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(54) **SELF SPACING HANGERS**

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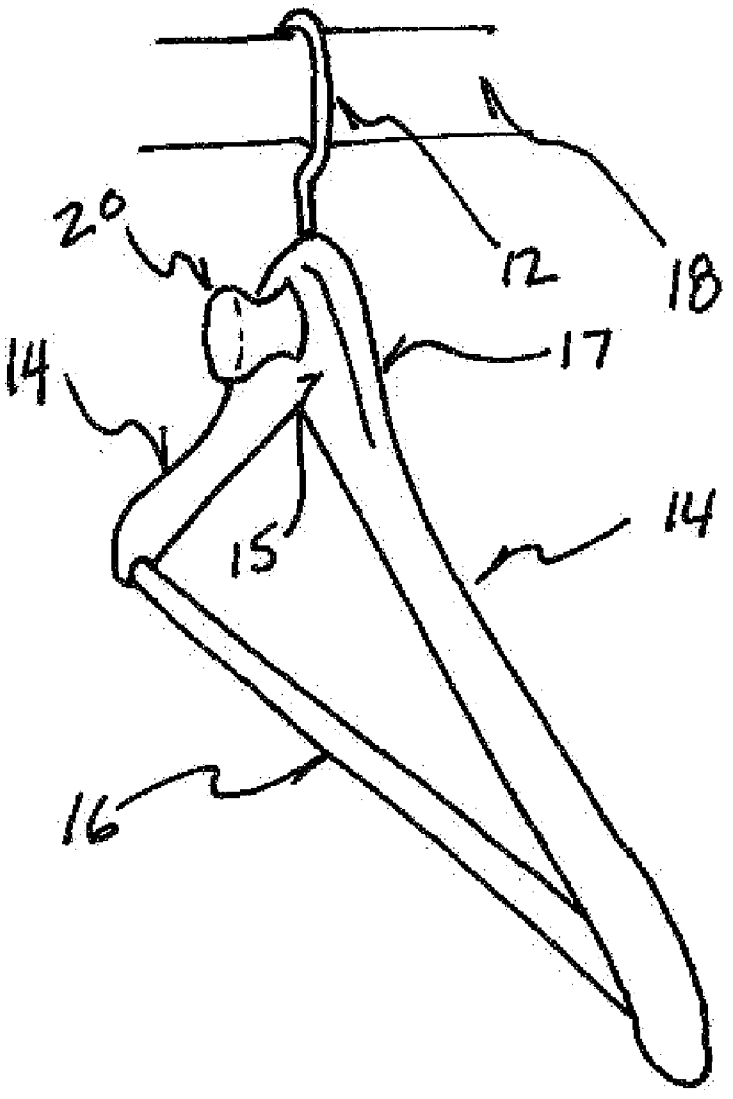
(57) **ABSTRACT**

An improved apparatus and system for hangers which automatically space themselves from one another such as to regulate the space between garments. These hangers have a spacing post protruding laterally from below the intersection of the hook and apex of the hanger body. The spacing post can be formed as part of the hanger, or added to existing hardware.

This invention has the advantage of allowing clothing to be cascaded to allow the viewing of various ensembles.

This invention also has the advantages, in certain embodiments, of being removable.



