An article of jewelry has a jewelry setting for removable engagement of a jewel from such article of jewelry. The jewelry setting enables biased engagement of the jewel with the article of jewelry in a secure manner, such that inadvertent separation of the jewel from the article of jewelry is prevented. A special tool for the engagement of the jewel with the jewelry article may be provided to enhance the secure connection between the jewel and article of jewelry. An interchangeable system of jewels, settings and articles of jewelry is also provided.
An airline ticket is purchased. The class of airfare (first class, business class, etc.) is determined. If the purchaser is a regular customer, a predetermined number of points is allocated to the purchaser's account with the airline company. The points can be used to present the purchaser with a free complementary setting provided with a jewel or jewels of higher quality and market value, or a gift certificate allowing the purchaser to select an article of jewelry. A percentage of the purchased value of the complimentary gift can be transferred to the provider of the article of jewelry. If the purchaser is not a regular customer, a complimentary piece of jewelry is awarded based on airfare class, distance, gender, etc.
INTERCHANGEABLE JEWELRY SETTING

CROSS REFERENCE TO RELATED APPLICATIONS


I. FIELD OF THE INVENTION

[0002] This invention relates to jewelry settings generally, and more specifically to a jewelry setting having inter-changeable parts that are rotationally biasable together.

II. BACKGROUND OF THE INVENTION

[0003] Jewelry pieces are conventionally permanent. In other words, once a jewel is fixed within a setting, the jewel and the setting may only be used or worn as a combined unit on one part of the body. This can be quite limiting, for example, if one wished to display or wear a particular jewel on one’s finger during one occasion and on one’s clothing in a brooch or pin during another occasion.

[0004] Interchangeable jewelry settings that overcome such a limitation are known. Usually, interchangeable jewelry settings allow a variety of stones or jewels to be used with a single setting. Alternatively, a single jewel or stone can be used in a variety of settings for adornment in a variety of locations. An early example is shown in U.S. Pat. No. 1,864,371 to Prussian.

[0005] Most prior art interchangeable jewelry settings incorporate a first setting piece having a jewel fixed thereto and a second setting piece into which such first setting piece is secured for as long as the user wants it in that piece of jewelry. The first setting piece may be threaded in the second setting piece, as shown in U.S. Pat. No. 1,160,723 to Lander. Other manners of engagement are shown in U.S. Pat. No. 4,982,581 to Furuyama, U.S. Pat. No. 5,588,310 to Lai, and U.S. Pat. No. 3,933,011 to DiGilio et al. Another popular method is shown in U.S. Pat. No. 5,456,095 to Tawil et al., wherein a bayonet-type locking arrangement having ramped engagement portions is used to secure the first setting within the second setting.

[0006] In each of the prior art references noted above, there is a chance that the first and second pieces may be inadvertently separated through hand manipulation. Such possibility arises from the downward placement of the first setting piece, having the jewel fixed thereto, into the second setting piece into which such first setting piece is placed. In such an arrangement, the engagement and disengagement of the first and second setting pieces may easily occur while the article of jewelry is being worn. While this arrangement may be convenient if it is desired to swiftly change gems or diamonds, it lacks a certain amount of security. Furthermore, because the engagement of the first and second pieces occurs primarily by hand, there are no security measures inherent in the structures of the prior art that prevent unwanted disengagement of the first and second pieces.

[0007] Assembling multiple pieces is a difficult task requiring skills and experience working with tools that are used for fastening separate components of an article of jewelry together. Often, a component engaged by a tool voluntarily detaches therefrom before the craftsman is able to fasten it to other components. Needless to say, the users of the article of jewelry, which is adapted to be used with a plurality of gems, may experience even more difficulties. Some of the prior art references discussed above disclose tools having certain features that facilitate the assembly or disassembly of the article of jewelry. However, the disclosed tools may have a rather complicated structure that does not ensure reliable and easy engagement between the tools and components to be fastened.

[0008] Jewelry has always been important part of wardrobe and many accessories associated with it. Historically, both men and women clothing were embroidered with pearls and sparkling gems. Belts, shoes, purses and other accessories were decorated with jewelry articles that were permanently attached to these accessories. While jewelry was relatively rarely associated with many of the noted items during the last century, this trend has been recently reversed. It is not unusual nowadays to see a variety of items, which may have an everyday utility, decorated with jewelry. However, typically, an article of jewelry, which is embedded in an item, has a permanently fixed gem. As a consequence, the item cannot be redecorated.

[0009] A need, therefore, exists for an article of jewelry overcoming the inadequacies of the prior art.

[0010] Still a further need exists for an article of jewelry provided with a structure adapted to selectively receive a plurality of jewels or gems.

[0011] A further need exists for an article of jewelry that can be coupled to a variety of items and have a structure configured to selectively receive a plurality of gems.

[0012] Still a further need exists for a tool configured to facilitate assembly/disassembly of an article of jewelry.

[0013] Another need exists for a tool configured to facilitate assembly/disassembly of an article of jewelry that is configured to selectively receive a plurality of gems and is a fixed portion that is coupled to an item to be decorated.
and configured to receive the removable portion. The structure of the article enables biased engagement of the received jewel with the fixed portion in a secure manner, such that inadvertent separation of the jewel from the article of jewelry is prevented.

[0016] Assembling the inventive article of jewel is realized by a special tool or key for engaging/disengaging the removable and fixed portions. The jewelry setting enables a plurality of jewels to be interchangeably set within the article of jewelry, thus enabling the appearance of the article of jewelry to be changed as desired.

[0017] In accordance with one aspect of the invention, the tool, configured to provide a reliable insertion, engagement and disengagement of the removable and fixed portions, is capable of generating a magnetic force that reliably attracts the removable portion to the tool. Accordingly, assembling/disassembling of the inventive article of jewelry can be performed in a time effective manner by eliminating a manual part of coupling the article’s components together.

[0018] In accordance with a further aspect of the invention, the article of jewelry can decorate a variety of items, which are both traditionally associated with jewelry and not typically thought of in combination with it. Such traditional items as men and women clothing and its accessories may include, for example, dresses, suits, shoes, belts, hats, combs and others. Rather unconventional items may include, but certainly not limited to, cellular phones, cameras, CD players, glasses, key holders, car holders, electronics, and frames for pictures and paintings.

