(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
1 November 2007 (01.11.2007)

PCT

(10) International Publication Number
WO 2007/123784 A2

(51) International Patent Classification:
A41H 31/00 (2006.01)

(21) International Application Number:
PCT/US2007/008044

(22) International Filing Date: 2 April 2007 (02.04.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/788,968 4 April 2006 (04.04.2006) US

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2007/123784 A2

(54) Title: HANGER & METHOD OF USE

(57) Abstract: A hanger comprises a molded plastic body including a base member from which projects a crooked arm that has an elbow portion and a linear portion extending lengthwise above and along the length the base member. The elbow portion and linear portion form an acute angle and linear portion pivots at the elbow portion upon a manually force being applied thereto. A free end of the linear portion with a stop element thereat forms between the stop element and an outer side of the base member a narrow gap that expands and contracts as the linear portion pivots to move between a closed position where the gap is the narrowest to an open position where the gap is wider. An outer surface of the elbow portion has at least one lateral groove therein that functions a fulcrum.

HANGER & METHOD OF USE

(Docket No. 9617a)

RELATED PATENT APPLICATIONS & INCORPORATION BY REFERENCE

This application is a PCT application which claims the benefit under 35 USC 119(e) of U. S. Provisional Patent Application No. 60/788,968, entitled " HANGER & METHOD OF USE ," filed April 4, 2006. This related application is incorporated herein by reference and made a part of this application. If any conflict arises between the disclosure of the invention in this PCT application and that in the related provisional application, the disclosure in this PCT application shall govern. Moreover, any and all U. S. patents, U. S. patent applications, and other documents, hard copy or electronic, cited or referred to in this application are incorporated herein by reference and made a part of this application.

DEFINITIONS

The words "comprising," "having," "containing," and "including," and other forms thereof, are intended to be equivalent in meaning and be open ended in that an item or items following any one of these words is not meant to be an exhaustive listing of such item or items, or meant to be limited to only the listed item or items.

The word "handbag" means any manually portable device for holding objects, including, but not limited to, luggage, purses, bags, cases, kits, and other similar devices.

BACKGROUND

Many people carry handbags. When they sit down, for example, while eating at a restaurant, they set their handbag on the floor or next to them on an adjacent unoccupied chair. This is not the most convenient or safest place for storing the handbag when not being carried. It is dangerous simply to place the handbag on the floor where someone may trip on it. And placing the handbag on a chair, or otherwise in a nearby location, exposes it to theft.

SUMMARY

My hanger and method of use has one or more of the features depicted in the illustrative embodiments discussed in the section entitled "DETAILED DESCRIPTION OF SOME ILLUSTRATIVE EMBODIMENTS." The claims that follow define my invention; however, without limiting the scope of my invention as expressed by these claims, in general terms, some, but not necessarily all, of the features of my hanger and method of use are:

One, my hanger comprises body including an elongated base member having a longitudinal centerline and a flexible and resilient hook member on the base. The base has opposed ends, an outer side, and underside configured to enable this underside to be positioned substantially flush against a substantially flat surface to facilitate attaching the hanger to the surface. The base member may have a thickness that is less than 0.5 inch and the outer side may have a substantially flat exterior surface with integral sides. The sides may be beveled at an intersection with the flat exterior surface and substantially at a right angle thereto.

Two, the hook member may be centrally positioned on the base member having a fixed end that may be integral with and attached to the outer side nearby one opposed end of the base member. The hook member may have a cross-sectional configuration substantially corresponding to a truncated ellipse to provide a substantially rounded exterior surface of the hook member and a substantially planar interior surface of the hook member. The hook member may have a greater cross-sectional dimension at the fixed end than at the free end.

Three, the hook member may include an arcuate portion extending along the longitudinal centerline and a substantially linear portion extending along the longitudinal centerline. The arcuate portion may have a substantially straight segment projecting outward from the fixed end substantially at a right angle to the outer side that terminates in a curved segment having an outer surface and an inner surface. The curved segment may terminate in an outer end that may be integral with an inner end of the substantially linear portion of the hook member and spaced from the outer side of the base member a first predetermined distance. The substantially linear portion of the hook member may slope inward towards the outer side of the base member. The linear portion terminates in a free end that is nearby the other opposed end of the base member and spaced from the outer side of the

base member a second predetermined distance that is substantially less than the first predetermined distance.

Four, the curved segment of the hook member provides an elbow portion having an outer surface with at least one groove therein that lies crosswise with respect to the longitudinal centerline. This lateral groove functions as a fulcrum for the linear portion so that, when a manual force is applied to the free end to push the linear portion away from the outer side, moving the linear portion from a closed position to an open position, the width of the groove is compressed slightly and, upon release of the force, the linear portion springs back to the closed position to narrow a gap between the linear portion's the free end and the outer side of the base member. The elbow portion and linear portion form an acute angle and the linear portion. There may be a plurality of grooves therein positioned side-by-side and lying crosswise with respect to the longitudinal centerline. Such plurality of grooves may extend into the arcuate portion along converging pathways. The arcuate portion has a predetermined thickness and the grooves may be substantially from 20 to 40 percent of the thickness of the arcuate portion, or even greater in some embodiments.

Five, the hook member may have a stop element integral with and attached to the free end. The stop element may be at the linear portion's free end. A narrow gap is formed between the stop element and the outer side of the base member that expands and contracts as the linear portion pivots to move between a closed position where the gap is the narrowest to an open position where the gap is wider. This stop element may comprise a plate member that is substantially at a right angle to the linear portion of the hook member and has an edge portion that overlaps the free end and is adjacent to and spaced from the outer side of the base member a third predetermined distance that is substantially less than the second predetermined distance. An edge portion of the plate member may have a curved end segment that is oriented rearward towards the straight segment of the hook member and at least partially forms the edge portion to orient the edge portion rearward towards the straight segment of the hook member. The plate member may have a substantially oval perimeter and a wavy configuration.

Six, my hanger may be injection molded from a plastic. Its base member may have a height substantially from 1/8 to 0.5 inch and a length substantially from 2 to 5.5 inches. The linear portion of the hook member may have a length substantially from 2 to 3 inches. The first predetermined distance may be substantially from 0.5 to

1.25 inch. The second predetermined distance may be substantially from 0.375 to 0.75 inch. The third predetermined distance may be substantially from 0.125 to 0.150 inch. The curved segment's inner surface may terminate at a junction with the linear portion, with this junction being above the outer side of the base member at least a distance of 0.5 inch. The free end of the linear portion may be above the outer side of the base member a distance that is less than 0.75 inch. A gap formed between the edge portion of the plate member and the outer side of the base member may have a distance substantially between 0.125 and 0.150 inch.

These features are not listed in any rank order nor is this list intended to be exhaustive.

I also provide a method of supporting underneath and to a substantially horizontal surface that is at least 24 inches above ground a handbag having a strap formed into a loop. My method comprising the steps of

(a) fastening to and beneath the horizontal surface a hanger having a base member with an underside positioned substantially flush against the horizontal surface,

the base member having attached thereto a flexible and resilient hook member having an arcuate portion and a substantially linear portion,

the arcuate portion having an interior surface that terminates at a junction with the linear portion, the junction being spaced from the base member at least a distance of substantially 0.5 inch, and

the linear portion sloping towards the base member and terminating in a free end that is spaced from the base member a distance that is less than substantially 0.75 inch, and

a stop element attached to the free end that has an edge portion that projects rearward and towards the outer side of the base member to provide a narrow gap between the edge portion and the base member that is substantially from 0.125 to 0.150 inch ,

(b) manually pushing the hook member to flex the hook member so the free end moves away from the base member to enlarge the gap,

(c) with the hook member flexed, passing the free end of the hook member through the strap loop, and

(d) releasing the hook member, which returns to an unflexed condition to move the free end towards the base member and returning the gap to its original condition, thereby supporting the handbag by the hook member.

