March 13, 1956 G. L. CALLERY ET AL 2,737,972

BONNET SHIELD FOR VALVES OR THE LIKE

Filed May 24, 1953

Fig. 1.

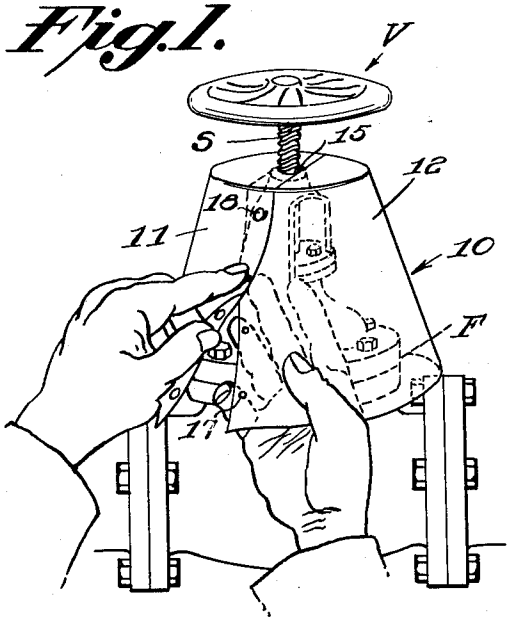


Fig. 2.

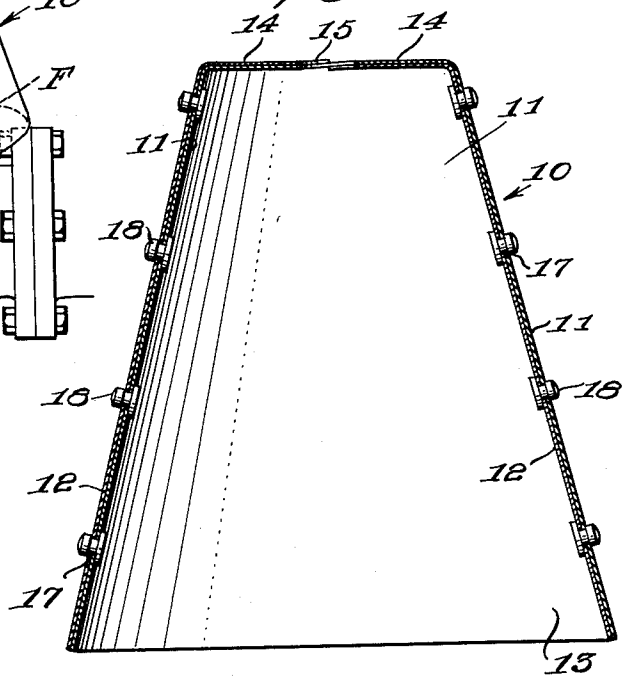


Fig. 3.

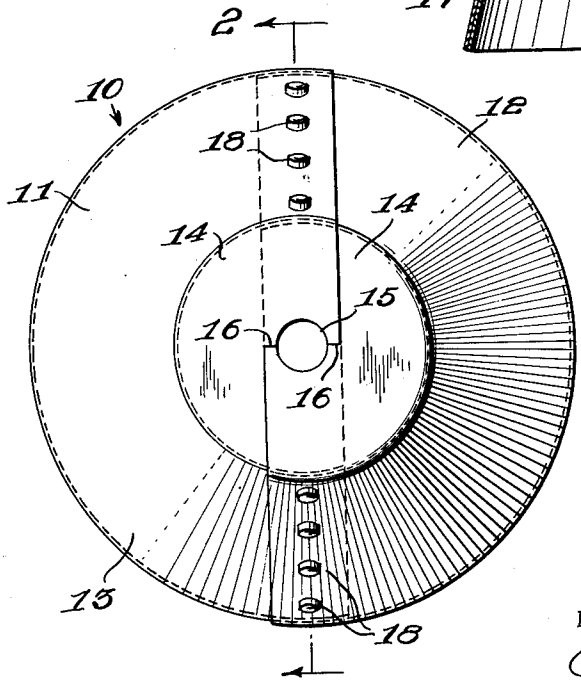
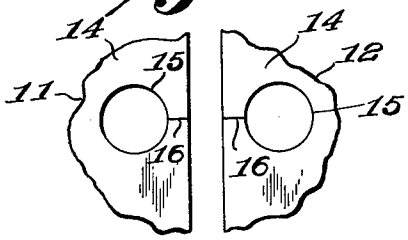


Fig. 4.



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BONNET SHIELD FOR VALVES OR THE LIKE

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Application March 24, 1953, Serial No. 344,383

3 Claims. (Cl. 137—377)

This invention relates to a bonnet shield for valves or the like.

The invention is more particularly concerned with a shield of bonnet form adapted to cover the packing gland, valve stem and bonnet flange of a valve structure for protecting personnel and equipment from leaks and blow-outs of valve packing and bonnet flange gaskets.