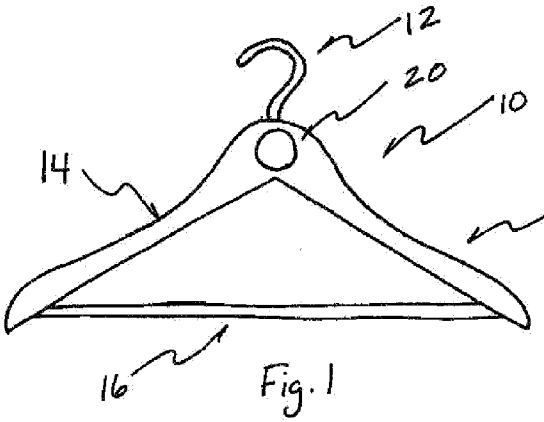


Fig. 1

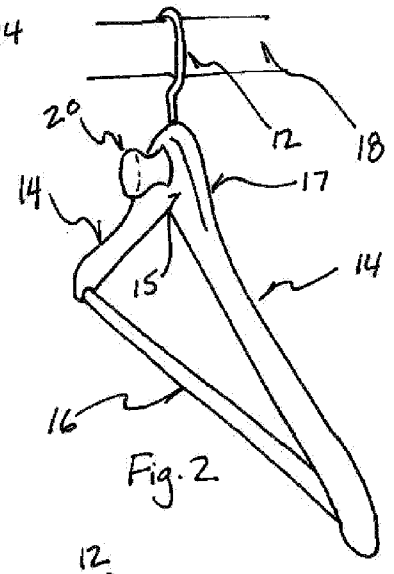


Fig. 2

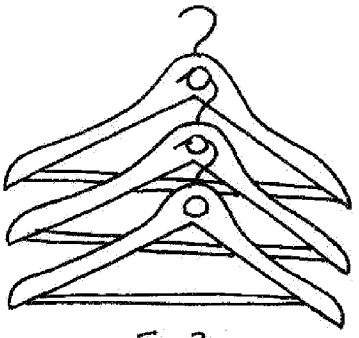


Fig 3

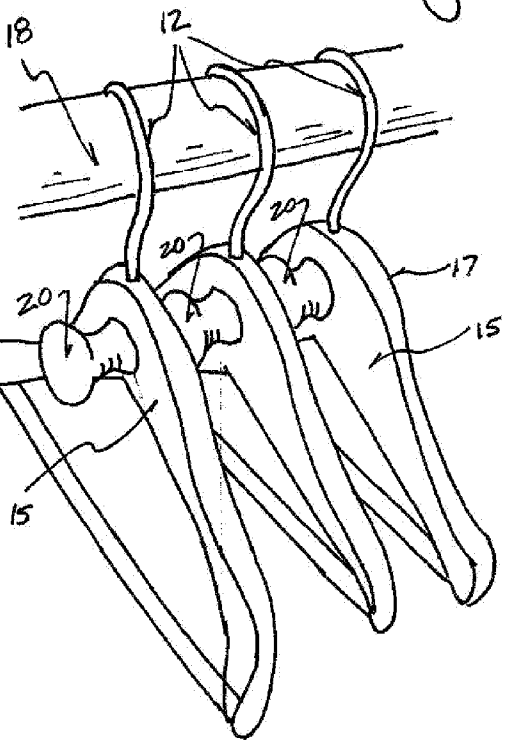


Fig 4

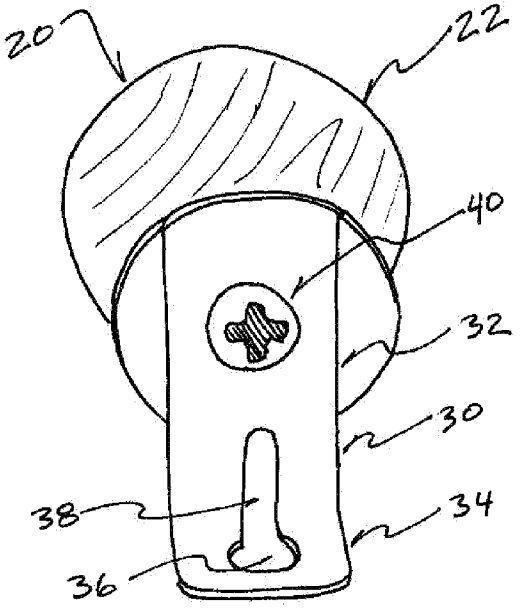
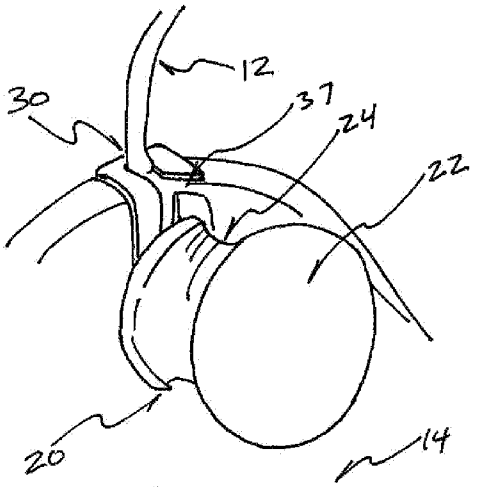