The arcuate portion may have a curved outer surface having at least one lateral groove therein that functions as a fulcrum for the linear portion of the hook member.

An alternate embodiment of my method does not require that the hanger be horizontally oriented. This alternate embodiment comprises the steps of

(a) fastening to the surface at least 24 inches above ground a hanger having a base member with an underside positioned substantially flush against the surface,

the base member having attached thereto a flexible and resilient hook member having an arcuate portion and a substantially linear portion,

the arcuate portion having an interior surface that terminates at a junction with the linear portion, the junction being spaced from the base member at least a distance of substantially 0.5 inch, and

the linear portion sloping towards the base member and terminating in a free end that is spaced from the base member a distance that is less than substantially 0.75 inch, and

a stop element attached to the free end that has an edge portion that projects rearward and towards the outer side of the base member to provide a narrow gap between the edge portion and the base member that is substantially from 0.125 to 0.150 inch,

the hanger being oriented with the gap facing away from the ground,

(b) manually pushing the hook member to flex the hook member so the free end moves away from the base member to enlarge the gap,

(c) with the hook member flexed, passing the free end of the hook member through the strap loop, and

(d) releasing the hook member, which returns to an unflexed condition to move the free end towards the base member and returning the gap to its original condition, thereby supporting the handbag by the hook member.

DESCRIPTION OF THE DRAWING

Some embodiments of my hanger and method will now be discussed in detail in connection with the accompanying drawing, which is for illustrative purposes only. This drawing includes the following figures (Figs.), with like numerals indicating like parts:

Fig. 1 is a perspective view of one embodiment of my hanger showing the top of the hanger.

Fig. 2 is a perspective view of the embodiment of the hanger depicted in Fig. 1 showing the bottom side of the hanger.

Fig. 3 is a top plan view of the embodiment of the hanger depicted in Fig. 1.

Fig. 4 is a rear end view taken along line 4-4 of Fig. 3.

Fig. 5 is a front end view taken along line 5-5 of Fig. 3.

Fig. 6 is a right hand side view taken along line 6-6 of Fig. 3.

Fig. 7 is a cross-sectional view taken along line 7-7 of Fig. 3.

Fig. 7A is a cross-sectional view taken along line 7A-7A of Fig. 7.

Fig. 7B is a cross-sectional view taken along line 7B-7B of Fig. 7.

Fig. 7C is a cross-sectional view taken along line 7C-7C of Fig. 7.

Fig. 8 is an end view taken along line 8-8 of Fig. 7 looking at the plate member at the free end of the hook member.

Fig. 9 is a perspective view of an alternate embodiment of my hanger showing the bottom side of this hanger.

Fig. 10A is a side view of my hanger fastened underneath and to a substantially horizontal surface.

Fig. 10B is a side view of the hanger shown in Fig. 10A supporting a purse above ground.

Fig. 10C is an enlarged fragmentary view taken along the line 10C in Fig. 10A.

Fig. 10D is an enlarged fragmentary view taken along the line 10D in Fig. 10B.

Fig. 10E is a cross-sectional view taken along line 10E-10E of Fig. 10C.

Fig. 11 is a perspective view of another alternate embodiment of my hanger showing the topside of this hanger.

Fig. 12 is a cross-sectional view taken along line 12-12 of Fig. 11.

Fig. 13A is a cross-sectional view taken along line 13A-13A of Fig. 12.

Fig. 13B is a cross-sectional view taken along line 13B-13B of Fig. 12.

Fig. 13C is a cross-sectional view taken along line 13C-13C of Fig. 12.

Fig. 14 is a cross-sectional view taken along line 14-14 of Fig. 12.

Fig. 15 is a side view of my hanger fastened to a substantially vertical surface.

Fig. 16 is a perspective view of still another alternate embodiment of my hanger showing the topside of this hanger.

Fig. 17 is a top plan view of the embodiment of my hanger depicted in Fig. 16.

Fig. 18 is a rear end view taken along line 18-18 of Fig. 17.

Fig. 19 is a cross-sectional view taken along line 19-19 of Fig. 18.

DETAILED DESCRIPTION OF SOME ILLUSTRATIVE EMBODIMENTS

As best depicted in Figs. 1, 7, 10A and 10B, one embodiment of my hanger designated by the numeral 10 comprises a unitary, single piece body 12 molded from a plastic such as, for example, polystyrene, polypropylene, ABS resin or an acetal resin sold under the trademark Delrin, using conventional injection molding techniques. The body 12 includes a base member 14 having an outer side 14a from which projects a crooked arm 16 that has an elbow portion 18 and a linear portion 20. The outer side 14a may be substantially flat, and the elbow portion 18 forms an arch A (Fig. 7). The elbow portion 18 is integral with the base member 14 nearby one end E1 of the base member. The elbow portion 18 terminates at a junction J shown as a dotted line in Fig. 6 where an outer end of the elbow portion and an inner end of the linear portion 20 join together. The elbow portion 18 and the linear portion 20 form an acute angle B (Fig. 6) typically ranging substantially from 60 to 80 degrees to provide a bite 11 (Figs. 10A and 10B) in the elbow portion 18.

As best depicted in Figs. 10A and 10B, the hanger 10 is inverted and mounted underneath and to a substantially horizontal, substantially flat surface S1, and is used to support above ground a handbag 22 by its strap 22a. Typically, the horizontal surface S1 is elevated above ground at least substantially 2 feet, typically ranging substantially from 2 to 5 feet. The underside of the base member 14 is substantially level to enable the underside to be positioned substantially flush against the substantially flat horizontal surface S1 to facilitate attaching the hanger 10 to this surface. This level underside may be coextensive with a solid bottom surface S2 of the base member 14 as illustrated in Fig. 2. Or, the level underside may be coextensive with a plane P overlying a number of cavities 24 in the bottom of the base member 14 as illustrated in Fig. 9. As shown in Fig. 15, the hanger 10 may also be mounted to a vertical or an inclined surface S7. When mounted to the surface S7, the gap G faces away from the ground. In all these different situations, my hanger is elevated above ground a distance d_5 that is at least substantially 2 feet, typically ranging substantially from 2 to 5 feet.

Referring to Fig. 2, the base member 14 of the hanger 10 is substantially solid and has an adhesive applied to the surface S2. This adhesive is covered by a removable cover sheet 13. When the hanger 10 is attached to a surface, the cover

sheet 13 is removed to expose the adhesive, which binds to the surface S1. Referring to Fig. 9, in another embodiment a hanger 10a, its base member 14c has a plurality of cavities 24 formed in its bottom that all have outer open ends lying in a plane P. In the hanger 10a at least one elongated reinforcing member 26 extends lengthwise substantially along a longitudinal centerline CL (Fig. 1) of the base member 14c and a pair of spaced apart reinforcing crossbars 28a and 28b intersect at a right angle with the elongated reinforcing member. A pair of passageways 30a and 30b passing through the base member 14c receive screws or other fasteners when the hanger 10a is attached to the horizontal surface S1. One passageway 30a intersects one cylindrical portion 26a of the reinforcing member 26 nearby the end E2 of the base member 14a and outboard of the one crossbar 28a and the other passageway 30b intersects another cylindrical portion 26b of the reinforcing member nearby the other end E1 of the base member 14 and outboard of the other crossbar 28b. The reinforcing member 26, the reinforcing crossbars 28a and 28b, and the cylindrical portions 26a and 26b of the reinforcing member each have outer surfaces that all lie in the plane P.

