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(54) **COAT HANGER BAG**

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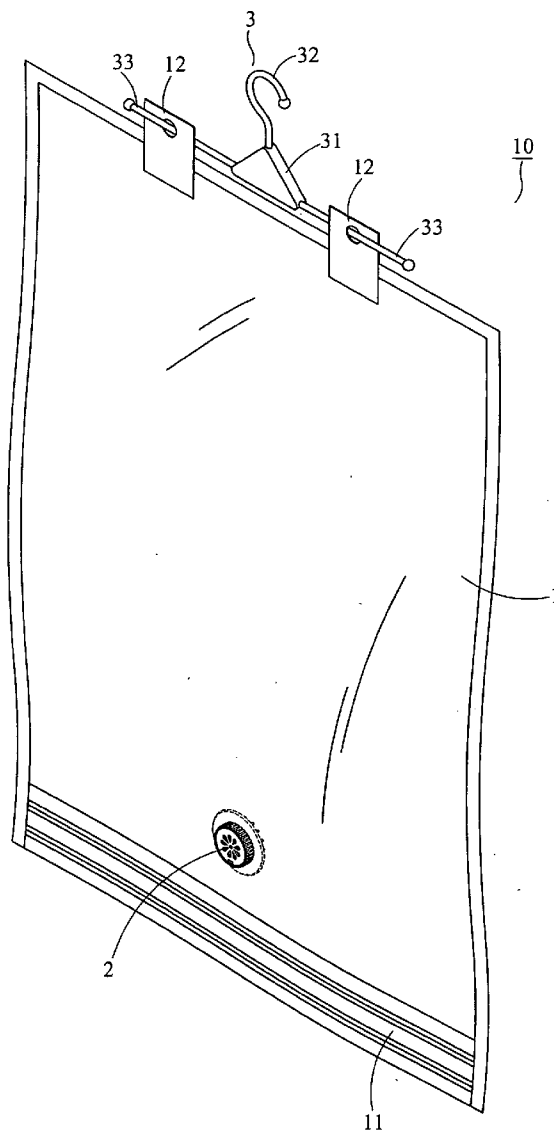
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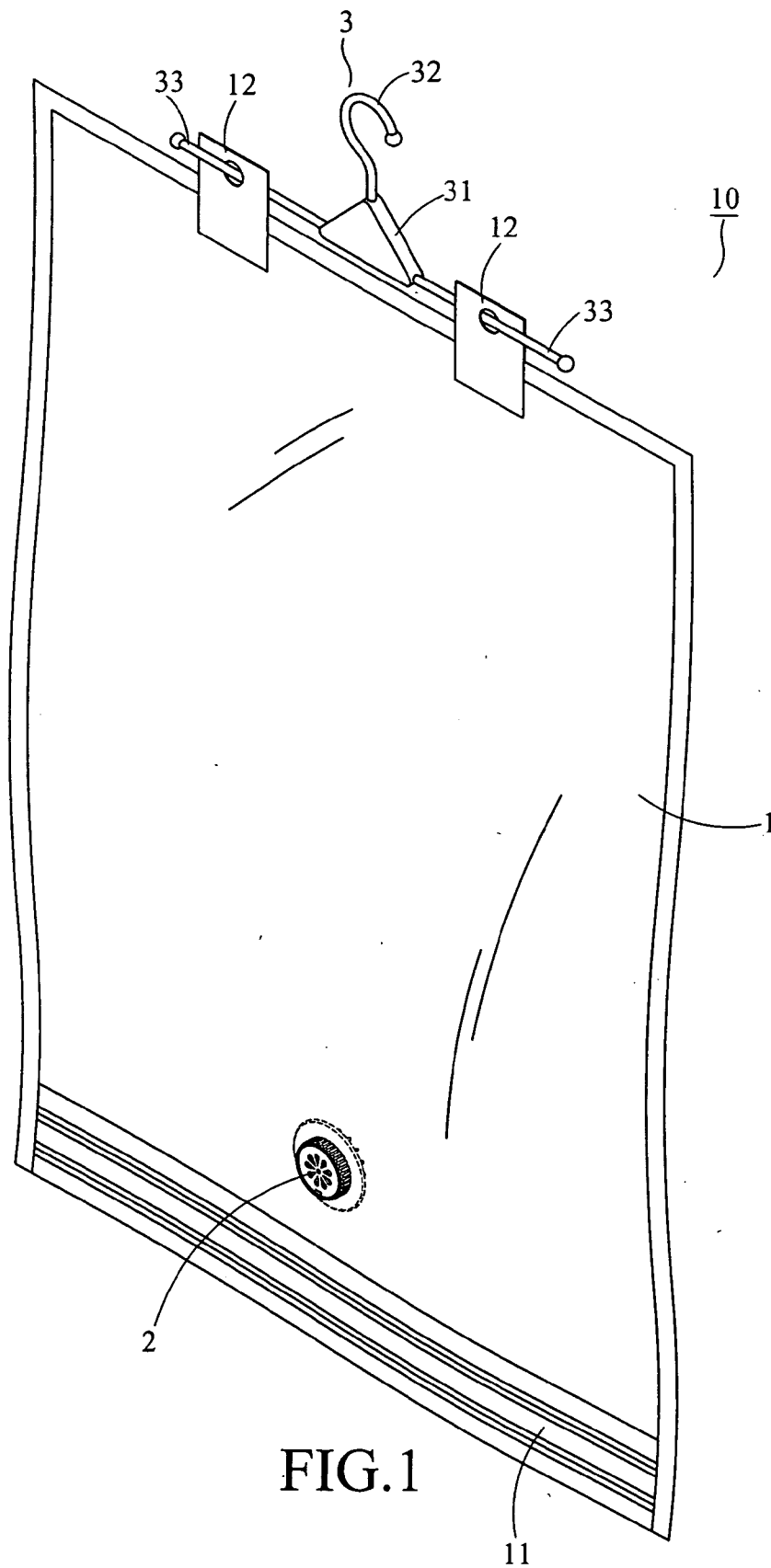
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(57) **ABSTRACT**

The present invention is to provide a vacuum hanger bag having a bag with an airtight closure, a one-way valve installed to the bag, and a hook disposed on the top end of the bag. The hook secured to an outer side of the bag, it consists of a hook with a jut projected downward from its bottom end to penetrate into an inner side of the bag. A base secured to the inner side of the bag with an axial hole for said jut embedding into. An impervious stopper is hidden from view retained at a bottom end of the axial hole. A nut is threaded to a bottom end of the base. And a hook ring with a jut projected upward from its top end is embedded into the nut.





