July 7, 1964 E. GILBERTON 3,139,743

PRESSURE REDUCING VALVE AND BURNER BLOCK FITTED ON A GAS LIGHTER CONTAINER

Filed Dec. 7, 1961

2 Sheets-Sheet 1

FIG.1

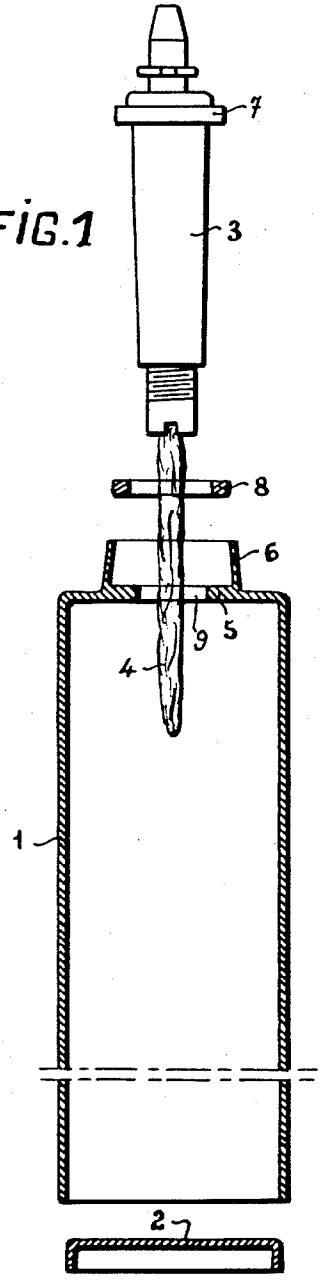
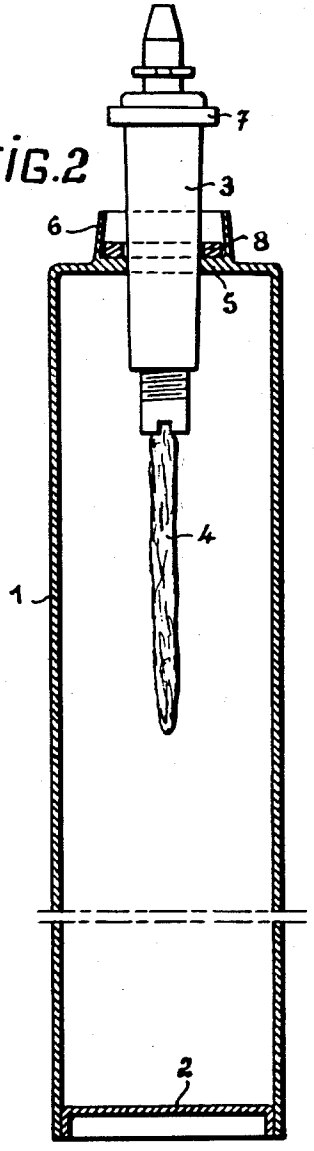


FIG.2



July 7, 1964 E. GILBERTON 3,139,743

PRESSURE REDUCING VALVE AND BURNER BLOCK FITTED ON A GAS LIGHTER CONTAINER

Filed Dec. 7, 1961

2 Sheets-Sheet 2

FIG.3

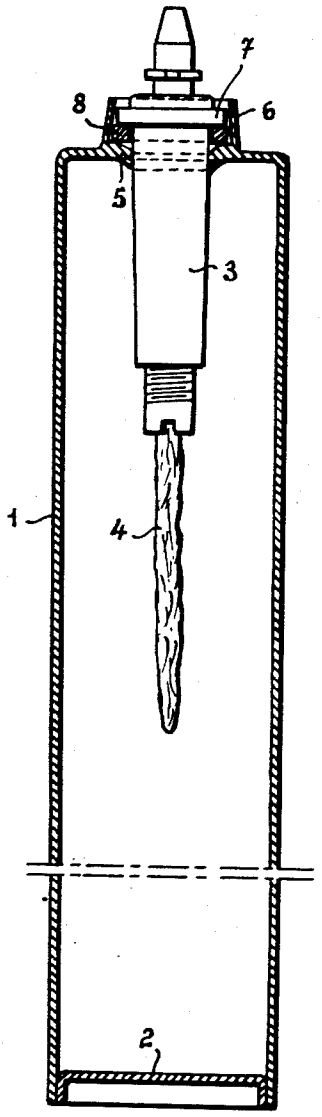
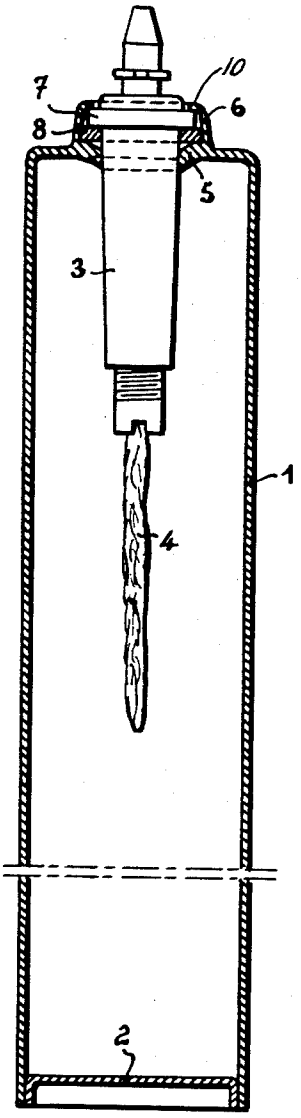


FIG.4



United States Patent Office 3,139,743 Patented July 7, 1964

3,139,743

PRESSURE REDUCING VALVE AND BURNER BLOCK FITTED ON A GAS LIGHTER CONTAINER

Emile Gilberton, Paris, France, assignor to Etablissements Genoud & Cie, Venissieux, France, a company of France

Filed Dec. 7, 1961, Ser. No. 157,803
Claims priority, application France Jan. 10, 1961
5 Claims. (Cl. 67—7.1)

This invention relates to improvements in gas lighters of the type wherein the gas-throttling or pressure reducing system is associated with the valve controlling the flow of gas and forming also a burner, these different parts forming a unitary block.