As best shown in Figs. 1, 2 and 3, the crooked arm 16 functions as a flexible and resilient hook member centrally positioned on the base member 14 between the opposed sides 15a and 15b of the base member 14 with the elbow portion 18 inward of a rear side 15c of the base member 14 a distance d_6 and the linear portion 20 terminating inward of a forward side 15d of the base member 14 a distance d_7. The distance d_6 is substantially from 0.25 to 0.75 inch, and the distance d_7 is substantially from 0.50 to 1.00 inch. The elbow portion 18 and the linear portion 20 both extend above and along the longitudinal centerline CL. The elbow portion 18 has a substantially straight segment 18a projecting outward substantially at a right angle to the outer side 14a. As depicted in Fig. 6, the straight segment 18a terminates in a curved segment 18b having an outer surface S3 and an inner surface S4. The curved segment 18b terminates at the junction J. The linear portion 20 slopes from the junction J inward towards the outer side 14a of the base member 14 and terminates in a free end 20a nearby the end E2 of the base member. A stop element 32 is at, and integral with, the free end 20a. A narrow gap G (Figs. 6 and 7) is formed between the stop element 32 and the outer side 14a of the base member 14.

The stop element 32 may comprise a plate member 32a that is substantially at a right angle to the linear portion 20 and has an edge portion 32b (Figs. 6 and 7) that overlaps the free end 20a and is adjacent to and spaced from the outer side 14a of the

base member 14 to form the gap G. As illustrated in Figs. 6, 7, and 8, a curved end segment 33 of the plate member 32a extends from an intermediate segment 37 and is oriented rearward towards the straight segment 18a of the crooked arm 16 and at least partially forms the edge portion 32b to orient this edge portion rearward towards the straight segment of the crooked arm 16. Another curved end segment 35 of the plate member 32a also extends from the intermediate segment 37 and is opposed to and oriented in an opposite direction to that of the curved end segment 33. The plate member 32a may have a substantially oval perimeter and a wavy configuration to form the curved end segments 33 and 35 and the intermediate segment 37. The straight segment 18a of the elbow portion 18 is inward of the rear side 15c a distance substantially from 0.25 to 0.75 inch and the stop element 32 is inward of the front side 15d a distance substantially from 0.25 to 0.75 inch.

As best shown in Figs. 10C, 10D, and 10E, the outer surface S3 of the elbow portion 18 has one or more grooves 36a therein that lie crosswise with respect to the longitudinal centerline CL. In the embodiments illustrated, there are four (4) lateral grooves 36 employed that are positioned side-by-side, lying crosswise with respect to the longitudinal centerline CL. These four grooves 36 extend along converging pathways 38 into the arcuate portion or arch A substantially from 20 to 40 percent of the thickness of the arcuate portion. As best shown in Fig. 10E, the grooves 36 each terminate in curved bottom 36a with a central apex 36d.

As illustrated in Figs. 10A through 10D, when a user applies a downward force F to the linear portion 20 of the hanger 10 or 10a, the linear portion moves from the position shown in dotted lines (Fig. 10A) to the position shown in solid lines, expanding the gap G to better enable the user to hang the handbag 22 on the hanger. The groove or grooves 36 at the elbow portion 18 function as a fulcrum and the linear portion 20 pivots at the elbow portion 18 upon application of the force F. Consequently, when the force F is applied, for example, to the free end 20a pushing the linear portion 20 away from the outer side 14a, the linear portion 20 moves from a closed position shown in Fig. 10A in dotted lines to an open position shown in solid lines in Fig. 10A, and the width of the gap G expands. As the gap G expands, the opposing sides 36b and 36c of each of the grooves 36 move towards each other, diminishing the distance between the sides of the grooves, placing the grooves in compression. Consequently, in the open position, the grooves 36 are placed in compression, acting like a compressed spring. Upon release of the force F, the linear

portion 20 thus springs back to the closed position to narrow again the gap G and the groove or grooves 36 are decompressed as shown in Fig. 10D.

As illustrated in Figs. 7A through 7C, the crooked arm 16 has a cross-sectional configuration substantially corresponding to a truncated ellipse to provide a substantially rounded exterior surface S5 of the crooked arm 16 and a substantially planar interior surface S6 of the crooked arm 16. The cross-sectional dimensions of the crooked arm 16 decrease from the straight segment 18a to the free end 20a, with the crooked arm 16 having its greatest cross-sectional dimension where it joins the base member 14. This shown by the three cross-sections I (Fig. 7A), II (Fig. 7B), and III (Fig. 7C). The height $\mathbf{h_3}$ of cross-section III is greater than the height $\mathbf{h_2}$ of the cross-section II, and the height $\mathbf{h_2}$ of the cross-section II is greater than the height $\mathbf{h_1}$ of the cross-section I. The width $\mathbf{w_3}$ of cross-section III is greater than the width $\mathbf{w_2}$ of the cross-section II, and the width $\mathbf{w_2}$ of the cross-section II is greater than the width $\mathbf{w_1}$ of the cross-section I.

As illustrated in Fig. 6, the junction J is spaced from the outer side 14a of the base member 14 a distance $\mathbf{d_1}$. The free end 20a is spaced from the outer side 14a of the base member 14 a distance $\mathbf{d_2}$ that is substantially less than the distance $\mathbf{d_1}$, and the edge portion 32b is spaced from the outer side 14a of the base member 14 a distance $\mathbf{d_3}$ that is substantially less than the distance $\mathbf{d_2}$. The distance $\mathbf{d_1}$ is substantially from 0.5 to 1.25 inch, the distance $\mathbf{d_2}$ is substantially from 0.375 to 0.75 inch, and the distance $\mathbf{d_3}$ is substantially from 0.125 to 0.150 inch. The junction J above the outer side 14a of the base member at least the distance d_1 of 0.5 inch, and the free end 20a is above the outer side 14a of the base member 14 the distance $\mathbf{d_2}$ that is less than 0.75 inch.

Referring to Figs. 11 through 14, an alternate embodiment of the hanger is identified by the numeral 10c. The hanger 10c is similar to the other embodiments, except it is molded in a manner to reduce the amount of plastic used. The crooked arm 16 of the hanger 10c includes a sunken channel 60a along the centerline CL that partially bifurcates the planar interior surface S6 into two sections, and the base member 14 includes a slot 60b passing through it along the centerline CL. The channel 60a and the slot 60b are substantially aligned and their respective outer ends terminate inward of the edge portion 32b. As shown in Fig. 14, the channel 60a is in the surface S6 opposite the apex 36d. This channel 60a strengthens the crooked arm 16.

Referring to Figs. 16 through 19, another alternate embodiment of my hanger is identified by the numeral 10d. My hanger 10d is similar to hanger 10c, except it employs grooves 36e that are deeper that the grooves in the other embodiments and it has a recess 100 in its underside surrounded by flat edges 102 so it is substantially level. Like the hanger 10c, it employs a sunken channel 60d along the centerline CL and the base member 14 includes a slot 60e. This channel 60d is substantially deeper that in the hanger 10c, and it comprises two sections I and II that straddle a projection 106 extending from the inside of the crooked arm 16. The grooves 36e are of substantially the same depth and they extend into the projection 106. Consequently, the crooked arm 16As is more flexible than the other embodiments. As with the other embodiments, when my hanger 10d is mounted substantially horizontally, a handbag 22 under its own weight will slide by its strap 22a along the planar interior surface S6 of the linear portion 20 of the crooked arm 16 into the bite 11 of the elbow portion 18.

