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(54) **DEVICE AND SYSTEM TO APPLY FACETED BEADS**

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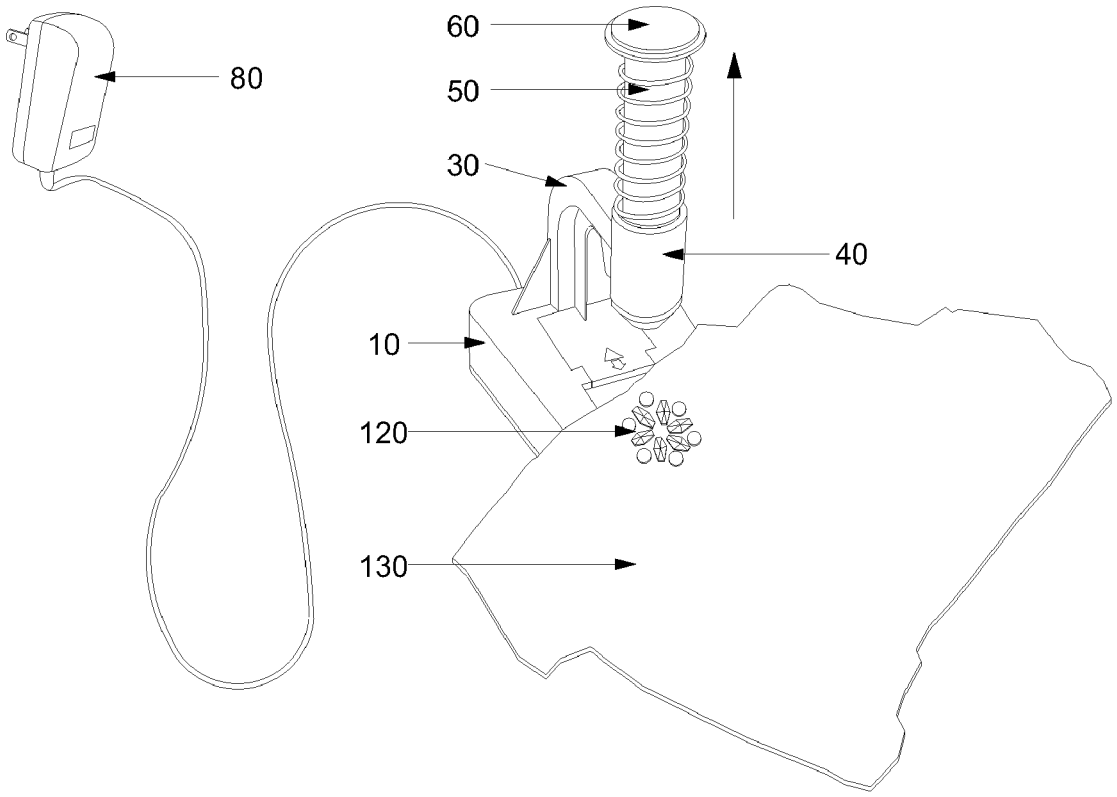
(52) **U.S. Cl.**
CPC ..... ***A41H 43/04*** (2013.01)
USPC ..... **156/64**; 156/272.8

(57) **ABSTRACT**

This invention is a personal bead attachment device. It consists of a base with a hot plate, a piston arm, a piston holder, spring and piston forming a pressure handle. There is a power source and a laser light from the piston. The user of the bead attachment device will plug it in and turn machine and laser light on from the back of the machine, in about 30 second the plate should be hot and ready to use. The user will place the fabric on top of the hot plate and place a bead on the top of fabric, the laser dot will tell the user the exact position of where the bead will be adhered.