[0019] Still other features and advantages of the invention will become clear upon review of the following detailed description in conjunction with the appended drawings.

IV. BRIEF DESCRIPTION OF THE DRAWINGS

[0020] FIG. 1 is an exploded view of the components of the jewelry setting of the present invention.

[0021] FIG. 2 is an exploded view of the insert, spring and jewelry article of the present invention.

[0022] FIG. 3 is a perspective view of the assembled insert, spring and article of jewelry.

[0023] FIG. 4 is an exploded view of the jewel, washer and setting of the present invention.

[0024] FIG. 5 is a perspective view of the assembled jewel, washer and setting.

[0025] FIG. 6A is an exploded view of the components used to assemble the jewelry setting of the present invention.

[0026] FIG. 6B is a bottom view of the setting of FIG. 1.

[0027] FIG. 6C is a top view of the insert of FIG. 1.

[0028] FIG. 6D illustrates a plug or cover used to prevent the setting of the invention from rotating within the insert once the insert is fit within the setting.

[0029] FIGS. 7A-7C illustrate engagement of the setting of the invention with the insert of the invention.

[0030] FIG. 8 is a partial section view of the assembled components of FIG. 1.

[0031] FIG. 9 illustrates a plurality of jewels interchangeably associated with a jewelry article.

[0032] FIG. 10 is a perspective view of an alternative design of the setting member of the invention.

[0033] FIG. 11 is a partially hidden assembly view of the setting of FIG. 10 position in an insert of the invention.

[0034] FIG. 12 illustrates an alternative embodiment of the insert of the present invention.

[0035] FIG. 13 is an exploded view of an alternative embodiment of the components of the jewelry setting of the present invention.

[0036] FIG. 14 is an exploded view of a tool engaging a component of the invention.

[0037] FIG. 15 is a perspective view of a tool for coupling the setting with an article of jewelry configured with at least one magnetic insert.

[0038] FIG. 16 is a perspective view of a key holder provided with the assembled insert, spring and article of jewelry.

[0039] FIG. 17 is a flowchart of the inventive method of the marketing the inventive article of jewelry.

V. DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0040] The jewelry setting of the present invention is designed to provide a consumer with the ability to optimize and maximize the use and enjoyment of a jewel or gem. Normally, a jewel is purchased in connection with a single article of jewelry, which can only be worn on a single body part or an item. This can be quite restrictive and prevent the user from wearing the jewel on more than only a few selected occasions. By allowing a user to securely interchange jewels with different jewelry articles, the user is no longer prevented from wearing a jewelry article in only one environment. Thus, a jewel may be worn on a ring one day, on a bracelet the next day, on a pin the day after, and in earrings the day after that. Or, a jewel may be used interchangeably with different jewelry articles throughout a single day. Accordingly, a user owning a plurality of different jewels and a plurality of different jewelry articles can create many jewelry articles having many different appearances. This provides the user with a variety of choices and options that are not possible with a jewelry article having a jewel fixed therein.

[0041] The following detailed description is of the best mode or modes of the invention presently contemplated. Such description is not intended to be understood in a limiting sense, but to be an example of the invention presented solely for illustration thereof, and by reference to which in connection with the following description and the accompanying drawings one skilled in the art may be advised of the advantages and construction of the invention. In the various views of the drawings, like reference characters designate like or similar parts.

[0042] FIG. 1 is an exploded view of a jewelry article employing the jewelry setting of the present invention, generally comprising an article of jewelry 20, such as a ring, pin, brooch, bracelet or the like, a spring 40, an insert 60, a setting 80, a washer or spring 100 and a jewel or gem 120.
For purposes of illustration and explanation, the article of jewelry 20 will be shown in representative form as a square piece, it being understood that such article of jewelry 20 can be a portion of a ring, pin, etc. The assembly is completed by engaging the “male” part, defined by the assembly of the gem 120 seated within the setting 80, with the “female” part defined by the assembly of the insert 60 and spring 40 both seated within the article of jewelry 20.

First, as shown in FIGS. 2 and 3, the spring 40 and insert 60 are seated within an orifice 21 provided in the article of jewelry 20 and fastened thereto, such that the spring 40 is seated on the recessed surface 22 and the bottom edge surface 62 of the insert 60 is seated on the spring rim 42. Such orifice 21 is defined by a seating surface 22, a side surface 24, an inner surface 26 having an inner opening 27, and an outer surface 28 having an outer opening 29. The terms “outer” and “inner” as used herein refer to the position of the article of jewelry 20 as worn on a person’s body. In other words, if the article of jewelry 20 is a ring, then the description of such article as worn on a person’s finger, the “outer” surface 28 would be exposed to the world, while the “inner” surface 26 would lie adjacent the person’s finger and be hidden from view. The insert 60 is further defined by an inner surface 63, a receiving chamber 67 adapted to receive the setting 80 as described below, and engagement members 65 having downwardly depending projections 68 for engaging the setting 80 as will be described below. The resilient spring tabs 44 that project upwardly toward the seated insert 60, which tabs will be described in detail later, are preferably not contacted by the bottom edge surface 62 of the insert 60. The side surface 64 of the insert 60 is preferably fastened to the inside surface 24 of the article of jewelry by a suitable adhesive such as glue, epoxy or the like, such that the upper edge surface 66 of the insert 60 becomes flush with the inner surface 26 of the article of jewelry 20.

The steps illustrated in FIGS. 2 and 3, i.e., the seating of the spring 40 and insert 60 in an article of jewelry 20, can be performed at the factory when the article 20 is manufactured, or it can be performed later by fashioning an orifice 21 into an existing piece of jewelry. Thus, the insert 60 and article of jewelry 20 can, if desired, be fashioned as a single piece.

The positioning of the jewel 120 within the setting 80 is illustrated in FIGS. 4 and 5. The setting 80 is provided with an orifice 82 adapted to receive the jewel 120 and a seating surface 84 adapted to receive the washer 100. The setting 80 is further provided with an upper edge surface 86, a ledge surface 87, a lower edge surface 88 (see also FIGS. 6A and 6B), and fin-shaped engagement members 90 having pockets 92 fashioned therefrom, which pockets are designed to engage protrusions 69 (see FIGS. 2, 3, 6A) provided on the inside engagement members 65 of the insert 60. The engagement members 90 and the engagement of the setting 80 with the article of jewelry 20 will be described in connection with FIGS. 6A through 8.