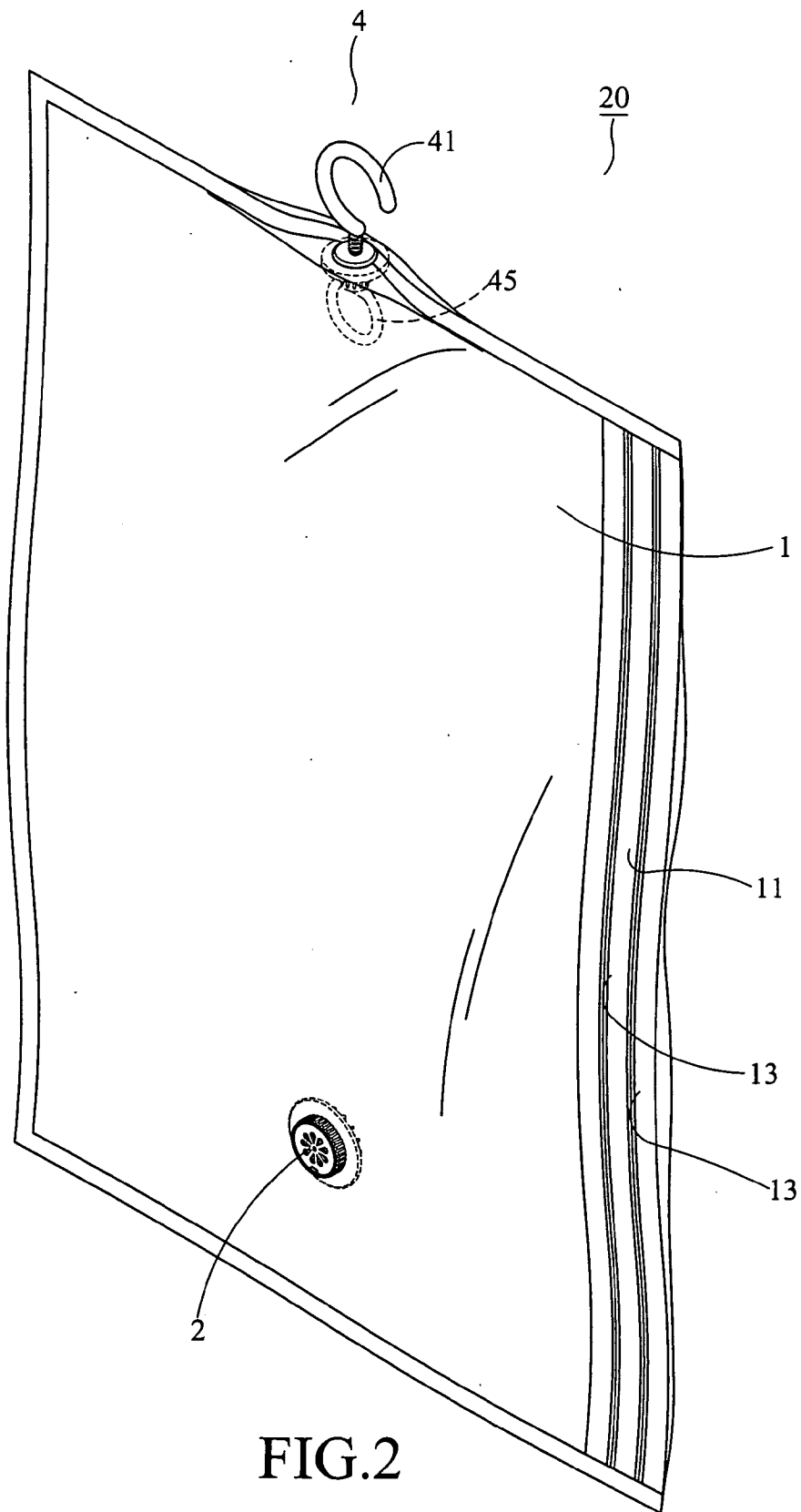


FIG. 2

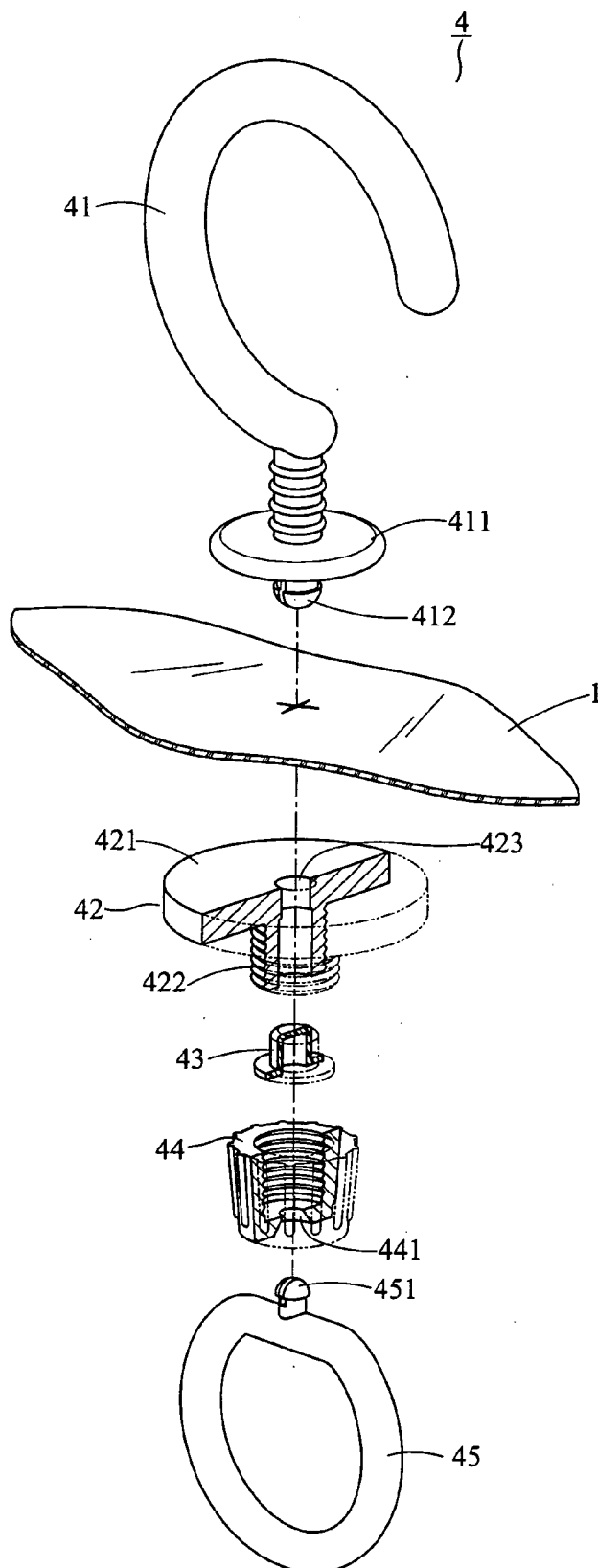


