



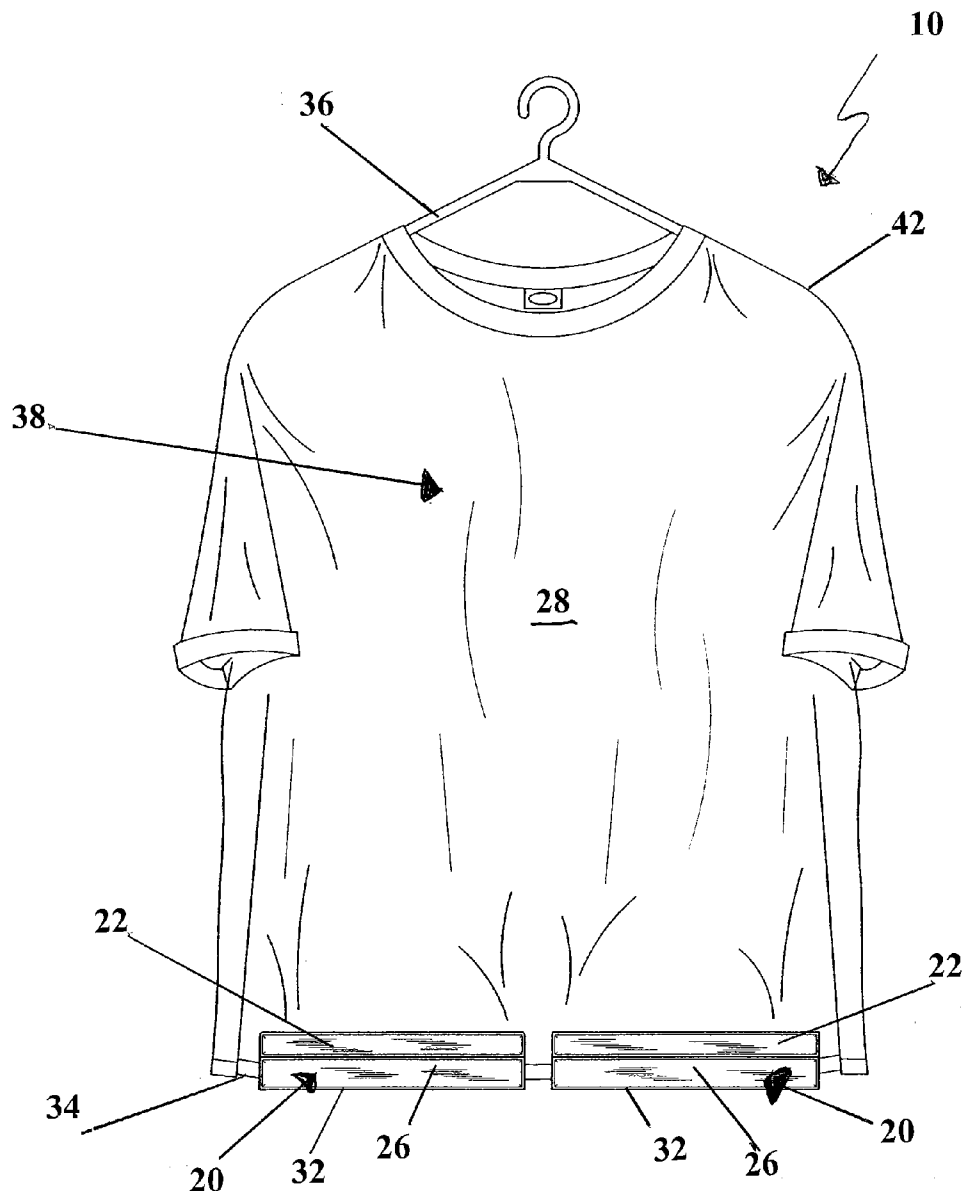
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(19) **United States**(12) **Patent Application Publication**
Burroughs(10) **Pub. No.: US 2007/0295769 A1**(43) **Pub. Date: Dec. 27, 2007**(54) **WRINKLE REMOVAL SYSTEM****Publication Classification**(76) Inventor: **Kathy Burroughs**, Hollysprings,
NC (US)(51) **Int. Cl.**
A41D 27/22 (2006.01)(52) **U.S. Cl.** 223/85(57) **ABSTRACT**

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A system and a method for removing wrinkles from garments, fabrics and the like is provided. The wrinkle removal system comprises holding a garment in position on a hanger, or like device, and attaching one or more wrinkle removing devices having at least one magnet. The wrinkle removing devices work in connection with gravity to pull wrinkles out of the garment.

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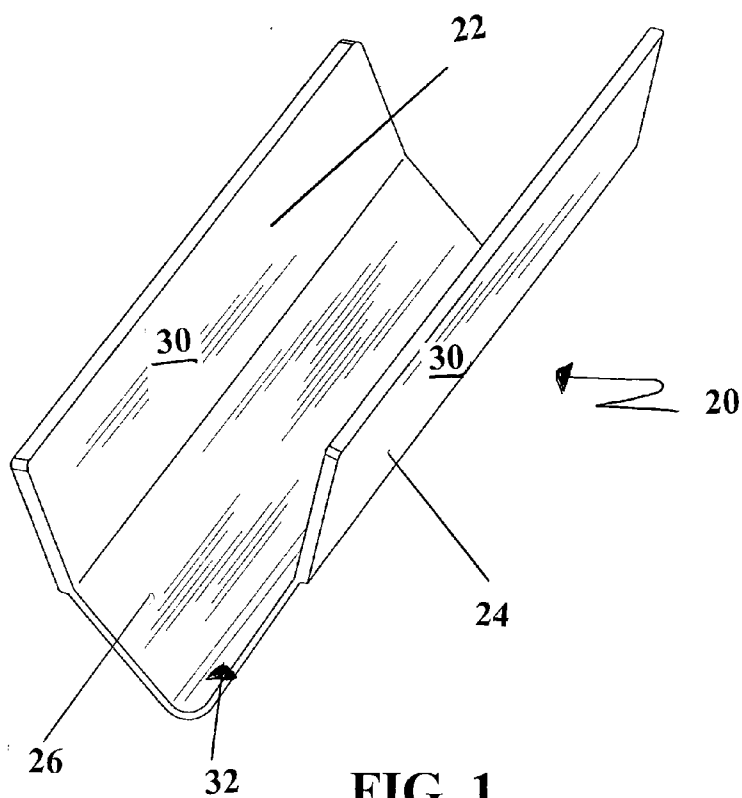