A primary object of the invention is to provide a bonnet shield for the above noted purpose which is not only simple in construction but is also capable of being installed on a valve with a minimum expenditure of time and effort.

A further object of the invention is to provide a bonnet shield of the above noted character and for the purpose stated which is formed of polyethylene semi-transparent material which is resistant to chemical and corrosive action and which provides for ease of inspection of the shielded valve parts.

A still further object of the invention is to provide a bonnet shield constructed of light gauge flexible material which provides for the lifting of sections thereof for ready access to valve parts.

Other objects and advantages of the invention will become apparent in the course of the following detailed description, taken in connection with the accompanying drawing, wherein:

Figure 1 is a perspective view showing the application of the improved bonnet shield to a bonnet type valve.

Figure 2 is an axial vertical sectional view of the shield as observed in the plane of line 2—2 on Fig. 3.

Figure 3 is a top plan view of the improved shield.

Figure 4 is an enlarged fragmental top plan showing sections of the two separable parts of the shield in separated relation.

Referring now in detail to the drawing, **10** designates the improved shield in its entirety. The shield comprises a pair of mating sections **11** and **12** each of which is of generally semi-truncated conical form including a skirt portion **13** and a top generally horizontal portion **14** of a form slightly greater than a semi-circle.

Each section **11**, **12** is of the same dimensions, and the sections are readily reversible thereby materially expediting the manufacture thereof.

Each top portion **14** is provided with a valve stem receiving aperture **15**, and the material of such portion is slit from the aperture to the free edge thereof, as indicated at **16**.

By the provision of the aperture **15** and slits **16** the two sections of equal dimensions can be lapped, as indicated in Figs. 2 and 3, to an extent equal to the diameter of an aperture **15** plus the length of the two slits **16** and with the lapped margins of the two sections being reversed at opposite sides of the axis of the shield with respect to the inner and outer walls thereof.

The lapped edges of the shield sections are provided with mating apertures **17** for removably receiving snap buttons **18** which are preferably of the same material as that of the shield. While the buttons disclosed are

preferably of the form shown and claimed in our copending application Serial No. 344,382, filed March 24, 1953, other forms of snap buttons may be used since the specific form of shield is not dependent upon any particular form of fastening means.

In Fig. 1 the improved shield **10** is shown as being applied to a bonnet type valve which includes a stem S and a flange F. In this view, the shield sections **11** and **12** are transversely shifted relative to the showing in Figs. 2 and 3, which further discloses the ready adaptability of the two like sections in forming a complete bonnet shield.

In applying the shield to the valve V, one section is brought into position with the stem S in its aperture **15** which was entered through spreading of the material at slit **16**. Thereafter, the mating section is brought into position in like manner with the stem extending through both alined apertures **15**. The edges of the sections are oppositely lapped at opposite sides of the shield and finally the snap buttons **18** are forced through the alined apertures **17**, as is indicated in Fig. 1.

While the bonnet shield is particularly adapted for use with an upstanding valve, as indicated in Fig. 1, it may be used with horizontal or inverted valves by the utilization of retaining straps secured to the skirt of the shield.

The simplicity of the shield sections renders them capable of being expeditiously cut from sheet material whereby the sections may be of different sizes or different forms for the formation of shields for valves of different sizes and different forms.

While we have disclosed our invention in accordance with a single specific structural embodiment thereof, such is to be considered as illustrative only and not restrictive, the scope of the invention being defined in the sub-joined claims.

What we claim and desire to secure by U. S. Letters Patent is:

1. In combination with a valve including a body having a top flange, a bonnet having a bottom flange and a packing gland, a gasket disposed between said flanges and a cylindrical valve stem extending from said body, through said packing gland and to an operating position thereabove, a bonnet shield of truncated conical form including a vertical-axis downwardly and laterally flaring skirt portion in surrounding relation to said flanges and said packing gland, and a horizontal top portion disposed above said packing gland, said shield comprising a pair of like sections having overlapping side and top edge portions with the edges of the two sections being disposed in parallel vertical planes at opposite sides of a vertical axial plane and in equally spaced relation thereto, the horizontal top portion being disposed above said packing gland and the overlapping edge portions thereof having alined apertures of substantially the diameter of said valve stem and through which said stem extends, the said overlapping edge portions being provided with slits opening into said apertures for receiving said stem upon horizontal movement of said sections toward said stem in the assembly thereof, wherein the lower edges of the sections surround said flanges, and means for releasably securing the overlapping edges of the skirt portion together.

2. The structure according to claim 1, wherein said edge portions of said skirt portions are oppositely overlapped relative to the inner and outer walls of the shield.

3. The structure according to claim 1, wherein said securing means comprise aligned apertures in said overlapping edge portions of said skirt portions, and snap buttons releasably received in said apertures.

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