FIG.3

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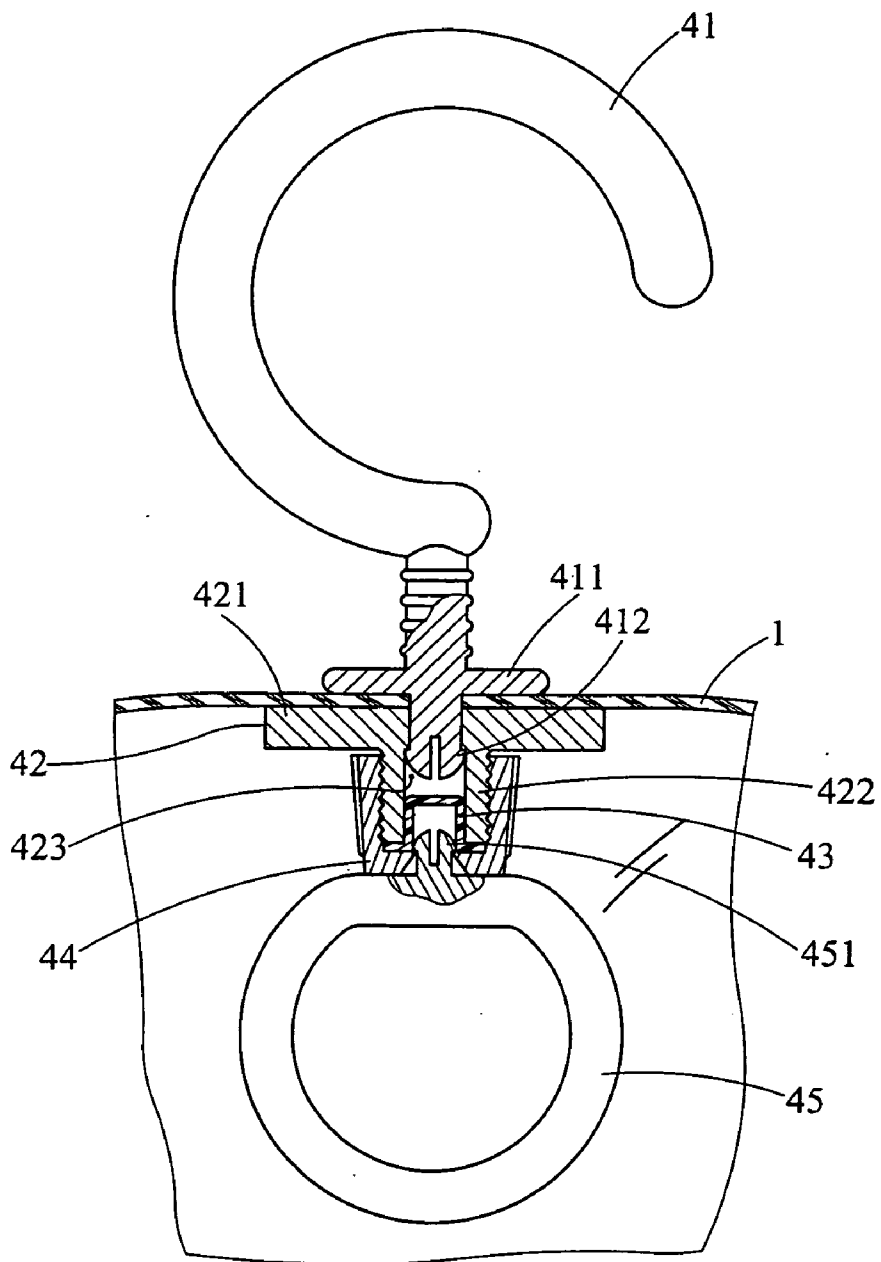