FIG. 1

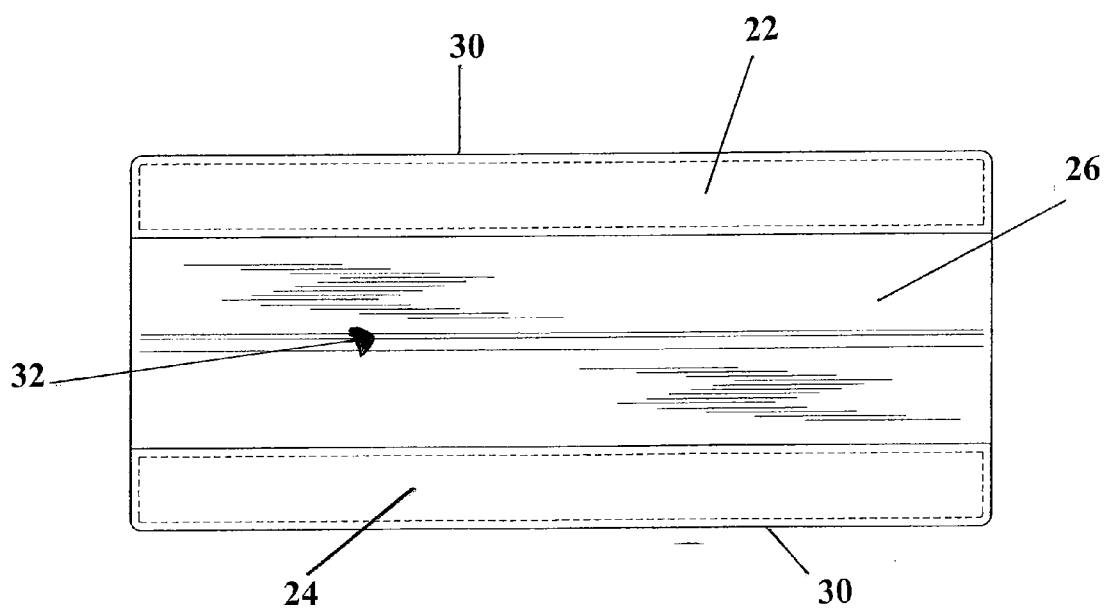


FIG. 2

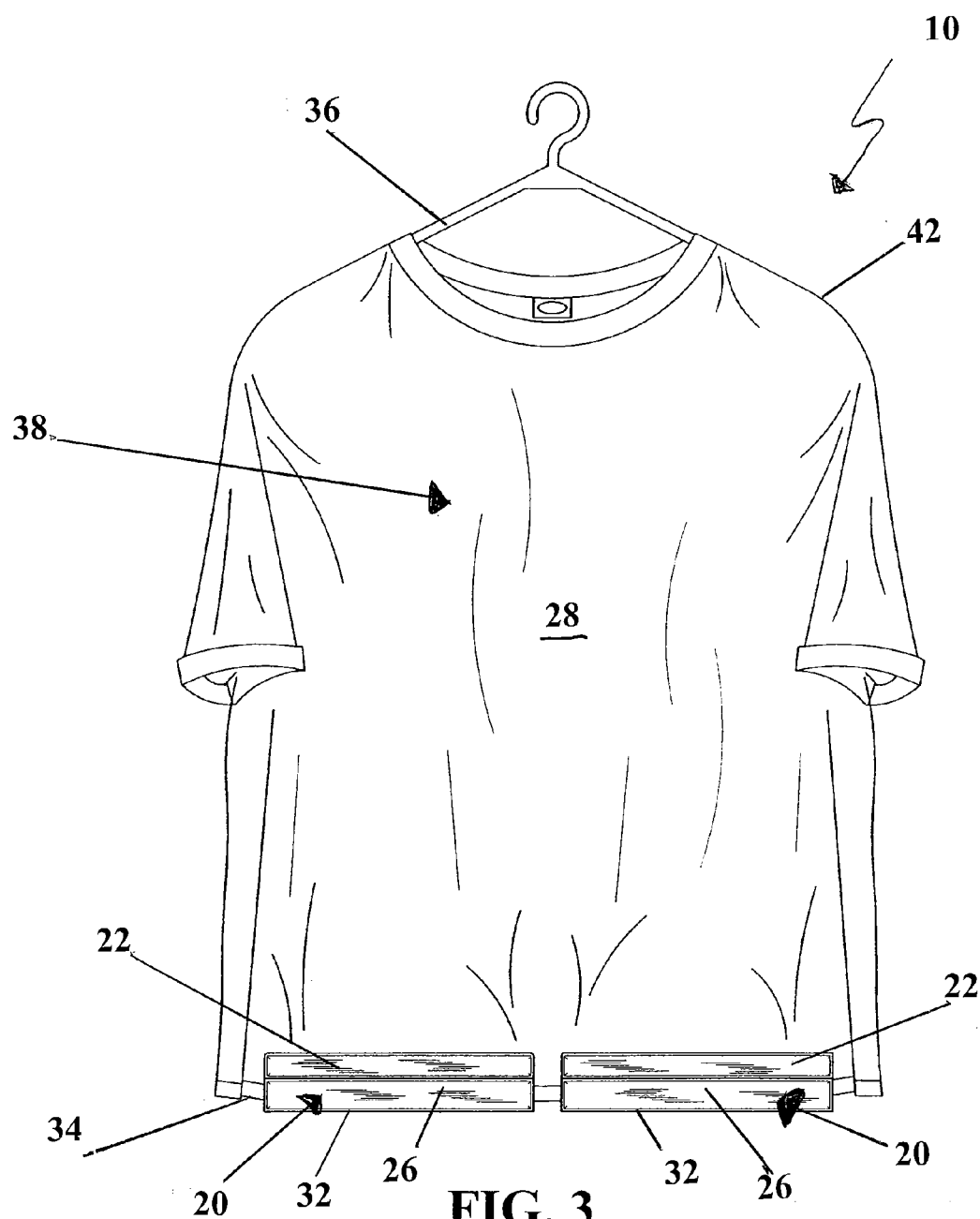