Due to its configuration and dimensions my hanger (a) is relatively small and compact to fit conveniently, unobtrusively, and in a non-interfering location, for example, under a table, bar top, desk, or other horizontal surface S1 or on a wall's surface S7, (b) the arch A formed in the elbow portion 18 provides adequate room to accommodate the handbag strap 22a or a user's hand when manipulating the linear portion 20, and (c) the handbag 22 under its own weight will slide by its strap 22a along the planar interior surface S6 of the linear portion 20 of the crooked arm 16 into the bite 11 of the elbow portion 18 or into the open gap G even without flexing when on the surface S7. The outer side 14a has a substantially flat exterior surface with the integral sides 15a, 15b, 15c, and 15d substantially at a right angle to this flat exterior surface. The sides 15a, 15b, 15c, and 15d are beveled at an intersection 40 (Fig. 1) with the outer side 14a. As shown in Figs. 3 and 4, the base member 14 is elongated having a length **l** substantially from 2 to 5.5 inches, a width **w** at its widest dimension substantially from 1 to 2.5 inch, and a substantially uniform height **h** (Fig. 4) that is less than 0.5 inch, for example, substantially from 1/8 to 3/8 inch. The base member 14 may from its one end E1 taper inward towards its other end E2. The linear portion 20 of the crooked arm 16 has a length substantially from 2 to 3 inches.

My hanger is easy to install and use. The hanger 10 is installed by simply removing the cover sheet 13 and then, with the hanger, pressing the adhesive bottom firmly against the surfaces S1 or S71, as the case may be. With the hangers 10a and

10c, screws (not shown) are passed through the passageways 30a and 30b and threaded into the surfaces S1 or S7, as the case may be.

My hanger is particularly suit for installation under a horizontal surface as shown in Figs. 10A and 10B, inverting the hanger. When a downward force F is applied manually to the linear portion 20, the gap G expands as the crooked arm 16 and linear portion 20 pivot to move between a closed position where the gap is the narrowest (Fig. 10B) to an open position (Fig. 10A) where the gap is wider. A user typically applies a downward force to the free end to expand the gap G and holds the crooked arm 16 with one hand in to maintain the gap in an expanded condition and, with the user's other hand, slides the strap 22a through the expanded gap. The user then releases the linear portion 20 and the crooked arm 16 springs back into the closed position shown in Fig. 10B. As it is suspend by the hanger, the handbag 22 aided by the influence of gravity tends to pull its strap 22a towards the bite 11 of the crooked arm 16 at the elbow. The portion of the strap 22a engaging the planar interior surface S6 of the crooked arm 16 along the linear portion 20 tends to move into the bite of the crooked arm 16.

All the different embodiments of my hanger for storing handbags are compact, easy to install, inhibit theft, avoid accidents, and are inexpensive to manufacture.

SCOPE OF THE INVENTION

The above presents a description of the best mode contemplated of my hanger, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains to make and use my hanger. My hanger is, however, susceptible to modifications and alternate constructions from the illustrative embodiments discussed above which are fully equivalent. Consequently, it is not the intention to limit my hanger to the particular embodiments disclosed. On the contrary, my intention is to cover all modifications and alternate constructions coming within the spirit and scope of my hanger as generally expressed by the following claims, which particularly point out and distinctly claim the subject matter of my hanger.

CLAIMS

1. A hanger comprising

a molded plastic body including

an elongated base member having a longitudinal centerline, opposed ends, an outer side, and an underside configured to enable the underside to be positioned substantially flush against a substantially flat surface to facilitate attaching the hanger to the surface,

a flexible and resilient hook member centrally positioned on the base member having a fixed end integral with and attached to the outer side nearby one opposed end of the base member,

the hook member including an arcuate portion extending along the longitudinal centerline and a substantially linear portion extending along the longitudinal centerline,

the arcuate portion having a substantially straight segment projecting outward from the fixed end substantially at a right angle to the outer side that terminates in a curved segment having an outer surface and an inner surface, the outer surface having at least one groove therein that lies crosswise with respect to the longitudinal centerline,

the curved segment terminating in an outer end that is integral with an inner end of the substantially linear portion of the hook member and spaced from the outer side of the base member a first predetermined distance,

the substantially linear portion of the hook member sloping inward towards the outer side of the base member and terminating in a free end that is nearby the other opposed end of the base member and spaced from the outer side of the base member a second predetermined distance that is substantially less than the first predetermined distance, and

a stop element integral with and attached to the free end, the stop element comprising a plate member that is substantially at a right angle to the linear portion of the hook member and has an edge portion that overlaps the free end and is adjacent to and spaced from the outer side of the base member a third predetermined distance that is substantially less than the second predetermined distance.

2. The hanger of claim 1 where the base member has a length substantially from 2 to 5.5 inches, the linear portion of the hook member has a length substantially from 2 to 3 inches, the first predetermined distance is substantially from 0.5 to 1.25 inch, the second predetermined distance is substantially from 0.375 to 0.75 inch, and the third predetermined distance is substantially from 0.125 to 0.150 inch.

3. The hanger of claim 1 where the outer surface has a plurality of grooves therein positioned side-by-side and lying crosswise with respect to the longitudinal centerline and that extend into the arcuate portion along converging pathways.

4. The hanger of claim 3 where the arcuate portion has a predetermined thickness and the grooves are substantially from 20 to 40 percent of said thickness of the arcuate portion.

5. The hanger of claim 1 where the edge portion of the plate member has a curved end segment that is oriented rearward towards the straight segment of the hook member and at least partially forms the edge portion to orient said edge portion rearward towards the straight segment of the hook member.

6. The hanger of claim 5 where the plate member has a substantially oval perimeter and a wavy configuration.

7. The hanger of claim 1 where the base member has a thickness that is less than 0.5 inch and the outer side has a substantially flat exterior surface with integral sides.

8. The hanger of claim 7 where the sides are beveled at an intersection with the flat exterior surface and substantially at a right angle thereto.

9. The hanger of claim 1 where the hook member has a cross-sectional configuration substantially corresponding to a truncated ellipse to provide a substantially rounded exterior surface of the hook member and a substantially planar interior surface of the hook member.

10. The hanger of claim 1 where the hook member has a greater cross-sectional dimension at the fixed end than at the free end.

11. The hanger of claim 1 where the underside of the base member has an exterior adhesive surface covered by a removable cover sheet.

12. The hanger of claim 1 where the base member has (a) a plurality of cavities therein formed by at least one elongated reinforcing member extending lengthwise substantially along the centerline and (b) a pair passageways therein, one passageway that intersects one portion of the reinforcing member nearby the one opposed end of the base member and the other passageway that intersects another portion of the reinforcing member nearby the other opposed end of the base member.

13. A hanger comprising

a molded plastic body including

an elongated base member having a predetermined length, an underside for mounting to a substantially flat surface, and an outer side from which projects a crooked arm that has an elbow portion integral at one end with the base member and an another end that terminates in a linear portion extending lengthwise above and along the length the base member and that pivots at the elbow portion upon a manually force being applied thereto,

said elbow portion and linear portion forming an acute angle and said linear portion having a free end with a stop element thereat that forms between the stop element and the outer side a narrow gap that expands and contracts as the linear portion pivots to move between a closed position where the gap is the narrowest to an open position where the gap is wider,

said elbow portion having a outer surface with at least one lateral groove therein that functions as a fulcrum for the linear portion so that, when a manual force is applied to the free end to push the linear portion away from the outer side moving said linear portion from the closed position to the open position, the width of the groove is compressed and, upon release of the force, the linear portion springs back to the closed position to narrow the gap.