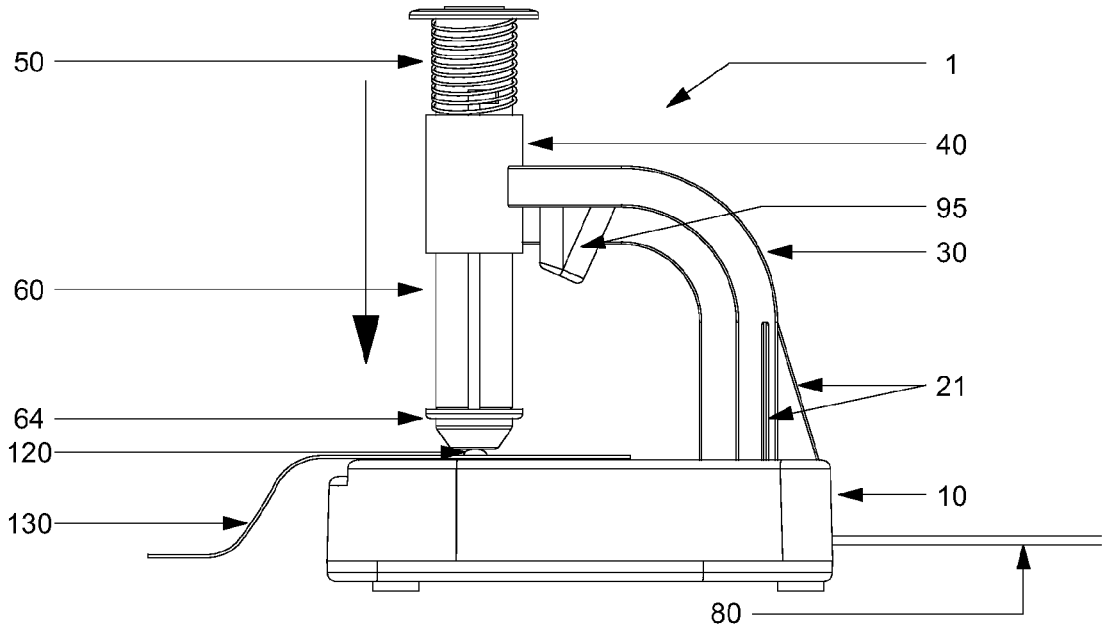



Figure 1

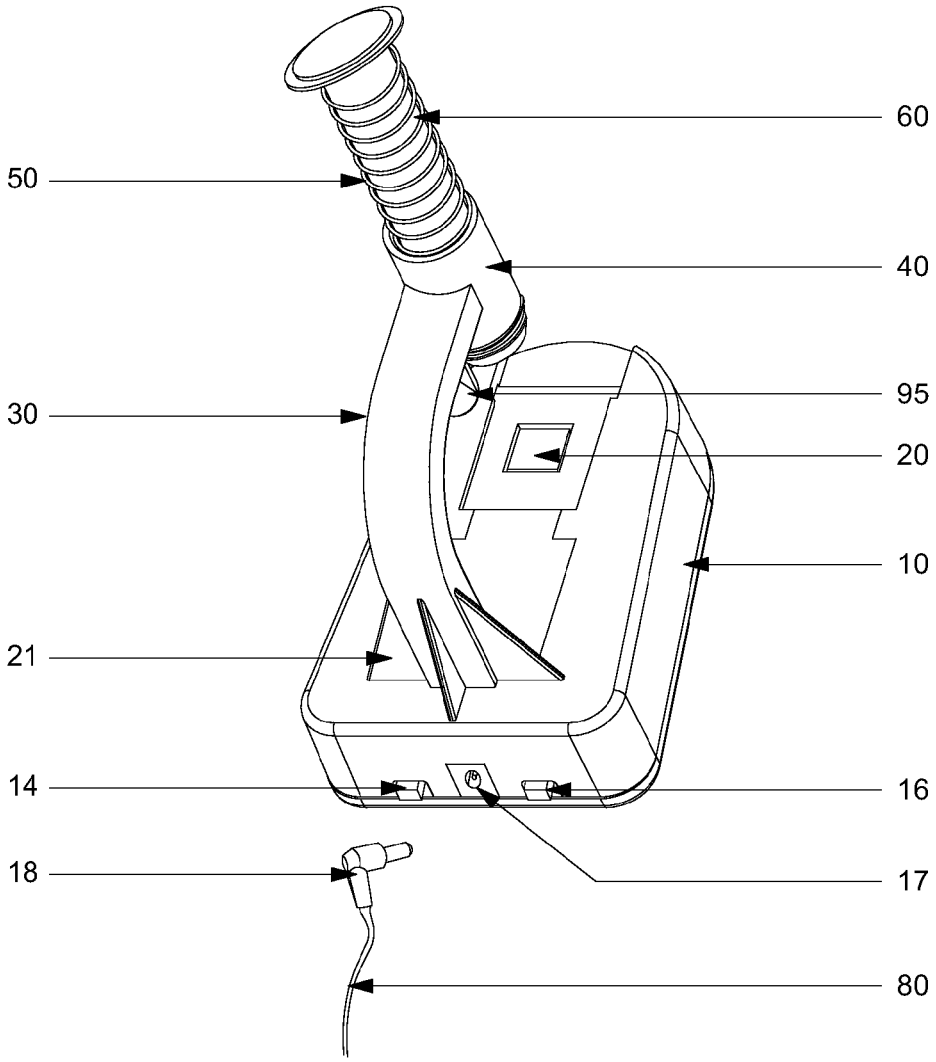



Figure 2

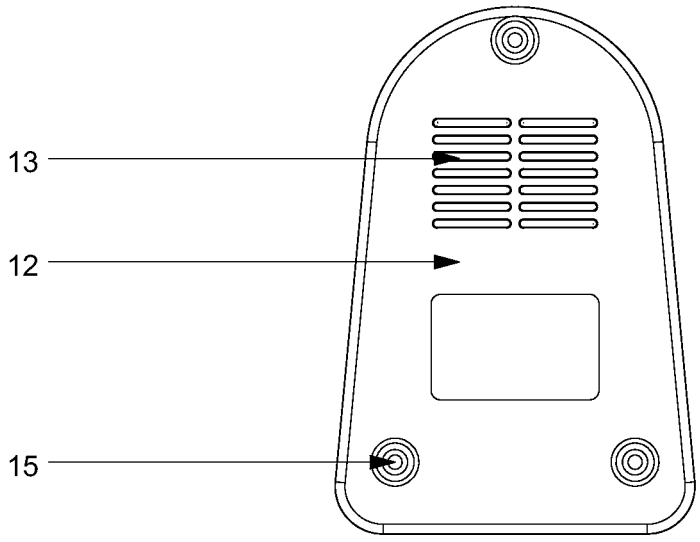



Figure 3

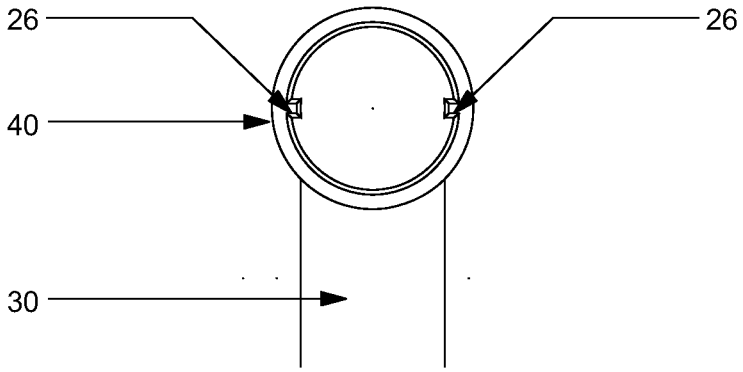



Figure 4

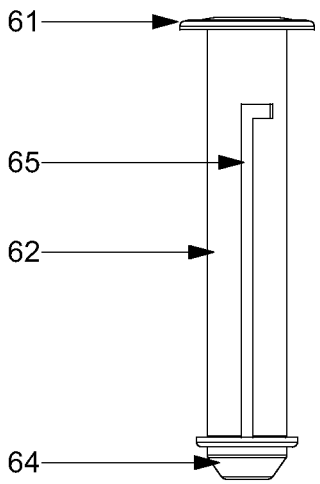



Figure 5

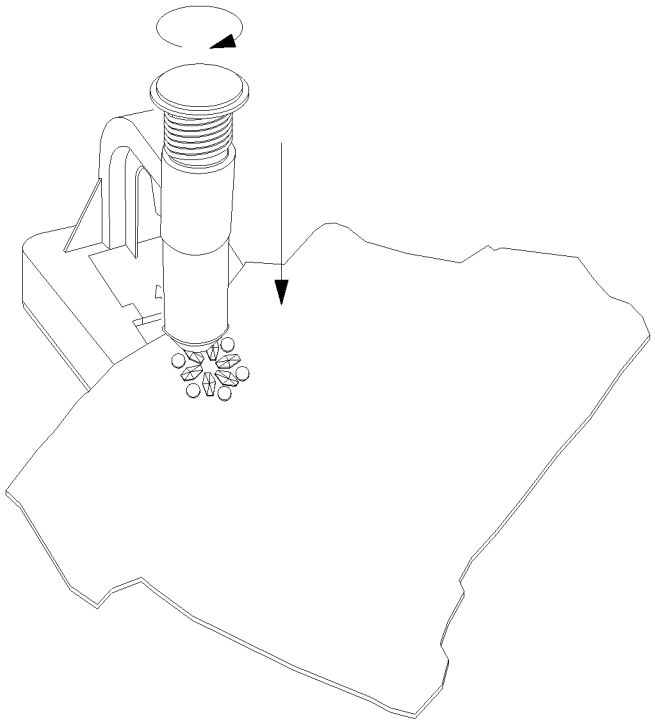


Figure 6

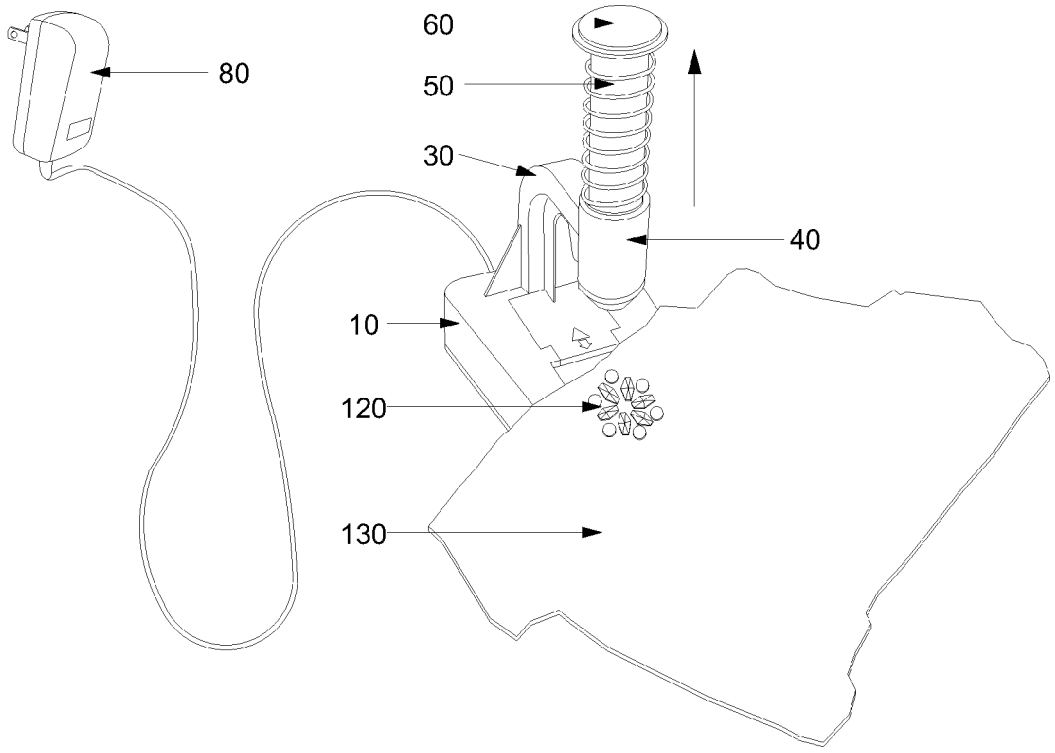



Figure 7

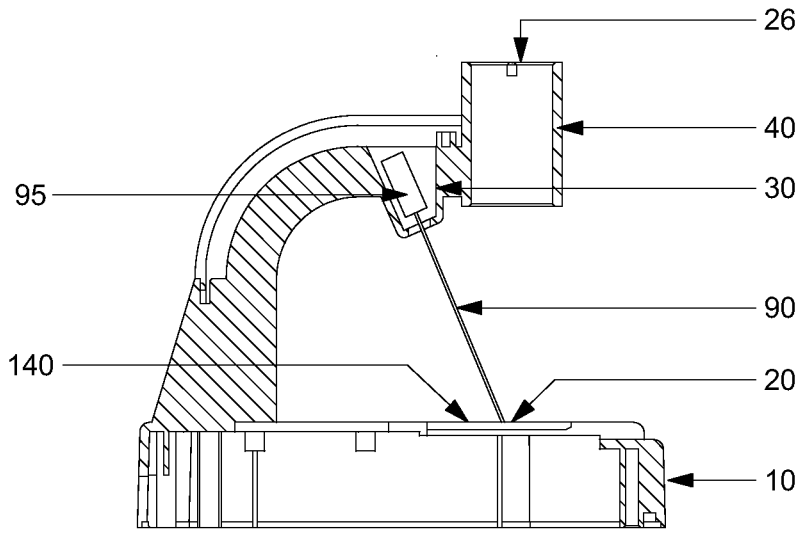



Figure 8

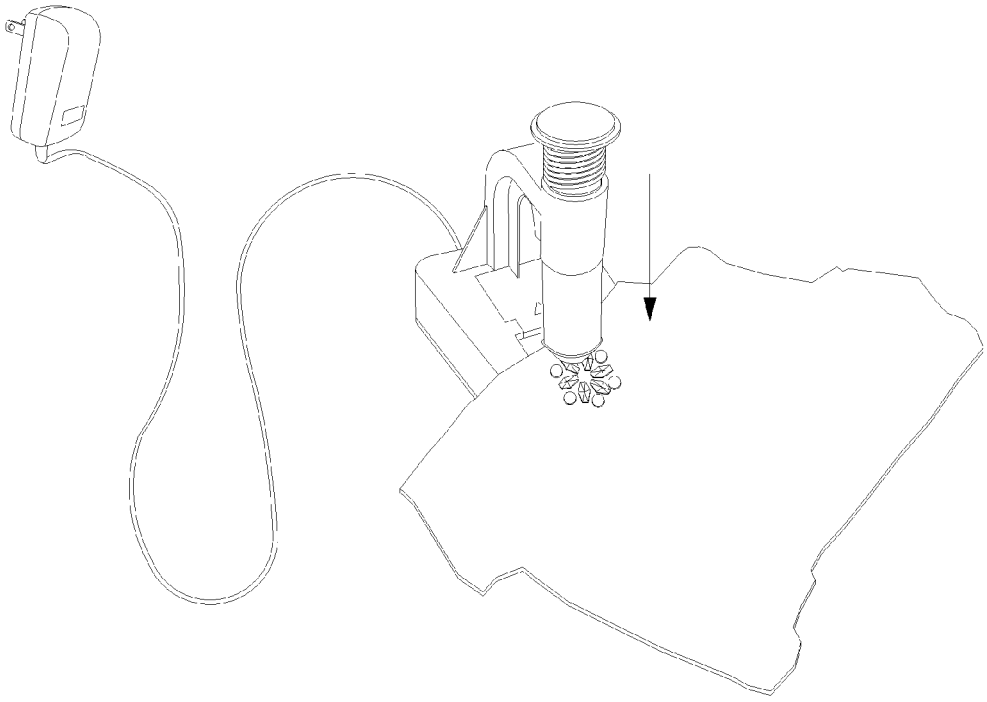


Figure 9

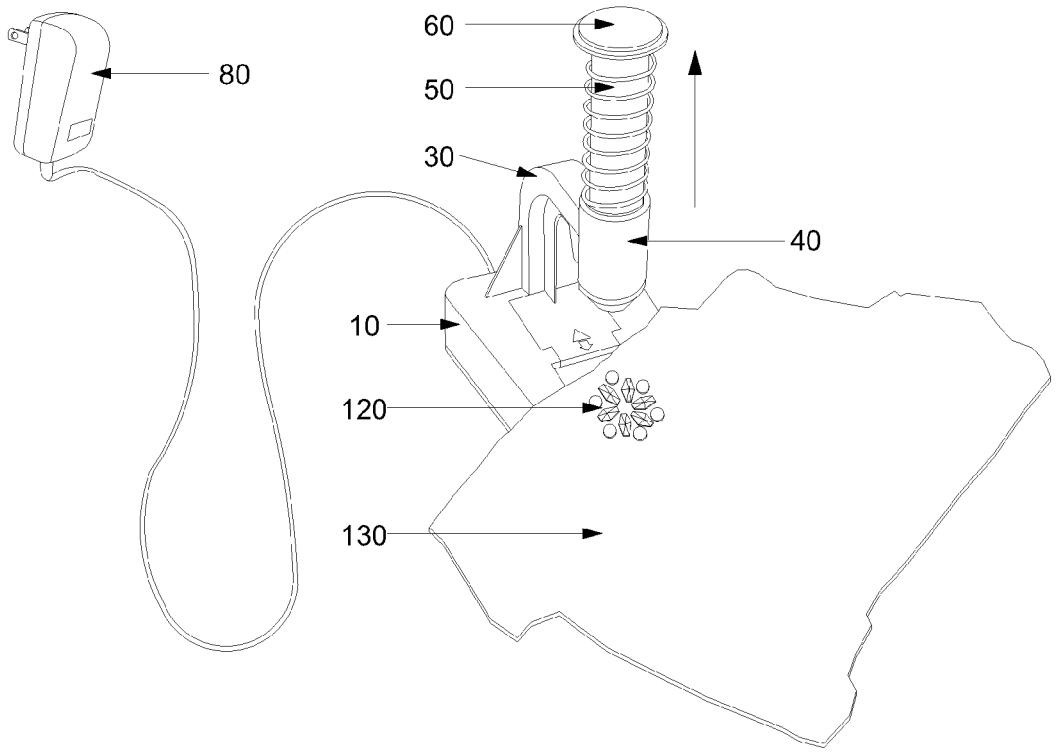



Figure 10

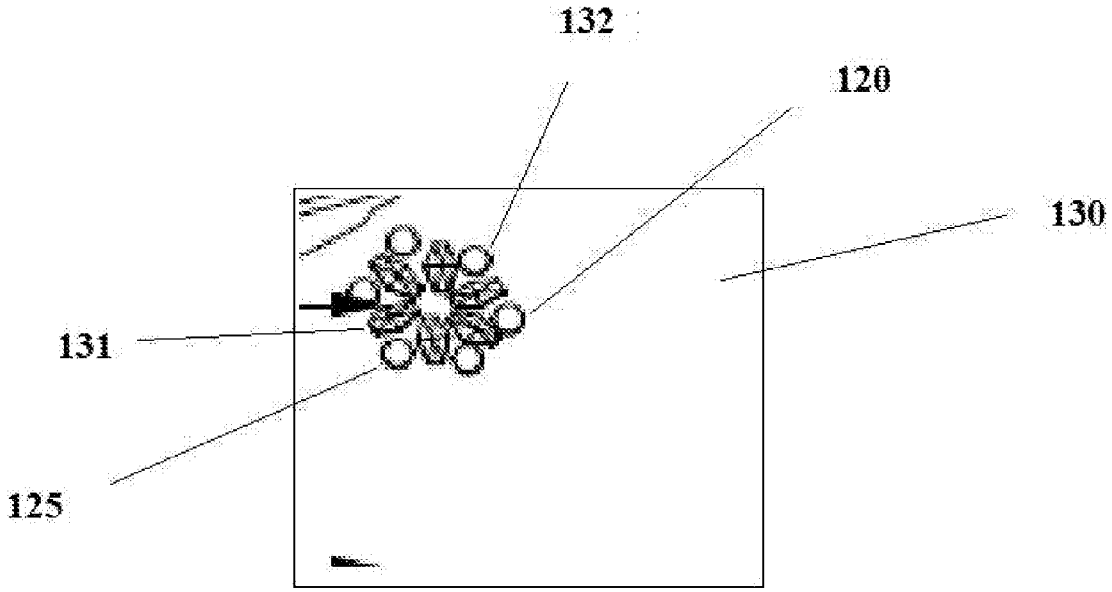



Figure 11

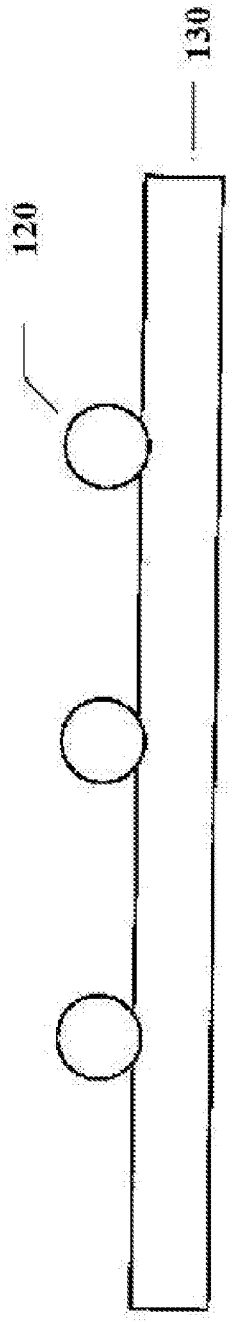



Figure 12

# DEVICE AND SYSTEM TO APPLY FACETED BEADS

## CROSS-REFERENCES TO RELATED APPLICATIONS (IF ANY)

**[0001]** This is a divisional application of application Ser. No. 12/562,232 filed Sep. 18, 2009.