FIG. 3

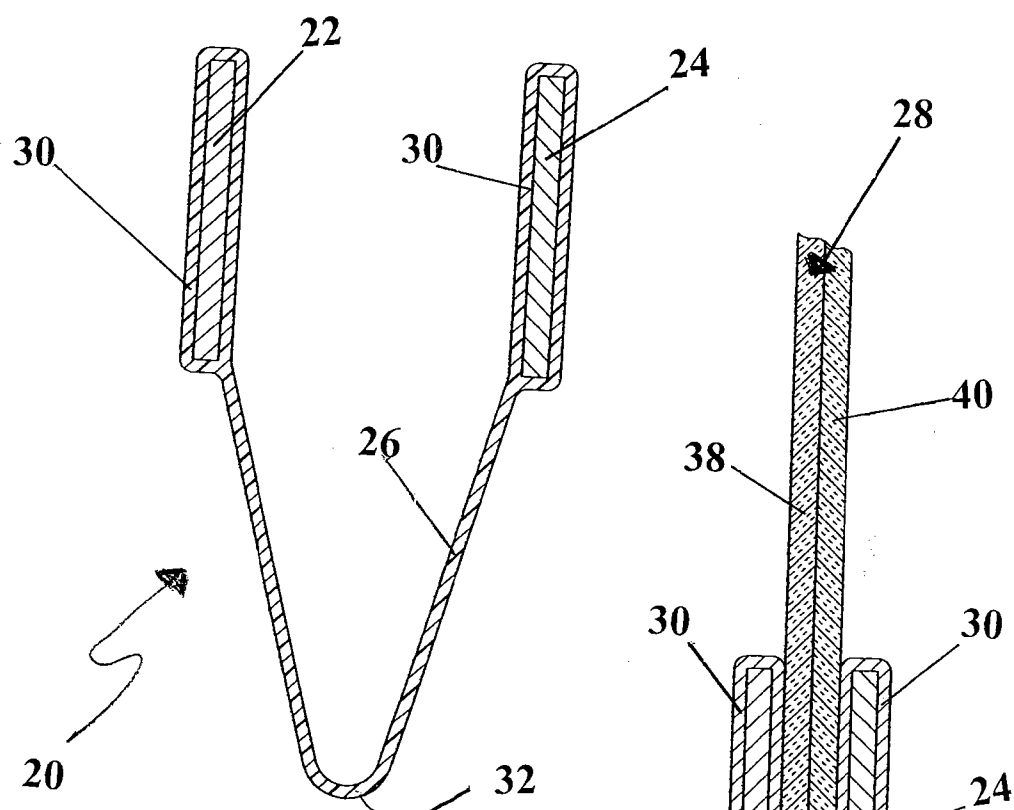


FIG. 4