14. A hanger comprising

a molded plastic body including

an elongated base member having a longitudinal centerline, opposed ends, an outer side, and an underside configured to enable said underside to be positioned substantially flush against a substantially flat surface to facilitate attaching the hanger to the surface,

a flexible and resilient hook member centrally positioned on the base member having a fixed end integral with and attached to the outer side nearby one opposed end of the base member,

said hook member including an arcuate portion extending along the longitudinal centerline and a substantially linear portion extending along the longitudinal centerline and having a cross-sectional configuration substantially corresponding to a truncated ellipse to provide a substantially rounded exterior surface of the hook member and a substantially planar interior surface of the hook member,

said arcuate portion having a first substantially straight segment projecting outward from the fixed end substantially at a right angle to the outer side that terminates in a curved segment having an outer surface and an inner surface, said outer surface having a plurality of grooves therein positioned side-by-side and lying crosswise with respect to the longitudinal centerline and that extend into the arcuate portion along converging pathways,

said curved segment terminating in an outer end that is integral with an inner end of the substantially linear portion of the hook member, said outer end being above the outer side of the base member a first predetermined distance,

said substantially linear portion of the hook member sloping inward towards the outer side of the base member and terminating in a free end that is nearby the other opposed end of the base member and above the outer side of the base member a second predetermined distance that is substantially less than the first predetermined distance, and

a stop element integral with and attached to the free end, said stop element comprising a plate member that is substantially at a right angle to the linear portion of the hook member and has an edge portion that is adjacent to and above the outer side of the base member a third predetermined distance that is substantially less than the second predetermined distance,

said base member having a height substantially from 1/8 to 0.5 inch and a length substantially from 2 to 5.5 inches, and the linear portion of the hook member having a length substantially from 2 to 3 inches, and the first predetermined distance

being substantially from 0.5 to 1.25 inch, the second predetermined distance being substantially from 0.375 to 0.75 inch, and the third predetermined distance being substantially from 0.125 to 0.150 inch.

15. The hanger of claim 14 where the edge portion of the plate member has a curved end segment that at least partially forms the edge portion and orients said edge portion rearward towards the straight segment of the hook member.

16. The hanger of claim 15 where the plate member has a substantially oval perimeter and a wavy configuration.

17. A hanger comprising

a molded plastic body including

an elongated base member having opposed ends, an outer side, and an underside that enables said underside to be positioned substantially flush against a substantially flat surface to facilitate attaching the hanger to the surface,

a flexible and resilient hook member having a fixed end integral with and attached to the outer side nearby one opposed end of the base member,

said hook member including an arcuate portion and a substantially linear portion, said arcuate portion having a curved segment having an outer surface and an inner surface, said outer surface having a plurality of lateral grooves therein positioned side-by-side,

said curved segment having an interior surface that terminates at a junction with the linear portion, said junction being above the outer side of the base member at least a distance of 0.5 inch,

said linear portion of the hook member sloping inward towards the outer side of the base member and terminating in a free end that is nearby the other opposed end of the base member and above the outer side of the base member a distance that is less than 0.75 inch, and

a stop element integral with and attached to the free end that has an edge portion that projects rearward and towards the outer side of the base member.

18. The combination comprising

substantially horizontal surface that is at least 24 inches above ground, and

a hanger including

a base member attached to the horizontal surface,

a crooked arm projecting outward and downward from an outer side of the base member and having a linear portion extending from an elbow of the crooked arm and sloping towards the outer side and terminating in a free end, and

a stop element attached to the free end that has an edge portion that projects towards the outer side of the base member to provide a gap between the edge portion and the base member that is between 0.125 and 0.150 inch,

said elbow portion having at least one groove therein that functions as a spring biased fulcrum for the linear portion, enabling the linear portion to pivot at the fulcrum to expand the gap and to spring back to narrow the gap.

19. A method of supporting underneath and to a substantially horizontal surface that is at least 24 inches above ground a handbag having a strap formed into a loop, said method comprising the steps of

(a) fastening to and beneath the horizontal surface a hanger having a base member with an underside positioned substantially flush against the horizontal surface,

said base member having attached thereto a flexible and resilient hook member having an arcuate portion and a substantially linear portion,

said arcuate portion having an interior surface that terminates at a junction with the linear portion, said junction being spaced from the base member at least a distance of substantially 0.5 inch, and

said linear portion sloping towards the base member and terminating in a free end that is spaced from the base member a distance that is less than substantially 0.75 inch, and

a stop element attached to the free end that has an edge portion that projects rearward and towards the outer side of the base member to provide a narrow gap between the edge portion and the base member that is substantially from 0.125 to 0.150 inch ,

(b) manually pushing the hook member to flex said hook member so the free end moves away from the base member to enlarge the gap,

(c) with the hook member flexed, passing the free end of the hook member through the strap loop, and

(d) releasing the hook member, which returns to an unflexed condition to move the free end towards the base member and returning the gap to its original condition, thereby supporting the handbag by the hook member.

20. The method of claim 19 where said arcuate portion has a curved outer surface having at least one lateral groove therein that functions as a fulcrum for the linear portion of the hook member.

21. A method of supporting on a surface a handbag having a strap formed into a loop, said method comprising the steps of

(a) fastening to the surface at least 24 inches above ground a hanger having a base member with an underside positioned substantially flush against the surface,

said base member having attached thereto a flexible and resilient hook member having an arcuate portion and a substantially linear portion,

said arcuate portion having an interior surface that terminates at a junction with the linear portion, said junction being spaced from the base member at least a distance of substantially 0.5 inch, and

said linear portion sloping towards the base member and terminating in a free end that is spaced from the base member a distance that is less than substantially 0.75 inch, and

a stop element attached to the free end that has an edge portion that projects rearward and towards the outer side of the base member to provide a narrow gap between the edge portion and the base member that is substantially from 0.125 to 0.150 inch,

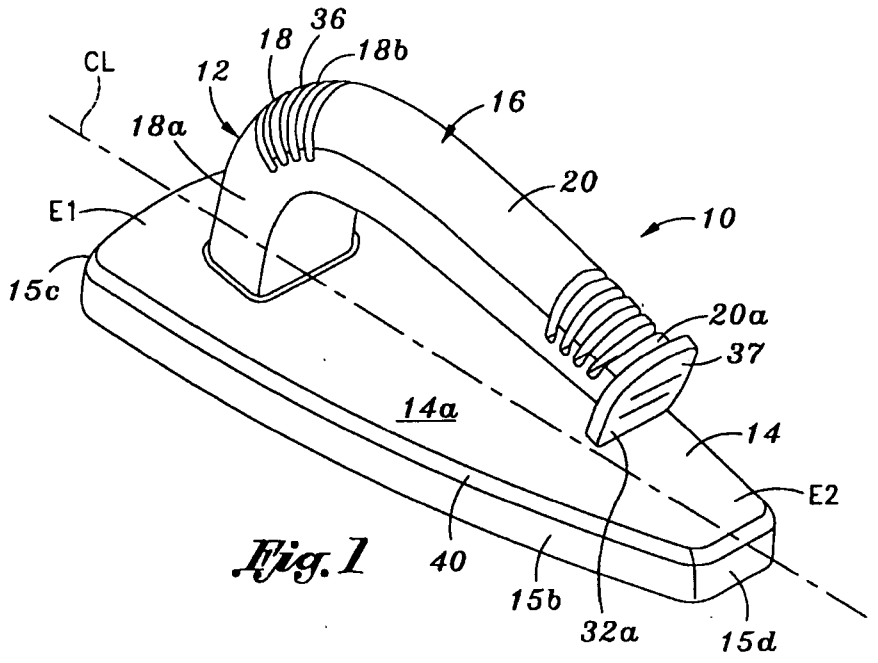
said hanger being oriented with the gap facing away from the ground,

(b) manually pushing the hook member to flex said hook member so the free end moves away from the base member to enlarge the gap,

(c) with the hook member flexed, passing the free end of the hook member through the strap loop, and

(d) releasing the hook member, which returns to an unflexed condition to move the free end towards the base member and returning the gap to its original condition, thereby supporting the handbag by the hook member.

22. The method of claim 21 where said arcuate portion has a curved outer surface having at least one lateral groove therein that functions as a fulcrum for the linear portion of the hook member.