Returning to FIGS. 4 and 5, the use of a spring or washer 100 is preferred to protect the seating contact between the jewel 120 and the setting 80, however such use is not critical and it may be left out of the construction as desired. Such element 100 may either be a simple rubber washer or a spring akin to spring 40. In certain situations, the use of a washer may be desirable. For example, a washer 100 will not show through a real diamond but will show through a fake diamond, such as a cubic zirconia. Thus, the washer 100 may be used to verify the type of jewel 120 placed within the setting 80. However, if it would be inappropriate to use a washer, then a spring may be used instead.

In any event, once the jewel 120 is set within the setting 80, the upper edge 86 of the setting 80 is used to fix the jewel 120 in place. Such fixation may comprise the bending of the upper edge material over the crown 122 of the jewel 120 or the use of prongs (not shown) folded over the crown 122. Alternatively (not shown), the jewel 120 may be inserted through the underside of the setting 80 (necessitating the use of a setting having the means to allow for passage of the jewel therethrough) and secured to the setting with a type of filling material. Such type of fixation would allow the person setting the jewel 120 to first check if the jewel 120 fits perfectly through the opening defined by the upper edge 86 of the setting. Otherwise, the upper edge material folded over the crown 122 may cover the crown 122 too much or it may not cover enough of the crown 122 to fix the jewel in place on the setting 80. Other methods of fixation are contemplated.

Once the jewel 120 is assembled within the setting 80, the setting 80 and jewel 120 combination is engaged with the article of jewelry 20 as shown in FIGS. 6A through 8. The lower edge surface 88 (FIG. 6B) of the setting 80 is provided with a plurality of ledges 94 that define along said lower edge surface 88 a seat adapted to receive a key 140 having a handle 141 and contact portion 142 for facilitating manipulation of said setting 80 during engagement and disengagement with said insert 60. In other words, the contact portion 142 of the key 140 is designed to securely fit within the opening defined along lower edge surface 88 of the setting and bounded by the ledges 94. The setting 80 is insertable into the receiving chamber 67 of the insert 60 by aligning the engagement members 90 with the openings defined along the upper edge surface 66 of the insert 60 (FIG. 6C). As shown in FIGS. 6A through 6C, such alignment can only occur if the setting 80 is inserted with the upper edge surface 86 facing the insert 60 and the lower edge surface 88 facing away from the insert 60. In other words, the setting 80 cannot be mistakenly or improperly inserted into the insert 60 starting with the lower edge surface 88 because of the unique design of the upper edge surface 66 openings and the mating design of the engagement members 90.

As shown in FIGS. 7A through 8, the setting 80 is then hand-inserted into the receiving chamber 67 of the insert 60 by the passage of the engagement members 90 through the upper edge surface 66 openings, with the ledge surface 87 of the setting 80 coming into contact with the spring tabs 44 of the spring 40. Then, using the key 140 engaged with the lower edge surface 88 of the setting, the setting 80 is pushed (arrow 150 of FIG. 7) further into the insert 60 against the spring tabs 44 and rotated (arrow 155 of FIG. 7) until the projections 68 present along the insert engagement members 65 are seated within the pockets 92 present along the setting engagement members 90. Stop surfaces 69 fashioned into the inner surface 63 of the insert 60 prevent over-rotation of the setting 80 with respect to the insert 60. FIGS. 7B through 7C are illustrative of the mating between the engagement members 65 and 90. When the setting 80 is first introduced into the insert 60, more
rotation of the setting 80 within the insert 60 would not result in engagement of the projections 68 and pockets 92 because the edge 91 of the engagement member 90 would contact the projection 68 as a result of the engagement member 90 being initially biased toward the engagement member 65. Thus, by pressing against the spring tabs 44, the setting 80 is displaced enough so that the projection 68 can clear the setting engagement member 90, during rotation of the setting 80 with respect to the insert 60. Upon release of the key 140 from the setting 80, the spring 40 biases the projections 68 against the pockets 92. Alignment of the projections 68 and pockets 92 can occur by varying the displacement of the spring tabs 44 such that the projections 68 snap into place within the pockets and/or by taking advantage of the stop surfaces 69 fashioned into the inner surface 63 of the insert.

As shown in FIG. 8, the setting 80 with jewel 120 is inserted into the receiving chamber 67 of the insert 60 and the article of jewelry 20 such that the jewel 120 is exposed along the outer surface 28 of the article of jewelry 20. In other words, the jewel 120 that is fixed within the setting 80 is inserted from the underside of the article of jewelry 20, such that it becomes impossible to remove the setting 80 and jewel 120 while the article of jewelry 20 is being worn. This is realized because the opening 29 defined along the outer surface 28 of the article of jewelry 20 is dimensioned to allow passage of the crown 122 of the jewel 120, but prevent complete passage of the setting 80 therethrough. In other words, the opening 29 present along the outer surface 28 of the article of jewelry 20 and through which the jewel 120 extends is smaller than the opening 29 present along the inner surface 26 through which the setting 80 and jewel 120 is initially passed. Such disparity between the openings 28,29 dimensions provides further security against inadvertent separation of the jewel 120 from the article of jewelry 20 while such article of jewelry 20 is being worn.

For even greater security, an additional cover or plug 160 (FIG. 6D) can be inserted into the upper edge surface openings 66 of the insert 60 after the setting 80 is engaged with the insert 60 to completely prevent the setting 80 from rotating within the insert 60. Downward extensions 165 are preferably configured for insertion through the upper edge surface openings 66 of the insert 60, which would prevent the engagement members 90 from rotating within the receiving chamber 67. Such extensions 165 may be dimensioned to fit exactly within the openings 66. Thus, not only would the plug 160 prevent the setting 80 from turning, but also it would provide further security against inadvertent separation of the jewel 120 from the article of jewelry 20 while such article of jewelry 20 is being worn.

When it is desired to remove the jewel 120 from the jewelry article 20, one merely removes the jewelry article 20 from one’s body and uses the key 140 to again press inwardly and also to counter-rotate the setting 80 within the insert 60 until the engagement members 90 are aligned with the openings disposed along surface 66. Then, the jewel 120 and setting 80 may be pushed through the jewelry article 20 by applying finger pressure to the crown 122 of the jewel 120.