Fig. 5



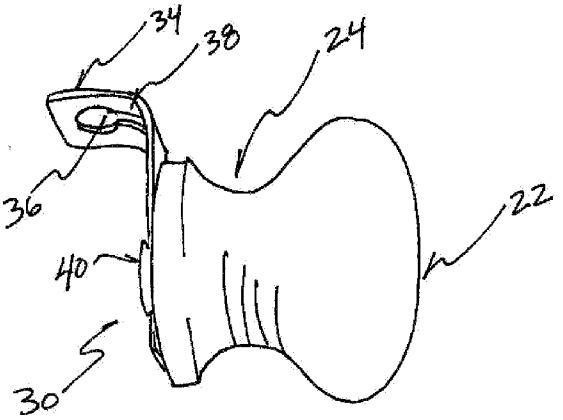


Fig 7

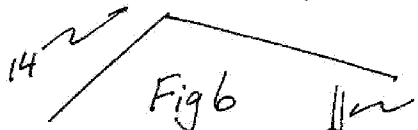


Fig 6

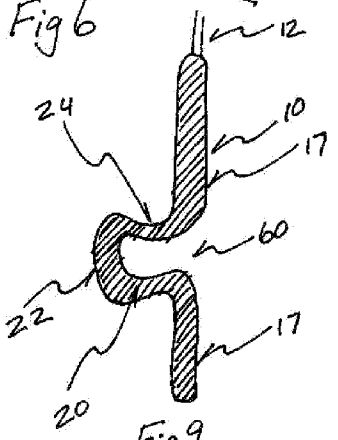


Fig 9

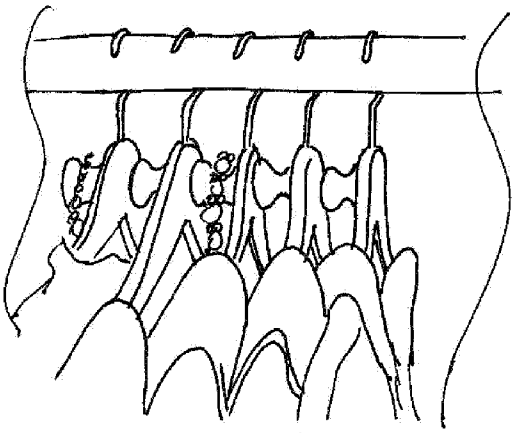


Fig 8

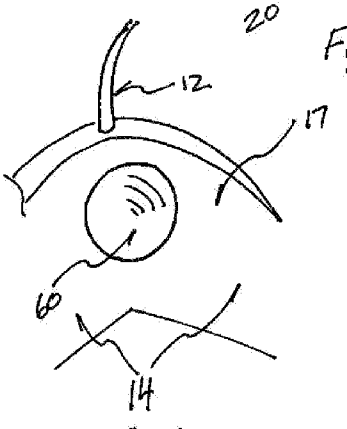


Fig. 10

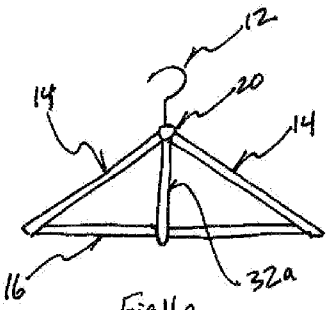


Fig 11a.

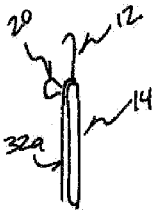


Fig 11b.

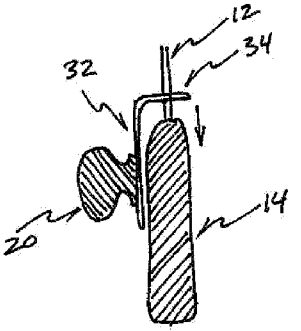


Fig 12

SELF SPACING HANGERS

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] The present application is a continuation-in-part application of U.S. provisional patent application, Ser. No. 60/792,353, filed Apr. 17, 2006, for Smart Space AKA Hanging Out, included by reference herein and for which benefit of the priority date is hereby claimed.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to an improved clothes hanger and, more particularly, to a system of hanging clothes where the garments are automatically spaced from one another when hung as a group which decreases creases and wrinkles. This invention can be used to organize both closets and rack, such as is found in retail space. In another arrangement, the hangers can be cascaded in a unique space saving configuration.