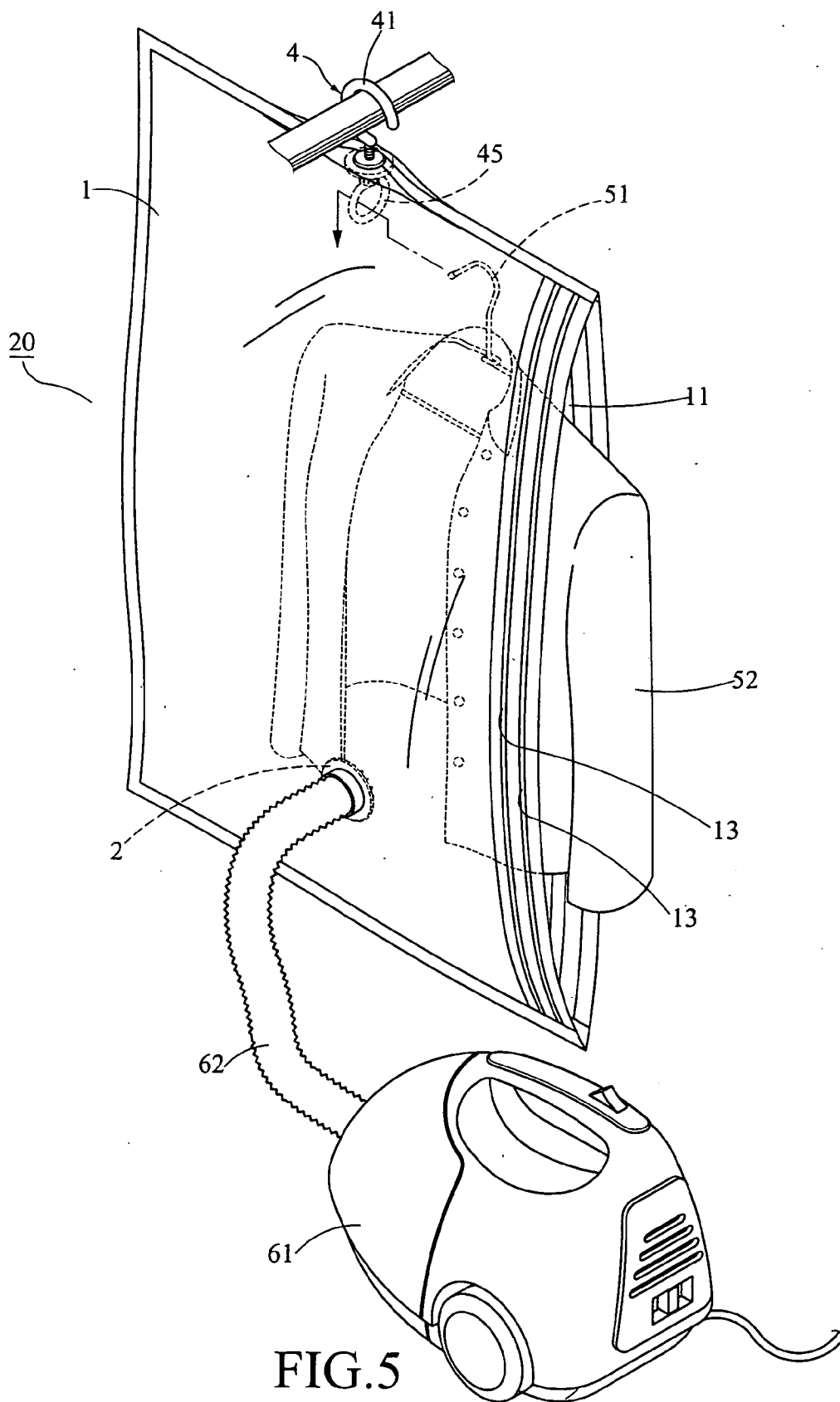
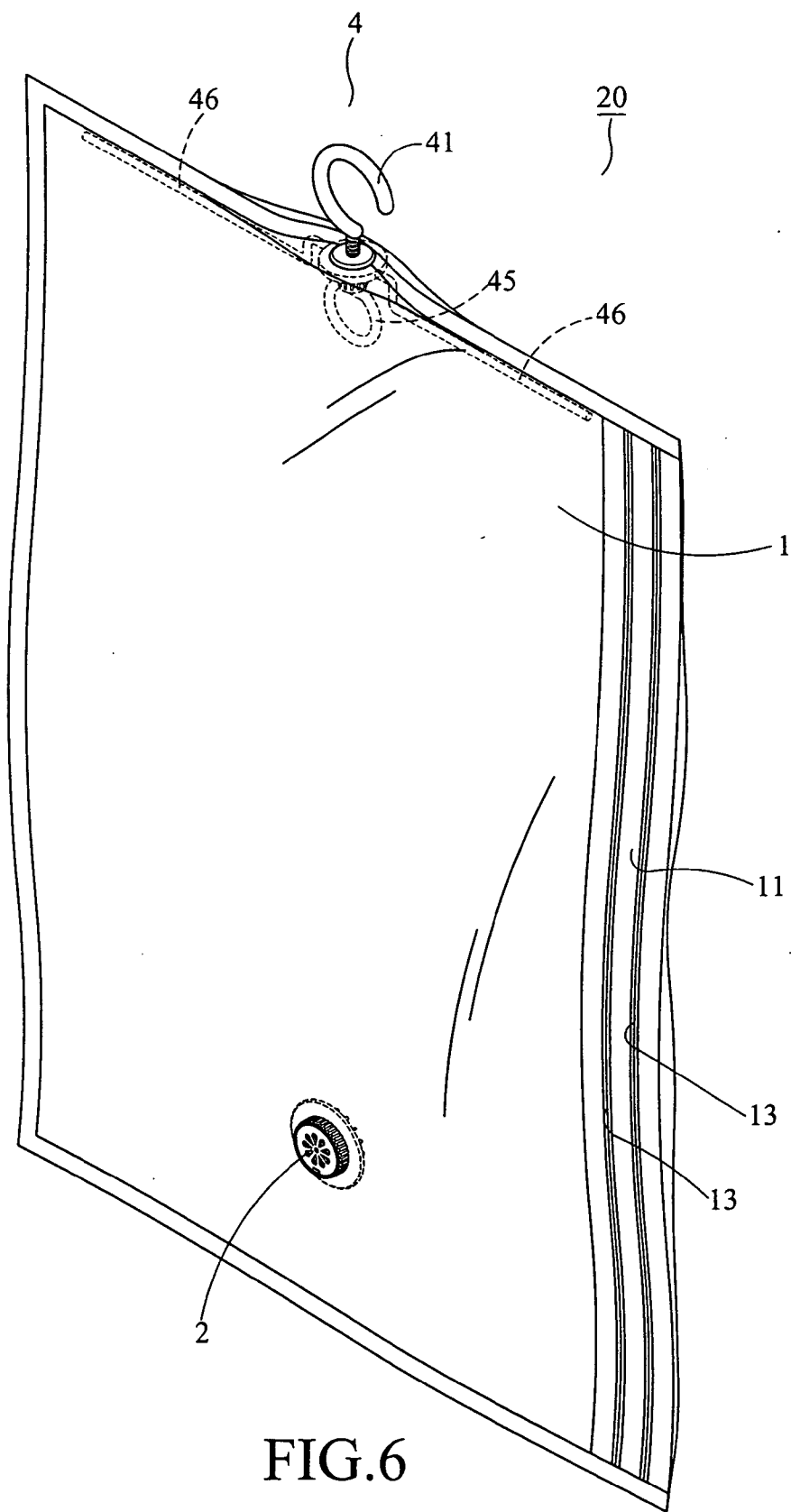