The present invention has been described with respect to one article of jewelry 20 containing one insert 60 into which is inserted one jewel 120 fastened to one setting 80. However, it will clearly be understood that the present invention can be defined as a system of interchangeable jewels and articles of jewelry. For example, a plurality of inserts 60 may be provided on a plurality of jewelry articles, such as a pin, a brooch and a bracelet for example. Each jewelry article having an insert 60 of the invention is then adapted to receive a jewel 120 set within the setting 80 of the invention. Thus, one may wear one particular jewel on a ring one day, then on a bracelet the next day, and so on. In other words, the jewel 120 set within the setting 80 of the invention may be transported and used interchangeably with various articles of jewelry. Alternatively, as illustratively depicted in FIG. 9, a plurality of jewels 120a-d set within settings 80 (not shown) of the invention may be used with a single article of jewelry 20.

While the present invention has been described with respect to a particular embodiment, it is not intended that it should be limited to such embodiment. For example, while the engagement members 90 on the setting 80 and the openings provided on the upper edge surface 66 of the insert 60 are fin-shaped, such engagement members and openings may comprise alternative shapes (see, for example, the insert configuration of FIG. 12, which illustrates one possible insert embodiment with other embodiments being contemplated). Also, such engagement members might comprise a single engagement member or a plurality as shown. Although it is preferable that the configuration of the engagement members 90 and the configuration of the openings allow the setting 80 to be inserted into the insert 60 in only one direction as discussed above. In addition, the engagement between the engagement members on the insert and the setting may comprise different configurations in addition to the use of a projection 68 seated within a pocket 92 as described.

Furthermore, the spring 40 may comprise different configurations to facilitate engagement and disengagement of the setting 80 with the insert 60. One illustrative example is shown in FIGS. 10 and 11, where a uniquely designed spring 40a, having rounded sections 40b and flattened, chordal sections 40c, is disposed around the perimeter of the inner surface 63 of the insert 60a and is adapted to engage grooves 95 fashioned into the side surfaces 96 of the engagement members 90a. Upon initial introduction of the setting 80a into the receiving chamber of the insert 60a, the grooves 95 do not engage the spring 40a because such grooves 95 are disposed adjacent the rounded sections 40b of the spring. However, upon rotation of the setting 80a within the insert 60a, the grooves 95 engage the chordal sections 40c of the spring 40a which act to resiliently bias against the rotation of the setting 80a. Thus, the secure engagement of the setting 80a within the insert 60a results from the movement of the grooves 95 against the straight sections 40c of the spring 40a. If necessary, a stop surface or member may be provided in the insert 60a to prevent over-rotation of the setting 80a within the insert 60a.

FIG. 13 illustrates yet a further embodiment of the present invention. In this embodiment, one or more jewels are fastened to a setting via a spring, not a washer, while the components that are seated within the jewelry item have a different configuration as compared with the embodiment described above. A setting 280 is provided with a hole 282 out of which the top of the jewel 220 will protrude. The jewel or gem 220 (faced downward) (or plurality of jewels
or gems) placed into the setting 280 (upside down) and a spring 230 is placed onto the tip 222 of the gem 220. A cover 215, having a depression 218 to accommodate the spring 240, is then fastened to the setting 280 and optionally, the cover 215 and setting 280 can be soldered by laser or glued together to add extra security. Other means of attaching the cover 215 to the setting 280, such as by having a threaded connection between the two, are also contemplated. The combination of the setting 280, gem 220, spring 230 and cover 215 forms the “male” piece of the interchangeable jewelry. The “female” piece, which is secured within a jewelry item 320 such as ring, brooch or the like, is formed by an insert 260.

A flat spring 240 is positioned within a cavity 267 in the jewelry item 320 and the insert 260 is positioned thereon and secured within the cavity 267. The setting 280, having the gem 220 secured therein, is then forced into the insert cavity 268 until the setting 280 abuts the spring 240. Afterward, the setting 280 is pushed against the prongs 242 of the spring and rotated until the setting 280 locks into the insert 260. As shown in FIG. 14, the setting 280 may be driven through the use of a tool 340 having fingers 342 that engage openings 216 in the rear surface 219 of the cover 215. The unusual arrangement of openings 216 and tool fingers 342 ensures that only those individuals with special tools will be able to engage and disengage the setting 280 from the insert 260. It should be appreciated that the engagement of the setting 260 with the jewelry item 320 and the setting 280 with the insert 260, to form a combined jewelry item that can be worn and displayed, is generally similar to the engagement of such items illustrated in the previous embodiments.

A system of jewels, settings and inserts is contemplated. For instance, every jewelry item 320 has two openings 327 and 329. The insert 260 is inserted through opening 327, while the gem 220 sticks out through opening 329. In order to benefit from the interchangeable nature of the inventive system, and in order to use multiple gems with a single jewelry item, the thickness of the setting 280 may vary to accommodate gems of different sizes such that multiple gem settings can be used with a single insert 260. If, for example, a woman has five gems having diameters ranging from 4.00 mm to 5.20 mm, each individual gem can be secured within an individual setting 280 that can accommodate gems of varying diameters ranging from 4.00 mm (0.25 carats) to 5.3 mm (0.50 carats), such that the various settings, having individual gems secured therein, can be used with a single insert 260. The interior thickness of the setting 280 would differ depending on the diameter of the gem, but the exterior diameter of the setting would remain the same so that the multiple settings could be used with a single insert.

In accordance with the above, a variety of sizes of gems, settings and inserts are contemplated. It is also contemplated that more than one gem, jewel or stone may be used in the same insert. For example, one setting/insert size could accommodate stones of 4.0 mm (0.25 carats) to 5.3 mm (0.50 carats), another setting/insert size could accommodate stones of 5.4 mm (0.50 carats) to 6.7 mm (1 carat), while another setting/insert size could accommodate stones of 1-2 carats and 2-3 carats. For each size range, a series of settings 280 would be manufactured to fit within a particularly sized insert. The advantage of this system is fairly clear.