My invention has for an object to provide a particularly simple, speedy and economical manner of mounting such a block on a fuel container. According to an embodiment of the invention, the container is formed by extrusion and is provided at its upper end, with a web surrounding an opening in the container and a neck encircling the web and projecting from the container. The unitary block as above mentioned is of a substantially frusto-conical outline, and is inserted with force fit into the opening in the container to produce a deformation at the edge of said opening in the container to form a seal between the block and the container. A packing is supported within the neck on the web and is clamped against the web by a collar formed on the block to form a second seal between the block and the container. The upper edge of said neck is inturned by a crimping action to overlie the collar and further secure the block in the container.

My invention will be readily understood upon consideration of the following description, given by way of example, of a preferred embodiment illustrated in the accompanying diagrammatic drawings, said embodiment relating to the case of a cylindrical container. In said drawings:

FIG. 1 is a view showing the different parts before their assembly.

FIG. 2 shows the first step of their assembly,

FIG. 3 shows the assembly after the unitary block has been fitted inside the container, and

FIG. 4 shows the container when completed after the assembly.

In the drawings, **1** designates the actual container and **2** its bottom, which is secured thereto by welding.

3 designates the unitary block comprising the pressure reducing valve means forming the burner with a wick **4** extending from its lower end.

The container **1** is provided at its upper end, with an inner flange or web **5** surrounding the upper opening **9** in the container **1**, from which projects a neck or stack **6**.

The block **3** has a tapered outer surface of frusto-conical shape and includes a head or collar **7**. The arrangement includes furthermore a packing **8** adapted for resting on the flange **5**. The diameter of the block **3**, at a location adjacent the head **7**, is slightly larger than that of the opening formed at the center of the flange **5**.

After the bottom **2** is welded to the lower end of the container **1** and the packing **8** is inserted in the neck **8**, block **3** is inserted inside the opening **9** in the flange **5** (FIG. 2).

The body **3** is inserted with a force fit inside said opening **9** until its head **7** engages intimately the packing **8** and crushes the latter against the flange **5** within the neck **6**. Said insertion is accompanied by slight deformation of the peripheral edge of the flange **5** which thus tightly engages the block **3** and ensures accurate positioning thereof with a perfect fluid tight relation established as a

result of the two seals formed on the one hand by said deformation of the flange and on the other hand, by the compression of the packing **8** (FIG. 3).

The assembly is completed by folding back through a crimping action the upper edge of the neck **6** over the head **7** to form inturned ends **10** which overlie the collar **7**.

Obviously and as apparent from the preceding disclosure, the invention is by no means limited to the sole embodiment described hereinabove, solely by way of example, and it covers all the modifications thereof falling within the scope of the accompanying claims:

What I claim is:

1. Apparatus comprising a container having an opening and otherwise closed, a neck projecting integrally from said container and surrounding the opening, said container including a web portion between the opening and the neck, a packing within the neck supported on the web portion, a one piece valve burner assembly adapted for controlling the flow of ignitable fluid in said container, said assembly including a tapered body portion having one end smaller than the opening and another end larger than the opening, said tapered body portion being inserted in the opening in force fit relation with the web portion of the container to deform said web portion and form a fluid-tight seal therewith, and means on said body portion for limiting entry of said body portion within said container and for concurrently compressing said packing to provide a second fluid-tight seal between the assembly and the container.

2. Apparatus as claimed in claim 1 wherein said means on said body portion includes a collar on said body portion extending outwardly thereof.

3. Apparatus as claimed in claim 2 comprising inturned end portions on said neck engaging the collar on a side thereof opposite the packing to secure the collar against the compressed packing.

4. A method of assembling a valve burner device in a container, said method comprising seating within the neck of a container a compressible packing surrounding an opening in the container which is otherwise closed, and inserting in said opening a tapered portion of a valve burner device beyond the position in which said tapered portion engages the container at said opening and is tightly fitted in said opening, to a position in which the container around said opening is locally deformed and the packing is compressed.

5. A method of assembling a valve burner device in a container, said method comprising seating within the neck of a container a compressible packing surrounding an opening in the container which is otherwise closed, inserting in said opening a tapered portion of a valve burner device until said tapered portion is tightly fitted in said opening, continuing further insertion of said device to locally deform the container around said opening and thereby force the device into said container until a collar on said device contacts the packing and compresses the same against the container, and inturning the neck to overlie the collar on said device to further secure the latter to the container.

References Cited in the file of this patent

UNITED STATES PATENTS

2,220,146	Curry	Nov. 5, 1940
2,774,520	Laundry	Dec. 18, 1956
2,895,633	Zellweger	July 21, 1959

FOREIGN PATENTS

70,495	France	Dec. 8, 1958
798,354	Great Britain	July 16, 1958