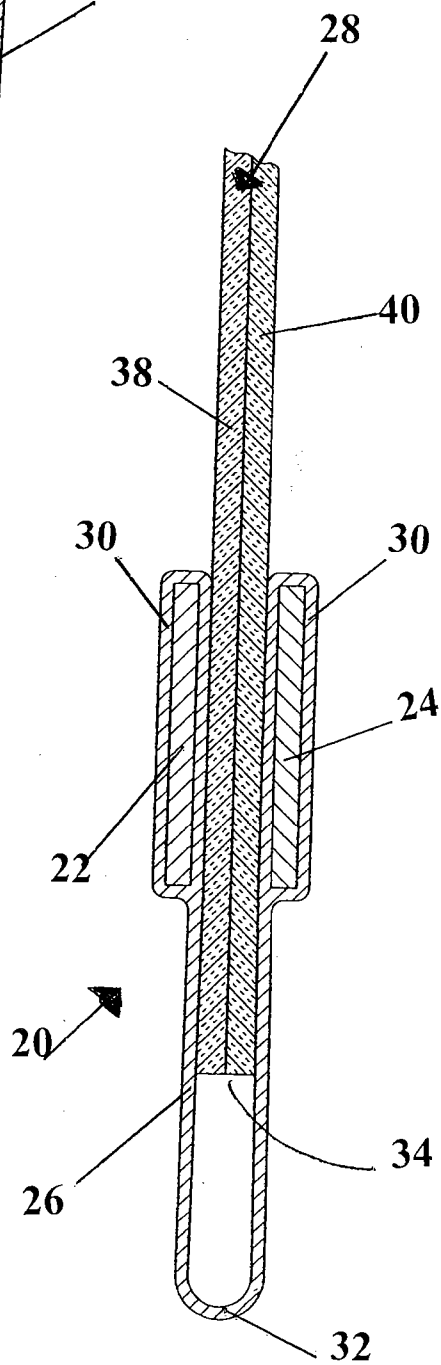
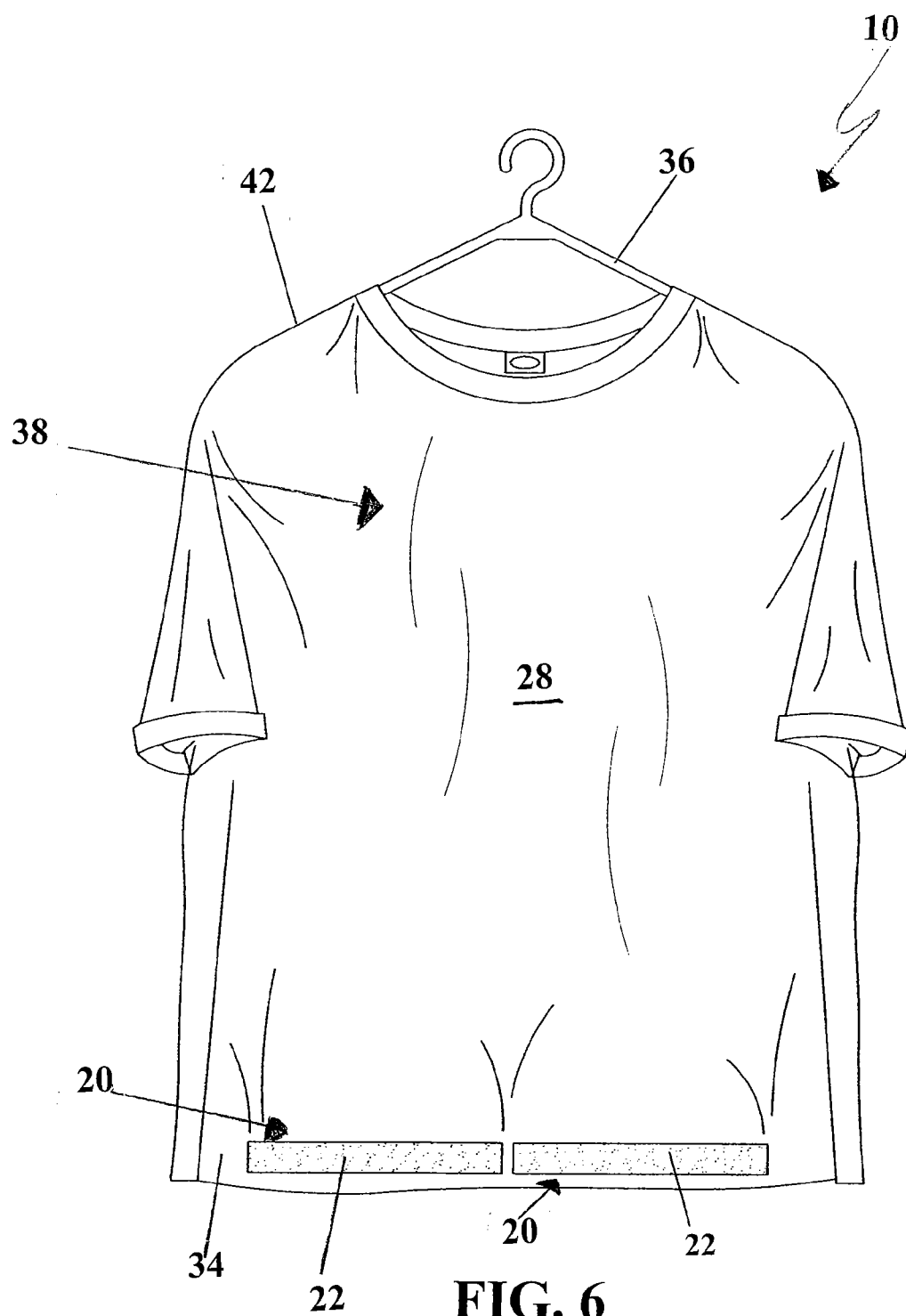