## STATEMENT AS TO RIGHTS TO INVENTIONS MADE UNDER FEDERALLY-SPONSORED RESEARCH AND DEVELOPMENT (IF ANY)

**[0002]** None

## BACKGROUND OF INVENTION

**[0003]** This invention relates generally to the applying of beads to fabric and more particularly bead designs.

**[0004]** 1. Background

**[0005]** Beads have been attached at garments for thousands of years by sewing the beads on fabric by hand. This has always been a time consuming process taking hours and days of manual labor to attach the beads in the simplest of designs. This is true no matter how big or small a project.

**[0006]** 2. Description of Prior Art

**[0007]** Many individual and families like to create their own garment designs. Beads are a natural to do this with.

**[0008]** Garments designs with beads has been around for many, many years. The beads are used to form designs or to essentiate parts of the garments. The biggest use of beads is in that of making dresses and women's accessories.

**[0009]** Endless designs can be made with any color beads and all can be combined with other type of embellishments such as embroidery, screen printing and many more. With new beading technique any design is possible such as Floral, Geometric, Letters and much more. The plastic beads need to be applied to fabric in this manner where any shape or pattern can be made with precision and consistency. In the past, to get this look, there were only the imported glass and plastic beads that were sewn on by hand in India, China, Haiti, Philippine and other countries where labor is very cheap. It can be very difficult for an individual or family to do.

**[0010]** For the foregoing reasons, there is a need for a method for a person to attached beads to garments that is fast, easy, precise, consistent and economically feasible. There is still room for improvement in the art.

## SUMMARY OF INVENTION

**[0011]** The present invention relates to a method to put plastic beads on a garment.

**[0012]** Accordingly, it is an object of the present invention to place plastic beads and other items on a garment or fabric in a fast, easy, precise, consistent and economically feasible method. A current invention is a personal bead attachment device. It consists of a base with a hot plate, a piston arm, a piston holder, spring and piston forming a pressure handle. There is a power source and a laser light from the laser light generator in the piston arm.

**[0013]** The user of the bead attachment device will plug it in and turn machine and laser light using switches on from the back of the machine, in about 30 second the plate should be hot and ready to use. The user will place the fabric on top of the hot plate and place a bead on the top of fabric, the laser dot will tell the user the center of the hot plate, the exact position of where the bead will be adhered. The user will press the spring-loaded pressure handle down on top of the bead, for most fabric, all that is needed is a medium, pressure for four seconds. This action causes the bead to be melted and adhered to the fabric.

**[0014]** Using this method, endless designs can be made this way with any color beads and all can be combined with other type of embellishments such as embroidery, screen printing and many more.