CL
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18
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18b
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18a
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E1
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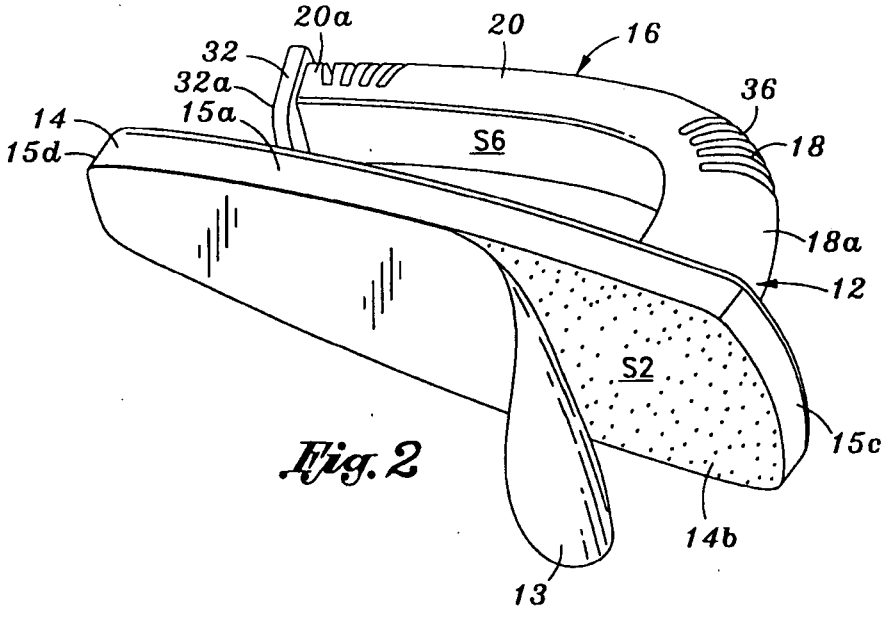
14a
14
E2
40
15b
32a
15d

Fig. 1


20a
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15a
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15d
S6
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18a
12
S2
15c
14b
13

