTION OF THE INVENTION

[0022] FIG. 1 depicts a locket assembly 11 made in accordance with the invention comprising a locket cover element 13 and a locket base element 15 hingedly connected to cover element 13 by means of a hinge unit 18.

[0023] FIG. 2 is an exploded view of locket assembly 11 showing cover element 13 and base element 15 as well as frame assembly 16 (see FIG. 3) defined by upper support frame 17 and lower support frame 19. Upper frame 17 is substantially rounded in configuration and is designed to be received within the inside of cover element 13 by means of a force fit, soldering, adhering or any other well known technique for permanent attachment therewithin.

[0024] Upper support frame 17 includes an attached outwardly directed tube element 21 designed for receiving a pivoting pin 23 therethrough and an oppositely located downwardly directed latch element 25 designed for hingedly engaging an aligned cutout 27 formed in lower support frame 19 (see also FIGS. 5 and 6). Latch element 25 may be selectively depressed in order to open locket assembly 11.

[0025] Lower frame 19, of substantially the same general size and shape of upper frame 17, is also substantially rounded in configuration and is designed to be received within the inside of base element 15 by means of a force fit, soldering, adhering or other technique for permanent attachment therewith.

[0026] Lower support frame 19 is further formed with outwardly directed fingers 29 (FIGS. 4, 4A and 4B) for defining a pivot slot 31 (see also FIG. 5). Each of fingers 29 includes a downwardly directed protrusion 30 formed with an inwardly directed socket 32 for receiving the ends of pin 23, as described below. First slot 31 is disposed opposite cutout 27 along frame 19 and is designed to be in alignment with tube element 21 of upper support frame 17 during production of locket assembly 11.

[0027] Significantly, in manufacture, both upper and lower frames 17 and 19 are formed by stamping out the frame elements from a selected metal. Specifically, frame 17 is formed from a stamped metal sheet 41 (see FIG. 2A). Metal sheet 41 is substantially planar and is defined by a ring element 43, a first inwardly directed extending portion 45 (from which latch element 25 is formed), and a second outwardly directed larger extending portion 47 (from which tube 21 is formed, located substantially opposite said first extending portion along said ring element 43).

[0028] Thus, hinge unit 18 of assembly 11 is formed by using second extending portion 47 of metal sheet 41 within which pin 23 is disposed along thereto, after which extending portion 47 is rolled around pin 23 in order to form tube element 21. On the other hand, latch element 25 is formed

by downwardly bending first extending portion 45 of sheet 41. As a result, the metal sheet 41 from which upper support frame 17 is formed can be made extremely thin without compromising the overall size or thickness of tube 21 and inserted pin 23. In other words, hinge unit 18 may be of a sufficient size/thickness to provide adequate pivoting support, yet support frame 17 as well as support frame 19 can be made extremely thin.

[0029] Also, significantly, pivoting pin 23 is of a thickness greater than that of either frame elements 17 and 19 so that hinge unit 18 is of a sufficient size and thickness to provide both pivoting support, as well as support for the frame elements.

[0030] By making frames 17 and 19 thinner, less metal is ultimately used, reducing overall cost.

[0031] After hinge unit 18 is formed, the ends of pin 23 are then soldered to the openings 32 formed in finger protrusions 30 of lower frame 19 (see FIGS. 3A and FIG. 5) so that frames 17 and 19 are hingedly connected.

[0032] FIG. 3 is a top plan view showing both upper and lower support frames 17 and 19 of frame assembly 16, while FIG. 3A is an enlarged view showing hinge unit 18 including tube element 21 and pivoting pin 23.

[0033] FIG. 4 is an exploded front view of locket assembly 11, including cover element 13, base element 15, upper frame 17 with attached tube element 21, lower frame 19 and pin 23, while FIGS. 4A and 4B are enlarged views of fingers 29 which outwardly depend from lower frame 19.

[0034] FIG. 5 is an exploded perspective view of assembly 11, showing cover element 13, upper frame 17 and lower frame 19, while FIGS. 5A and 5B show the details of fingers 29, including sockets 32 of protrusion 30 in which pin 23 is received and fixed (by soldering) during assembly; FIG. 5C shows the details of tube element 21 integrally attached along upper frame 17.

[0035] FIG. 6 is an exploded side view of assembly 11 showing cover element 13, upper frame 17, lower frame 19 and base element 15, while FIGS. 6A and 6B show the details of tube element 21 and fingers 29, including protrusions 30.

[0036] In an alternative version, the pivoting pin may be integrally formed as part of lower frame 19 (by a single stamping process). In a preferred form, the integrally formed pivoting pin is formed from an extending element to frame 19, which is wrapped or folded over to define the pin. In manufacture, the extending sheet of the stamped out upper element can then be wrapped around the now formed pivoting pin to define the tube element as before.

[0037] Under the inventive system, the stamped out frame can have a reduced thickness down to 0.2 mm, while still retaining construction integrity of the tube element, because when wrapped around the pivoting pin, either the pin itself, or at least the tube element that wraps around and contains the pin will have an overall thickness of at least 0.5 mm.

[0038] In general, the concept of the inventive system is to reduce the thickness of the two frame elements (upper and lower), while maintaining a sufficient thickness in the hinge unit. In particular, and in its most preferred form, the concept is to have the pivoting pin be dimensioned with the diameter

that is greater than the thickness of the frame elements (for providing adequate pivoting support) yet reducing the overall use of metal.

[0039] The scope of the invention is now defined in the following claims:

1. A method for producing a pivotal frame assembly for a jewelry locket, the method comprising:

stamping out a first frame element from a sheet of metal, said first frame element including a first extending portion;

stamping out a second frame element from a sheet of metal;

positioning a pin along said first extending portion;

wrapping said first extending portion about said pin in order to form a tube received with and rotatable about said pin;

attaching said pin at its ends to said second frame element in order to form a hinge unit defined by said rotatable tube and said received pin such that said first frame element is pivotal relative to said second frame element.

2. The method of claim 1, wherein said metals of said frame element are the same.

3. The method of claim 1, wherein said frames are substantially rounded in configuration.

4. The method of claim 1, further including stamping out said first frame element to include a second extending portion located substantially opposite said first extending portion along said frame element.

5. The method of claim 4, further including bending said second extending portion relative to said first frame element in order to form a latch element.

6. The method of claim 5, further including forming said second frame element with a latch engaging element designed to be aligned with the latch element of said first frame element for selectively engaging said first frame element to said second frame element.

7. The method of claim 1, further including forming said second frame element with a pair of fingers to which the ends of said pin are attached.

8. The method of claim 7, further including forming each said finger with a socket in which an end of said pin is fixedly received.

9. The method of claim 1, further including forming said pin with a thickness greater than that of either of said frame elements.

10. The method of claim 7, further including attaching said pin ends to said fingers by soldering.

11. The method of claim 1, further including forming each said frame element with a thickness of approximately 0.2 mm and said tube with a thickness of at least 0.5 mm.

12. The method of claim 1, wherein said second frame element stamping step includes forming an extending portion to said second frame element, and wherein the method further includes the step of rolling said second frame element extending portion in order to form said pin.

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