Instead of a jeweler enlarging a hole on a jewelry item to accommodate a larger jewel, the jeweler merely has to place the jewel in a different setting 280 and then attach such setting 280 to the insert that is already in place in the jewelry item. Of course, this would only work for particular ranges of sizes. Going from a 0.25 carat jewel to a 3 carat jewel would obviously require a jewelry item (ring, brooch or the like) having a substantially larger opening 267 and a correspondingly larger setting 260. However, if, continuing with the example above, a woman decided from a 0.25 carat jewel to a 0.50 carat jewel, the same insert 260 can be used in the jewelry item and the opening in the jewelry item does not have to be modified.

FIG. 13 also illustrates the use of an identification means 285 associated with a setting 280. Currently there are companies that put a serial number on a diamond with a micro laser inscription. This process, although it allows for identification, leaves a microscopic mark on the stone. With the present invention, the identification means 285 could be on the setting 280, and such identification means 285 could be sealed by a particular sealing means such that if the seal is broken, the value of the identification becomes void. One type of means 285 could be inserting a chip onto the surface or into the body of the setting 280. Such chip might be a microchip that is essentially hidden from view and can be programmed with personalized information. With such a chip incorporated into the setting 280 as an identification means 285, the integrity of the setting 280 and gem 220 associated therewith can be assured and insured without damaging the gem 220 in any way. Other identification means placed on a surface of the setting or on other components of the inventive system, such as a barcode, inscription or the like, are also contemplated. As long as the scaling means remains unbroken, the identification means can guarantee that the setting 280 and gem 220 are original, bona fide products and not fake or imitations of the inventive system.

Returning to FIGS. 4 and 13, the positioning of the jewel 120 within the setting 80 can be performed in a different manner. While, as is disclosed above, the flat washer 100 is configured as a separate resilient element for retaining the jewel within the setting 80, the setting 80 and washer 100 can be designed as a one-piece structure. Accordingly, the inner surface of the setting 80 is formed with the resilient element. During the positioning of the gem 120 within the setting 80, the resilient element extends radially inwardly and abuts the body of the jewel so as to bias the jewel 120 against its voluntary displacement from the setting 80. The resilient element may be coupled to the setting 80 at any location within the inner peripheral wall of the setting, but preferably, it is fixed to the setting in the vicinity of upper edge surface 86 (FIG. 4).

The resilient element is configured so as to have its inner surface extending complementary to the outer peripheral surface of jewel 120. A configuration of the resilient element may have a shape similar to the flat washer 100. Alternatively, it may have a generally frustoconical inner surface extending complementary to the outer surface of the jewel 220, as shown in FIG. 13. Note that other shapes, of course, are readily available provided that the outer surface of the resilient element extends complementary to the inner surface of the setting 80 and 280 (FIGS. 4 and 13, respectively), and the inner surface of the resilient element comple-
ments the outer surface of the jewel. Alternatively, the outer end of the setting 80 can be integrally formed with the washer. The washer may have the same structure as disclosed above.

[0063] A variety of engineering plastics, rubber and other resilient materials can be employed for manufacturing the resilient element and are subject only to the consideration of resiliency and minimal abrasiveness. Preferably, the resilient element is made from silicon and bonded to the setting 80. As a consequence, the user can exchange the gems in a simpler and more time-effective manner, as compared to the embodiments of FIGS. 4 and 13 that require an additional step of removing and inserting the washer 0.100 and spring 230 into the setting every time the user replaces the jewels.

[0064] The tool or key 140 and 340, as shown in FIGS. 6A and 14, respectively, can be modified to further facilitate insertion of the setting/jewel assembly into the article of jewelry 20 or 320. Typically, the article of jewelry and, as a consequence, its components are relatively small. At least partially, the process of assembling the inventive article of jewelry, as depicted in FIGS. 1 through 14, includes a manual step during which the removable portion or setting/jewel assembly is manually inserted into the fixed portion of the article of jewelry. Coupling these components manually is particularly inconvenient because of the small size of these components. Only after the insertion of the setting/jewel assembly, the user utilizes the tool 140 (FIG. 6A) for further pushing, rotating and locking the setting/jewel assembly in the article of jewelry. At least one of the reasons for the manual installation of the setting/jewel assembly can be attributed to the fact that the tool 140, 340 cannot displace and hold this assembly before it is inserted into the receiving chamber 67 of the insert 60 (FIG. 6A). Providing the tool 140 and 340 (FIGS. 6A and 14, respectively) with a means for reliably holding the setting/jewel assembly 60 would obviate such a problem and facilitate the process of exchanging a plurality of jewels.

[0065] Thus, in accordance with one aspect of the invention, the entire contact portion 142 (FIG. 6A) can be made from magnetizable material. Alternatively, only the bottom of the contact portion 142 may be provided with a layer of magnetizable material (not shown). Still another alternative modification may include the entire tool made from magnetizable materials.

[0066] Alternatively, as shown in FIG. 15, a tool 440, which has a shape generally similar to the tool 140 of FIG. 6A, has the contact portion 442 configured with a magnetic insert 446 that tightly fits in a nest provided in the bottom of the contact portion 442.

[0067] A further modification of the key tool, particularly the tool utilized in the embodiment that is illustrated in FIG. 14, is implemented by having only fingers 444 (FIG. 15) made from magnetizable material. The fingers 444 can be either fixed to the contact portion 442 or removably coupled thereto by means of screwing or fittingly pressing each of the fingers into a respective recess, which can be formed in the contact portion 442.

[0068] The number, configuration and pattern of the fingers 444 and magnetic inserts 446 can vary in accordance with a concrete configuration of ledges or holes on the receiving surface of the setting. For example, the magnetic insert may be implanted or formed in the central area of the bottom portion 142 and, if the tool is configured as illustrated in FIG. 14, the magnetic insert is spaced inwardly from the fingers 444.

[0069] Furthermore, instead of having the entire body of the fingers 444 made from magnetizable material, each of the recesses that receives a respective finger may have a nest or seat configured to receive a small magnetic element (not shown), which is in contact with the inner end of the finger after the latter has been coupled to the tool.

[0070] Providing the tool 440 with magnetic means allows the user to couple the tool with the setting and displace the setting to a position in which the setting 80 (FIG. 6A) and the article of jewelry or fixed portion 20 are axially aligned, and then, insert and rotate the setting to a locking or securing position.