Fig. 2

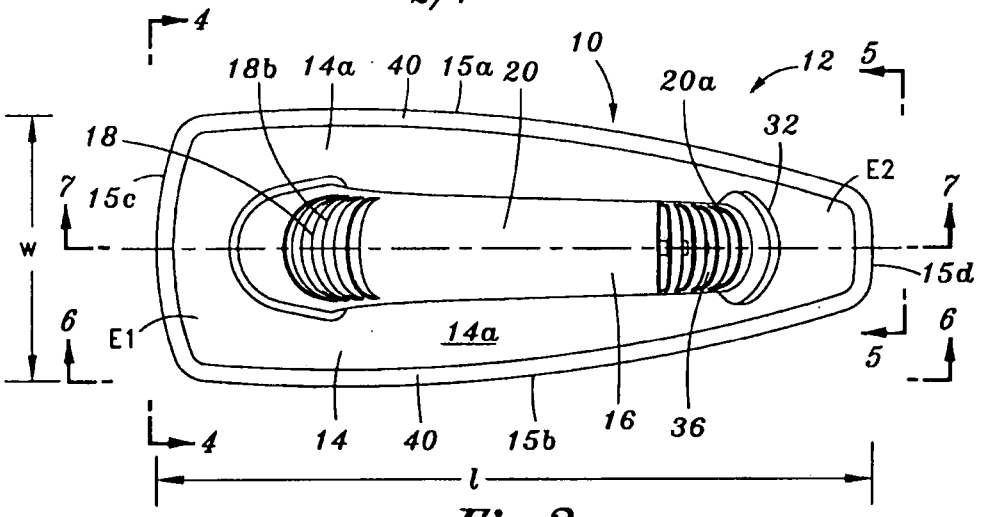


Fig. 3

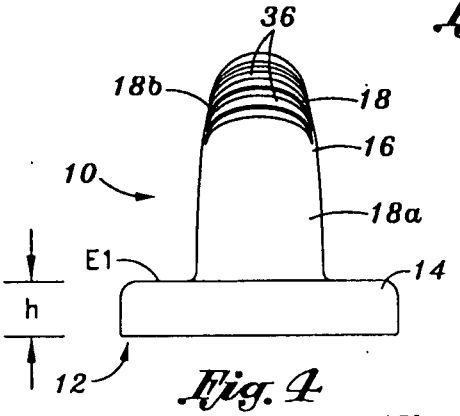


Fig. 4

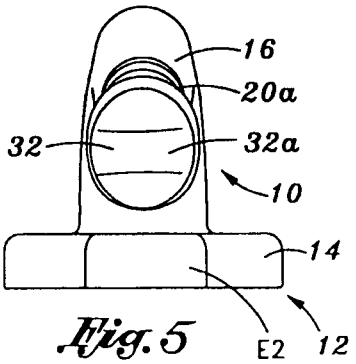


Fig. 5

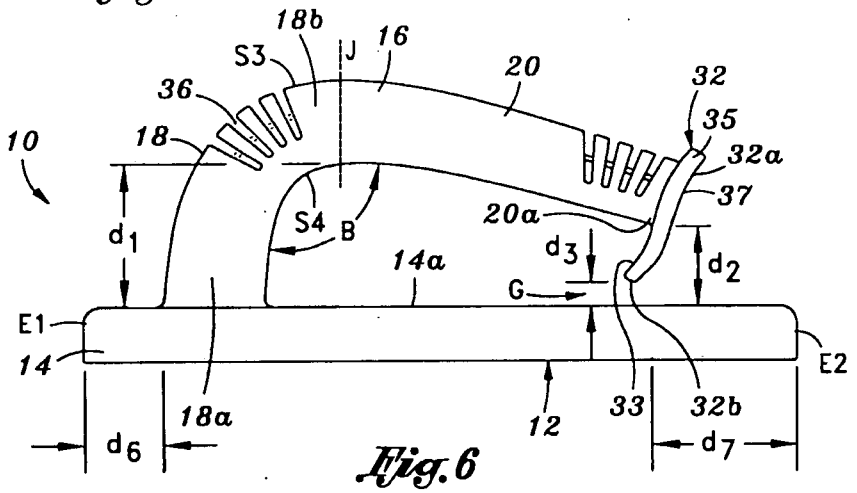


Fig. 6

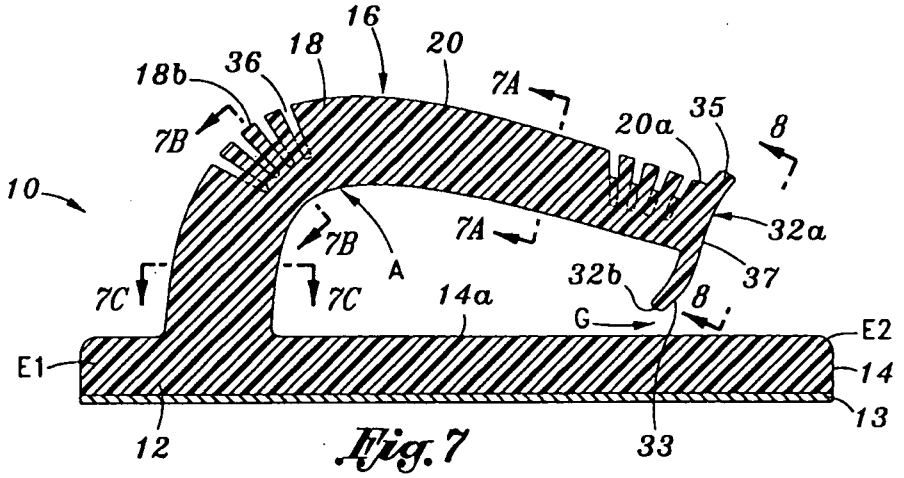


Fig. 7

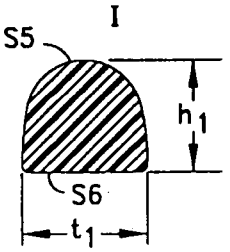


Fig. 7A

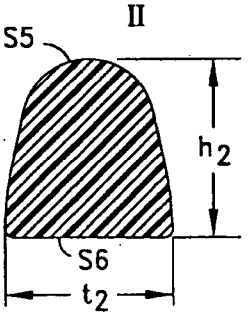


Fig. 7B

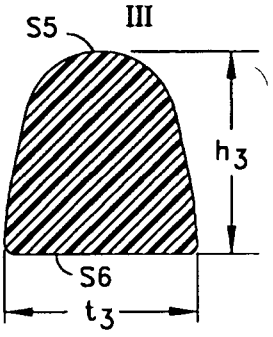


Fig. 7C

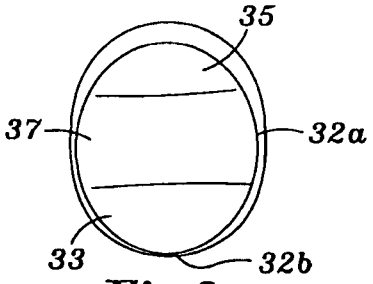
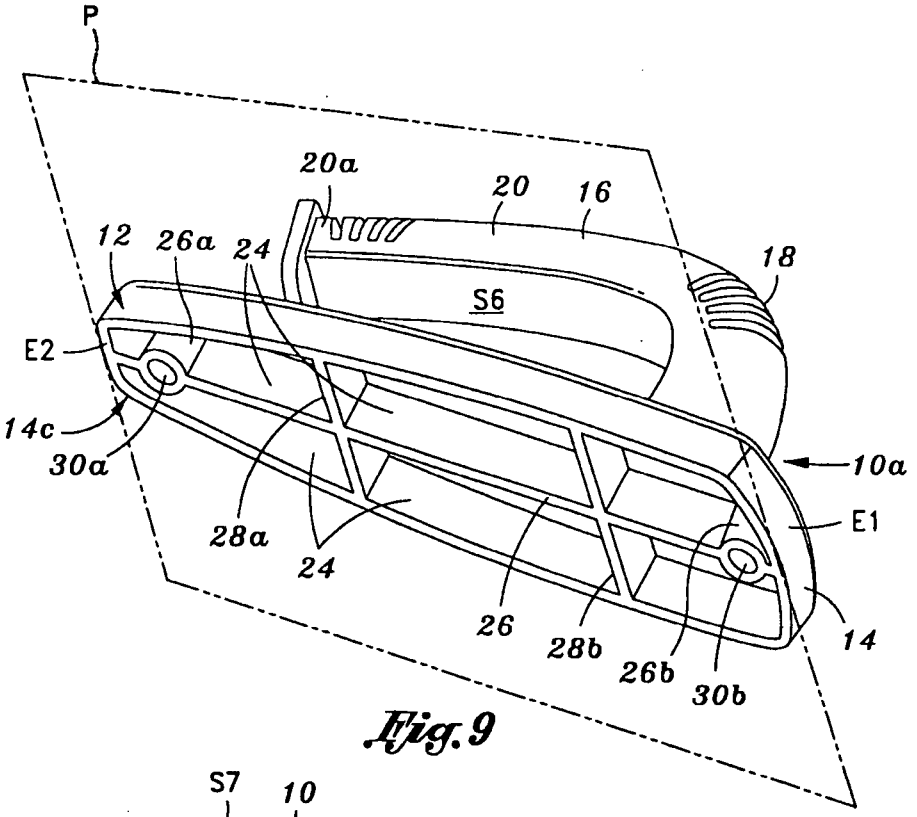


Fig. 8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26a
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10a
E1
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24
26
28b
26b
30b
14