FIG. 5



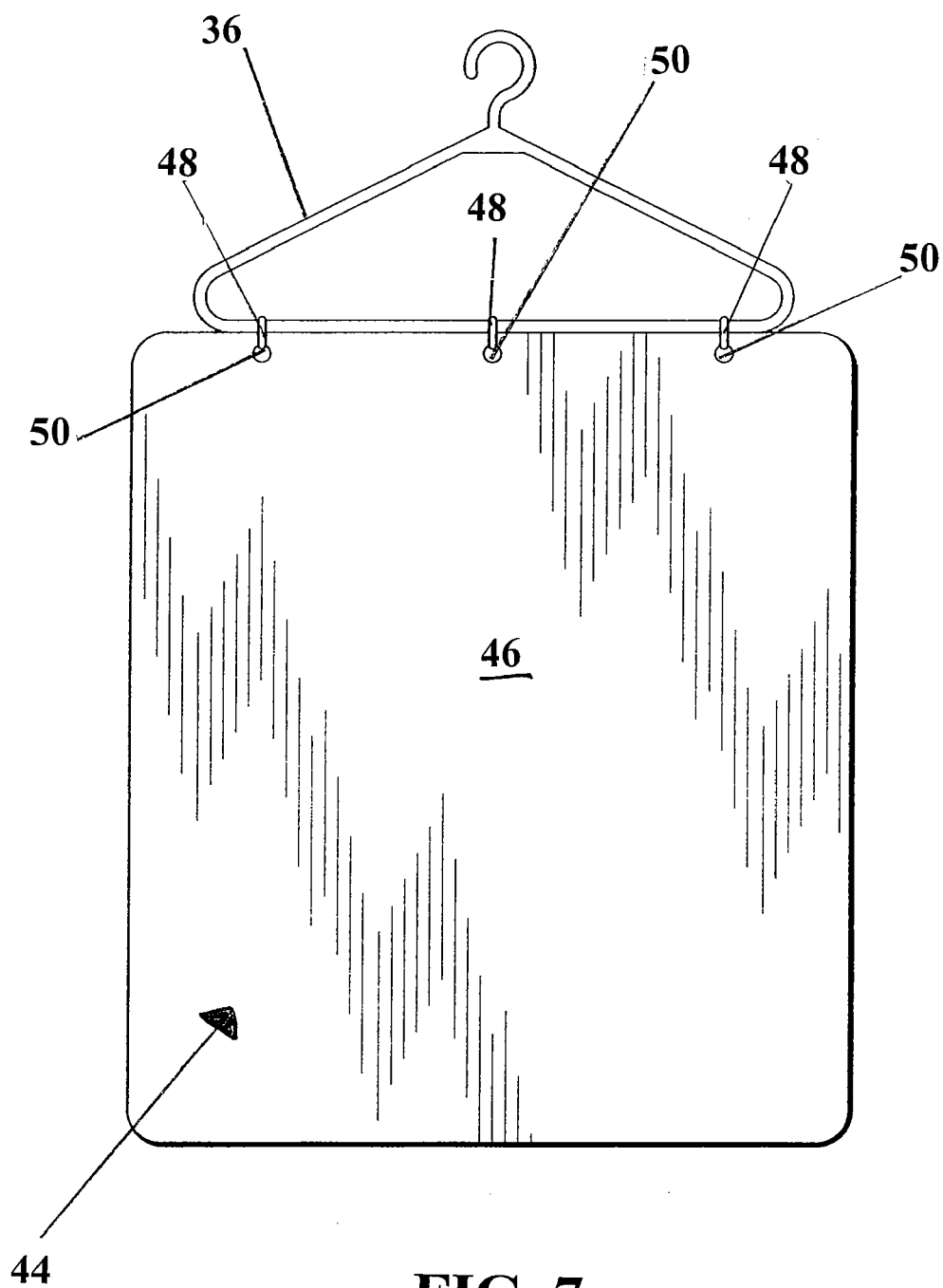


FIG. 7

WRINKLE REMOVAL SYSTEM

FIELD OF THE INVENTION

[0001] The present invention relates to wrinkle removal devices and systems. More specifically, the present invention relates to a system for removing wrinkles from garments and other fabrics without the need for the application of heat.

BACKGROUND OF THE INVENTION

[0002] Devices for removing wrinkles from clothing, such as irons, steamers and the like, are well known in the art. These devices generally require the application of heat and often times moisture to smooth and de-wrinkle the clothing or fabric. However, such devices have many drawbacks as the user must work with a hot device which may potentially score or damage the fabric, if not the user or those around the user. Additionally, these devices often introduce wrinkles if not used properly. Moreover, these devices require the users time and attention in order to work the iron or the steamer back and forth over the garment to smooth and de-wrinkle same.

[0003] Accordingly, there is a need in the art for a wrinkle removing device and system that removes wrinkles from garments, fabrics, clothing and the like without the application of heat and which requires only minimal time by the user.

BRIEF SUMMARY OF THE INVENTION

[0004] The wrinkle removal system comprises a means for holding a garment in a hanging position. The means for hanging a garment may comprise a hanger, or the like, and may further comprise a shaping member for shaping a garment placed thereon. A first magnet and a second magnet are magnetically attracted together and positioned on at least a portion of the garment. The first and second magnets comprise a weight applied in connection with the force of gravity to pull upon the garment and draw wrinkles out of same. The first and second magnets may further comprise a wrinkle removing device having a flexible hinge interconnecting same. The wrinkle removing device and/or magnets may be used in combination with the means for holding a garment to form a wrinkle removal system that removes wrinkles from garments, fabrics, clothing, and the like, without the application of heat and requiring minimal time and/or effort by the user.

[0005] The primary object of the wrinkle removal system is to provide a method of pulling wrinkles out of clothing, garments and the like without the need for the application of heat.

[0006] Other aspects, features and details of the present invention can be more completely understood by reference to the following detailed description in conjunction with the drawings, and from the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] The invention will now be described, by way of example, with reference to the attached drawings, of which:

[0008] FIG. 1 comprises a perspective view of a wrinkle removal device for use in the wrinkle removal system according to one embodiment.

[0009] FIG. 2 shows a plan view of the wrinkle removal device of FIG. 1 in a fully extended or flattened position.

[0010] FIG. 3 shows an embodiment of the wrinkle removal system.

[0011] FIG. 4 shows a cross-sectional view of the wrinkle removal device of FIG. 1.

[0012] FIG. 5 shows a cross-sectional view of the wrinkle removal device as used in FIG. 3.

[0013] FIG. 6 shows a wrinkle removal system according to an alternative embodiment.