[0071] It is not unusual to inadvertently drop the setting during assembly. Having the tool capable of attracting the fallen setting that may be made from a variety of metals substantially facilitates a search for this item.

[0072] As mentioned above, the inventive article of jewelry can decorate a variety of consumer items, which is practically limitless, but for the purposes of convenience, the inventive consumer item may be conditionally categorized as electronic consumer items, garment consumer items, kitchenware consumer items, and combinations of these.

[0073] An illustrative example of one of the above-mentioned items is shown in FIG. 16 and depicts a key holder 450. The body of the key holder 450 has an orifice 460 that, as is illustrated, has already received a spring 470 and insert 480. The setting/jewel assembly, which is not shown in this figure, can be easily inserted, locked in and, if a need exists for exchanging the inserted jewel, removed from the key holder by the inventive key or tool.

[0074] Among the electronic consumer items, perhaps most popular may include mobile phones, cameras, CD players, laptops, desktop, flashlights, tape recorders, and radios. The garment consumer items represent a particular broad spectrum of products and may include without any limitation handbags, buttons, zippers, shoes, boots, clothing, combs, brushes, hats, leatherwear, fashion jewelry, shopping bags, purses, key holders, pens, cuff links, pocket knives, nail clippers, and scissors.

[0075] The furniture consumer item may be selected from frames for photographs, frames for paintings, chairs, armchairs, carpets, tables, cabinets, stoves and coffee tables. Finally, the kitchenware items are selected from the group consisting of utensils, china including plates, cups, food product containers and etc.

[0076] Certainly, the above listed consumer items may include a variety of other items, such as cars, bicycles, attributes of pets ware, children toys and etc.

[0077] Aesthetic appeal, market value and exchangeability of jewels or gems can be used as a powerful method of promotion of other products and/or services. For example, given a market value of the jewelry piece, it can be used as an attractive complimentary gift to certain purchases. Thus, a combination or kit of a purchased product or service and the inventive article of jewelry may be a viable promotional tool for the advertised services. A great variety of service may
benefit from association with the inventive particle of jewelry. To name a few, one may think of transportation services including air and all types of ground and sea transportation means, electronic communication including both wireless and wired communication, credit card services and many, many others.

[0078] One of limitless examples of the inventive method of the marketing the inventive article of jewelry is illustrated in FIG. 17 and depicts an airfare purchaser in a step 500. A value of gift is defined on the class of the purchased airfare which include first, business, and economy classes, a distance, destination and many others, as indicated by a step 502. Determining the status of the purchaser as a first time customer, as indicated by a step 506, or a regular flyer, as shown in a step 504, the purchaser may be presented with an option. In case of the first time purchaser of the airfare, he or she may be complimented with a predetermined piece of jewelry. For example, gentlemen may be given a pen decorated with the inventive article of jewelry, whereas ladies may have a pendant.

[0079] If the purchaser is a frequent customer of the airline, based on the number of previously accumulated points, as indicated by a step 508, the purchaser is complimented with either a new article of jewelry that has a higher value than the previously received gifts or given a gift certificate (see step 514), which would allow the air ticket purchaser to select the desired piece of jewelry.

[0080] Alternatively, as indicated by a step 510, the purchaser may be presented with a new setting that structurally matches the previously received piece of jewelry, but has more sophisticated jewels.

[0081] Each gift or gift certificate is associated with depositing a certain percentage of the purchased value to the account of the manufacturer of the article of jewelry or its distributor, as indicated by a step 512.

[0082] Furthermore, purchasing the article of jewelry may trigger the accumulation of points allocated for each purchase and allowing the purchaser for a certain discount that is associated with future purchases of jewelry. Again, the frequent purchaser may receive an upgraded setting with gems or jewels if he has purchased the article of jewelry before.

[0083] The scenario of providing the purchaser with a kit may be slightly modified by, for example, providing a consumer product with an insert decorated with a logo of consumer product manufacturer. The insert is removable coupled to the consumer product and can be replaced with the inventive article of jewelry added to the kit. Again, of course, the manufacturer of the consumer product allocates a certain percentage of the purchased product’s retail value to the account of the manufacturer or retailer of the article of jewelry.

[0084] While the present invention has been described at some length and with some particularity with respect to the several described embodiments, it is not intended that it should be limited to any such particulars or embodiments or any particular embodiment. Thus, the invention is to be construed with references to the appended claims so as to provide the broadest possible interpretation of such claims in view of the prior art and, therefore, to effectively encompass the intended scope of the invention.

What is claimed is:

1. A system for the retention of a jewel in an article of jewelry adapted to decorate an item, whereby a plurality of jewels may interchangeably set in the article of jewelry, the system comprising:

   a fixed portion housed within an article of jewelry, the fixed portion comprising a receiving chamber;

   a removable portion adapted to retain a jewel, and

   a facilitator tool configured to engage and displace the removable portion towards and away from the receiving chamber of the fixed portion, the facilitator tool being operative to insert and detachably couple the removable portion to the fixed portion.

2. A system in accordance with claim 1, wherein the facilitator tool is operative to magnetically attract the removable portion, the facilitator tool and removable portion being disengaged upon coupling the fixed portion to the removable portion.

3. A system in accordance with claim 2, wherein the facilitator tool includes a handle and a contact portion configured to engage the removable portion, the removable portion comprising a removable member magnetically attractable to the facilitator and insertable into the receiving chamber of the fixed portion, the inserting member having a seat portion for receiving the jewel.

4. A system in accordance with claim 3, wherein at least the contact portion of the facilitator tool is made from a magnetizable material.

5. A system in accordance with claim 3, wherein the contact portion has at least one magnetic insert.

6. A system in accordance with claim 3, wherein the contact portion has a surface located adjacent to the insertion member during engagement between the facilitator tool and the removable portion and provided with a layer of the magnetizable material.

7. A system in accordance with claim 3, wherein the contact portion has a surface located adjacent to the insertion member of the removable portion and provided with a plurality of fingers, the fingers each being configured to engage a respective recess provided in the surface of the insertion member so that the facilitator tool and removable portion rotate synchronously relative to the fixed portion in response to a torque applied by the facilitator tool during coupling the fixed and removable portions.