Fig. 9

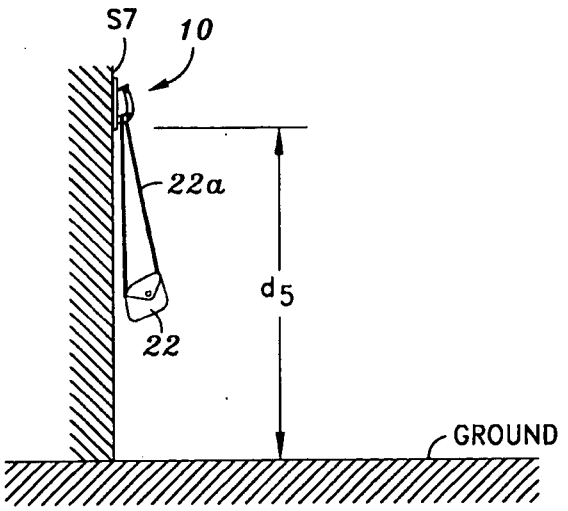
S7
10
22a
d_5
22
GROUND

Fig. 15

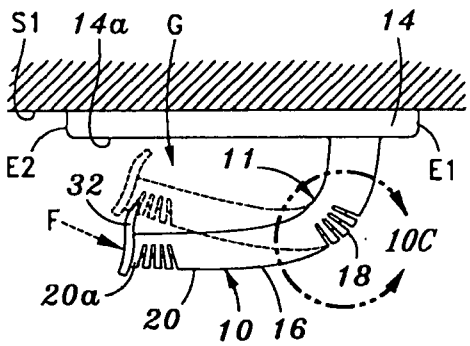

Fig. 10A

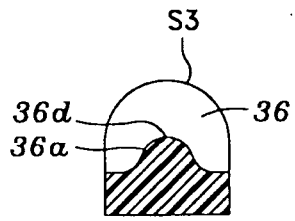

Fig. 10E

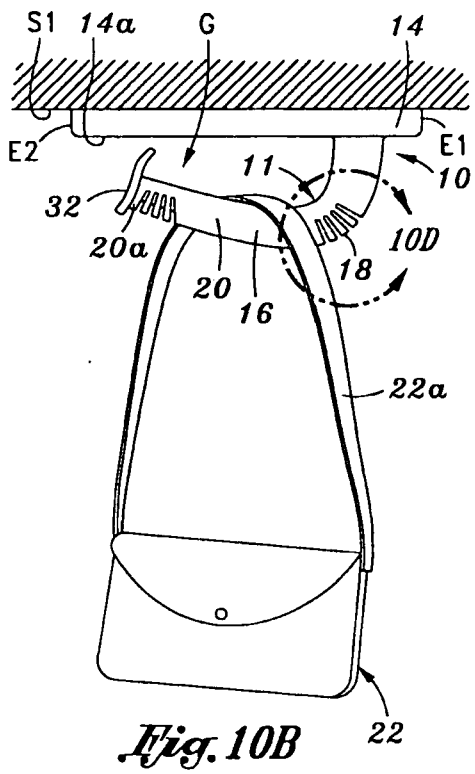

Fig. 10B

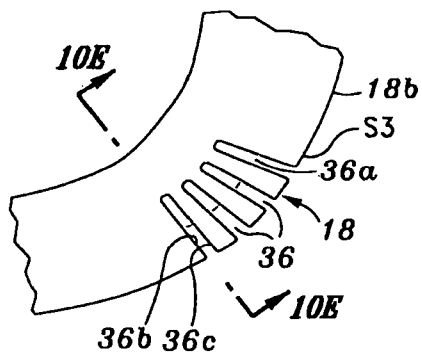

Fig. 10C

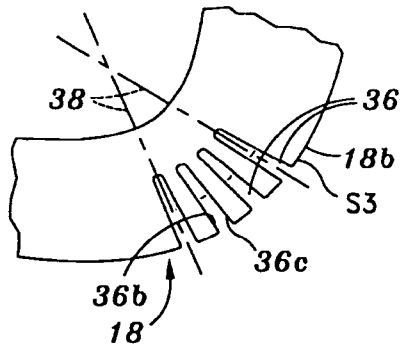

Fig. 10D

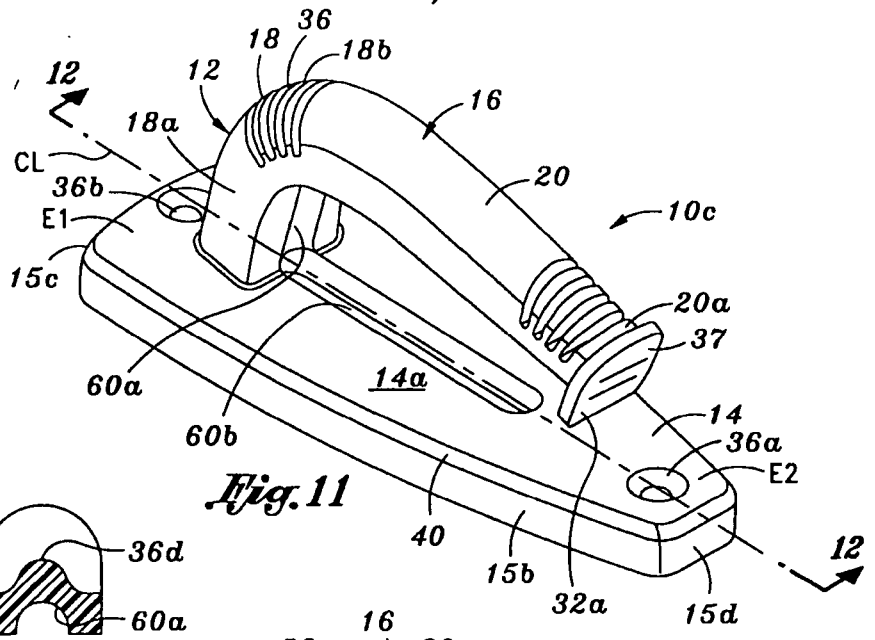

Fig. 11

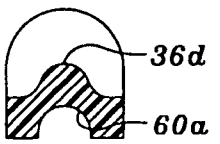

Fig. 14

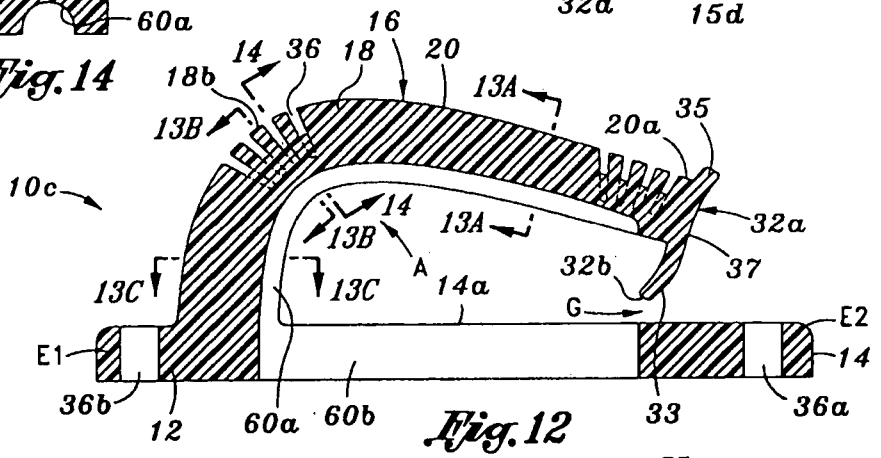

Fig. 12

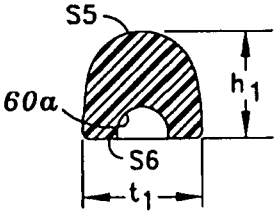

Fig. 13A

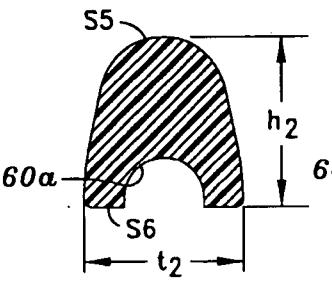

Fig. 13B

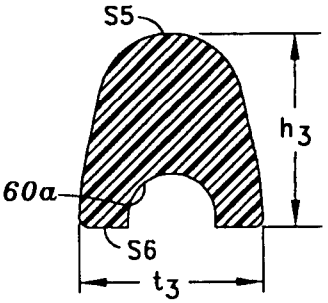

Fig. 13C

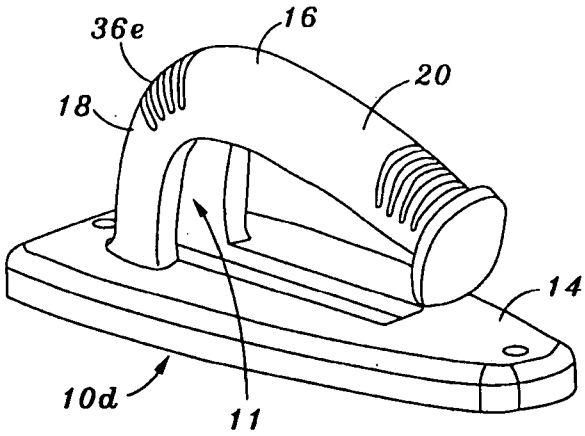

Fig. 16

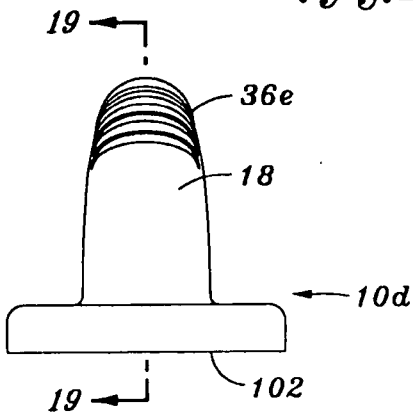

Fig. 18

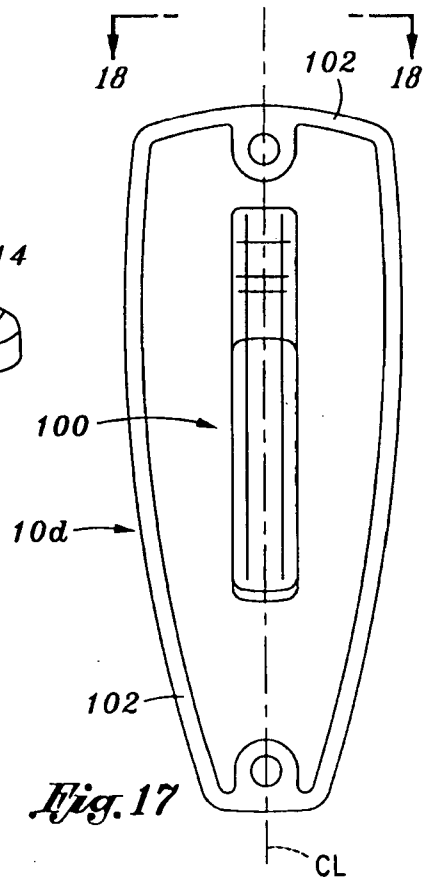

Fig. 17

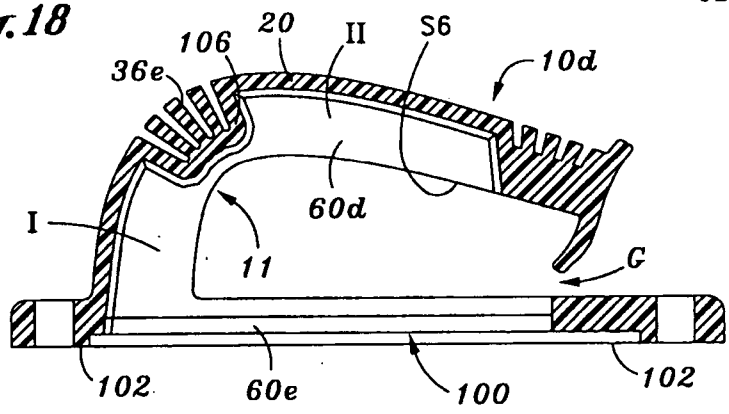

Fig. 19