[0014] FIG. 7 shows a means for hanging a garment or the like having a shaping-member as used in an embodiment of the wrinkle removal system.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

[0015] Referring to the Figures, the wrinkle removal system disclosed utilizes the application of weight and the force of gravity to de-wrinkle and/or stretch fabrics, garments, clothing items and the like. The system requires the user's attention only to initially "set-up" or hang the garment item and place the wrinkle removal device(s) thereon. Thus, the system requires very little time and/or effort of the user to de-wrinkle the clothing item or garment. Moreover, the wrinkle removal system disclosed does not require the application of heat or moisture to de-wrinkle items. However, the application of heat or moisture may further enhance the benefits of the system as more fully set forth herein below.

[0016] The system disclosed is preferably for use with items which can be hung from, for example, a hanger, such as a triangular shirt hanger, a clip-type hanger, or like device, and may be used with hanger devices of various types and sizes depending upon the item to be de-wrinkled, its size, and shape. Likewise, any clothing items, garments, fabrics and the like may be de-wrinkled by the wrinkle removal system.

[0017] FIGS. 1 & 2 show an embodiment of a wrinkle removal device 20 as used in one embodiment of the wrinkle removal system 10. As can be seen, the wrinkle removal device 20 comprises a first magnetic strip 22 and a second magnetic strip 24 integrally connected by a flexible hinge 26. The first 22 and second 24 magnetic strips comprise a weight sufficient to pull upon and/or stretch the garment 28 or fabric, but not heavy enough to damage same. The first 22 and second 24 magnetic strips are preferably flexible, high-strength magnets. More preferably, the magnets 22, 24 are 4 to 5 ppi, 0.125 inches thick, 1 inch wide, and may be of any length. The magnetic strips 22, 24 comprise multi-pole magnets that are magnetized over the entire magnet, as opposed to strips of N and S polarity. The magnetic strength of the first 22 and/or second 24 magnet is sufficient to attract another magnet or magnetically attractable member (such as a metallic strip) through a garment 28, and preferably through a variety of fabric types and thicknesses. While specific dimensions and specifications are disclosed, it is understood by one of the skill in the art that any size or type of magnet may be used which comprises sufficient weight to accomplish the purposes provided and sufficient attracting force to retain same in use with the wrinkle removal system 10. In addition to the magnetic strip 22 or 24, as indicated above, additional or alternative materials may be used to add weight to the wrinkle removal device 20 such as, for example, steel or other metals applied in combination with the magnet, and the like. Likewise, the type, size and strength of the magnets may be varied without loss of

efficiency. The weight, or additional weights or devices, may be added to the magnetic strip to increase or create the weight, and thus, the “pulling force,” on the garment 28.

[0018] In the embodiment shown in FIGS. 1-5, the magnetic strips 22, 24 (and, if applicable, attached weight(s) or weighted devices are contained within, or surrounded by a covering 30, such as a plastic covering or the like. The magnet(s) and/or weight(s) may be coated in plastic. Alternatively a paint, such as enamel paint, may be applied to keep the magnet 22 or 24 and/or weight from marking the clothing. Any type of coating or paint may be applied to protect to the magnetic strips 22, 24 and the materials 28 they are placed in contact with from discoloration, tearing and other damage. The covering 30 may further be integrally connected with the flexible hinge 26, as shown in FIG. 1, and may comprise the same or a similar material.

[0019] Referring to FIG. 2, the preferred embodiment of the wrinkle removal device 20 comprises a pair of magnetic strips 22, 24 of substantially equal dimensions at opposite sides of, and preferably attached to or contained within a material, such as the plastic covering 30 described above. The magnetic strips 22, 24 may be contained within sleeves of the material and/or may be otherwise attached by a fastening device and/or adhesive. The flexible hinge 26 of the wrinkle removal device 20 is located between the pair of magnetic strips 22, 24 and preferably comprises a fold 32 along a portion thereof to allow for the contact of the first magnetic strip 22 with the second magnetic strip 24 when the hinge 26 is folded at fold 32, or more preferably to allow a magnetic interaction between the first 22 and the second 24 magnetic strips.

[0020] FIG. 3 shows a wrinkle removal device 20 as used in the wrinkle removal system 10 disclosed in an embodiment herein. Depending on the size of the garment 28, one or a plurality of wrinkle removal devices 20 may be applied to a garment 28. In FIG. 3, two wrinkle removal devices 20 are applied to the garment 28. Preferably, the number of wrinkle removal devices used will vary with the size of the garment 28, the size of the wrinkle removal device(s) 20 and/or the weight to be applied to the garment 28, any one of which may be based upon user preferences. In the embodiment disclosed, a pair of wrinkle removal devices 20 are used and apply weight to the garment 28 to de-wrinkle and stretch the garment 28. Each wrinkle removal device 20 is positioned at the end 34 of the garment 28, opposite a means for hanging the garment 36 which is, preferably a rigid connection. As a result, the wrinkle removal device 20 works in connection gravity to apply a downward force to pull downward upon the garment 28 that is fixed in position at its top, due to the rigid connection or support of the garment 28 on the means for hanging same 36. The garment 28 is stretched and de-wrinkled.

[0021] As can be seen in FIGS. 3, 4 and 5, a portion of each wrinkle removal device 20 is located on both a first 38 and a second 40 side of the garment 28. Namely, the first magnetic strip 22 is located on a first side 38 of the garment 28, the fold 32 of the flexible hinge 26 is located at or near the bottom 34 of the garment 28, and the second magnetic strip 24 is located on a second side 40 of the garment 28, preferably in an approximate relation to the location of the first magnetic strip 22 so that the first and second magnetic strips are magnetically attracted together. The magnetic attraction holds the wrinkle removal device 20 in position on the garment 28.