[0004] 2. Description of the Related Art

[0005] The relevant art of interest describes various hangers, in particular hangers and hanging systems which maintain an extended space between garments as they are hung on a dowel or closet pole. Extended meaning greater than the spacing dictated purely by the thickness of the wire or hook.

[0006] Many people are particular about their clothes and spend high dollar amounts for just the right dress, shirt, pants or suit. These garments, which can represent a significant part of a person's wealth and self image, are brought to a domicile where they are then hung in a closet. Currently there is no simple, effective, and economical way to regular the spacing between garments. When garments are pressed together on hangers, they become wrinkled and creased. At a minimum this requires extra care, to iron or otherwise remove wrinkles.

[0007] Closets are many times dark and musty with poor air circulation. If clothes are slightly wet when hung in an ordinary closet with inadequate spacing, they become musty and smell within a few hours.

[0008] Furthermore, in situations such as a retail rack, the cloths need to be as attractive as possible. Both for being inviting to the prospective buyer to approach the rack, and to be able to view individual garments with a minimum number of wrinkles. The garments also have to be easy to remove and replace on the rack. Retail stores spend a significant amount of employee time and resources to improve and maintain the look of the rack space and garments thereon.

[0009] Additionally, over time garments which are pressed together and continually creased exhibit a hysterisis effect and are no longer able to retain the original shape as they were received from the store. The need is felt for a simple economical and efficient way which allows the clothes on a hanger to be self organizing in such a way to improve appearance on the rack and take better care of the garments which can represent such a significant amount of the owners wealth.

[0010] U.S. Pat. No. 1,458,066 issued Jun. 14, 1922 to Le Compte; discloses a coat hanger with an adjuster made of wire. The adjuster having means for clipping to a garment lapel and hold the front away from the back of the garment to allow for drying and aeration to the inside of the garment. It also allows a wearer to put on the garment while it is on the hanger. The hanger is distinguishable for providing a means for extending the lapel of the garment in a spaced relation. While it does increase the spacing, it does not allow for a gap between garments. It is also too bulky for the practical spacing of garments in a closet

[0011] U.S. Pat. No. 2,902,192 issued Aug. 6, 1957 to Ericson et al.; teaches an elliptical closed loop which distends from the hanger shoulders and contains a pair of mounting brackets which can be attached to the shoulders. This device is distinguishable for being able to be mounted and removed from an existing hanger design. It also provides a means for suspending newly washed articles of clothing for drying. While it does provide a means for distending articles of dress, it does not provide space between the garments as the present invention does. It is also too bulky, and does not provide the uniform look achieved by the present invention.

[0012] U.S. Pat. No. 3,373,878 issued Mar. 22, 1966 to Daitch; discloses a clothing hanging coupler which maintains a regular spacing between garments. It is also detachable to a conventional wire hanger design. It, however, is used to tie several hangers together so they cannot be used separately. The hanger distinguishable for providing uniform spacing between garments. It has the limitation of requiring several hangers being linked together for this system to work.

[0013] U.S. Pat. No. 3,58,590 issued Sep. 15, 1970 to Nathanson; discloses a hanger spacing device which evenly spaces hangers. This invention is distinguishable over the Daitch patent, as it allows separate decoupling of individual hangers. But it requires the user to manually align with a series of ingress and egress slits in the spacing apparatus. This is not always easy to do, with garments being caught up in the spacing apparatus. In addition, it does not allow the added capability of cascading an ensemble of clothing.

[0014] U.S. Pat. No. 3,991,884 issued Nov. 16, 1976 to De Maagd et al., discloses a spaced hanger arrangement wherein the spacing between hangers is maintained by a custom display rod. This invention is distinguishable for moving the means for spacing to a rod rather than an attachment to a hanger. While the De Maagd invention does not employ similar elements to a hanger based solution, it further points out the felt need for a solution.

