

SEALING VALVE FOR VACUUM CONTAINER



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BACKGROUND OF THE INVENTION

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FIELD OF THE INVENTION

10 The invention relates to a kind of sealing valve, more particularly, a kind of sealing valve for vacuum containers, e.g., food-preserving containers or ash containers, that maintains the containers under vacuum condition, with multiple merits of simple structure, easy use and excellent sealing effect.

DESCRIPTION OF THE PRIOR ART

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The common food-preserving containers, for the purpose of assuring the degree of freshness of food contained inside, are usually installed with sealing valves on cap body so as to prevent air from re-entering into the containers after the containers being vacuumed.

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In addition, the design of bone-ash urns for preserving bone ashes is becoming high-tech oriented, with not only the sealing valves being installed, but also the multiple-layered epoxy resin being attached onto the urn bodies. As a result, the vacuum state inside the bone-ash urns is to be kept, so as to
25 preserve bone ashes effectively, thus expressing the respect and memory toward the deceased.

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The conventional sealing valve provides the function of enabling air to one-way circulation, and for achieving such function, the conventional sealing valve is to be composed of a variety of parts, or O-shaped rings made of metal along with rubber. No matter what kinds of parts or material being used, the common characteristic is the structural complexity.

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No matter what kind of structural types for the sealing valves or application types for vacuum containers, such minimized vacuum container having sealing valve needed to be manually operated to vacuum the air out to achieve the object of vacuuming the air inside the vacuum container.

Consequently, even though the conventional sealing valve maintain the function of enabling air to one-way circulation, the production cost is to be driven higher because of the structural complexity thereof, which might compromise the air-tightness of the vacuum container.

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SUMMARY OF THE INVENTION

10 The object of the invention is to provide a kind of sealing valve, more particularly, a sealing valve used in vacuum containers, e.g., food-preserving containers and bone-ash containers, for preserving items under state of vacuum, with multiple merits of simple structure, easy use and excellent sealing effect. For achieving the aforementioned object, the sealing valve for vacuum containers of the invention comprises the cap body, the connecting
15 body and the locking portion. The cap body is to be jointed to the locking portion through the connecting body; the locking portion is formed with the concave portion; the locking portion is to lock onto the hole on the upper cap via the concave portion, thus when the vacuum pump proceeds to extract air out of the vacuum container, the cap body is to be deflected and deformed by
20 air flow, so that the air hole of the upper cap is to be opened, and then the cap body is to automatically close the air hole of the upper cap after the pressure difference between the interior and exterior of the vacuum container has reached the predetermined value.

25 The sealing valve performs better with the material being rubber having deflected nature and integrally formed. The rubber material can be synthetic or natural rubber.

30 The sealing valve performs better when the vertical length between the top of the cap body and the edge of the cap body is larger than that between the top of the cap body and the bottom surface of the locking portion.

The sealing valve performs better when the cap body is formed as umbrella
35 shape.

The sealing valve performs better when the inner surface of the cap body is formed as arc shape.

BRIEF DESCRIPTION OF THE DRAWINGS

These and other features, aspects and advantages of the present invention will become better understood with regard to the following description,
5 appended claims and accompanying drawings that are provided only for further elaboration without limiting or restricting the present invention, where

Fig. 1 shows a sectional and structural view of the preferred embodiment for the sealing valve of the invention;

10 Fig. 2 shows a sectional and structural view of the sealing valve of the invention used in the vacuum container, wherein the state before being vacuumed is shown;

15 Fig. 3 shows a state of Fig. 2 during the vacuuming process; and

Fig. 4 shows a state of Fig. 2 after the vacuuming process.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Please refer to Fig. 1, the sealing valve 1 of the invention comprises a cap body 10, a connecting body 11 and a locking portion 12, wherein the cap body 10 is to be jointed to the locking portion 12 through the connecting body 11;
25 the locking portion 12 contains a concave portion 13; the cap body 10 is formed as umbrella shape; and, the inner surface 14 of the cap body 10 is of arc shape.

The preferred embodiment for the sealing valve 1 of the invention is for the
30 vertical length H1 between the top of the cap body 10 and the edge of the cap body 10 to be larger than the vertical length H2 between the top of the cap body and the bottom surface of the locking portion 12; furthermore, the preferred embodiment for the sealing valve 1 of the invention is for the sealing valve 1 to be made of rubber having deflective quality and integrally formed.

35 The rubber material can be synthetic rubber or natural rubber.

As shown in Fig. 2, common vacuum container 2 includes an upper cap 20 and the main body 25, wherein the upper cap 20 contains a concave portion

21, with the hole 22 and the air hole 23 installed therein. At first, place the items ready to be preserved into the main body 25, and then the upper cap 20 is to be put on, and further the sealing procedure is to be proceeded on the jointing portion between the upper cap 20 and the main body 25 (e.g., for long-term preservation, epoxy resin is to be applied thereon; for short-term preservation, the O-shaped rings can be installed on the jointing portion). And then, the locking portion 12 of the sealing valve 1 is to lock onto the hole 22 on the upper cap 20 via the concave portion 13, thus the sealing valve is to be jointed to the upper cap 20. In fig. 2, since the vacuum container 2 is not under the vacuuming process, the vertical length H1 of the sealing valve 1 is larger than the vertical length H2, and the inner surface 14 of the cap body 10 is of arc shape, hiatus is found between the sealing valve 1 and the upper cap 20.

As shown in fig. 3, before the manual vacuum pump 3 proceeds to vacuum the vacuum container 2, the head portion 30 of the vacuum pump 3 needs to flatly attach to the concave portion 21 of the upper cap 20 and cover therein the sealing valve 1; and then when the vacuuming process goes on, the cap body 10 of the sealing valve 1 is to be deflected and deformed because of the airflow (please refer to the arrow sign in Fig. 3), thus the air hole 23 of the upper cap 20 is to be opened. Not until the pressure difference between the interior and exterior of the vacuum container 2 has reached the predetermined value, does the vacuuming process come to a halt, so that the cap body 10 is to flatly attach onto the concave portion 21 of the upper cap 20 because of the pressure difference, thus the air hole 23 is to be automatically closed, please refer to Fig. 4, thus achieving the object of sealing the vacuum container 2. If for the long-term preservation, one more cap can be additionally installed at the concave portion 21 and apply the epoxy resin thereon for long-term preservation.

Although the present invention has been described in considerable detail with reference to certain preferred embodiments thereof, those skilled in the art can easily understand that all kinds of alterations and changes can be made within the spirit and scope of the appended claims. Therefore, the spirit and scope of the appended claims should not be limited to the description of the preferred embodiments contained herein.

WHAT IS CLAIMED IS:

1. A sealing valve for vacuum container comprising: a cap body, a connecting
body and a locking portion, wherein said cap body, of umbrella shape, is to
5 be jointed with said locking portion through said connecting portion; said
cap body, connecting body and locking portion are integrally formed.
2. A sealing valve for vacuum container as in claim 1, wherein said locking
portion is formed with a concave portion.
- 10 3. A sealing valve for vacuum container as in claim 1, wherein said sealing
valve is made of rubber material.
4. A sealing valve for vacuum container as in claim 1, wherein the vertical
15 length from the top of said cap body to the edge thereof is larger than that
from said top of said cap body to the bottom surface of said locking
portion.
5. A sealing valve for vacuum container as in claim 1, wherein the inner
20 surface of said cap body is of arc shape.

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