[0022] As a result of its position, the wrinkle removal device 20 sandwiches the garment 28 between the first 22 and the second 24 magnetic strips (see FIG. 5). In other words, the first magnetic strip 22 is magnetically attracted to the second magnetic strip 24 (which is positioned on the opposite side of the garment) through the garment 28. The magnetic attraction forces are strong enough to retain the wrinkle removing device 20 upon the garment 28 without the need for additional clips or other attaching means.

[0023] In the embodiment shown in FIG. 5, the wrinkle removal device 20 has a flexible hinge 26 integrally connecting the first magnetic strip 22 with the second magnetic strip 24 to form a single wrinkle removal device 20. The flexible hinge 26 permits easy folding and attachment or detachment of the wrinkle removal device 20 from the garment 28, as both magnetic attraction members 22, 24 are contained in a single article. Thus, a user could hold the garment 28 in one hand and attach the wrinkle removal device 20 with the other hand.

[0024] FIG. 6 demonstrates an alternative embodiment of a wrinkle removal device 20 disclosed herein. Specifically, the wrinkle removal device 20 comprises one or more magnets or magnetic strips 22, 24 applied to the garment 28 at the base 34 thereof in the manner described above. Namely, a first magnetic strip 22 is placed on a first side 38 of a garment 28 and a second magnetic strip 24 is placed on second side 40 of the garment 28 (not shown). The magnetic strips are magnetically attracted to each other from opposite sides of the garment 28 and secure the garment 28 there between. Further, the first 22 and second 24 magnetic strips comprise a weight that is sufficient to pull upon the garment 28 in connection with the force of gravity to stretch and de-wrinkle the garment 28. Alternatively, a weight may be added to one or more of the magnetic strips via an attachment device and/or adhesive, or via the coating or other means available in the art. In the embodiment of FIG. 6, the magnetic strips 22, 24 are not connected by a flexible hinge. The magnetic strips may be contained in a sheath or may be coated, such as described above, but such covering 30 or coating is not required.

[0025] In the embodiment specifically shown in FIG. 6, a plurality of magnetic strips are used. Namely, a first 22 and a second magnetic strip 24 are magnetically attracted to a third and/or a fourth magnetic strip (not shown) positioned upon the opposite side of the article. (The third and fourth magnetic strips and their position on the garment 28 comprise an approximately mirror image of that shown in FIG. 6 and are therefore not specifically shown herein).

[0026] In a preferred embodiment, in order to accomplish de-wrinkling of the garment 28, or the like in the embodiments of the wrinkle removal system disclosed, the item is hung in a vertical position. However, it is contemplated that the system may be adapted for use with alternative arrangements, such as a horizontally configured structure. The wrinkle removal system 10 involves using hangers 36 of various sizes and types, depending upon the size and the type of garment, material, or other product to be held and de-wrinkled. Common triangular hangers, clip-type hangers, and the like may be used in connection with the wrinkle removal system 10. Preferably, the device 36 comprises a rigid or substantially rigid support of the item 28 to be hung which is positioned at or near, and in contact with, an end 42 of the item 28. The device 36 is capable of resisting and/or withstanding the force applied by the attached wrinkle

removal device 20 or devices. Further, the means for hanging the item 36 is of sufficient size and strength to retain the item 28 in position. Preferably, a hanger or like device is used that is sufficient in size and strength to support and retain the garment 28 or clothing item in position with the attached weight of the wrinkle removal device 20 or devices thereon.

[0027] By hanging the garment 28 on one end 42, and attaching a wrinkle removing device 20 or magnetic strip 22 or 24 at the opposite end 34 of the garment 28, (see FIGS. 3 & 6) the weight of the wrinkle removal device 20, or magnetic strips 22 or 24, work in connection with the downward force of gravity to draw upon, and pull the fabric or garment 28 in a downward direction thereby stretching and de-wrinkling same.

[0028] In addition to the foregoing means for hanging a garment 36 or the like, FIG. 7 discloses an alternative embodiment of a hanger mechanism used in the wrinkle removal system 10. Specifically, a means for hanging an item 36 may be provided with a shaping member 44, or shape-forming member, that provides a surface area 46 for appropriately shaping the article of clothing, garment 28 or the like positioned thereon. In a preferred embodiment, the shaping member 44 comprises a plastic sheet, such as a polypropylene sheet, although other materials such as alternative plastics, metal, and the like may be used. As a non-limiting example, a common shirt, t-shirt, or skirt may comprise a generally rectangular area from left seam to right seam (see, for example, FIG. 3). Thus, a generally rectangular sheet or surface area 46 may be used as the shaping member 44 for reshaping or maintaining the shape of the garment 28 as it is de-wrinkled. While a rectangular shape is specifically shown and described, other shapes are applicable. Any shape or size shaping member 44 may be used to accommodate the shape and size of the article to which the shaping member is applied.

[0029] The shaping member 44 may be secured to the hanger 36 by removable connection means 48, such as bundle ties, clips, zip-ties, fabric ties, rivets or other means commonly known in the art. The connection means 48 are preferably inserted through small holes 50 in the shaping member 44 and connected to at least a portion of the hanger mechanism 36. Through the use of removable connection means 48, the shaping member 44 can be interchanged with different size and shape members to accommodate different garment types, sizes and shapes, other clothing items and the like. Alternatively, the shaping member 44 may be removed entirely depending on the user's preferences. Alternatively, the shaping member 44 may be integrally connected as a portion of the hanger mechanism 36 itself.