8. A system in accordance with claim 7, wherein the surface of the contact portion of the facilitator tool has a plurality of seats each configured to removably receive a respective one of the plurality of fingers and provided with a respective magnetic insert so that the respective magnetic insert is in contact with an inner end of the respective finger upon coupling the finger to the seat.

9. A system in accordance with claim 7, wherein the plurality of fingers each are fixedly mounted to the surface of the contact portion of the facilitator tool.

10. A system in accordance with claim 3, wherein the insertion member has a face opposing the surface of the contact portion of the facilitator tool during engagement between the facilitating tool and the removable portions, the face having a formation configured to engage the contact portion of the facilitator tool so that the facilitator tool and the removable portion are rotatably fixed relative to one another upon applying a torque to the facilitator tool.
11. A system in accordance with claim 10, wherein the formation includes a plurality of ledges extending outwards from the face of the insertion member and having inner surfaces, the inner surfaces being configured to engage an outer periphery of the contact portion in a rotatably fixed manner.

12. A system in accordance with claim 1, wherein the item is selected from the group consisting of handbags, buttons, zippers, shoes, boots, clothing, combs, brushes, hats, leatherware, fashion jewelry, shopping bags, purses, key holders, pens, cuff links, card holders, frames for photographs and frames for paintings.

13. A system in accordance with claim 1, wherein the item is selected from the group consisting of mobile phones, cameras, CD players, laptops, lighters and electronics.

14. A system in accordance with claim 1, wherein the fixed portion further comprising a biasing member, an outer end exposed during the wearing of the article of jewelry, an inner end hidden during the wearing of the article of jewelry, and an inner wall having securing means and being disposed between the inner end and the outer end;

the fixed portion adapted for passage of the insertion member through the inner end and into the receiving chamber for seating of the removable portion within the fixed portion and for displaying of the jewel seated within the seat portion adjacent the outer end, the fixed and removable portions extending along a longitudinal axis upon insertion of the insertion into the fixed portion, the removable portion being seated relative to the fixed portion through a rotatable engagement of the insertion member with the securing means on the inner wall of the fixed portion;

wherein the insertion member engages the biasing member upon rotation of the removable portion within the fixed portion, and the biasing member generates an axially longitudinally directed force for urging the fixed and the removable portions to remain seated so that the fixed and removable portions are prevented from axial displacement relative to one another while seated; and

wherein the insertion member has a predefined shape and the inner end has a plurality of passages that form a pattern of passages, each passage of the plurality of passages corresponding in shape to the shape of the insertion member.

15. A system in accordance with claim 14, wherein the outer end and the inner end each have a diameter and the diameter of the outer end is less than the diameter of the inner end for preventing passage of the insertion member completely through the outer end.

16. A system in accordance with claim 3, wherein the insertion member of the removable portion is provided with a resilient element fixed to an inner surface of the insertion member and configured to retain the jewel within the insertion member.

17. A system in accordance with claim 16, wherein the resilient element is made from elastomeric material selected from the group consisting of engineering plastics and rubber.

18. A system in accordance with claim 3, wherein the insertion member of the removable portion is provided with a retaining element removably insertable into the insertion member and configured to retain the jewel within the insertion member.

19. A system in accordance with claim 14, wherein the insertion member is fin-shaped.

20. A system in accordance with claim 14, wherein the predefined shape and the pattern of passages are configured for unidirectional insertion of the insertion member into the receiving chamber.

21. A system in accordance with claim 17, wherein the elastomeric material includes silicon.

22. A system in accordance with claim 14, wherein the biasing member further comprises at least one chordal section.

23. A system in accordance with claim 22, further comprising at least one groove disposed on the at least one insertion member for biased engagement with the at least one chordal section.

24. An article of jewelry comprising:

a consumer item formed with a body having an outer face; and

a jewelry assembly embedded in the body of the consumer item and including

a retaining member provided with an outer end opening into the outer face of the body;

a biasing member disposed within the retaining member and spaced inwards from the outer opening;

a setting removably insertable into the retaining member and configured to selectively receive a plurality of jewels so that a received jewel extends towards the outer end opening and is displayed proximate to the outer face of the body upon inserting the setting into the retaining member, wherein the setting is removable from the retaining member to have the received jewel replaced with a new jewel for altering appearance of the consumer item upon inserting the setting with the new jewel into the retaining member,

wherein the retaining member and the setting extend along a longitudinal axis upon insertion of the setting into the retaining member, and the biasing member generates an axially directed force for urging the retaining member and the setting to remain engaged so that the retaining member and the setting are prevented from axial displacement relative to one another while engaged.

25. An article of jewelry in accordance with claim 24, wherein the consumer item is selected from the group consisting of electronic consumer items, garment consumer items, kitchenware consumer items, and combinations of these.

26. An article of jewelry in accordance with claim 24, wherein the electronic consumer items are selected from the group consisting of mobile phones, cameras, CD players, laptops, desktops, flashlights, tape recorders, and radios.

27. An article of jewelry in accordance with claim 24, wherein the garment consumer items are selected from the group consisting of handbags, buttons, zippers, shoes, boots, clothing, combs, brushes, hats, leatherware, fashion jewelry, shopping bags, purses, key holders, pens, cuff links, pocket knives, nail clippers, and scissors.

28. An article of jewelry in accordance with claim 24, wherein the furniture consumer items are selected from the
group consisting of frames for photographs, frames for paintings, chairs, armchairs, carpets, tables, cabinets, stoves and coffee tables.

29. An article of jewelry in accordance with claim 24, wherein the kitchenware items are selected from the group consisting of utensils, plates, cups, food product containers.

30. An article of jewelry in accordance with claim 24, wherein the setting has
a) a jewel seat housing the received jewel,
b) a resilient element disposed in the jewel seat and configured to resiliently engage the received jewel so that the jewel is prevented from voluntary displacement from the jewel seat, and
an engaging portion having a plurality of insertion members for axial insertion through the retaining member for displaying the received jewel proximate to the outer opening of the retaining member.

31. An article of jewelry of claim 30, wherein the retaining member is configured with an inner end opening smaller than the outer end opening to arrest displacement of the setting so that the received jewel is displaced proximate to the outer face of the consumer item, prevent the setting from completely received jewel from falling out of the retaining member, an inner end opening being provided with a plurality of passages that form a pattern of passages,
the engaging portion of the setting being provided with a plurality of insertion members for axial insertion through the plurality of passages of the inner end opening of the retaining member, each of the plurality of insertion members having a predefined shape that corresponds with the inner end opening passage, and the engagement portion engaging the retaining member through a rotation of the setting within the retaining member.