[0015] U.S. Pat. No. 4,403,703 issued Sep. 13, 1983 to Nikles, Jr; discloses a garment display mounted on vertical supports with arms extending therefrom with a series of hooking. This rack display unit is distinguishable over the prior art for using vertical space with a subordinant arm for hanging individual garments.

[0016] U.S. Pat. No. 5,018,649 issued May 28, 1991 to Ventimiglia; discloses a portable mannequin, which consists of a hoop which is pivotally mounted to a frame which can then be rotated vertically or horizontally. This mannequin is distinguishable for having a collapsible frame which can be extended creating an effect similar to the disclosure by Ericson. It is attachable to an existing hanger by means of a book. It is far too cumbersome to be practically used to space cloths in a closet.

[0017] In general it can be seen that these systems are inflexible, not allowing easy removal and re-insertion of garments back onto the closet pole. Many are bulky, expensive, and impractical.

[0018] It is therefore an object of the invention to incorporate a system comprising individual hanger that when grouped together assume the property of self regulation of spacing between hangers and hangers with garments.

[0019] It is another object of the invention to provide a regulated spacing, yet allow hangers to be removed or added individually, and in any location group while maintaining self regulation.

[0020] It is another object of the invention to allow modification of existing hangers with detachable modifiers.

[0021] It is another object of the invention to provide a cascading utility, whereby groups of clothes can be arranged in an ensemble.

[0022] It is another object of the invention that clothes hung using this system are not pressed or jammed together creating wrinkles and creases.

[0023] It is another object of the invention that damp clothes which are hung have adequate ventilation to reduce mildew and odor.

[0024] It is another object of the invention that retail outlets can reduce the amount of time used straightening clothes at the end of the day.

BRIEF DESCRIPTION OF THE INVENTION

[0025] Summary

[0026] The present invention relates to a spacing means which can be built in as part of the hanger or can be attached to an existing hanger of various types. The spacers naturally align themselves in such a way that they provide a regular minimum spacing between hangers and garments as the tip of one spacer intercepts the junction of the hanger adjacent hanger.

[0027] Objects and Advantages

[0028] Advantages for the present invention include a system regarding individual hangers that when grouped together assume the property of regulated spacing between hangers and hangers with garments.

[0029] A further advantage is that the present invention provides a regulated spacing, yet hangers may be removed or added one at a time, and in any location.

[0030] A further advantage is that the present invention can be embodied such as to be detachable to existing hangers.

[0031] A further advantage is that the present invention can provide a cascading utility, whereby groups of cloths can be arranged in an ensemble.

[0032] A further advantage is that clothes hung using this system are not pressed and jammed together creating wrinkles and creases.

[0033] A further advantage is that retail outlets can reduce the amount of time used straightening clothes at the end of the day.

[0034] These and other advantages of the present invention will become readily apparent upon review of the following specification and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0035] A complete understanding of the present invention may be obtained by reference to the accompanying drawings, when considered in conjunction with the subsequent, detailed description, in which:

[0036] FIG. **1** is a front view of a hanger of the present invention;

[0037] FIG. **2** is a front perspective view of a hanger of the present invention hanging on a hanger rod;

[0038] FIG. **3** is a front plan view of a group of hangers of the present invention in a cascading arrangement;

[0039] FIG. **4** is a front perspective view of a group of hangers of the present invention on a hanger rod;

[0040] FIG. **5** is a rear detail view of a preferred embodiment of the current invention;

[0041] FIG. **6** is a front detail view of an alternate embodiment of the present invention with a hook element assembled on an existing hanger;

[0042] FIG. **7** is a left detail view of a preferred embodiment of the current invention;

[0043] FIG. **8** is a perspective view of a group of hangers which embody the present invention hanging on a hanger rod;

[0044] FIG. **9** is a section view of an alternate embodiment of the present invention;

[0045] FIG. **10** is a rear perspective view of a feature of one embodiment of the present invention;

[0046] FIG. **11***a* is a front view of an alternate embodiment of the present invention;

[0047] FIG. **11***b* is a left elevation view of an alternate embodiment of the present invention; and

[0048] FIG. **12** is a left sectional view of a preferred embodiment of the present invention being applied to an existing hanger.