FIG.4





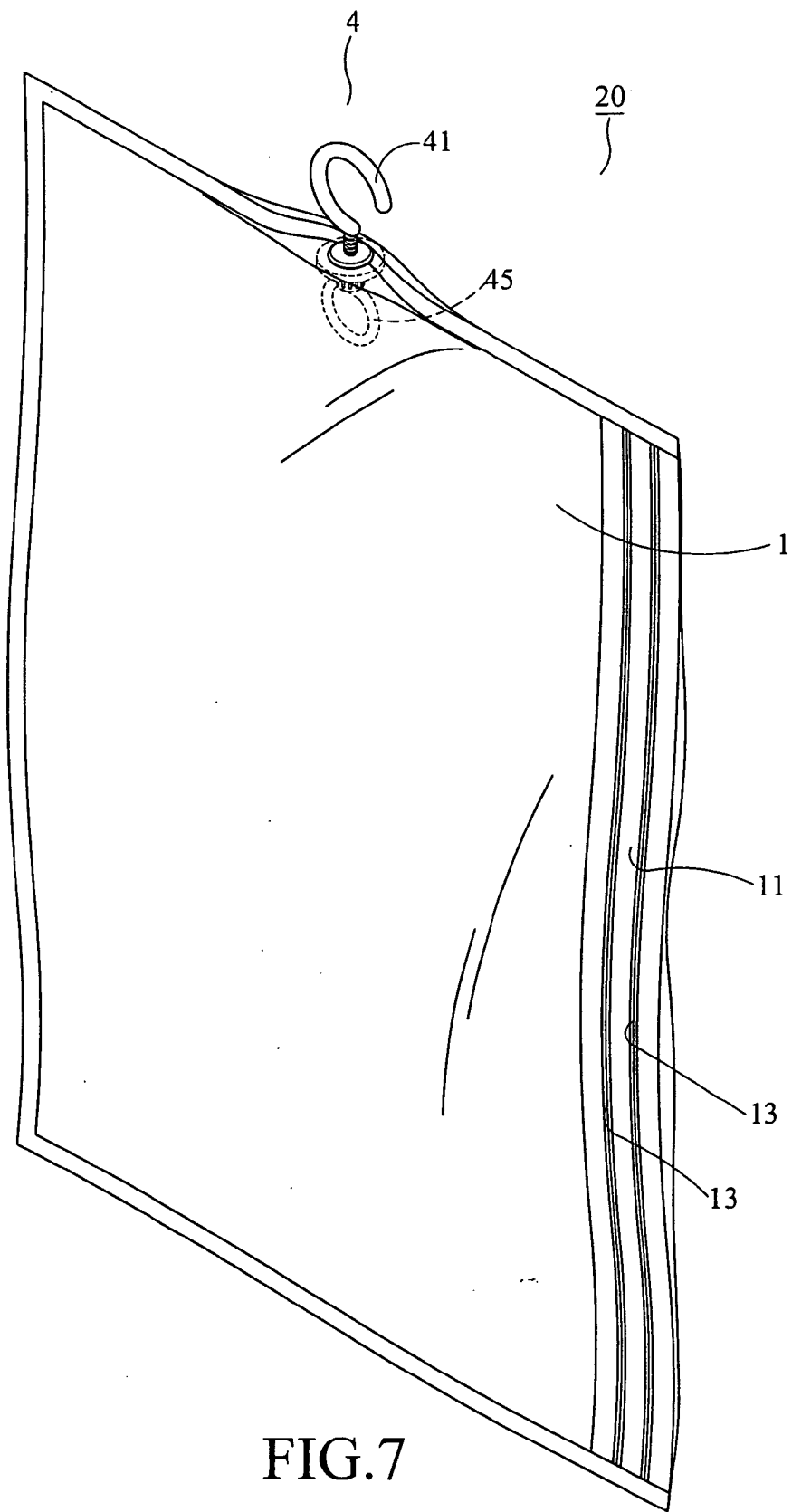
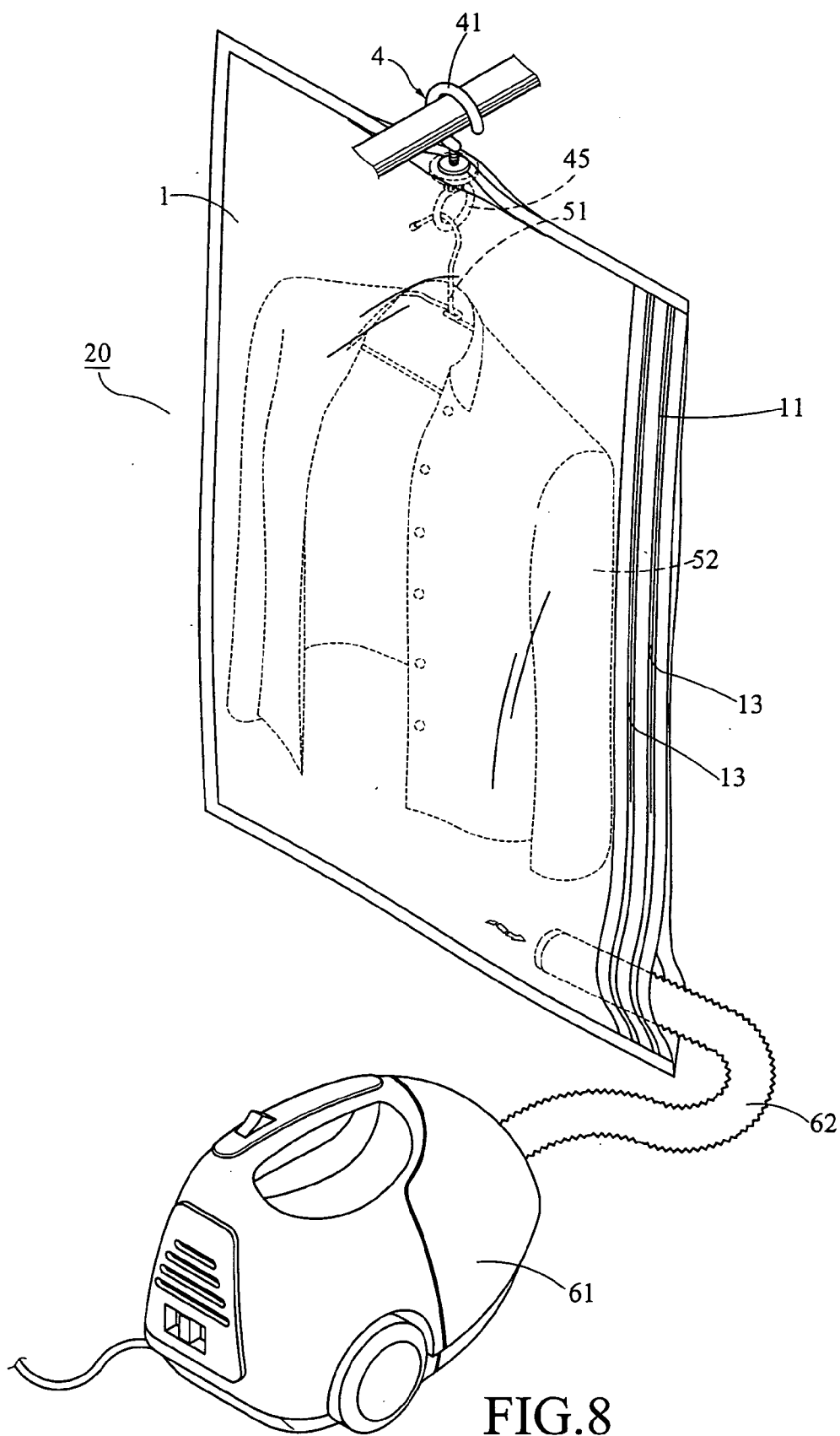


