A gas-containing apparatus includes a can, a bag and a cover. The bag is installed in the can. The bag includes a tube formed thereon and with an internal side and an external side, a thread formed on the external side of the tube and a boss formed on the external side of the tube. The cover is mounted on the can. The cover includes a valve with an external side and an internal side, a thread formed on the internal side of the valve for engagement with the thread of the bag and a recess defined in the valve for receiving the boss, thus avoiding rotation of the tube relative to the valve.
Fig. 5
PRIOR ART
BAG FOR USE IN GAS CAN

BACKGROUND OF INVENTION

[0001] 1. Field of Invention

The present invention relates to a bag for use in a gas can.

[0002] 2. Related Prior Art

Referring to FIG. 5, a conventional valve 2 of a gas can. The valve 2 includes a hole 3 defined therein and an annular flange 4 formed on the wall of the hole 3. A bag 5 includes a nozzle 6 on which an annular flange 7 is formed. The bag 5 is put in the gas can. The nozzle 6 is inserted in the hole 3. The annular flange 7 is engaged with the annular flange 4. However, this engagement is not firm. The annular flange 7 can be disengaged from the annular flange 4 when the pressure in the bag 5 is high.

[0005] 3. Summary of Invention

The present invention is therefore intended to obviate or at least alleviate the problems encountered in prior art.

SUMMARY OF INVENTION

[0006] It is the primary objective of the present invention to provide a secure gas-containing apparatus.

[0007] According to the present invention, a gas-containing apparatus includes a can, a bag and a cover. The bag is installed in the can. The bag includes a tube formed thereon and with an internal side and an external side, a thread formed on the external side of the tube and a boss formed on the external side of the tube. The cover is mounted on the can. The cover includes a valve with an external side and an internal side, a thread formed on the internal side of the valve for engagement with the thread of the bag and a recess defined in the valve for receiving the boss, thus avoiding rotation of the tube relative to the valve.

[0008] Other objects, advantages, and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the attached drawings.

BRIEF DESCRIPTION OF DRAWINGS

[0009] The present invention will be described through detailed illustration of embodiments referring to the attached drawings wherein:

[0010] FIG. 1 is a perspective view of a gas-containing apparatus according to the preferred embodiment of the present invention.

[0011] FIG. 2 is an exploded view of the gas-containing apparatus shown in FIG. 1.

[0012] FIG. 3 is a partial cutaway of the gas-containing apparatus shown in FIG. 1.

[0013] FIG. 4 is a cross-sectional view of the gas-containing apparatus shown in FIG. 1.

[0014] FIG. 5 is a partial cutaway of a conventional gas-containing apparatus.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0015] FIG. 1 shows a gas-containing apparatus 1 according to the preferred embodiment of the present invention.

The gas-containing apparatus 1 includes a can 10 and a cover 20 mounted on the can 10.

[0016] Referring to FIG. 2, the can 10 defines a space 11 for containing gas and includes an upper rim 12.

[0017] The cover 20 includes a rim 21 engaged with the upper rim 12 of the can 10. For adequate sealing, a seal 22 is often sandwiched between the rim 21 of the cover 20 and the upper rim 12 of the can 10. A valve 23 is mounted on the cover 20. The valve 23 is a tubular element with an external side and an internal side. A thread 24 is formed on the internal side of the valve 23. The valve 23 defines a recess 25 at a lower end thereof.

[0018] A bag 30 filled with gas is installed in the can 10. The bag 30 includes a tube 31 formed thereon and with an internal side and an external side. On the external side of the tube 31 is formed a thread 32 for engagement with the thread 24. Also on the external side of the tube 31 is formed a boss 33 for insertion in the recess 25 as clearly shown in FIGS. 3 and 4, thus avoiding rotation of the tube 31 relative to the valve 23. The boss 33 includes an inclined side 34 for facilitating the boss 33 entering the recess 25 in a direction and an upright side 35 for avoiding the boss 33 escaping the recess 25 in an opposite direction. Thus, the engagement of the tube 31 with the valve 23 is firm.

[0019] The present invention has been described through detailed illustration of the preferred embodiment. Those skilled in the art can derive variations from the preferred embodiment without departing from the scope of the present invention. Therefore, the preferred embodiment shall not limit the scope of the present invention defined in the claims.

What is claimed is:

1. A gas-containing apparatus includes:
   a can;
   a bag installed in the can, the bag including a tube formed thereon and with an internal side and an external side, a thread formed on the external side of the tube and a boss formed on the external side of the tube; and
   a cover mounted on the can, the cover including a valve with an external side and an internal side, a thread formed on the internal side of the valve for engagement with the thread of the bag and a recess defined in the valve for receiving the boss, thus avoiding rotation of the tube relative to the valve.

2. The gas-containing apparatus according to claim 1 wherein the boss includes an inclined side for facilitating the boss entering the recess in a direction and an upright side for avoiding the boss escaping the recess in an opposite direction.

3. The gas-containing apparatus according to claim 1 wherein the can includes an upper rim, and the cover includes a rim for engagement with the upper rim of the can.

4. The gas-containing apparatus according to claim 3 including a seal installed between the upper rim of the can and the rim of the cover.

5. A gas-containing apparatus includes:
   a can;
   a bag installed in the can, the bag including a tube formed thereon and with an internal side and an external side,
a thread formed on the external side of the tube and a recess defined in the tube; and

a cover mounted on the can, the cover including a valve with an external side and an internal side, a thread formed on the internal side of the valve for engagement with the thread of the bag and a boss formed on the valve for insertion in the recess, thus avoiding rotation of the tube relative to the valve.

6. The gas-containing apparatus according to claim 5 wherein the boss includes an inclined side for facilitating the boss entering the recess in a direction and an upright side for avoiding the boss escaping the recess in an opposite direction.

7. The gas-containing apparatus according to claim 5 wherein the can includes an upper rim, and the cover includes a rim for engagement with the upper rim of the can.

8. The gas-containing apparatus according to claim 7 including a seal installed between the upper rim of the can and the rim of the cover.