32. An article of jewelry in accordance with claim 31, wherein the plurality of insertion members are symmetrically and radially disposed around the setting, the article of jewelry further comprising at least one additional setting comprising an additional jewel seat thereon and adapted for removable engagement with the retaining member.

33. An article of jewelry in accordance with claim 24, further comprising a facilitator tool for engaging the setting and further displacing and removably axially inserting the setting the retaining member.

34. An article of jewelry in accordance with claim 30, wherein the resilient element includes a washer or a spring.

35. An article of jewelry in accordance with claim 30, wherein the resilient element is fixedly coupled to the jewel seat.

36. An article of jewelry in accordance with claim 33, wherein the facilitator tool is made from a magnetizable material.

37. A method for assembling an article of jewelry adapted to decorate an item, the article of jewelry comprising:
a) a retaining member having an axial inner passage; and
b) a setting member removably coupleable to the retaining member;
the method comprising the steps of:
a) selectively setting a plurality of jewels in the setting member;
b) engaging the setting member by a facilitator tool;
c) displacing the facilitator tool towards and axially aligning the facilitator tool with the retaining member;
d) axially displacing the facilitator tool towards the retaining member, thereby axially inserting the setting member into the inner passage of the retaining member;
e) applying a torque to the facilitator tool, thereby rotating the retaining and setting members relative to one another to a locking position, in which the jewel extends through the axial inner passage of the retaining member and terminates proximate to the outer side of the item.

38. The method in accordance with claim 37, wherein the setting member and facilitator tool are magnetically attractable to one another.

39. The method in accordance with claim 37 further comprising applying an axial force to the facilitator tool, thereby disengaging the facilitator tool from the setting member.

40. The method in accordance with claim 39 further comprising
applying a countertorque to the facilitator tool, thereby unlocking the setting and retaining members from one another upon engaging the facilitator tool with the setting member; and
axially displacing the facilitator tool with the setting member from retaining member; and
repeating the steps (a) through (d).

41. The method in accordance with claim 37 wherein the item is selected from the group consisting of handbags, buttons, zippers, shoes, boots, clothing, combs, brushes, hats, leatherwear, fashion jewelry, shopping bags, purses, key holders, pens, cuff links, card holders, frames for photographs, frames for paintings, mobile phones, cameras, CD players, laptops, lighters and electronics.

42. A kit for decorating a consumer item with an article of jewelry, comprising:
a) a fixed portion having a receiving chamber and configured to be embedded in the item so that the receiving chamber opens into an outer side of the consumer item;
a) a plurality of jewels;
b) a removable portion detachably coupled to the fixed portion and configured to interchangeably receive and retain the plurality of jewels; and
a facilitator tool adapted to engage, displace and axially insert the removable portion into the receiving chamber of the fixed portion, the facilitator tool further being adapted to apply a torque to the removable portion so that the removable portion rotates relative to the fixed portion between a locked position, in which a retained jewel extends through the outer side of the item, and an unlocked position, in which the facilitator tool is operative to pull the removable member with the retained jewel from the receiving chamber.

43. A kit in accordance with claim 42, wherein the facilitator tool is configured to magnetically attract the removable portion.
44. A kit in accordance with claim 42, wherein the removable portion has a resilient member fixedly attached an inner wall of the removable portions and configured to bias the retained jewel against voluntary displacement thereof from the removable portion.

45. A kit in accordance with claim 42, wherein the resilient member is made from silicon.

46. A kit in accordance with claim 42, wherein the item is selected from the group consisting of handbags, buttons, zippers, shoes, boots, clothing, combs, brushes, hats, leatherwear, fashion jewelry, shopping bags, purses, key holders, pens, cuff links, card holders, frames for photographs, frames for paintings, mobile phones, cameras, CD players, laptops, lighters and electronics.

47. A method of marketing comprising the steps of:

offering a consumer product or service to a consumer;
complimenting the offered consumer product or service with a piece of jewelry having a market value, the piece of jewelry comprising:

a fixed portion having a receiving chamber and configured to be embedded in an item so that the receiving chamber opens into an outer side of the consumer item,
a collection of jewels,
a removable portion detachably coupled to the fixed portion and configured to interchangeably receive and retain the plurality of jewels;
establishing a system of reward points based on a value of the purchased product or service by the consumer, whereas each subsequent purchase of the consumer product or service includes at least one component of the piece of jewelry having a higher market value than the market value of the piece of jewelry presented with a previous purchase of the consumer product or service; and

allocating a predetermined percentage of the market value of the purchased piece of jewelry to a manufacturer or retailer thereof.

48. A method in accordance with claim 47, wherein the consumer product has an insert provided with a logo of a manufacturer of the consumer product, the insert being removably embedded in the consumer product, the article of jewelry being shaped and dimensioned similarly to the insert, the method further comprising

removing the insert from the purchased consumer product, and
removably inserting the article of jewelry into the consumer product instead of the removed insert.

49. A method in accordance with claim 47, wherein the at least one component of the piece of jewelry is the setting provided with a new collection of jewels.

50. A method in accordance with claim 47, wherein the offered consumer product is selected from the group consisting of handbags, buttons, zippers, shoes, boots, clothing, combs, brushes, hats, leatherwear, fashion jewelry, shopping bags, purses, key holders, pens, cuff links, card holders, frames for photographs, frames for paintings, mobile phones, cameras, CD players, laptops, lighters and electronics.

51. A method in accordance with claim 47, wherein the offered service is selected from the group consisting of transportation fare, use of credit cards and electronic communication services, and combinations thereof.

52. A method of promoting an article of jewelry comprising:

a fixed portion having a receiving chamber and configured to be embedded in an item so that the receiving chamber opens into an outer side of the item,
a collection of jewels,
a removable portion detachably coupled to the fixed portion and configured to interchangeably receive and retain the plurality of jewels;
the method comprising:

collecting reward points for purchasing the article of jewelry; and

receiving a new article of jewelry or a component thereof having a higher market value than the previously purchased article of jewelry upon collecting a predetermined amount of the reward points.

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