FIG. 7





**COAT HANGER BAG**

FIELD OF THE INVENTION

[0001] The present invention is related to a vacuum hanger bag and a hook ring installed within, in particular, for clothing conveniently hanging into or removing out thereof.

BACKGROUND OF THE INVENTION

[0002] As shown in FIG. 1, a conventional vacuum hanger bag 10 consists of a bag 1 having an airtight closure 11, a one-way valve 2 installed to the bag 1, and a hanger 3 installed to the top end of the bag 1. Said hanger is composed of a triangular body 31 with a hook 32 protruded from the vertex of the triangle, and two shoulders 33 extended from both sides of the base of the triangle. By means of two shoulders 33 passed through two loops 12 along the top end of the bag and then the shoulders 33 are joined together with the bag 1. Said two loops 12 are welded to the bag 1 by high frequency welding.

[0003] Before the clothing (quilt, blanket, clothes or the like) is hanging in the bag 1, two chains of interconnected closure clips of the closure 11 should be opened up; then the clothing hung therein. After two chains of interconnected closure clips are closed, a cap is removed from the one-way valve 2, and a vacuum cleaner 61 starts (refer to FIG. 5) to suck out the air inside the bag 1. Air remained in the bag 1 are drained off by the partly negative air pressure till the air in the bag is exhausted to approach to near vacuum. Finally, the suck pipe 62 is removed off the one-way valve 2; the cap then is threaded to the one-way valve. Thereby, the clothing can be preserved inside the vacuum bag 1 for a longer while. The vacuum bag hung out on a cloth rail in a wardrobe without occupying enormous space.

[0004] The vacuum bag illustrated in FIG. 1 is equipped with two loops 12 attached to the bag 1 by high frequency welding, both of the two loops having through holes formed within for passing through two shoulders 33 of the hanger 3. After the hanger 3 is hung from the cloth rail, two loops 12 are to be overburdened with the whole bag 1 laden with clothing. Due to the loops 12 are made of soft thin plastic sheet, a duly loaded clothing over a hanger is only suspended from two loops 12, for a long term suspending which may cause two loops out of shape further to rip apart the through holes results in the bag 1 separated from the hanger 3. And nothing can be hung out within the separated bag 1.

[0005] Next, an airtight closure 11 of a vacuum bag 10 is installed to a bottom end of the bag 1, when a folded hanger bag is spread upright in a wardrobe, the clothing would have been hung into the bag 1 from an opening at the bottom end of the bag vertically, if desired. In fact, a vacuum bag must be taken down from a cloth rail and placed onto a table surface flatly. Thereby, the user is going to hang anything into the bag horizontally. In turn, anything moved out from the bag, it must be taken down from a cloth rail and placed onto a table surface flatly. Moreover, clothing has a specific gravity overburdened to the hanger 3; consequently it causes the clothing to be fallen below the bag 1. Then the clothing will be wrinkled up.

[0006] Accordingly, person skilled in the art have provided a vacuum bag, such as disclosed in U.S. Pat. No. 5,746,360 (hereinafter '360) entitled "Coat hanger bag" to Chin-Lai Chen on May 5, 1998, in which, Chen taught that a hook 50 is disposed above a bag 10, a hanger 60 is

threaded to the hook 50, a one-way valve (hanger member) 30 is disposed inside the coat hanger 60; when the hook 50 is taken down from a hanger 60, a bore 61 can be connected to a sucking hole 70 of the vacuum cleaner by a sucking tube 40. When sucking out air, air remained in the bag 10 will be drained out till the inner side of the bag 1 is nearly vacuum.

[0007] The drawback of '360 is when sucking out air, a hook 50 needs to be taken down from the bag 1, then the sucking tube 40 fits over the sucking hole 70, until the air remained inside the bag 1 is drained off to approach to near vacuum. The sucking tube 40 can be separated from the bag 1, and the hook 50 is threaded to the hanger 60 integrally as a whole. Thereby, the hook 50 can be used to hang the bag 1 on the cloth rail in the wardrobe. Each time when the bag 1 is processed through a vacuum sucking process, the steps should be repeated step by step. It may cause a work-shy to the users.

[0008] Further, an opening of the vacuum bag 10 is located at the bottom end of the bag 1, whenever the clothing is taken out or hung into the bag 1, the sucking out air process should be processed on a table surface. Therefore, a lot of workload may be annoyed to the users.

SUMMARY OF THE INVENTION

[0009] The present invention is aimed to provide a vacuum bag to prevent it from deformation and being separated from a hanger.

[0010] The present invention is also aimed to provide a vacuum bag can be used to hang into or taken out clothing upright.