**[0015]** Any design is possible including Floral, Geometric, Letters and much more. The uniqueness of this technique is that this is the first time that plastic beads are applied to fabric in this manner where any shape or pattern can be made with precision and consistency

## BRIEF DESCRIPTION OF DRAWINGS

**[0016]** Without restricting the full scope of this invention, the preferred form of this invention is illustrated in the following drawings:

**[0017]** FIG. **1** displays the bead attachment device;

**[0018]** FIG. **2** shows the back of the device;

**[0019]** FIG. **3** shows the bottom of the base;

**[0020]** FIG. **4** shows the piston holder;

**[0021]** FIG. **5** displays the piston;

**[0022]** FIG. **6** shows the piston being locked in place;

**[0023]** FIG. **7** shows upward force from the spring;

**[0024]** FIG. **8** shows the laser light generator;

**[0025]** FIG. **9** shows the beads being attached using the device;

**[0026]** FIG. **10** shows the piston releasing after the beads where attached;

**[0027]** FIG. **11** shows the fabric with the beads attached; and

**[0028]** FIG. **12** shows a bead being melted into fabric using the device.

## DETAILED DESCRIPTION

**[0029]** The following description of a method to attached beads to garments is demonstrative in nature and is not intended to limit the scope of the invention or its application of uses.

**[0030]** FIG. **1** displays the bead attachment device with the major components. It consists of a base **10** with a hot plate **20**, a piston arm **30**, a piston holder **40**, spring **50** and piston **60**. There is a power source **80** and a laser light **90** from the laser light generator **95** in the piston arm **30**.

**[0031]** The base **10** has a hot plate **20** on the top of the base **10**. The hot plate **20** is recessed from top surface of the base **10** as shown in FIG. **2**. This recess allows the hot plate **20** to be used without danger of the user being burnt. The base **10** has sides with an on/off switch **14** for the hot plate **20** and an on/off switch **16** for the laser light Generator **95** on the back side of the base **10** as shown in FIG. **2**. The bottom **12** of the base is shown in FIG. **3**. In the preferred embodiment, the bottom **12** of the base has a plurality of legs **15** extending slightly from the bottom **12**. The bottom **12** also has a vent **13** that allows heat from the hot plate **20** to escape from the base **10**. The power source **80** in the preferred embodiment is a power cord **18** that connects to a power socket **17** in the back of the base **10**.

**[0032]** The hot plate **20** is connected to the hot plate on/off switch **14** to the power source **80**.

**[0033]** Extending perpendicular from the base **10** is the piston arm **30**. The piston arm **30** curves up away from the

base **10** and at the end of the piston arm **30** is the piston holder **40**. The piston arm **30** has a plurality of fins **21** the extend perpendicular away for the piston arm **20** to provide stability to the piston arm **30**.

**[0034]** The piston holder **40**, as shown in FIG. **4** is circular in shape and has a diameter that is slightly larger than the diameter of the piston **60**. The piston holder **40** has a pair of locking ridges **26** which are across from each other.

**[0035]** The piston **60**, as shown in FIG. **5**, has a flat head **61**, a body **62** and a piston cap **64**. The piston **60** is a cylinder with the flat head **61** in the top of the piston **60** and the piston cap **64** screwing into the bottom of the piston **60**. The piston cap **64** is made of a soft, heat resistant material as it applies pressure to a bead **120** to connect it to a piece of material **130**. The piston **60** has a plurality locking channel **65** that is a channel that runs straight up and down the piston **60** until it runs at a 90 degree angle. The locking ridges **26** of the piston holder **40** fit into the locking channels **65** of the piston **60**. When the piston **60** is at the locking position the piston is turned locking the piston in place as shown in FIG. **6**. The piston **60** is placed into the spring **50** with the spring have the same diameter as the piston holder **40**. The piston **60** is placed into the piston holder **40** and then the piston cap **64** is screwed on to the bottom of the piston **60**. The piston cap **64** had a ridge that has a slightly larger diameter than the piston holder **40**. When attached to the piston holder **40** the spring **50** provides an up force to the piston **60** as show in FIG. **7** with the spring **50** being compressed between the rim of the piston holder **40** and the piston's flat head **61**.

**[0036]** A laser light **90** is generated through a laser light generator **95** which is attached to the interior of the piston arm **20** as shown in FIG. **8** in the preferred embodiment and to the power source **80** and is turned on through an on and off button **16**. The laser light **90** displays where the bead **120** should be placed on the fabric **130**. Once placed the user presses on the flat head **61** of the piston **60**. The laser light **90** goes from the laser light generator **95** to the center of the hot plate **20**.

**[0037]** The laser light **90** is a light source that sends a laser light beam dot to the center of the hot plate **20** to tell the operator on where to place the bead **120**. This improves the process because when the fabric **130** is on top of the hot plate **20**, the plate **20** is covered and it is very difficult to tell where the hot plate **20** or the center of the hot plate **20** is.

**[0038]** Although the User can place the bead **120** on fabric **130** and use the center of the piston cap **64** to align, but the laser light **90** is much more accurate and faster.

**[0039]** FIG. **9** and FIG. **10** show a close up view of beads **120** being attached to garment **130**. It shows how the plastic beads are bonded to fabric. This is the goal of the current invention to do this where any shape or pattern can be made with precision and consistency.