[0030] When in use, the garment 28 is placed over the hanger 36 having a shaping member 44 so that the garment 28 is positioned to be formed into the appropriate shape. One or more wrinkle removal devices 20 or magnetic strips 22, 24 are attached at the bottom 34 of the garment 28, so that a first magnetic strip 22 is positioned on a first side 38 of garment 28 and a second magnetic strip 24 is positioned on a second side 40 of the garment 28 and magnetically attracted to the first strip. The shaping member 44 may further be positioned between these magnetic strips 22, 24 or may be in a position terminating above same. The wrinkle removal device 20 may be used on a garment 28 that is damp or slightly moistened to reshape the garment 28 and avoid the development of wrinkles. However, one skilled in the art

would understand that the wrinkle removing device may be attached to any garment in need of de-wrinkling.

[0031] In use, the method of a preferred embodiment includes the steps of hanging an item 28 on one end 42 thereof with an appropriate size and type of hanger mechanism 36, dampening the item with a fine mist of water from a spray bottle (although such an application of water is not necessary), gentle tugging to smooth out the wrinkles in the item, and attaching the wrinkle removal device 20 or devices on the bottom hem or cuff of the item by positioning a first magnetic strip 22 on a first side 38 of the garment 28, at the bottom 34 thereof, and positioning a second magnetic strip 24 on a second side 40 of the garment 28 so that it is magnetically attracted to the first strip and is secured in position on the garment 28. The weight of these magnetic strips 22, 24 on the hanging garment 28 operate in connection with gravity to pull or stretch the garment 28 and draw the wrinkles out of the item. The wrinkle removal devices weigh down the item and hold it taut while it dries if wet, thereby also keeping it from re-wrinkling while it dries. In addition to the above, a person may attach the wrinkle removal devices and/or apply the wrinkle removal system 10 to clothing after laundering, ironing, steaming, or dry cleaning to keep same from re-wrinkling.

[0032] As a result, the user saves significant time in not having to physically iron or steam a garment. However, prior, or subsequent to, the use of the wrinkle removal system, the material may be ironed or steamed, if preferred. As no ironing or steaming is needed, the system disclosed is more effective at de-wrinkling materials, such as knit material, as new wrinkles do not form during the de-wrinkling process. For example, ironing, on occasion, adds wrinkles because the material moves underneath the device which results in the iron setting the wrinkles into the item. Additionally, the wrinkle removal system does not scorch or damage an item via excessive heat and does not involve the use of electricity. Likewise, the system is safe for use by all users as heat and electricity are not involved.

[0033] As is understood by the foregoing, in a preferred embodiment, the wrinkle removal system 10 comprises a method to pull wrinkles out of clothing 28 that would normally require ironing or steaming to accomplish the task. Weight is used to pull the wrinkles out of the clothing in combination with the additional features used and disclosed herein. By weighing down the fabric with a magnetic strip 22 or 24 or a plurality of magnetic strips, a sufficient amount of downward force is applied to pull wrinkles out. In addition, the application of weight also maintains the fabric in a taut position to prevent wrinkles after laundering, ironing, steaming or dry cleaning. Thus, the wrinkle removal device 20 and system 10 may be applied at any time to a garment 28 to de-wrinkle or maintain a wrinkle-free state.

[0034] Although the present invention has been described with reference to preferred embodiments, persons skilled in the art will recognize that changes may be made in form and detail without departing from the spirit and scope of the invention.

[0035] While multiple embodiments are disclosed, still other embodiments of the present invention will become apparent to those skilled in the art from the following detailed description. As will be apparent, the invention is capable of modifications in various obvious aspects, all without departing from the spirit and scope of the present

invention. Accordingly, the drawings and detailed description are to be regarded as illustrative in nature and not restrictive.

I claim:

1. A wrinkle removal system comprising:
a means for holding a garment in a hanging position;
a first magnet;
a second magnet for interacting with the first magnet;
wherein the first and second magnets are positioned on a first and a second side of the garment and the first and second magnets comprise a weight that is applied to the garment, which in combination with the force of gravity is capable of removing wrinkles from the garment.
2. The wrinkle removal system of claim 1, wherein the first and second magnets further comprise a flexible hinge connecting the magnets together.
3. The wrinkle removal system of claim 1, wherein at least one of the first and second magnets comprise a covering.
4. The wrinkle removal system of claim 1, wherein the first magnet comprises a covering, the second magnet comprises a covering, and the covering comprises a flexible hinge therebetween.
5. The wrinkle removal system of claim 1, wherein the means for holding a garment comprises a hanger.
6. The wrinkle removal system of claim 1, wherein the means for holding a garment further comprises a shaping member.
7. The wrinkle removal system of claim 1, further comprising a plurality of pairs of magnets for de-wrinkling the garment.

8. The wrinkle removal system of claim 1, wherein the first and second magnets are positioned near a end of the garment opposite to its point of contact with the means for holding the garment.

9. A wrinkle removal system comprising:
a hanger mechanism for hanging a garment having a shaping-member; and
a wrinkle removing device comprising a first magnet having a first weight and a second magnet having a second weight, the wrinkle removing device retaining a garment there between and utilizing the force of gravity to pull wrinkles out of the garment.
10. A method of removing wrinkles from a garment comprising:
placing a garment on a hanger mechanism;
attaching a wrinkle removing device comprising a first magnet and a second magnet to the garment;
the attachment of the wrinkle removing device to the garment comprising placing the garment between the first magnet and the second magnet and retaining the magnetic strips in position via the magnetic interaction between same, the weight of the first and second magnets operate in connection with gravity to pull upon and de-wrinkle the garment.
11. The wrinkle removal system of claim 10, wherein the wrinkle removing device further comprises a flexible hinge interconnecting the first and second magnets.
12. The wrinkle removal system of claim 10, wherein the magnets are integrally connected and surrounded by a covering uniformly connected with a flexible hinge.

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