[0011] The present invention is also aimed to provide a vacuum bag to sustain the hanger laden with clothing, and the clothing will not be drooped or wrinkled due to the specific gravity of itself.

[0012] The present invention is also aimed to provide a hook can be assembled easily for hanging out clothing.

[0013] To solve the problems as mentioned above, and to achieve the purposes of the present invention, a first embodiment of the present invention is realized by a vacuum hanger bag (20) comprising a bag (1) equipped with an airtight closure formed by two chains of interconnected closure clips (13); a one-way valve (2) installed to the bag (1); and a hook (4) protruded from a middle point at a top end of the bag (1) characterized in that:

[0014] the hook (4) secured to an outer side of the bag (1) with a jut (412) projected downward from its bottom end for penetrating into the inner side of the bag (1); a base (42) secured to an inner side of the bag opposite to the hook (4) with an axial hole (423) for receiving the jut (412); an impervious stopper (43) is hidden from view retained at a bottom end of the axial hole (423) of the base (42); a nut (44) is threaded to a bottom end below the base (42); and a hook ring (45) with a jut (451) projected upward from its top end embedding into the nut (44).

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] FIG. 1: shows a perspective view of a conventional vacuum bag.

[0016] FIG. 2: shows a perspective view of a vacuum bag of the first embodiment of the present invention.

[0017] FIG. 3: shows an exploded view of FIG. 2.

[0018] FIG. 4: shows a whole cross sectional view of FIG. 2.

[0019] FIG. 5: shows a diagrammatic view of the application of FIG. 2.

[0020] FIG. 6: shows a perspective view of an alternative embodiment of FIG. 2.

[0021] FIG. 7: shows a perspective view of a second embodiment of the vacuum bag of the present invention.

[0022] FIG. 8: shows a diagrammatic view of the application of FIG. 7.

DESCRIPTION OF PREFERRED EMBODIMENTS IN DETAIL

[0023] The present invention is described in conjunction with the appended drawings hereinafter.

First Embodiment

[0024] As shown in FIG. 2, a vacuum hanger bag 20 includes a bag 1 with an airtight closure 11, a one-way valve 2 installed to the bag 1, and a hook 4 attached to a top end of the bag 1.

[0025] As mentioned above, the airtight closure 11 is disposed to a lateral side of the bag 1; the clothing is placed into or removed from the bag 1 through the lateral opening directly. At least, two chains of interconnected closure clips 13 are installed to the airtight closure 11. Said closure clips 13 are well-known prior arts which is composed of a male, and a female chains, after the male and female chains are joined together; the airtight closure 11 is closed.

[0026] Next, a one-way valve 2 can be connected to a suck pipe of the vacuum cleaner. Air can be drained off the bag in one-way orientation but not being sucked therein. Therefore, when the valve cap is removed off, the air can be sucked out by means of a suck pipe. Conversely, when the air is not sucked out, the valve is automatically sealed. Kinds of one-way valves can be found in the USPTO issued patents and published applications, the present invention introduces a one-way valve according to U.S. application Ser. No. 11/260,364 entitled "one way valve" assigned to Su, Fu Long on Oct. 28, 2005. (Su, Fu Long now corrects his name as Su, Yu-Hsin in Taiwan, R.O.C to file application before the USPTO.)

[0027] As shown in FIGS. 3 and 4, a hook 41 is secured to the outside of a bag 1; a jut 412 projected downward from a bottom end of the hook is penetrated into the inner side of the bag 1. Opposite to the hook 41, a base 42 secured to the inner side of the bag having an axial hole 423 for receiving the jut 412 embedded therein. An impervious stopper 43 is hidden from view retained at a bottom end of the axial hole 423 of the base 42. A nut 44 is threaded to a bottom end of the base 42. A hook ring 45 with a jut 451 projected upward from its top end, the jut 451 can be embedded into the nut 44. Due to the hook 4 is engaged to the hanger integrally as a whole, therefore, when the hook 41 is hung from the cloth rail for hanging out the hanger and the clothing, the hook 4 can withstand all the specific gravity of all the hanger 51 and clothing 52.

[0028] As mentioned above, the jut 412 at the bottom of the hook 41 is equipped with a press plate 411, the press plate is pressed onto the bag 1. A base plate 421 on top of the base 42 is welded to the bottom of the bag 1 by high frequency welding. And the bag 1 is introduced between the press plate 411 and base plate 421 to be pressed tight.

[0029] A threaded rod 422 at the bottom end of the base 42 is threaded to the nut 44; the axial hole 423 is formed at a

center of the base 42. A lower opening of the axial hole 423 is closed by the cap like stopper 43, due to the stopper 43 is made of soft plastics or silicone, said stopper 43 can be plugged into a through hole 423 of the base 42 made of hard plastics, therefore, the stopper 43 fits in the through hole 423 tight.

[0030] A through hole 441 formed at a bottom end of the nut 44 can accommodate the jut 451 of the hook ring 45 embedded therein. After embedding, the jut 451 can enter into the cap like stopper 43. Due to the bottom edge of the stopper 43 is pressed tight under the threaded rod 422; therefore, an impervious effect can be achieved.

[0031] Next, said hook 4 can be formed integrally by assembling a hook 41, base 42, nut 44 and hook ring 45 as a single hanger. The hook 41 is hung from the cloth rail, in turn, clothing or something can be hung from a hook ring 45; thereby, a hanger 51 (as shown in FIG. 5) can further be hung from the hook ring 45.

[0032] As shown in FIG. 5, a hanger 51 with clothing 52 being hung out can be hung into or removed from transversally through an airtight closure 11 along a lateral side of the bag 1. At this time, the vacuum hanger bag 20 is hung from the cloth rail upright; it needs not to place onto a table surface in operation. Therefore, the vacuum hanger bag 20 is to facilitate the users' clothing to hang into or remove from the bag promptly. After a hanger 51 with clothing 52 is hanging into the bag, two chains of interconnected closure clips are closed by means of the male and female clips being embedded to each other reciprocally. A suck pipe 62 of the vacuum cleaner is connected to the one-way valve 2 for sucking out air remained in the bag, until it approaches to near vacuum.