[0049] For purposes of clarity and brevity, like elements and components will bear the same designations and numbering throughout the Figures.

DETAILED DESCRIPTION OF THE DRAWINGS

[0050] In reference to the drawings, FIGS. **1** and **2** illustrate aspects of the current invention. A hanger **10** is generally comprised of a hook **12** for suspending the hanger from a hanger rod **18**, beam, or other suitable surface. Extending from the hook **10** to either side are the shoulders **14** for hanging garments, generally the sleeves for shirts, coats, jackets and the like. Optionally located at the bottom end of the shoulders **14**, a lower support **16** may be found. Many time at the apex where the shoulders **14** meet, just below the hook, is a substantially flat region called the face side **15**, with a corresponding back side **17** just opposite the face side **15**. While spacer assembly **20** can be mounted in various regions of the hanger **10**, it has been found that a spacer assembly **20** is best suited to be mounted relatively centered on the face side **15**. The spacer assembly **20** can either be formed as part of the hanger **10**, or can be manufactured separately and added to an existing hanger.

[0051] FIG. **3** is a front plan view of a group of hangers of the present invention in a cascading arrangement. This is particularly suited for banging garments in an ensemble or arrangement, and can be particularly useful for utilizing vertical space when closet space is tight.

[0052] FIG. **4** is a front perspective view of a group of hangers **10** of the present invention on a hanger rod **18** illustrating the self arranging nature when hangers **10** of the present invention are organized together. Note the even spacing between hangers **10** as the hanger assembly **20**, as mounted on the face side **15** of the preceding hanger contacts the back side **17** surface of the following hanger **10**.

[0053] FIGS. **5** through **7** show detail views of a part of a preferred embodiment of the current invention. The spacer assembly **20** is comprised of an end which set the distance

between hangers **10**. An optional spacer button **22** serves to provide a rounded surface for contact. Immediately behind the spacer button **22** is a spacer ledge **24** which is generally parabolic and provides a protuberance for holding hanging accessories **50**, or holding a group of hangers **10** in a cascading arrangement as shown in FIG. **3**. The embodiment shown in FIGS. **5-7** illustrates a spacer attachment means **30** such that the spacer assembly **20** can be attached to and detached from existing hangers via an attachment means. The attachment means is comprised of a vertical face **32** which is secured to the spacer assembly **20** via an attachment means **40**. The vertical face **32** is formed into a horizontal shelf **34** which adds additional support to spacer assembly **20** in increase the load bearing capability. Roughly centered in the horizontal shelf **34** is a mounting hole **36** for mounting the spacer assembly **20** to the hook **12**. The mounting hole **36** can be enlarged to accommodate hangers with flared ends to the hook. In addition, a mounting slit **38** extends from the mounting hole **36** to accommodate hooks **12** with a recurved configuration. In an alternate embodiment, an open ended mounting hook **37** allows the spacer attachment means **30** to be applied with out sliding over the end of the hook **12**. It is recommended that a small amount of tape, two sided tape, or glue, such as applied by a hot glue gun be used to minimize movement or swinging of the spacer assembly **20** during use.

[0054] FIG. **8** is a perspective view of a group of hangers which embody the present invention hanging on a hanger rod.

[0055] FIGS. **9** and **10** are a section view and a rear perspective view respectively of an alternate embodiment of the present invention with the spacer assembly **20** formed into the hanger **10**. Also shown are examples of the registration key **60**, which is a slightly concave region formed into the back side **17** of the hanger. In operation, the spacer button **22** nests into the registration key **60** which adds another dimension of registration and organization. In use, the rounded surface of the spacer button **22** provides just the right amount of resistance to be easily removed yet self aligning.

[0056] FIG **11***a* and *b* are front and left elevation views of an alternate embodiment of the present invention. In some embodiments, for example wire hangers, the hanger **10** has very little or no face in the shoulder. In such cases, the vertical face **32** can be replaced with an extended vertical face **32***a* which extends to the lower support **16** and provides a stable structure.