**[0040]** In the preferred embodiment, plastic or acrylic beads would be used, but any material can be used so long as it bonds to the garment **130** under proper heat and pressure that is safe for the garment **130**. Multiple colors, shapes and/or textures of beads can be used for this invention or well as different types of garments **130**.

**[0041]** Beside the revolutionary primary function of this device **1** and process being used in the machine of Melting and bonding any type of plastic beads **120** to fabric **130**, the device **1** can be used with any Hot-Glue based decorative items, these are decorative items that have Melt able glue coating on them, such as metal transfers **131** and rhinestones **132**. The glue-based item, like a metal transfer **131** or rhinestones **132** or glue-based beads **125** is placed just like the bead **120** with the laser light **90** displaying where the bead **120** should be placed on the fabric **130**. Once placed the user presses on the flat head of the piston **60** pressing the glue-based beads **120** with enough force to heat up and melt the glue on the back of the item and attached it to the fabric **130**.

**[0042]** FIG. **11** shows a sample pattern or artwork **110** that can be used with this process.

**[0043]** To use the bead attachment device, a user would plug and turn machine and laser light on from the back of the device, in about 30 second the plate should be hot and ready to use. The user will place the fabric **130** on top of the hot plate and place a bead **120** on the top of fabric **130**; the laser dot **140** will tell the user the exact position of where the bead **120** will be adhered. The user will press the piston **60** down on top of the bead **120**, for most fabric **130**, all that is needed is a medium, pressure for four seconds. This action causes the bead **120** to be melted and adhered to the fabric **130** as shown in FIG. **12**.

**[0044]** Although many features, functions, and advantages of the present invention have been described in this specification, together with details of the structure of specific embodiments thereof, the description as a whole is illustrative only, and substitutions may be made in detail, especially in matters of shape, dimension and arrangement of elements within the principles of the invention to the full extent indicated by the broad, general meaning of the terms in which the claims are expressed.

## Advantages

**[0045]** The previously described version of the present invention has many advantages, including many elements missing in all prior art. It provides a method of applying plastic beads to fabric where any shape or pattern can be made with speed, precision and consistency. Although many features, functions, and advantages of the present invention have been described in this specification, together with details of the structure of specific embodiments thereof, the description as a whole is illustrative only, and substitutions may be made in detail, especially in matters of shape, dimension and arrangement of elements within the principles of the invention to the full extent indicated by the broad, general meaning of the terms in which the claims are expressed. Therefore, the point and scope of the appended claims should not be limited to the description of the preferred versions contained herein.

That which is claimed is:

**1**. A method for attaching items to fabric comprising:

having a base with a hot plate, a piston arm connected to said base and to a piston holder, a spring and piston forming a pressure handle which fits into the piston holder with a power source and a laser light generator and having said piston apply force to form a bond.

**2**. A method according to claim **1** further comprising:

having said laser light show where the item is to be placed.

**3**. A method according to claim **1** further comprising:

having a power source connected to said hot plate and said laser light.

**4**. A method according to claim **3** further comprising:

having a hot plate on/off switch connect to said power source connected and said hot plate and having an laser light on/off switch connected to said laser light and an on/off switch connected to said power source.

**5**. A method according to claim **1** further comprising:
having an on/off switch connect to said power source connected and said hot plate and having an on/off switch connected to said laser light and said power source.

**6**. A method according to claim **1** further comprising:
having said laser light generator within the piston arm.

**7**. A method according to claim **6** further comprising:
having a laser light generated from said laser light generator going through a hole in the piston arm to the center of the hot plate.

**8**. A method according to claim **7** further comprising:
where an item to be connected to a fabric is placed where the laser light points on the center of said hot plate.

**9**. A method according to claim **1** further comprising:
where an item is connected to fabric by heating up the hot plate having the piston apply force to the item and melting the bottom of the item into the fabric to form a bond.

**10**. A method according to claim **1** further comprising:
having the piston being able to lock in a downward position for storage and portability.

**11**. A method for attaching items to fabric comprising:
having a user use a bead attachment device where said user would use a laser light on from the back of the device to indentify where to place the bead which would be on fabric located above a hot plate which is in the base of the device, the user presses a piston contained by a piston holder in the base of the device down on top of the bead, this causes the bead to be melted and adhered to the fabric.

**12**. A method according to claim **11** further comprising:
where the users presses for four seconds.

**13**. A method according to claim **11** further comprising:
having a power source connected to said hot plate and said laser light.

**14**. A method according to claim **13** further comprising:
having a hot plate on/off switch connect to said power source connected and said hot plate and having an laser light on/off switch connected to said laser light and an on/off switch connected to said power source.

**15**. A method according to claim **11** further comprising:
having an on/off switch connect to said power source connected and said hot plate and having an on/off switch connected to said laser light and said power source.

**16**. A method according to claim **11** further comprising:
having the piston being able to lock in a downward position for storage and portability.

* * * * *