[0033] As shown in FIG. 6, both left and right sides of the base 42 has shoulders 46 extending along the top edge of the bag. By means of two shoulders 46, the top end of the bag 1 can be unfolded without contraction. The bag 1 is not only to stand upright but also to show an outstanding appearance.

Second Embodiment

[0034] As shown in FIGS. 7 and 8, a vacuum hanger bag 20 of the second embodiment is different from the same of the first embodiment. Since the bag 1 of the vacuum hanger bag 20 is not equipped with a one-way valve 2. Sucking out air process is to be processed through a gap kept between two closed interconnected closure clips 13 for penetrating a suck pipe 62 therein. Until air remained in the bag 1 is drained off to approach to a near vacuum, the suck pipe 62 can be taken out from the bag 1. And, the gap kept between two interconnected closure clips 13 is closed. Thereby, the operation of vacuum sucking process is finished.

Advantage Obtained by the Application of the Present Invention

[0035] The merits and advantages of the present invention can be achieved by the embodiments of the present invention as following:

[0036] When a hook 4 is disposed to a vacuum hanger bag 20, by means of a hook 41 protruded from a top end of the bag hung from a cloth rail. In turn, a hook ring 45 inside the bag is designed for hanging out a hanger with clothing, the specific gravity of the hanger and clothing are directly endured by the hook ring 45. Owing to the hook ring 45 is assembled to said hook 41 integrally as a whole, thereby, the

bag 1 needs not to withstand the specific gravity of clothing directly, thereby the bag 1 will not be separated from the hook ring 45 and the bag 1 will not be deformed or wrinkled. [0037] A vacuum hanger bag 20 is hung from a cloth rail by a hook 4, the hanger with clothing hanging out can be hung into the bag once for all through an airtight closure at a lateral side and to hang out on a hook ring thereof. Conversely, they can be removed from the bag through the airtight closure altogether in the same way. Because the clothing and the hanger can be hung into and removed from the bag once for all, there is no need to place the hanger and clothing on the table surface flatly as a conventional vacuum hanger bag in operation.

What is claim claimed:

1. A vacuum hanger bag (20) comprising a bag (1) equipped with an airtight closure formed by two chains of interconnected closure clips (13); a one-way valve (2) installed to the bag (1); and a hook (4) protruded from a middle point at a top end of the bag (1) characterized in that:

the hook (4) secured to an outer side of the bag (1) with a jut (412) projected downward from its bottom end for penetrating into the inner side of the bag (1);

a base (42) secured to an inner side of the bag opposite to the hook (4) with an axial hole (423) for receiving the jut (412);

an impervious stopper (43) is hidden from view retained at a bottom end of the axial hole (423) of the base (42); a nut (44) is threaded to a bottom end below the base (42); and

a hook ring (45) with a jut (451) projected upward from its top end embedding into the nut (44).

2. A vacuum hanger bag (20) comprising a bag (1) equipped with an airtight closure formed by two chains of interconnected closure clips (13); and a hook (4) protruded from a middle point at a top end of the bag (1) characterized in that:

the hook (4) consists of a hook (41) fixed to the outer side of the bag (1) with a jut (412) penetrating into an inner side of the bag (1);

a base (42) fixed to an inner side of the bag (1) with an axial hole (413) for receiving the jut (412);

an impervious stopper (43) is hidden from view retained at a bottom end of the axial hole (423) of the base (42); a nut (44) is threaded to a bottom end below the base (42); and

a hook ring (45) with a jut (451) embedding into the nut (44).

3. A vacuum hanger bag (20) as claim 1 claimed wherein the hook (41) with a jut projected downward from its bottom end is equipped with a press plate (411) to press onto a bag (1); and a base plate (421) at a top end of the base (42) is welded to the bottom end of the bag (1) by high frequency welding, the bag (1) is introduced between the press plate (411) and the base plate (421) tight in between.

4. A vacuum hanger bag (20) as claim 2 claimed wherein the hook (41) with a jut projected downward from its bottom end is equipped with a press plate (411) to press onto a bag (1); and a base plate (421) at a top end of the base (42) is welded to the bottom end of the bag (1) by high frequency welding, the bag (1) is introduced between the press plate (411) and the base plate (421) and the bag (1) is pressed tight in between.

5. A vacuum hanger bag (20) as claim 1 claimed wherein a threaded rod (422) at the bottom end of the base (42) is threaded to the nut (44); the axial hole (423) is formed at the center of the base (42); an opening at the bottom end of the axial hole (423) is closed by a cap like stopper (43).

6. A vacuum hanger bag (20) as claim 2 claimed wherein a threaded rod (422) at the bottom end of the base (42) is threaded to the nut (44); the axial hole (423) is formed at the center of the base (42); an opening at the bottom end of the axial hole (423) is closed by a cap like stopper (43).

7. A vacuum hanger bag (20) as claim 1 claimed wherein a through hole (441) at the bottom end of the nut (44) is to accommodate a jut (451) projected upward from the top end of the hook ring (45) embedded therein.

8. A vacuum hanger bag (20) as claim 2 claimed wherein a through hole (441) at the bottom end of the nut (44) is to accommodate a jut (451) projected upward from the top end of the hook ring (45) embedded therein.

9. A vacuum hanger bag (20) as claim 1 claimed wherein the left and right sides of the base (42) has shoulders (46) extending along the top edge of the bag (1).

10. A vacuum hanger bag (20) as claim 2 claimed wherein the left and right sides of the base (42) has shoulders (46) extending along the top edge of the bag (1).

11. A vacuum hanger bag (20) as claim 1 claimed wherein an airtight closure (11) is disposed to a lateral side of the bag (1).

12. A vacuum hanger bag (20) as claim 2 claimed wherein an airtight closure (11) is disposed to a lateral side of the bag (1).

13. A hook (4) characterized in that:

a hook (41) is equipped with a press plate (411) at its bottom end, and a jut (412) projected downward from the bottom end of the press plate (411);

a base (42) is equipped with a base plate (421) at its top end and a threaded rod (422) at its bottom end, an axial hole (423) is formed at a center of the seat (42) for receiving the jut (412) being embedded into;

a nut (44) is threaded to a threaded rod (422) at a bottom end of the base (42), a through hole (441) is formed at a bottom end of the cap (44); and

a hook ring (45) is equipped with a jut (451) on its top end embedding into a through hole of the nut (44).

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