[0057] FIG. **12** is a left sectional view of a preferred embodiment of the present invention being applied to an existing hanger.

[0058] For purposes of clarity and brevity, like elements and components will bear the same designations and numbering throughout the Figures.

CONCLUSION, RAMIFICATIONS, AND SCOPE

[0059] Although the present invention had been described in detail, those skilled in the art will understand that various changes, substitutions, and alterations herein may be made without departing from the spirit and scope of the invention in its broadest form.

[0060] Having thus described the invention, what is desired to be protected by Letters Patent is presented in the subsequently appended claims.

What is claimed is:

1. A self spacing hanger for automatically spacing garments, hanging from a rod, from one another in an orderly way, comprising:
- means for receiving garments to hang;
- means for suspending said garment receiving means from a rod;
- means for providing a base for spacer assembly;
- means for attaching a spacer assembly to a hanger; and
- means for providing an interface point between the backside of one hanger and the distal end of said spacer assembly of an adjacent hanger.

2. The self spacing hanger in accordance with claim **1**, wherein said means for providing an interface point between the backside of one hanger and the adjacent hanger comprises a spacer button.

3. The self spacing hanger in accordance with claim **2**, wherein said spacer button is detachable from said hanger.

4. The self spacing hanger in accordance with claim **1**, wherein said backside of one hanger corresponding to said interface point comprises a slightly concave surface.

5. A self spacing hanger for automatically organizing garments in an orderly way, comprising:
- a hanger, for receiving garments to hang;
- a planar region face side, for providing a base for spacer assembly;
- a spacer button, for providing an interface point between the backside of one hanger and the face side of the adjacent hanger;
- a spacer attachment means, for attaching a spacer assembly to a hanger; and
- a securing means, for securing a vertical face to a spacer button, permanently coupled to said spacer button.

6. The self spacing hanger as recited in claim **5**, further comprising:
- a substantially planar back side containing a slightly concave region, for providing an alignment surface for adjacent spacer assembly.

7. The self spacing hanger with a spacer button as recited in claim **5**, further comprising:
- a substantially parabolic spacer ledge, for providing a shelf for hanging accessories.

8. The self spacing hanger as recited in claim **5**, further comprising:
- an open ended mounting hook, for providing an alternative way of mounting spacer assembly to a hook.

9. The self spacing hanger as recited in claim **5**, further comprising:
- an elongated mounting slit, for fitting alternative embodiments of hangers.

10. The self spacing hanger as recited in claim **7**, further comprising:
- an elongated extended vertical face, for intercepting the lower support to provide a base for an alternate embodiment.

11. The self spacing hanger as recited in claim **7**, further comprising:
- a horizontal shelf, for resting on the surface of the hanger shoulders while providing means for mounting hole to attach to hanger hook.

12. The self spacing hanger as recited in claim **7**, further comprising:
- a hollow, enlarged mounting hole, for fitting a spacer assembly over an existing hanger.

13. The self spacing hanger as recited in claim **7**, further comprising:

an open ended mounting hook, for providing an alternative way of mounting spacer assembly to a hook.

14. A self spacing hanger for automatically spacing garments from one another in an orderly way, comprising:

a hanger, for receiving garments to hang;

a planar region face side, for providing a base for spacer assembly;

a substantially planar of slightly concave back side, for providing an abutment surface for adjacent spacer assembly;

a spacer button, for providing an interface point between the backside of one hanger and the face side of the adjacent hanger;

extending orthogonally from hanger face side, a substantially parabolic spacer ledge, for providing a shelf for hanging accessories;

a spacer attachment means, for attaching a spacer assembly to a hanger;

a vertical face, for connecting between securing means and hanger hook, rigidly connected to said spacer button;

a hollow, enlarged mounting hole, for fitting a spacer assembly over an existing hanger;

an open ended mounting hook, for providing an alternative way of mounting spacer assembly to a hook;

an elongated, hollow mounting slit, for fitting alternative embodiments of hangers;

a securing means, for securing a vertical face to a spacer button, simultaneously connected to said vertical face, and permanently coupled to said spacer button; and

a concave registration key, for registering the back of one hanger with the front of another, reciprocally associated to said spacer button.

* * * * *